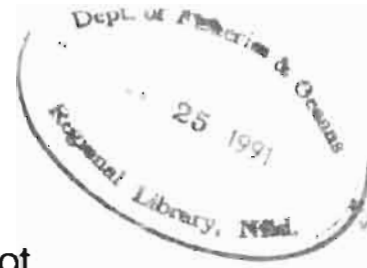




Scientific Excellence • Resource Protection & Conservation • Benefits for Canadians  
Excellence scientifique • Protection et conservation des ressources • Bénéfices aux Canadiens

## **Data Record of Juvenile Salmonids and Other Fish Species Captured by Surface Trawl off Coastal British Columbia in August, 1988 and September, 1990**



K. D. Cooke, B. J. Waddell, and C. Groot

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

1991

**Canadian Data Report of  
Fisheries and Aquatic Sciences 837**



Fisheries  
and Oceans

Pêches  
et Océans

Canada

## **Canadian Data Report of Fisheries and Aquatic Sciences**

Data reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of data reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries and aquatic sciences.

Data reports are not intended for general distribution and the contents must not be referred to in other publications without prior written authorization from the issuing establishment. The correct citation appears above the abstract of each report. Data reports are abstracted in *Aquatic Sciences and Fisheries Abstracts* and indexed in the Department's annual index to scientific and technical publications.

Numbers 1-25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26-160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was introduced with the publication of report number 161.

Data reports are produced regionally but are numbered nationally. Requests for individual reports will be filled by the issuing establishment listed on the front cover and title page. Out-of-stock reports will be supplied for a fee by commercial agents.

## **Rapport statistique canadien des sciences halieutiques et aquatiques**

Les rapports statistiques servent à classer et à archiver les compilations de données pour lesquelles il y a peu ou point d'analyse. Ces compilations auront d'ordinaire été préparées à l'appui d'autres publications ou rapports. Les sujets des rapports statistiques reflètent la vaste gamme des intérêts et des politiques du ministère des Pêches et des Océans, c'est-à-dire les sciences halieutiques et aquatiques.

Les rapports statistiques ne sont pas destinés à une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au-dessus du résumé de chaque rapport. Les rapports statistiques sont résumés dans la revue *Résumés des sciences aquatiques et halieutiques*, et ils sont classés dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros 1 à 25 de cette série ont été publiés à titre de relevés statistiques, Services des pêches et de la mer. Les numéros 26 à 160 ont été publiés à titre de rapports statistiques du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 161.

Les rapports statistiques sont produits à l'échelon régional, mais numérotés à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page du titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

Canadian Data Report of  
Fisheries and Aquatic Sciences 837

1991

DATA RECORD OF JUVENILE SALMONIDS AND OTHER FISH SPECIES CAPTURED  
BY SURFACE TRAWL OFF COASTAL BRITISH COLUMBIA IN AUGUST, 1988 AND  
SEPTEMBER, 1990

by

K. D. Cooke, B. J. Waddell, and C. Groot

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

(c)Minister of Supply and Services Canada 1991

Cat. No. Fs 97-13/0837E

ISSN 0706-6465

Correct citation for this publication:

Cooke, K. D., B. J. Waddell, and C. Groot. 1991. Data record of juvenile salmonids and other fish species captured by surface trawl off coastal British Columbia in August, 1988 and September, 1990. Can. Data Rep. Fish. Aquat. Sci. 837: 79 p.

ABSTRACT

Cooke, K. D., B. J. Waddell, and C. Groot. 1991. Data record of juvenile salmonids and other fish species captured by surface trawl off coastal British Columbia in August, 1988 and September, 1990. Can. Data Rep. Fish. Aquat. Sci. 837: 79 p.

This data record summarizes catch information of juvenile Pacific salmon (Genus Oncorhynchus) and other fish species captured in Queen Charlotte Sound and off the west coasts of Vancouver Island and Queen Charlotte Islands. The collections were made using the 'Bernard-Sigmund' beam trawl from August 1-11, 1988 and from September 7-19, 1990. Length data are presented for most of the captured fish. Sex and stomach content data are listed for species examined as potential juvenile salmonid predators.

Key words: salmon, juvenile, distribution, surface trawl, Vancouver Island, Queen Charlotte Sound, Queen Charlotte Islands, predators, length, stomach contents

RÉSUMÉ

Cooke, K. D., B. J. Waddell, and C. Groot. 1991. Data record of juvenile salmonids and other fish species captured by surface trawl off coastal British Columbia in August, 1988 and September, 1990. Can. Data Rep. Fish. Aquat. Sci. 837: 79 p.

Les données présentées ici fournissent des informations sur les captures de saumons du Pacifique juvéniles (genre Oncorhynchus) et d'autres espèces dans le bassin Reine-Charlotte et au large des côtes ouest de l'île de Vancouver et des îles de la Reine-Charlotte. Les prises ont été effectuées avec le chalut à perche du "Bernard-Sigmund" du 1<sup>er</sup> au 11 août 1988, et du 7 au 9 septembre 1990. Des données sur la longueur de la plupart des poissons capturés sont présentées de même que sur le sexe et le contenu stomacal des poissons appartenant à des espèces pouvant être des prédateurs des saumons juvéniles.

## INTRODUCTION

This data record summarizes catch information of juvenile Pacific salmon (Genus Oncorhynchus) and other fish species captured in Queen Charlotte Sound and off the west coasts of Vancouver Island and Queen Charlotte Islands in August, 1988 and September, 1990. The collections form part of the Marine Survival of Salmon (MASS) Program, initiated in 1987 to examine the survival of juvenile Pacific salmon in relation to oceanographic and environmental factors. The cruises reported here were designed to i) examine the migratory routes, run timing, speed and direction of movement of juvenile Pacific salmon, specifically sockeye salmon (Oncorhynchus nerka), along the west coast of Vancouver Island and Queen Charlotte Islands, and in Queen Charlotte Sound and Hecate Strait, (Fig. 1) and ii) determine the potential of the surface beam trawl as a tool for sampling near-surface offshore waters.

Juvenile sockeye (O. nerka) emigrating from Great Central, Sproat, and Henderson lakes on the west coast of Vancouver Island migrate down Alberni Inlet and through Barkley Sound to the ocean annually from late April until mid-June, with early migrants entering open ocean waters by the beginning of May (Cooke and Groot, 1990). Hartt and Dell (1986) have shown that juvenile Pacific salmon migrate in a narrow band within 30 km of shore along the British Columbia and southeastern and central Alaskan coast in summer, before moving offshore to feeding grounds in the North Pacific Ocean.

## METHODS

### FISHING GEAR AND OPERATION

Fishing operations were carried out between August 1 and 11, 1988, and September 7 - 19, 1990 with the 'W.E. RICKER' using twin Bernard-Sigmund beam trawls (Hargreaves and Hungar, 1991). The nets were attached to 10.3 m long beams, top and bottom, and rigged for towing aft of the vessel from 10.5 m outriggers located midships on both port and starboard sides. The nets have a 9.1 m wide by 12.2 m deep opening. In 1988, the nets measured 82 m and 85.3 m in length. In 1990, these nets were replaced with ones measuring 85 m in length. Mesh sizes of the trawl body range from 40.6 cm to 2.5 cm. The codends were equipped with a 1.9 cm mesh liner, 5 m in length, for retention of juvenile fishes. The bottom beam of each net was equipped with deflectors to pull the beam downward when towed, and force the net to open. The effective fishing depth was dependent upon warp length, vessel speed, and sea conditions.

The warp lengths were set so that in relatively calm seas and at optimum towing speed the top beam of each trawl was towed at the surface. Optimum towing speed through the water was estimated at 7.2 km/h (4 kn) based on vessel horsepower, propeller pitch, manoeuvrability of the vessel while towing, and catchability of juvenile salmonids (R.M. Hungar, Pacific Biological Station, Nanaimo, B.C., pers. comm.). Actual towing speeds through the water ranged between 5.0 km/h (2.8 kn) and 7.6 km/h (4.2 kn) and vessel speed over the ground varied from 2.9 km/h (1.6 kn) to 8.5 km/h (4.7 kn), depending upon wind, sea, and tidal conditions. Swell heights of 1.5 - 2 m caused the top beam of the nets to periodically break the surface, momentarily decreasing the effective fishing depth.

Once deployed, the nets remained in the water for the duration of a transect; only the codends would be hauled. In 1988, we hauled the codends alternately, usually at 1 or 2 h intervals, depending on the catch rate and species composition. In 1990, the codends were hauled in succession after 1 h fishing time. Occasionally, only one net would be fished when catch rates were very high. Hauling the codend caused the tow beams of the net being sampled to scissor inboard, thus constricting the net opening. The net continued to fish but at a reduced rate; performance of the paired net was not affected during retrieval. The vessel was maintained on a relatively constant course and speed for each transect. This procedure allowed for continuous sampling of the surface waters along each transect to a depth of about 5 m.

#### SURVEY AREA AND FISHING PATTERN

In 1988, the survey area extended from Cape Caution in Queen Charlotte Sound southwest to 14.4 km (8 nm) off Triangle Island, then southward along the west coast of Vancouver Island to Clayoquot Sound, near Tofino (Fig. 1). We generally fished in a zigzag pattern, moving in a southwest direction from nearshore to about 36 km (20 nm) offshore, and returning east or southeast back toward shore (Fig. 2). Transect headings were initially set based on the north-northwest migrational tendency of juvenile Pacific salmon, as determined by Hartt and Dell (1986). By fishing in the opposing direction of migration, we had a greater likelihood of intercepting juvenile salmon. The direction of trawling was also dependent upon local sea conditions, swell and wind direction, other vessel traffic, and coastal geography.

Fishing operations usually began about 1700 h, continued through the night and concluded at about 0600 h the following morning. Most transects lasted between 10 and 12 h, except T01 which took 19 h to complete. Fishing in nearshore waters was often precluded by the vessel's navigational requirements. Turning while towing the nets and foul grounds along some parts of the coast made it necessary to stay 5.5 km (3.0 nm) away from shore in most areas.

In 1990, parallel transects separated by 40 km (21.6 nm) were fished from Cape Caution to Aristazabal Island in Queen Charlotte Sound, and from Cape St. James to Tasu Sound along the west coast of the Queen Charlotte Islands, and from Triangle Island to Brooks Peninsula along the west coast of Vancouver Island (Figures 1 and 2). Course headings for the transects were generally on south-west or north-east headings. Transects extended from about the 100 m depth contour nearshore to about the edge of the 1800 m (1000 fm) shelf break.

#### DATA RECORDINGS AND SAMPLE COLLECTION

Transects (T) were separated on the basis of tow heading, i.e. inshore or offshore (Fig. 2). Sets were distinguished by transect number, port (P) or starboard (S) net, and set time (Table 1 and 2). The port and starboard nets were hauled alternately and, thus, had different "start" and "end" times. The set "end time" was defined as the time when the codend was closed off during retrieval. Because the nets were continuously fishing, the "start time" for a set was considered the same as the "end time" of the previous set on the same side.

Total numbers of each species from each set were recorded or, when abundant, estimated by number or weight. Fork lengths (mm) were recorded for all salmon and for a maximum of 100 (when available) of other species captured. Mean length and total catch were estimated from sub-samples of large catches of Pacific herring (Clupea harengus pallasii), Pacific saury (Cololabis saira), and lanternfishes (Myctophidae species). Jellyfish catches were noted when quantities were significant. In 1988, all juvenile sockeye salmon, some juvenile pink salmon (Oncorhynchus gorbuscha) and all coded wire tagged salmonids were preserved in 10% formalin solution for laboratory examination. All juvenile salmon and juvenile sablefish (Anoplopoma fimbria) captured in 1990 were examined for external wounds and preserved for laboratory examination.

Set location information are presented in Table 1 for 1988 and Table 2 for 1990. Catch per set data are presented in Tables 3 and 4 for 1988 and 1990, respectively, and summarized in Table 5. Length frequency data of salmon species are listed in Table 6 for 1988 and Table 7 for 1990. Tables 8 and 9 list length frequencies of sablefish, herring, saury, and hake captures for 1988 and 1990, respectively. Statistical summaries of length frequency for the major species for both years are presented in Table 10. Length by species for other miscellaneous incidentals are reported in Table 11 for 1990; lengths were not recorded in 1988 for miscellaneous incidentals. Catch from T11 (Sept. 17, 1990) was not included in the calculations for mean fork length by species (Tables 7, 9, and 10) because the set direction was perpendicular to all other transect runs in 1990. Therefore, the data were not comparable to those of the inshore and offshore tows.



Mean fork lengths and standard deviations are computed for all sets within a transect and all transects combined. Length (mm), sex, and stomach content data are presented in Table 12 (1988) and Table 13 (1990) for fish species regarded as potential juvenile salmon predators. Catch per set data from both years are illustrated in Fig. 3 - 7 for juvenile sockeye (O. nerka), pink (O. gorbuscha), chum (O. keta), coho (O. kisutch), and chinook (O. tshawytscha). Catch per set data are also illustrated for Sablefish (Anoplopoma fimbria), Pacific herring (Clupea harengus pallasii) and Pacific saury (Cololabis saira) in Figures 8, 9, and 10, respectively for 1988 and 1990.

#### ACKNOWLEDGEMENTS

We are indebted to Captains A. Ranger and D. Parfitt and the crew of the W.E. RICKER for operation of the twin beam surface trawls and collection of the samples. The assistance of B. Hargreaves, R. Hungar and E. Alford in ensuring the gear was operational in time for each cruise was appreciated. G. Tolson, J. Morris, and B. Thomson are thanked for their assistance in the field and laboratory.

#### REFERENCES

- Cooke, K.D. and C. Groot. 1990. Data record of juvenile sockeye salmon and other fish species captured by purse seine in Alberni Inlet and Barkley Sound in April, May, and June, 1987 and 1988. Can. Data Rep. Fish. Aquat. Sci. 813.
- Hargreaves, N.B. and R.M. Hungar. (1991) Bernard-Sigmund salmon trawls: new paired side-trawls for sampling juvenile salmon and other fishes near the sea surface. Can. J. Fish. Aquat. Sci. (in press).
- Hartt, A.C. and M.B. Dell. 1986. Early oceanic migrations and growth of juvenile Pacific salmon and steelhead trout. Int. N. Pac. Fish. Comm. Bull. 46: 105 p.

LIST OF TABLES:

- Table 1 1988 set location information.
- Table 2 1990 set location information.
- Table 3 1988 catch per set information.
- Table 4 1990 catch per set information.
- Table 5 Summary of Total Catch By Species for 1988 and 1990.
- Table 6 1988 salmonid length frequency data.
- Table 7 1990 salmonid length frequency data. (Catch from Transect 11 was not included in the calculations for mean length by species because the set direction was perpendicular to all other transects run in 1990.)
- Table 8 1988 sablefish, herring, saury, and hake length frequency data.
- Table 9 1990 sablefish, herring, saury, and hake length frequency data.
- Table 10 Statistical summary of total catch length frequency for 1988 and 1990.
- Table 11 1990 miscellaneous incidental catch length frequency data.
- Table 12 1988 length, sex, and stomach content data for fish deemed potential juvenile salmonid predators.
- Table 13 1990 length, sex, and stomach content data for fish deemed potential juvenile salmonid predators.

Table 1 - 1988 set information.

TRANSECT T01

AREA - Queen Charlotte Sound/Cape Caution-Triangle Island  
(Course heading 248 - 270 - 192)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	03/08/88	1730	60	51 09.00	127 49.50	51 07.40	127 54.70	370,400
P01		1800	60	51 08.60	127 51.50	51 06.70	127 58.00	388,920
S02		1830	60	51 07.40	127 54.80	51 06.10	128 00.90	379,660
P02		1900	60	51 06.70	127 58.00	51 05.30	128 04.50	416,700
S03		1930	60	51 06.10	128 00.90	51 04.57	128 07.46	416,700
P03		2000	60	51 05.30	128 04.50	51 03.65	128 11.08	407,440
S04		2030	60	51 04.57	128 07.56	51 02.50	128 14.13	416,700
P04		2100	60	51 03.65	128 11.08	51 02.00	128 17.24	388,920
S05		2130	60	51 02.50	128 14.13	51 01.30	128 20.11	379,660
P05		2200	60	51 02.00	128 17.24	51 00.64	128 23.14	277,800
S06		2230	60	51 01.30	128 20.11	50 59.99	128 25.99	296,320
P06		2300	60	51 00.62	128 23.13	50 59.35	128 28.80	305,580
S07		2330	60	50 59.99	128 25.99	50 58.81	128 31.80	324,100
P07	04/08/88	0000	60	50 59.35	128 28.80	50 58.25	128 34.42	268,540
S08		0030	60	50 58.81	128 31.80	50 57.53	128 36.87	296,320
P08		0100	60	50 58.25	128 34.42	50 56.69	128 39.28	370,400
S09		0130	60	50 57.53	128 36.87	50 56.65	128 42.19	342,620
P09		0200	60	50 56.69	128 39.28	50 56.65	128 44.63	305,580
S10		0230	60	50 56.65	128 42.19	50 56.42	128 47.53	333,360
P10		0300	60	50 56.65	128 44.63	50 56.27	128 49.53	277,800
S11		0330	60	50 56.42	128 47.53	50 56.37	128 50.92	296,320
P11		0400	60	50 56.27	128 49.53	50 56.33	128 52.53	296,320
S12		0430	60	50 56.37	128 50.92	50 56.03	128 54.51	333,360
P12		0500	60	50 56.33	128 52.53	50 55.92	128 56.08	333,360
S13		0530	60	50 56.03	128 54.51	50 56.21	128 58.98	324,100
P13		0600	60	50 55.92	128 56.08	50 56.20	129 01.71	324,100
S14		0630	60	50 56.21	128 58.98	50 56.12	129 05.23	287,060
P14		0700	75	50 56.20	129 01.71	50 56.62	129 09.93	324,100
S15		0730	60	50 56.12	129 05.23	50 56.61	129 11.20	268,540
P15		0815	45	50 56.62	129 09.93	50 56.63	129 14.29	194,460
S16		0830	60	50 56.61	129 11.20	50 55.30	129 16.37	277,800
P16		0900	60	50 56.63	129 14.29	50 53.92	129 17.18	296,320
S17		0930	60	50 55.30	129 16.37	50 52.22	129 17.22	305,580
P17		1000	60	50 53.92	129 17.18	50 50.81	129 16.61	277,800
S18		1030	60	50 52.22	129 17.22	50 49.46	129 15.50	277,800
P18		1100	60	50 50.81	129 16.61	50 48.13	129 13.96	324,100
S19		1130	60	50 49.46	129 15.50	50 47.50	129 12.10	324,100

SUBTOTAL

37.0 (hours)

Table 1: (cont'd)

TRANSECT T02

AREA - West Coast of Vancouver Island/San Josef-Pisces Canyon  
(Course heading 248)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>	
S01	04/08/88	1720	40	50 38.90	128 25.40	50 37.77	128 27.91	222,240	
P01		1710	80	50 39.10	128 24.80	50 37.41	128 30.08	456,827	
S02		1800	60	50 37.77	128 27.91	50 37.05	128 32.66	333,360	
P02		1830	60	50 37.41	128 30.08	50 36.53	128 35.02	324,100	
S03		1900	60	50 37.05	128 32.66	50 35.85	128 37.40	324,100	
P03		1930	60	50 36.53	128 35.02	50 35.23	128 39.77	314,840	
S04		2000	60	50 35.85	128 37.40	50 34.53	128 42.12	314,840	
P04		2030	60	50 35.23	128 39.77	50 33.76	128 44.13	324,100	
<u>SUBTOTAL</u>			8.0 (hours)						

TRANSECT T03

AREA - West Coast of Vancouver Island/Pisces Canyon-Kains Island  
(Course heading 105)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>	
S01	04/08/88	2100	60	50 34.53	128 42.12	50 32.48	128 46.15	333,360	
P01		2130	60	50 33.76	128 44.13	50 30.83	128 45.67	333,360	
S02		2200	60	50 32.48	128 46.15	50 30.49	128 42.88	333,360	
P02		2230	60	50 30.83	128 45.67	50 30.60	128 40.33	333,360	
S03		2300	60	50 30.49	128 42.88	50 30.45	128 37.47	333,360	
P03		2330	60	50 30.60	128 40.33	50 30.12	128 34.66	333,360	
S04	05/08/88	0000	60	50 30.45	128 37.47	50 29.52	128 31.63	342,620	
P04		0030	60	50 30.12	128 34.66	50 28.95	128 28.24	333,360	
S05		0100	60	50 29.52	128 31.63	50 28.37	128 25.20	342,620	
P05		0130	60	50 28.95	128 28.24	50 27.72	128 21.94	333,360	
S06		0200	120	50 28.37	128 25.20	50 26.21	128 13.71	629,680	
P06		0230	120	50 27.72	128 21.94	50 25.10	128 09.96	648,200	
S07		0400	90	50 26.21	128 13.71	50 24.13	128 06.12	333,360	
P07		0430	30	50 25.10	128 09.96	50 25.00	128 06.95	171,310	
<u>SUBTOTAL</u>			16.0 (hours)						

Table 1: (cont'd)

TRANSECT T04

AREA - West Coast of Vancouver Island/Quatsino Sound-Kwakutil Canyon  
(Course heading 248)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	05/08/88	1700	60	50 23.00	128 03.90	50 21.83	128 07.34	324,100
P01		1730	60	50 23.00	128 04.20	50 21.29	128 09.64	324,100
S02		1800	60	50 21.83	128 07.34	50 21.12	128 11.75	342,620
P02		1830	60	50 21.29	128 09.64	50 20.52	128 14.04	324,100
S03		1900	60	50 21.12	128 11.75	50 19.99	128 16.70	314,840
P03		1930	60	50 20.52	128 14.04	50 19.32	128 19.01	342,620
S04		2000	60	50 19.99	128 16.70	50 18.62	128 21.59	333,360
P04		2030	60	50 19.32	128 19.01	50 17.42	128 22.69	342,620
S05		2100	60	50 18.62	128 21.59	50 17.47	128 19.81	296,320
<u>SUBTOTAL</u>			9.0 (hours)					

TRANSECT T05

AREA - West Coast of Vancouver Island/Kwakutil Canyon-Brooks Bay  
(Course heading 132)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	05/08/88	2130	90	50 17.42	128 22.69	50 17.16	128 14.42	458,370
S01		2200	120	50 17.47	128 19.81	50 16.40	128 09.20	629,680
P02		2300	120	50 17.16	128 14.42	50 13.96	128 05.01	685,240
S02	06/08/88	0000	120	50 16.40	128 09.20	50 11.40	128 03.27	629,680
<u>SUBTOTAL</u>			7.5 (hours)					

TRANSECT 6

AREA - West Coast of Vancouver Island/Brooks Bay-Quatsino Canyon  
(Course heading 233)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	06/08/88	0100	120	50 13.96	128 05.01	50 09.55	128 07.02	611,160
S01		0200	120	50 11.40	128 03.27	50 07.02	128 11.69	592,640
P02		0300	120	50 09.55	128 07.02	50 04.99	128 15.88	592,640
S02		0400	150	50 07.02	128 11.69	50 02.59	128 21.94	833,400
P03		0500	60	50 04.99	128 15.88	50 02.64	128 21.09	296,320
<u>SUBTOTAL</u>			9.5 (hours)					

Table 1: (cont'd)

TRANSECT T07

AREA - West Coast of Vancouver Island/Brooks Bay-Ououkinsh Canyon  
(Course heading 198)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	06/08/88	1715	45	50 14.18	127 57.55	50 11.62	127 58.63	263,910
P01		1725	95	50 13.70	127 57.97	50 08.27	128 00.23	571,805
S02		1800	120	50 11.62	127 58.63	50 04.57	128 02.68	703,760
P02		1900	120	50 08.27	128 00.23	50 00.98	128 04.26	722,280
S03		2000	120	50 04.57	128 02.68	49 57.70	128 05.18	722,280
P03		2100	120	50 00.98	128 04.26	49 55.95	128 03.93	629,680
<u>SUBTOTAL</u>			10.3 (hours)					

TRANSECT T08

AREA - West Coast of Vancouver Island/Ououkinsh Canyon-Checleset Bay  
(Course heading 067)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	06/08/88	2200	120	49 57.70	128 05.18	49 57.98	127 59.17	648,200
P01		2300	120	49 55.95	128 03.93	49 59.41	127 53.23	611,160
S02	07/08/88	0000	120	49 57.98	127 59.17	50 00.46	127 49.90	611,160
P02				- Net set with codend open -				
S03		0200	120	50 00.46	127 49.90	50 01.81	127 43.87	611,160
P03		0300	120	50 01.18	127 47.19	50 00.61	127 43.14	611,160
<u>SUBTOTAL</u>			12.0 (hours)					

TRANSECT T09

AREA - West Coast of Vancouver Island/Checleset Bay-Crowther Canyon  
(Course heading 198)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	07/08/88	0400	150	50 01.81	127 43.87	49 56.38	127 45.52	949,150
P01		0500	60	50 00.61	127 43.14	49 57.78	127 44.68	314,840
S02		1725	90	50 00.00	127 45.16	49 52.37	127 48.42	486,150
P02		1850	70	49 52.50	127 48.30	49 48.65	127 48.03	378,167
<u>SUBTOTAL</u>			6.2 (hours)					

Table 1: (cont'd)

TRANSECT T10

AREA - West Coast of Vancouver Island/Kyuquot Canyon-Kyuquot Sound  
(Course heading 067)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	SET	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
			<u>TIME (min)</u>					
S01	07/08/88	1855	125	49 52.37	127 48.42	49 49.95	127 42.91	675,208
P01		2000	120	49 48.65	127 48.03	49 51.40	127 38.30	629,680
S02		2100	60	49 49.95	127 42.91	49 50.22	127 37.10	314,840
<u>SUBTOTAL</u>			5.1 (hours)					

TRANSECT T11

AREA - West Coast of Vancouver Island/Kyuquot Sound-Esperanza Canyon  
(Course heading 203 - 240)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	SET	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
			<u>TIME (min)</u>					
S01	08/08/88	1330	90	49 51.69	127 19.58	49 48.26	127 20.20	416,700
P01		1400	120	49 50.94	127 18.82	49 45.64	127 22.73	685,240
S02		1500	120	49 51.69	127 20.20	49 43.49	127 27.76	592,640
P02		1600	120	49 50.94	127 22.73	49 40.78	127 28.67	592,640
S03		1700	120	49 43.49	127 27.76	49 40.57	127 25.08	611,160
<u>SUBTOTAL</u>			9.5 (hours)					

TRANSECT 12

AREA - West Coast of Vancouver Island/Esperanza Canyon-Nootka Island  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	SET	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
			<u>TIME (min)</u>					
P01	08/08/88	1800	120	49 40.78	127 28.67	49 41.82	127 20.10	703,760
S01		1900	120	49 43.49	127 25.08	49 42.89	127 14.94	703,760
P02		2000	120	49 41.82	127 20.10	49 43.41	127 09.95	648,200
S02		2100	120	49 42.89	127 14.94	49 43.77	127 05.45	666,720
<u>SUBTOTAL</u>			8.0 (hours)					

Table 1: (cont'd)

TRANSECT T13

AREA - West Coast of Vancouver Island/Nootka Island-Esperanza Canyon  
(Course heading 225 - 180 - 090)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	08/08/88	2200	120	49 41.82	127 20.10	49 41.15	127 05.45	629,680
S01		2300	75	49 43.77	127 05.45	49 40.59	127 09.57	405,125
S02	09/08/88	0015	45	49 40.59	127 09.57	49 35.35	127 10.74	256,965
P02		0130	30	49 37.39	127 10.75	49 35.18	127 11.00	166,680
S03		0200	30	49 35.18	127 11.00	49 33.49	127 11.33	152,790
P03		0300	70	49 32.55	127 10.79	49 32.28	127 03.55	367,313
S04		0400	60	49 32.35	127 04.50	49 32.05	126 58.69	342,620
P04		0515	60	49 32.14	126 57.67	49 32.40	126 51.46	324,100
S05		0630	60	49 32.36	126 49.96	49 32.57	126 43.59	351,880
P05		0615	90	49 32.40	126 51.46	49 32.57	126 43.59	513,930

SUBTOTAL 10.7 (hours)

TRANSECT T14

AREA - West Coast of Vancouver Island/Esperanza Canyon-Nootka Sound  
(Course heading 210 - 294)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	09/08/88	0750	70	49 32.57	126 43.59	49 28.91	126 43.16	388,920
P02		0900	60	49 28.91	126 43.16	49 29.84	126 45.84	342,620
P03		1000	60	49 29.84	126 45.84	49 22.94	126 48.38	351,880
P04		1100	60	49 22.94	126 48.38	49 20.54	126 51.57	277,800

SUBTOTAL 4.2 (hours)

TRANSECT T15

AREA - West Coast of Vancouver Island/Nootka Sound-Clayoquot Sound  
(Course heading 140 - 105 - 305)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
S01	10/08/88	1045	120	49 25.32	126 46.57	49 17.34	126 41.13	592,640
S02		1245	60	49 17.34	126 41.13	49 15.28	126 37.47	259,280
S03		1345	75	49 15.28	126 37.47	49 13.41	126 32.80	370,400
P01		1415	105	49 14.39	126 36.03	49 12.50	126 28.30	518,560
S04		1500	120	49 13.41	126 32.80	49 11.76	126 23.62	629,680
P02		1600	120	49 12.50	126 28.30	49 10.70	126 18.94	629,680
S05		1700	120	49 11.76	126 23.62	49 09.93	126 13.91	648,200
P03		1800	120	49 10.70	126 18.94	49 09.14	126 08.86	648,200
P04		2000	60	49 09.14	126 08.86	49 07.97	126 05.02	212,980
S06		1900	150	49 09.93	126 13.91	49 08.00	126 09.00	601,900

SUBTOTAL 17.5 (hours)

OVERALL TOTAL 170.5 (hours)



Table 2 - 1990 set information.

TRANSECT T01

AREA - Queen Charlotte Sound  
(Course heading 072)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	SET	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
			<u>TIME (min)</u>					
P01	07/09/90	0300	60	50 46.71	129 40.90	50 47.90	129 36.10	333,360
S01		0310	60	50 46.71	129 40.90	50 47.90	129 36.10	333,360
P02		0400	60	50 47.90	129 36.10	50 49.00	129 30.70	324,100
S02		0410	60	50 47.90	129 36.10	50 49.00	129 30.70	324,100
P03		0500	60	50 49.00	129 30.70	50 50.30	129 26.10	314,840
S03		0510	60	50 49.00	129 30.70	50 50.30	129 26.10	314,840
P04		0600	60	50 50.30	129 26.10	50 51.30	129 21.20	324,100
S04		0610	60	50 50.30	129 26.10	50 51.30	129 21.20	324,100
P05		0700	60	50 51.30	129 21.20	50 51.60	129 17.51	361,140
S05		0710	60	50 51.30	129 21.20	50 51.60	129 17.51	361,140
P06		0800	60	50 51.60	129 17.51	50 53.32	129 14.80	314,840
S06		0810	60	50 51.60	129 17.51	50 53.32	129 14.80	314,840
P07		0900	60	50 53.32	129 14.80	50 53.40	129 10.30	351,880
S07		0910	60	50 53.32	129 14.80	50 53.40	129 10.30	351,880
P08		1000	60	50 53.40	129 10.30	50 55.20	129 03.40	342,620
S08		1010	60	50 53.40	129 10.30	50 55.20	129 03.40	342,620
P09		1100	60	50 55.20	129 03.40	50 56.70	128 57.40	342,620
S09		1110	60	50 55.20	129 03.40	50 56.70	128 57.40	342,620
P10		1200	60	50 56.70	128 57.40	50 57.90	128 50.62	342,620
S10		1210	60	50 56.70	128 57.40	50 57.90	128 50.62	342,620
P11		1300	60	50 57.90	128 50.62	50 59.40	128 43.60	324,100
S11		1310	60	50 57.90	128 50.62	50 59.40	128 43.60	324,100
P12		1400	60	50 59.40	128 43.60	51 00.70	128 38.00	333,360
S12		1410	60	50 59.40	128 43.60	51 00.70	128 38.00	333,360
P13		1500	60	51 00.70	128 38.00	51 01.70	128 32.80	324,100
S13		1510	60	51 00.70	128 38.00	51 01.70	128 32.80	324,100
P14		1600	60	51 01.70	128 32.80	51 02.80	128 27.70	324,100
S14		1610	60	51 01.70	128 32.80	51 02.80	128 27.70	324,100
P15		1700	60	51 02.80	128 27.70	51 03.00	128 23.30	333,360
S15		1710	60	51 02.80	128 27.70	51 03.00	128 23.30	333,360
P16		1800	60	51 03.00	128 23.30	51 04.90	128 19.70	324,100
S16		1810	60	51 03.00	128 23.30	51 04.90	128 19.70	324,100
P17		1900	60	51 04.90	128 19.70	51 05.60	128 15.70	324,100
S17		1910	60	51 04.90	128 19.70	51 05.60	128 15.70	324,100
P18		2000	60	51 05.60	128 15.70	51 06.40	128 12.80	351,880
S18		2010	60	51 05.60	128 15.70	51 06.40	128 12.80	351,880
P19		2100	60	51 06.40	128 12.80	51 07.20	128 08.60	333,360
S19		2110	60	51 06.40	128 12.80	51 07.20	128 08.60	333,360
P20		2200	60	51 07.20	128 08.60	51 08.00	128 03.70	351,880
S20		2210	60	51 07.20	128 08.60	51 08.00	128 03.70	351,880
P21		2300	60	51 08.00	128 03.70	51 09.00	127 58.10	342,620
S21		2310	60	51 08.00	128 03.70	51 09.00	127 58.10	342,620
P22	08/09/90	0000	60	51 09.00	127 58.10	51 09.85	127 50.90	324,100
S22		0010	60	51 09.00	127 58.10	51 09.85	127 50.90	324,100

SUBTOTAL

44.0 (hours)

Table 2: (cont'd)

TRANSECT T02

AREA - Queen Charlotte Sound  
(Course heading 251)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	08/09/90	0525	35	51 28.42	128 10.66	51 27.30	128 14.46	333,360
S01				- Net set with codend open -				
P02		0600	60	51 27.30	128 14.46	51 25.95	128 19.84	324,100
S02		0545	85	51 27.50	128 13.40	51 25.95	128 19.84	324,100
P03		0700	60	51 25.95	128 19.84	51 24.90	128 25.30	324,100
S03		0710	60	51 25.95	128 19.84	51 24.90	128 25.30	324,100
P04		0800	60	51 24.90	128 25.30	51 23.95	128 30.60	324,100
S04		0810	60	51 24.90	128 25.30	51 23.95	128 30.60	324,100
P05		0900	60	51 23.95	128 30.60	51 22.67	128 35.92	333,360
S05		0910	60	51 23.95	128 30.60	51 22.67	128 35.92	333,360
P06		1000	60	51 22.67	128 35.92	51 21.07	128 41.13	324,100
S06		1010	60	51 22.67	128 35.92	51 21.07	128 41.13	324,100
P07		1100	60	51 21.07	128 41.13	51 19.98	128 47.65	324,100
S07		1110	60	51 21.07	128 41.13	51 19.98	128 47.65	324,100
P08		1200	60	51 19.98	128 47.65	51 18.87	128 52.04	324,100
S08		1210	60	51 19.98	128 47.65	51 18.87	128 52.04	324,100
P09		1300	60	51 18.87	128 52.04	51 17.75	128 56.90	324,100
S09		1310	60	51 18.87	128 52.04	51 17.75	128 56.90	324,100
P10		1400	60	51 17.75	128 56.90	51 16.70	129 01.64	324,100
S10		1410	60	51 17.75	128 56.90	51 16.70	129 01.64	324,100
P11		1500	60	51 16.70	129 01.64	51 15.57	129 06.39	333,360
S11		1510	60	51 16.70	129 01.64	51 15.57	129 06.39	333,360
P12		1600	60	51 15.57	129 06.39	51 14.21	129 11.91	379,660
S12		1610	60	51 15.57	129 06.39	51 14.21	129 11.91	379,660
P13		1700	60	51 14.21	129 11.91	51 13.19	129 17.42	342,620
S13		1710	60	51 14.21	129 11.91	51 13.19	129 17.42	342,620
P14		1800	60	51 13.19	129 17.42	51 11.88	129 23.19	333,360
S14		1810	60	51 13.19	129 17.42	51 11.88	129 23.19	333,360
P15		1900	60	51 11.88	129 23.19	51 10.59	129 27.28	314,840
S15		1910	60	51 11.88	129 23.19	51 10.59	129 27.28	314,840
P16		2000	60	51 10.59	129 27.28	51 09.82	129 32.02	324,100
S16		2010	60	51 10.59	129 27.28	51 09.82	129 32.02	324,100
P17		2100	60	51 09.82	129 32.02	51 08.41	129 38.11	333,360
S17		2110	60	51 09.82	129 32.02	51 08.41	129 38.11	333,360
P18		2200	60	51 08.41	129 38.11	51 07.40	129 42.57	333,360
S18		2210	60	51 08.41	129 38.11	51 07.40	129 42.57	333,360
P19		2300	60	51 07.40	129 42.57	51 06.30	129 47.23	324,100
S19		2310	60	51 07.40	129 42.57	51 06.30	129 47.23	324,100
P20	09/09/90	0000	60	51 06.30	129 47.23	51 05.07	129 52.54	333,360
S20		0010	60	51 06.30	129 47.23	51 05.07	129 52.54	333,360
P21		0100	60	51 05.07	129 52.54	51 03.88	129 57.51	333,360
S21		0110	60	51 05.07	129 52.54	51 03.88	129 57.51	333,360
P22		0200	60	51 03.88	129 57.51	51 02.80	130 02.10	324,100
S22		0210	60	51 03.88	129 57.51	51 02.80	130 02.10	324,100
P23		0300	60	51 02.80	130 02.10	51 01.69	130 07.03	333,360
S23		0310	60	51 02.80	130 02.10	51 01.69	130 07.03	333,360
P24		0400	60	51 01.69	130 07.03	51 00.43	130 12.07	333,360
S24		0410	60	51 01.69	130 07.03	51 00.43	130 12.07	333,360

SUBTOTAL

47.0 (hours)

**Table 2:** (cont'd)

TRANSECT T03  
AREA - Queen Charlotte Sound  
 (Course heading 072)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	09/09/90	1000	60	51 17.20	130 34.50	51 18.40	130 29.11	324,100
S01		0950	80	51 17.20	130 34.50	51 18.40	130 29.11	432,133
P02		1100	60	51 18.40	130 29.11	51 19.76	130 23.48	361,140
S02		1110	60	51 18.40	130 29.11	51 19.76	130 23.48	361,140
P03		1200	60	51 19.76	130 23.48	51 21.35	130 17.03	324,100
S03		1210	60	51 19.76	130 23.48	51 21.35	130 17.03	324,100
P04		1300	60	51 21.35	130 17.03	51 22.50	130 10.88	333,360
S04		1310	60	51 21.35	130 17.03	51 22.50	130 10.88	333,360
P05		1400	60	51 22.50	130 10.88	51 23.97	130 04.35	342,620
S05		1410	60	51 22.50	130 10.88	51 23.97	130 04.35	342,620
P05		1400	60	51 22.50	130 10.88	51 23.97	130 04.35	342,620
S05		1410	60	51 22.50	130 10.88	51 23.97	130 04.35	342,620
P06		1500	60	51 23.97	130 04.35	51 25.20	129 58.89	333,360
S06		1510	60	51 23.97	130 04.35	51 25.20	129 58.89	333,360
P07		1600	60	51 25.20	129 58.89	51 26.23	129 53.20	342,620
S07		1610	60	51 25.20	129 58.89	51 26.23	129 53.20	342,620
P08		1700	60	51 26.23	129 53.20	51 27.49	129 48.26	333,360
S08		1710	60	51 26.23	129 53.20	51 27.49	129 48.26	333,360
P09		1800	60	51 27.49	129 48.26	51 28.60	129 43.85	314,840
S09		1810	60	51 27.49	129 48.26	51 28.60	129 43.85	314,840
P10		1900	60	51 28.60	129 43.85	51 29.43	129 39.90	314,840
S10		1910	60	51 28.60	129 43.85	51 29.43	129 39.90	314,840
P11		2000	60	51 29.43	129 39.90	51 30.27	129 36.63	324,100
S11		2010	60	51 29.43	129 39.90	51 30.27	129 36.63	324,100
P12		2100	60	51 30.27	129 36.63	51 31.25	129 32.51	333,360
S12		2110	60	51 30.27	129 36.63	51 31.25	129 32.51	333,360
P13		2200	60	51 31.25	129 32.51	51 32.27	129 28.00	333,360
S13		2210	60	51 31.25	129 32.51	51 32.27	129 28.00	333,360
P14		2300	60	51 32.27	129 28.00	51 33.16	129 23.21	351,880
S14		2310	60	51 32.27	129 28.00	51 33.16	129 23.21	351,880
P15	10/09/90	0000	60	51 33.16	129 23.21	51 34.67	129 16.28	324,100
S15		0010	60	51 33.16	129 23.21	51 34.67	129 16.28	324,100
P16		0100	60	51 34.67	129 16.28	51 35.85	129 10.38	333,360
S16		0110	60	51 34.67	129 16.28	51 35.85	129 10.38	333,360
P17		0200	60	51 35.85	129 10.38	51 37.55	129 02.01	324,100
S17		0210	60	51 35.85	129 10.38	51 37.55	129 02.01	324,100
P18		0300	60	51 37.55	129 02.01	51 39.38	128 54.28	333,360
S18		0310	60	51 37.55	129 02.01	51 39.38	128 54.28	333,360
P19		0400	60	51 39.38	128 54.28	51 40.77	128 47.85	314,840
S19		0410	60	51 39.38	128 54.28	51 40.77	128 47.85	314,840
P20		0500	60	51 40.77	128 47.85	51 41.88	128 42.36	342,620
S20		0510	60	51 40.77	128 47.85	51 41.88	128 42.36	342,620
P21		0600	60	51 41.88	128 42.36	51 43.23	128 36.81	314,840
S21		0610	60	51 41.88	128 42.36	51 43.23	128 36.81	314,840
P22		0700	60	51 43.23	128 36.81	51 44.70	128 31.40	333,360
S22		0710	60	51 43.23	128 36.81	51 44.70	128 31.40	333,360
P23		0800	60	51 44.70	128 31.40	51 45.64	128 26.29	324,100
S23		0810	60	51 44.70	128 31.40	51 45.64	128 26.29	324,100
P24		0900	60	51 45.64	128 26.29	51 46.98	128 21.10	333,360
S24		0910	60	51 45.64	128 26.29	51 46.98	128 21.10	333,360
P25		1000	35	51 46.98	128 21.10	51 47.62	128 18.05	124,238
S25		1010	30	51 46.98	128 21.10	51 47.62	128 18.05	106,490
<u>SUBTOTAL</u>			<u>24.8</u>	(hours)				

**Table 2:** (cont'd)

**TRANSECT T04**

**AREA - Queen Charlotte Sound**  
(Course heading 250)

SET	DATE	START TIME	SET TIME (min)	START LATITUDE	START LONGITUDE	END LATITUDE	END LONGITUDE	VOLUME SAMPLED (m3)
P01	10/09/90	1520	40	52 04.15	128 36.69	52 03.31	128 40.05	228,413
S01		1530	40	52 03.85	128 37.80	52 03.31	128 40.05	228,413
P02		1600	60	52 03.31	128 40.05	52 02.02	128 44.54	333,360
S02		1610	60	52 03.31	128 40.05	52 02.02	128 44.54	333,360
P03		1700	60	52 02.02	128 44.54	52 01.00	128 48.73	333,360
S03		1710	60	52 02.02	128 44.54	52 01.00	128 48.73	333,360
P04		1800	60	52 01.00	128 48.73	51 59.78	128 53.78	333,360
S04		1810	60	52 01.00	128 48.73	51 59.78	128 53.78	333,360
P05		1900	60	51 59.78	128 53.78	51 59.03	128 59.28	333,360
S05		1910	60	51 59.78	128 53.78	51 59.03	128 59.28	333,360
P06		2000	60	51 59.03	128 59.28	51 58.19	129 04.89	333,360
S06		2010	60	51 59.03	128 59.28	51 58.19	129 04.89	333,360
P07		2100	60	51 58.19	129 04.89	51 57.01	129 10.17	333,360
S07		2110	60	51 58.19	129 04.89	51 57.01	129 10.17	333,360
P08		2200	60	51 57.01	129 10.17	51 55.68	129 16.03	324,100
S08		2210	60	51 57.01	129 10.17	51 55.68	129 16.03	324,100
P09		2300	60	51 55.68	129 16.03	51 54.42	129 21.39	342,620
S09		2310	60	51 55.68	129 16.03	51 54.42	129 21.39	342,620
P10	11/09/90	0000	60	51 54.42	129 21.39	51 53.31	129 26.20	296,320
S10		0010	60	51 54.42	129 21.39	51 53.31	129 26.20	296,320
P11		0100	60	51 53.31	129 26.20	51 52.01	129 31.58	305,580
S11		0110	60	51 53.31	129 26.20	51 52.01	129 31.58	305,580
P12		0200	60	51 52.01	129 31.58	51 51.04	129 37.55	305,580
S12		0210	60	51 52.01	129 31.58	51 51.04	129 37.55	305,580
P13		0300	60	51 51.04	129 37.55	51 49.66	129 42.34	259,280
S13		0310	60	51 51.04	129 37.55	51 49.66	129 42.34	259,280
P14		0400	60	51 49.66	129 42.34	51 48.86	129 47.30	268,540
S14		0410	60	51 49.66	129 42.34	51 48.86	129 47.30	268,540
P15		0500	60	51 48.86	129 47.30	51 47.81	129 51.74	259,280
S15		0510	60	51 48.86	129 47.30	51 47.81	129 51.74	259,280
P16		0600	60	51 47.81	129 51.74	51 46.66	129 56.50	268,540
S16		0610	60	51 47.81	129 51.74	51 46.66	129 56.50	268,540
P17		0700	60	51 46.66	129 56.50	51 45.40	130 00.80	296,320
S17		0710	60	51 46.66	129 56.50	51 45.40	130 00.80	296,320
P18		0800	60	51 45.40	130 00.80	51 44.57	130 05.97	324,100
S18		0810	60	51 45.40	130 00.80	51 44.57	130 05.97	324,100
P19		0900	60	51 44.57	130 05.97	51 43.35	130 11.00	333,360
S19		0910	60	51 44.57	130 05.97	51 43.35	130 11.00	333,360
P20		1000	60	51 43.35	130 11.00	51 42.11	130 16.49	324,100
S20		1010	60	51 43.35	130 11.00	51 42.11	130 16.49	324,100
P21		1100	60	51 42.11	130 16.49	51 41.07	130 22.28	324,100
S21		1110	60	51 42.11	130 16.49	51 41.07	130 22.28	324,100
P22		1200	60	51 41.07	130 22.28	51 39.64	130 27.32	305,580
S22		1210	60	51 41.07	130 22.28	51 39.64	130 27.32	305,580
P23		1300	60	51 39.64	130 27.32	51 38.63	130 32.24	342,620
S23		1310	60	51 39.64	130 27.32	51 38.63	130 32.24	342,620
P24		1400	60	51 38.63	130 32.24	51 37.38	130 37.26	342,620
S24		1410	60	51 38.63	130 32.24	51 37.38	130 37.26	342,620
P25		1500	60	51 37.38	130 37.26	51 36.47	130 42.11	333,360
S25		1510	60	51 37.38	130 37.26	51 36.47	130 42.11	333,360
P26		1600	60	51 36.47	130 42.11	51 35.20	130 47.80	314,840
S26		1610	60	51 36.47	130 42.11	51 35.20	130 47.80	314,840

**Table 2:** (cont'd)

TRANSECT T04 (cont'd.)  
AREA - Queen Charlotte Sound  
 (Course heading 250)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P27	11/09/90	1700	60	51 35.20	130 47.80	51 34.33	130 52.60	287,060
S27		1710	60	51 35.20	130 47.80	51 34.33	130 52.60	287,060
P28		1800	60	51 34.33	130 52.60	51 33.30	130 57.22	287,060
S28		1810	60	51 34.33	130 52.60	51 33.30	130 57.22	287,060
P29		1900	60	51 33.30	130 57.22	51 32.24	131 01.84	287,060
S29		1910	60	51 33.30	130 57.22	51 32.24	131 01.84	287,060
<u>SUBTOTAL</u>			57.25 (hours)					

TRANSECT T05  
AREA - West Coast of the Queen Charlotte Islands  
 (Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	12/09/90			- Net set with codend open -				
S01		0700	60	52 34.20	132 25.50	52 35.00	132 20.90	296,320
P02		0800	60	52 35.00	132 20.90	52 36.16	132 15.68	324,100
S02				- Net set with codend open -				
P03		0900	60	52 36.16	132 15.68	52 38.20	132 08.60	314,840
S03				- Net set with codend open -				
P04		1000	60	52 38.20	132 08.60	52 40.70	132 05.50	314,840
S04		1010	60	52 38.20	132 08.60	52 40.70	132 05.50	314,840
P05		1100	30	52 40.70	132 05.50	52 41.00	132 02.50	162,050
S05		1110	30	52 40.70	132 05.50	52 41.00	132 02.50	162,050
<u>SUBTOTAL</u>			6.0 (hours)					

TRANSECT T06  
AREA - West Coast of the Queen Charlotte Islands  
 (Course heading 072)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	12/09/90	1700	60	52 18.00	132 08.50	52 19.29	132 03.74	305,580
S01		1710	60	52 18.00	132 08.50	52 19.29	132 03.74	305,580
P02		1800	60	52 19.29	132 03.74	52 20.63	131 59.11	314,840
S02		1810	60	52 19.29	132 03.74	52 20.63	131 59.11	314,840
P03		1900	60	52 20.63	131 59.11	52 21.84	131 53.73	314,840
S03				- Net set with codend open -				
P04		2000	60	52 21.84	131 53.73	52 22.31	131 50.55	314,840
S04		2010	60	52 21.84	131 53.73	52 22.31	131 50.55	314,840
P05		2100	60	52 22.31	131 50.55	52 22.92	131 45.67	324,100
S05		2110	60	52 22.31	131 50.55	52 22.92	131 45.67	324,100
P06		2200	60	52 22.92	131 45.67	52 23.71	131 40.44	324,100
S06		2210	60	52 22.92	131 45.67	52 23.71	131 40.44	324,100
<u>SUBTOTAL</u>			11.0 (hours)					

**Table 2: (cont'd)**

**TRANSECT T07**

**AREA** - West Coast of the Queen Charlotte Islands  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	13/09/90	0330	60	52 02.00	131 50.80	52 03.24	131 46.16	333,360
S01		0340	60	52 02.00	131 50.80	52 03.24	131 46.16	333,360
P02		0430	60	52 03.24	131 46.16	52 04.68	131 39.32	333,360
S02		0440	60	52 03.24	131 46.16	52 04.68	131 39.32	333,360
P03		0530	60	52 04.68	131 39.32	52 05.91	131 33.62	324,100
S03		0540	60	52 04.68	131 39.32	52 05.91	131 33.62	324,100
P04		0630	60	52 05.91	131 33.62	52 07.60	131 27.44	342,620
S04		0640	60	52 05.91	131 33.62	52 07.60	131 27.44	342,620
P05		0730	60	52 07.60	131 27.44	52 08.84	131 23.34	314,840
S05		0740	60	52 07.60	131 27.44	52 08.84	131 23.34	314,840

**SUBTOTAL** 10.0 (hours)

**TRANSECT T08**

**AREA** - West Coast of the Queen Charlotte Islands - Cape St. James -  
Queen Charlotte Sound  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	13/09/90	2000	60	51 46.80	131 27.50	51 47.86	131 21.05	333,360
S01		2010	60	51 46.80	131 27.50	51 47.86	131 21.05	333,360
P02		2100	60	51 47.86	131 21.05	51 49.05	131 15.15	333,360
S02		2110	60	51 47.86	131 21.05	51 49.05	131 15.15	333,360
P03		2200	60	51 49.05	131 15.15	51 50.18	131 09.47	333,360
S03		2210	60	51 49.05	131 15.15	51 50.18	131 09.47	333,360
P04		2300	60	51 50.18	131 09.47	51 50.91	131 05.98	342,620
S04		2310	60	51 50.18	131 09.47	51 50.91	131 05.98	342,620
P05	14/09/90	0000	60	51 50.91	131 05.98	51 52.08	131 03.39	333,360
S05		0010	60	51 50.91	131 05.98	51 52.08	131 03.39	333,360
P06				- Codend split open -				
S06		0110	60	51 52.08	131 03.39	51 52.78	131 00.68	370,400
P07		0200	60	51 52.78	131 00.68	51 53.25	130 59.09	370,400
S07		0210	60	51 52.78	131 00.68	51 53.25	130 59.09	370,400
P08		0300	60	51 53.25	130 59.09	51 53.63	130 56.16	379,660
S08		0310	60	51 53.25	130 59.09	51 53.63	130 56.16	379,660
P09		0400	60	51 53.63	130 56.16	51 54.93	130 51.08	361,140
S09		0410	60	51 53.63	130 56.16	51 54.93	130 51.08	361,140
P10		0500	60	51 54.93	130 51.08	51 56.45	130 46.84	305,580
S10		0510	60	51 54.93	130 51.08	51 56.45	130 46.84	305,580
P11		0600	60	51 56.45	130 46.84	51 57.52	130 40.62	324,100
S11		0610	60	51 56.45	130 46.84	51 57.52	130 40.62	324,100
P12		0700	60	51 57.52	130 40.62	51 58.87	130 34.83	333,360
S12		0710	60	51 57.52	130 40.62	51 58.87	130 34.83	333,360
P13		0800	60	51 58.87	130 34.83	52 00.35	130 29.25	314,840
S13		0810	60	51 58.87	130 34.83	52 00.35	130 29.25	314,840
P14		0900	60	52 00.35	130 29.25	52 01.00	130 24.17	324,100
S14		0910	60	52 00.35	130 29.25	52 01.00	130 24.17	324,100
P15		1000	60	52 01.00	130 24.17	52 02.09	130 18.09	324,100
S15		1010	60	52 01.00	130 24.17	52 02.09	130 18.09	324,100

Table 2: (cont'd)

TRANSECT T08 (cont'd.)

AREA - West Coast of the Queen Charlotte Islands - Cape St. James -  
Queen Charlotte Sound  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P16	14/09/90			- Log caught in net - emptied catch & reset -				
S16				- Not hauled because of port net problems -				
P17		1220	40	52 03.10	130 15.20	52 03.84	130 10.98	203,720
S17		1110	120	52 02.09	130 18.09	52 03.84	130 10.98	648,200
P18		1300	60	52 03.84	130 10.98	52 04.95	130 05.35	324,100
S18		1310	60	52 03.84	130 10.98	52 04.95	130 05.35	324,100
P19		1400	60	52 04.95	130 05.35	52 06.12	130 00.68	314,840
S19		1410	60	52 04.95	130 05.35	52 06.12	130 00.68	314,840
P20		1500	60	52 06.12	130 00.68	52 07.24	129 55.39	333,360
S20		1510	60	52 06.12	130 00.68	52 07.24	129 55.39	333,360
P21		1600	60	52 07.24	129 55.39	52 08.52	129 49.91	342,620
S21		1610	60	52 07.24	129 55.39	52 08.52	129 49.91	342,620
P22		1700	60	52 08.52	129 49.91	52 09.42	129 44.56	314,840
S22		1710	60	52 08.52	129 49.91	52 09.42	129 44.56	314,840
P23		1800	60	52 09.42	129 44.56	52 10.49	129 38.84	305,580
S23		1810	60	52 09.42	129 44.56	52 10.49	129 38.84	305,580
P24		1900	60	52 10.49	129 38.84	52 11.72	129 33.51	324,100
S24		1910	60	52 10.49	129 38.84	52 11.72	129 33.51	324,100
P25		2000	60	52 11.72	129 33.51	52 13.63	129 28.14	324,100
S25		2010	60	52 11.72	129 33.51	52 13.63	129 28.14	324,100
P26		2100	60	52 13.63	129 28.14	52 14.49	129 23.25	314,840
S26		2110	60	52 13.63	129 28.14	52 14.49	129 23.25	314,840
P27		2200	60	52 14.49	129 23.25	52 15.65	129 17.98	324,100
S27		2210	60	52 14.49	129 23.25	52 15.65	129 17.98	324,100
P28		2300	60	52 15.65	129 17.98	52 16.76	129 12.34	333,360
S28		2310	60	52 15.65	129 17.98	52 16.76	129 12.34	333,360
P29	15/09/90	0000	60	52 16.76	129 12.34	52 17.88	129 06.85	324,100
S29		0010	60	52 16.76	129 12.34	52 17.88	129 06.85	324,100
P30		0100	60	52 17.88	129 06.85	52 18.95	129 01.87	333,360
S30		0110	60	52 17.88	129 06.85	52 18.95	129 01.87	333,360
<u>SUBTOTAL</u>			60.0	(hours)				

Table 2: (cont'd)

TRANSECT T09

AREA - Hecate Strait  
(Course heading 252)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	15/09/90	0700	60	52 34.00	129 33.30	52 32.83	129 38.62	324,100
S01		0715	55	52 34.00	129 33.30	52 32.83	129 38.62	297,092
P02		0800	60	52 32.83	129 38.62	52 31.70	129 44.56	333,360
S02		0810	60	52 32.83	129 38.62	52 31.70	129 44.56	333,360
P03		0900	60	52 31.70	129 44.56	52 30.61	129 49.69	333,360
S03		0910	60	52 31.70	129 44.56	52 30.61	129 49.69	333,360
P04		1000	60	52 30.61	129 49.69	52 29.32	129 55.27	333,360
S04		1010	60	52 30.61	129 49.69	52 29.32	129 55.27	333,360
P05		1100	60	52 29.32	129 55.27	52 28.04	130 00.66	333,360
S05		1110	60	52 29.32	129 55.27	52 28.04	130 00.66	333,360
P06		1200	60	52 28.04	130 00.66	52 26.91	130 06.55	333,360
S06		1210	60	52 28.04	130 00.66	52 26.91	130 06.55	333,360
P07		1300	60	52 26.91	130 06.55	52 25.59	130 11.92	333,360
S07		1310	60	52 26.91	130 06.55	52 25.59	130 11.92	333,360
P08		1400	60	52 25.59	130 11.92	52 24.45	130 16.18	333,360
S08		1410	60	52 25.59	130 11.92	52 24.45	130 16.18	333,360
P09		1500	60	52 24.45	130 16.18	52 23.66	130 20.38	203,720
S09		1510	60	52 24.45	130 16.18	52 23.66	130 20.38	203,720
P10		1600	60	52 23.66	130 20.38	52 22.79	130 25.44	240,760
S10		1610	60	52 23.66	130 20.38	52 22.79	130 25.44	240,760
P11		1700	60	52 22.79	130 25.44	52 21.63	130 30.27	268,540
S11		1710	60	52 22.79	130 25.44	52 21.63	130 30.27	268,540
P12		1800	60	52 21.63	130 30.27	52 20.62	130 35.96	268,540
S12		1810	60	52 21.63	130 30.27	52 20.62	130 35.96	268,540
P13		1900	60	52 20.62	130 35.96	52 19.63	130 41.28	342,620
S13		1910	60	52 20.62	130 35.96	52 19.63	130 41.28	342,620
P14		2000	60	52 19.63	130 41.28	52 18.29	130 46.93	342,620
S14		2010	60	52 19.63	130 41.28	52 18.29	130 46.93	342,620
P15		2100	60	52 18.29	130 46.93	52 16.82	130 53.27	342,620
S15		2110	60	52 18.29	130 46.93	52 16.82	130 53.27	342,620
P16		2200	60	52 16.82	130 53.27	52 15.94	130 59.26	333,360
S16		2210	60	52 16.82	130 53.27	52 15.94	130 59.26	333,360

SUBTOTAL 31.9 (hours)

TRANSECT T10

AREA - West Coast of Vancouver Island  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	16/09/90	1610	50	50 02.90	128 44.80	50 03.90	128 41.06	262,367
S01		1545	85	50 02.75	128 46.22	50 03.90	128 41.06	446,023
P02		1700	60	50 03.90	128 41.06	50 04.80	128 36.89	296,320
S02		1710	60	50 03.90	128 41.06	50 04.80	128 36.89	296,320
P03		1800	60	50 04.80	128 36.89	50 05.84	128 31.96	268,540
S03		1810	60	50 04.80	128 36.89	50 05.84	128 31.96	268,540
P04		1900	60	50 05.84	128 31.96	50 07.06	128 27.78	333,360
S04		1910	60	50 05.84	128 31.96	50 07.06	128 27.78	333,360



Table 2: (cont'd)

TRANSECT T10 (cont'd.)

AREA - West Coast of Vancouver Island  
(Course heading 070)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P05	16/09/90	2000	60	50 07.06	128 27.78	50 08.29	128 22.35	333,360
S05		2010	60	50 07.06	128 27.78	50 08.29	128 22.35	333,360
P06		2100	60	50 08.29	128 22.35	50 09.51	128 16.89	342,620
S06		2110	60	50 08.29	128 22.35	50 09.51	128 16.89	342,620
P07		2200	60	50 09.51	128 16.89	50 11.06	128 11.46	342,620
S07		2210	60	50 09.51	128 16.89	50 11.06	128 11.46	342,100
P08		2300	60	50 11.06	128 11.46	50 12.20	128 06.71	342,100
S08		2310	60	50 11.06	128 11.46	50 12.20	128 06.71	342,100
P09	17/09/90	0000	60	50 12.20	128 06.71	50 13.20	128 02.09	324,100
S09		0010	60	50 12.20	128 06.71	50 13.20	128 02.09	324,100

SUBTOTAL 18.25 (hours)

TRANSECT T11

AREA - West Coast of Vancouver Island  
(Course heading 330)

<u>SET</u>	<u>DATE</u>	<u>START TIME</u>	<u>SET TIME (min)</u>	<u>START LATITUDE</u>	<u>START LONGITUDE</u>	<u>END LATITUDE</u>	<u>END LONGITUDE</u>	<u>VOLUME SAMPLED (m3)</u>
P01	17/09/90	0100	60	50 13.20	128 02.09	50 15.20	128 03.01	324,100
S01		0110	60	50 13.20	128 02.09	50 15.20	128 03.01	324,100
P02		0200	60	50 15.20	128 03.01	50 17.65	128 07.05	342,620
S02				- Net set with codend open -				
P03				- Net set with codend open -				
S03		0310	60	50 17.65	128 07.05	50 21.86	128 11.40	324,100
P04		0400	60	50 21.86	128 11.40	50 24.62	128 13.39	324,100
S04				- Net set with codend open -				
P05		0500	60	50 24.62	128 13.39	50 28.50	128 16.16	324,100
S05		0510	60	50 24.62	128 13.39	50 28.50	128 16.16	324,100
P06		0600	60	50 28.50	128 16.16	50 32.22	128 18.82	296,320
S06		0610	60	50 28.50	128 16.16	50 32.22	128 18.82	296,320
P07		0700	60	50 32.22	128 18.82	50 35.98	128 21.27	314,840
S07		0710	60	50 32.22	128 18.82	50 35.98	128 21.27	314,840

SUBTOTAL 11.0 (hours)

Table 2: (cont'd)

TRANSECT T12

AREA - West Coast of Vancouver Island  
(Course heading 250)

SET	DATE	START TIME	SET	START LATITUDE	START LONGITUDE	END LATITUDE	END LONGITUDE	VOLUME SAMPLED (m3)
			TIME (min)					
P01	17/09/90	0800	60	50 35.98	128 21.27	50 35.13	128 26.67	314,840
S01		0810	60	50 35.98	128 21.27	50 35.13	128 26.67	314,840
P02		0900	60	50 35.13	128 26.67	50 33.55	128 31.89	324,100
S02		0910	60	50 35.13	128 26.67	50 33.55	128 31.89	324,100
P03		1000	60	50 33.55	128 31.89	50 32.56	128 36.21	324,100
S03		1010	60	50 33.55	128 31.89	50 32.56	128 36.21	324,100
P04		1100	60	50 32.56	128 36.21	50 31.38	128 41.80	324,100
S04		1110	60	50 32.56	128 36.21	50 31.38	128 41.80	324,100
P05		1200	60	50 31.38	128 41.80	50 30.19	128 47.28	333,360
S05		1210	60	50 31.38	128 41.80	50 31.19	128 47.28	333,360
P06		1300	60	50 31.19	128 47.28	50 28.85	128 52.24	324,100
S06		1310	60	50 31.19	128 47.28	50 28.85	128 52.24	324,100
P07		1400	60	50 28.85	128 52.24	50 27.62	128 57.05	324,100
S07		1410	60	50 28.85	128 52.24	50 27.62	128 57.05	324,100
P08		1500	60	50 27.62	128 57.05	50 26.90	129 01.20	296,320
S08		1510	60	50 27.62	128 57.05	50 26.90	129 01.20	296,320
P09		1600	60	50 26.90	129 01.20	50 25.97	129 05.04	305,580
S09		1610	60	50 26.90	129 01.20	50 25.97	129 05.04	305,580

SUBTOTAL 17.0 (hours)

TRANSECT T13

AREA - Queen Charlotte Sound/ Triangle Island - Cape Caution  
(Course heading 070 - 131)

SET	DATE	START TIME	SET	START LATITUDE	START LONGITUDE	END LATITUDE	END LONGITUDE	VOLUME SAMPLED (m3)	
			TIME (min)						
P01	18/09/90	1400	60	50 46.91	129 40.00	50 47.67	129 35.15	361,140	
S01		1345	- Codend came open, no set -						
P02		1500	60	50 47.67	129 35.15	50 48.99	129 29.51	333,360	
S02		1510	- Net set with codend open -						
P03		1600	60	50 48.99	129 29.51	50 50.20	129 24.19	351,880	
S03		1610	60	50 48.99	129 29.51	50 50.20	129 24.19	351,880	
P04		1700	60	50 50.20	129 24.19	50 51.54	129 18.69	324,100	
S04		1710	60	50 50.20	129 24.19	50 51.54	129 18.69	324,100	
P05		1800	60	50 51.54	129 18.69	50 52.35	129 15.46	287,060	
S05		1810	60	50 51.54	129 18.69	50 52.35	129 15.46	287,060	
P06		1900	60	50 52.35	129 15.46	50 53.77	129 10.37	351,880	
S06		1910	60	50 52.35	129 15.46	50 53.77	129 10.37	351,880	
P07		2000	60	50 53.77	129 10.37	50 54.77	129 03.86	351,880	
S07		2010	60	50 53.77	129 10.37	50 54.77	129 03.86	351,880	
P08		2100	60	50 54.77	129 03.86	50 55.88	128 57.50	342,620	
S08		2110	60	50 54.77	129 03.86	50 55.88	128 57.50	342,620	
P09		2200	60	50 55.88	128 57.50	50 57.23	128 51.98	333,360	
S09		2210	60	50 55.88	128 57.50	50 57.23	128 51.98	333,360	
P10		2300	60	50 57.23	128 51.98	50 58.44	128 45.71	324,100	
S10		2310	60	50 57.23	128 51.98	50 58.44	128 45.71	324,100	
P11	19/09/90	0000	60	50 58.44	128 45.71	50 59.56	128 40.05	351,880	
S11		0010	60	50 58.44	128 45.71	50 59.56	128 40.05	351,880	

Table 2: (cont'd)

TRANSECT T13 (cont'd.)

AREA - Queen Charlotte Sound/ Triangle Island - Cape Caution  
(Course heading 070 - 131)

<u>SET</u>	<u>DATE</u>	<u>SET</u>		<u>START</u> <u>LATITUDE</u>	<u>START</u> <u>LONGITUDE</u>	<u>END</u> <u>LATITUDE</u>	<u>END</u> <u>LONGITUDE</u>	<u>VOLUME</u> <u>SAMPLED (m3)</u>
		<u>START</u> <u>TIME</u>	<u>TIME</u> <u>(min)</u>					
P12	19/09/90	0100	60	50 59.56	128 40.05	51 00.87	128 34.39	370,400
S12		0110	60	50 59.56	128 40.05	51 00.87	128 34.39	370,400
P13		0200		- Net set with codend open -				
S13		0210	60	51 00.87	128 34.39	51 02.09	128 29.06	351,880
P14		0300	60	51 02.09	128 29.06	51 03.80	128 23.00	314,840
S14		0310		- Net set with codend open -				
P15		0415	45	51 03.92	128 21.98	51 04.28	128 18.92	229,185
S15		0410		- Net set with codend open -				
P16		0500		- Net set with codend open -				
S16		0510	60	51 04.28	128 18.92	51 05.60	128 14.34	342,620
P17		0600	60	51 05.60	128 14.34	51 06.64	128 09.59	333,360
S17		0610		- Net set with codend open -				
P18		0700	60	51 06.64	128 09.59	51 07.35	128 04.69	361,140
S18		0710	60	51 06.64	128 09.59	51 07.35	128 04.69	361,140
P19		0800	60	51 07.35	128 04.69	51 08.67	127 59.00	342,620
S19		0810	60	51 07.35	128 04.69	51 08.67	127 59.00	342,620
P20		0900	60	51 08.67	127 59.00	51 10.05	127 53.19	342,620
S20		0910	60	51 08.67	127 59.00	51 10.05	127 53.19	342,620
P21		1000	60	51 10.05	127 53.19	51 07.92	127 48.47	351,880
S21		1010	60	51 10.05	127 53.19	51 07.92	127 48.47	351,880
P22		1100	60	51 07.92	127 48.47	51 05.31	127 43.70	342,620
S22		1110	60	51 07.92	127 48.47	51 05.31	127 43.70	342,620

SUBTOTAL

37.75 (hours)

**SPECIES LIST**

Sockeye Salmon  
Chinook Salmon  
Coho Salmon  
Chum Salmon  
Pink Salmon  
Pacific Herring  
Pacific Saury  
Sablefish  
Steelhead trout  
Blue Shark  
Slender Snipe Eel  
Ribbon Barracudina  
California Headlightfish  
Bigfin Lanternfish  
Blue Lanternfish  
Pacific Hake  
Pacific Tomcod  
Walleye Pollock  
Threespine Stickleback  
Bay Pipefish  
Wolf-eel  
Prowfish  
Pacific Sand Lance  
Chub Mackerel  
Medusafish  
Ragfish  
Yellowtail Rockfish  
Black Rockfish  
Pygmy Rockfish  
Northern Spearnose Poacher  
Spotted Snailfish  
Arrowtooth Flounder  
Curlfin Sole  
Ocean Sunfish

Unidentified Fish  
Unidentified Juv. Cod  
Unidentified Juv. Rockfish  
Unidentified Juv. Faldfish  
Unidentified Juv. Fish  
Unidentified Larval Fish  
Squid

Shrimp  
Euphausiids

Oncorhynchus nerka  
Oncorhynchus tshawytscha  
Oncorhynchus kisutch  
Oncorhynchus keta  
Oncorhynchus gorbusha  
Clupea harengus pallasii  
Cololabis saira  
Anoplopoma fimbria  
Salmo gairdneri  
Prionace glauca  
Nemichthys scolopaceus  
Notolepis rissoi rissoi  
Diaphus theta  
Symbolophorus californiense  
Tarletonbeania crenularis  
Merluccius productus  
Microgadus proximus  
Theragra chalcogramma  
Gasterosteus aculeatus  
Syngnathus griseolineatus  
Anarrhichthys ocellatus  
Zaprora silenus  
Ammodytes hexapterus  
Scomber japonicus  
Icichthys lockingtoni  
Icosteus aenigmaticus  
Sebastes flavidus  
Sebastes melanops  
Sebastes wilsoni  
Agonopsis emmelane  
Liparis callyodon  
Atheresthes stomias  
Pleuronichthys decurrens  
Mola mola

Loligo opalescence  
Ommastrephes bartrami

**Table 3 - 1988 catch by set**

**N.B.** Numbers in ( ) represents adult salmon catch.  
 Squid catch without notation is Loligo opalescence with length > 60 mm.  
 Squid catch followed by (j) is Loligo opalescence with length < 60 mm.  
 Squid catch followed by (G) is Ommastrephes bartrami.

**TRANSECT T01**

**AREA** - Queen Charlotte Sound/Cape Caution-Triangle Island  
 (Course heading 248 - 270 - 192)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS	
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK						
S01	03/08/88	1730	60	0	0	0	0	0	0	0	0	0		
P01		1800	60	0	0	0	0	1	0	0	2	0	1 Steelhead Trout 1 Black Rockfish	
S02		1830	60	1	0	0	0	0	0	0	2	0		
P02		1900	60	1	0	1	2	5	0	0	0	0		
S03		1930	60	1	0	1	0	0	0	0	0	0		
P03		2000	60	2	0	3	2	0	0	0	0	0	1 Walleye Pollock	
								(1)						
S04		2030	60	0	0	1	0	0	0	0	0	0		
P04		2100	60	0	0	1	0	9	5	0	0	0		
								(1)						
S05		2130	60	0	0	2	1	0	6	0	0	0		
P05		2200	60	0	0	3	0	0	16	0	0	12	1 Arrowtooth Flounder	
S06		2230	60	0	1	2	0	0	18	0	1	5		
								(1)						
P06		2300	60	0	0	4	0	0	17	0	0	0		
S07		2330	60	0	0	6	0	0	10	0	0	0		
								(1)						
P07	04/08/88	0000	60	0	0	9	0	1	35	0	0	0		
						(1)								
S08		0030	60	0	0	3	0	0	5	0	0	7		
P08		0100	60	0	0	1	0	1	0	0	0	0		
								(1)						
S09		0130	60	0	0	1	0	0	0	0	0	1		
P09		0200	60	0	0	0	1	0	3	0	0	7		
S10		0230	60	1	0	3	0	0	2	0	0	1		
P10		0300	60	0	0	0	0	0	1	0	0	3		
								(1)						
S11		0330	60	0	0	2	0	0	2	0	0	2		
P11		0400	60	0	0	0	0	1	1	0	0	0		
S12		0430	60	0	0	6	2	1	6	0	0	8		
P12		0500	60	0	0	0	1	1	0	0	0	1		
S13		0530	60	0	0	0	1	0	2	0	0	0		
P13		0600	60	0	0	0	0	0	0	0	0	0		
S14		0630	60	0	0	0	0	0	0	0	0	0		
P14		0700	75	0	0	0	2	0	0	0	0	0		
S15		0730	60	0	0	0	0	0	0	0	0	0		
P15		0815	45	0	0	0	0	0	0	0	0	0		
S16		0830	60	0	0	0	0	0	0	0	0	0		
P16		0900	60	0	0	0	0	0	0	0	0	0		
S17		0930	60	0	0	0	0	0	0	26	0	0		
P17		1000	60	0	0	0	0	0	0	0	0	0		
S18		1030	60	0	0	0	0	0	0	42	0	0		
P18		1100	60	0	0	0	0	0	0	103	0	0		
S19		1130	50	0	0	0	0	0	0	145	0	0		
<b>SUBTOTAL</b>				37.0	6	1	49	12	20	129	316	5	47	1 Steelhead Trout 1 Walleye Pollock 1 Black Rockfish 1 Arrowtooth Flounder
				(hours)			(1)	(6)						

**Table 3:** (cont'd)

**TRANSECT T02**

**AREA** - West Coast of Vancouver Island/Cape Russell-Pisces Canyon  
(Course heading 248)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	04/08/88	1720	40	0	0	0	0	0	0	0	0	0	
P01		1710	80	0	0	1	1	1	0	0	0	0	
S02		1800	60	1	0	1	0	0	0	0	0	0	
P02		1830	60	0	0	0	1	0	0	0	0	0	
S03		1900	60	0	0	0	0	0	0	0	0	0	
P03		1930	60	0	0	0	0	0	0	0	0	0	1 Juv. Prowfish
S04		2000	60	0	0	0	0	0	0	0	0	0	
P04		2030	60	0	0	0	0	1	0	5	0	0	
<b>SUBTOTAL</b>			8.0 (hours)	1	0	2	2	2	0	5	0	0	1 Juv. Prowfish

**TRANSECT T03**

**AREA** - West Coast of Vancouver Island/Pisces Canyon-Kains Island  
(Course heading 105)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	04/08/88	2100	60	0	0	0	0	0	0	0	0	0	1 Black Rockfish
P01		2130	60	0	0	0	0	0	0	19	0	0	100 Blue Lanternfish
S02		2200	60	0	0	0	0	0	0	1	0	0	
P02		2230	60	0	0	0	0	0	0	9	0	0	200 Blue Lanternfish
S03		2300	60	0	0	0	0	0	0	1	0	2	60 Blue Lanternfish
P03		2330	60	0	0	0	0	0	0	19	0	0	
S04	05/08/88	0000	60	0	0	0	0	0	0	1	0	0	
P04		0030	60	0	0	0	0	0	0	3	0	0	50 Blue Lanternfish
S05		0100	60	0	0	0	0	0	0	0	0	0	
P05		0130	60	0	0	0	1	0	0	0	0	0	
S06		0200	120	2	0	0	2	3	0	0	0	0	
P06		0230	120	1	0	3	4	1	7	3	0	0	6 Blue Lanternfish
S07		0400	90	2	0	0	0	1	74	0	0	0	1 Pacific Sand Lance
P07		0430	30	6	1	2	11	2	9	0	0	0	
<b>SUBTOTAL</b>			16.0 (hours)	11	1	5	18	7	90	56	0	2	416 Blue Lanternfish 1 Pacific Sand Lance 1 Black Rockfish

Table 3: (cont'd)

TRANSECT T04

AREA - West Coast of Vancouver Island/Quatsino Canyon-Kwakutil Canyon  
(Course heading 248)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	05/08/88	1700	60	0	0	0	0	0	6	0	0	0	
P01		1730	60	1	0	6	0	0	2	0	0	0	
								(2)					
S02		1800	60	0	1	1	1	0	1	0	0	0	
P02		1830	60	0	0	3	6	5	0	0	0	0	1 Prowfish
S03		1900	60	0	0	1	0	0	0	0	0	0	
P03		1930	60	4	0	2	0	2	0	0	0	0	
								(1)					
S04		2000	60	0	0	0	0	0	0	0	0	0	
P04		2030	60	0	0	0	0	1	0	0	0	0	
S05		2100	60	0	0	1	0	0	0	8	0	0	
<u>SUBTOTAL</u>			9.0 (hours)	5	1	14	7	8 (3)	9	8	0	0	1 Prowfish

TRANSECT T05

AREA - West Coast of Vancouver Island/Kwakutil Canyon-Brooks Bay  
(Course heading 132)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	05/08/88	2130	90	0	0	0	3	1	0	0	0	20	120 Blue Lanternfish 9 California Headlightfish Euphausiids
S01		2200	120	0	0	0	1	0	0	0	0	5	8 Blue Lanternfish 5 California Headlightfish Euphausiids
P02		2300	120	1	0	2	7	1	6	0	0	2	10 Blue Lanternfish 200 California Headlightfish 4 Pacific Hake Euphausiids
								(1)					1 Un. Fish
S02	06/08/88	0000	120	14	0	1	8	4	53	0	0	20	1 Un. Fish 2 Pacific Hake
							(2)						
<u>SUBTOTAL</u>			7.5 (hours)	15	0	3	19 (2)	6 (1)	59	0	0	47	214 California Headlightfish 138 Blue Lanternfish 6 Pacific Hake 2 Un. Fish Euphausiids

**Table 3: (cont'd)**

**TRANSECT T06**

**AREA - West Coast of Vancouver Island/Brooks Bay-Quatsino Sound**  
(Course heading 233)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	06/08/88	0100	120	2	1	7 (1)	6 (1)	2	3000	0	0	4	2 Pacific Hake
S01		0200	120	3	1	8	5	2	35	0	0	1	300 California Headlightfish 2 Pacific Hake
P02		0300	120	0	0	2	3	1 (4)	31	0	0	0	500 California Headlightfish 2 Pacific Hake
S02		0400	150	1	0	0	0	0 (1)	0	0	1	0	
P03		0500	60	1	0	2 (1)	0 (1)	0 (1)	3	0	0	0	
<b>SUBTOTAL</b>			9.5 (hours)	7	2	19 (2)	14 (3)	5 (6)	3069	0	1	5	800 California Headlightfish 6 Pacific Hake

**TRANSECT T07**

**AREA - West Coast of Vancouver Island/Brooks Bay-Ououkinsh Canyon**  
(Course heading 198)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	06/08/88	1715	45	4	0	2	2	1	11	0	0	0	1 Wolf-eel
P01		1725	95	3	0	2	0	0	50	0	0	0	
S02		1800	120	1 (1)	0	0	0	3	75	0	0	0	
P02		1900	120	6	0	2	3	2 (2)	1000	0	0	0	
S03		2000	120	10	0	0	3	1	4	0	0	20	5000 Blue Lanternfish 10 Bigfin Lanternfish
P03		2100	120	2	0	1 (2)	0 (2)	0 (2)	0	0	0	0	10000 Blue Lanternfish 10 Bigfin Lanternfish
<b>SUBTOTAL</b>			10.3 (hours)	26 (1)	0	7 (2)	8 (2)	7 (4)	1140	0	0	21	15000 Blue Lanternfish 20 Bigfin Lanternfish 1 Wolf-eel



Table 3: (cont'd)

**TRANSECT T08**

**AREA - West Coast of Vancouver Island/Ououkinsh Canyon-Checleset Bay**  
(Course heading 067)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	06/08/88	2200	120	3	0	0	0	0	0	0	0	10	1000 Blue Lanternfish 10 Bigfin Lanternfish
P01		2300	120	0	0	0	0	0	1	0	0	5	1000 Blue Lanternfish 100 California Headlightfish 20 Bigfin Lanternfish 1 Slender Snipe Eel
S02	07/08/88	0000	120	3	0	4	3	5	200	0	0	6	1000 Blue Lanternfish 100 California Headlightfish 1 Pacific Hake
P02		-NO SET-		-	-	-	-	-	-	-	-	-	
S03		0200	120	0	3	0	9	0	20	0	0	0	
P03		0300	120	2	12	0	66	22	4500	0	0	0	
<b>SUBTOTAL</b>			12.0	8	15	4	78	27	4720	0	0	21	1 Slender Snipe Eel 200 California Headlightfish 30 Bigfin Lanternfish 3000 Blue Lanternfish 1 Pacific Hake
			(hours)			(4)		(4)					

**TRANSECT T09**

**AREA - West Coast of Vancouver Island/Checleset Bay-Crowther Canyon**  
(Course heading 198)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	07/08/88	0400	150	1	17	0	70	28	2250	0	0	0	7 Pacific Hake
P01		0500	60	1	4	0	9	1	9000	0	0	0	
					(2)	(6)							
S02		1725	90	0	0	0	0	0	25	0	0	2	3 Pacific Hake
								(1)					
P02		1850	70	0	0	1	0	0	160	0	0	0	
<b>SUBTOTAL</b>			6.2	2	21	1	79	29	11275	160	0	2	10 Pacific Hake
			(hours)		(2)	(6)		(1)					

**TRANSECT T10**

**AREA - West Coast of Vancouver Island/Kyuquot Canyon-Kyuquot Sound**  
(Course heading 067)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	07/08/88	1855	125	0	0	0	0	0	2	100	0	0	
P01		2000	120	1	0	0	1	0	0	25	0	1	2 Pacific Hake Euphausiids (~10 kg)
							(1)						
S02		2100	60	6	0	3	7	1	0	0	0	0	9 Pacific Hake
<b>SUBTOTAL</b>			5.1	7	0	3	8	1	2	125	0	1	11 Pacific Hake Euphausiids (~10 kg)
			(hours)				(1)						



**Table 3:** (cont'd)

**TRANSECT T14**

**AREA** - West Coast of Vancouver Island/Esperanza Canyon-Nootka Sound  
(Course heading 210 - 294)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	09/08/88	0750	70	0	0	2	9	10	30	0	0	0	
P02		0900	60	1	0	2	58	132	300	0	0	0	
P03		1000	60	0	0	0	16	38	0	0	0	0	
P04		1100	60	1	0	0	4	3	0	300	0	0	
<b>SUBTOTAL</b>			4.2 (hours)	2	0	4	87	183	330	300	0	0	

**TRANSECT T15**

**AREA** - West Coast of Vancouver Island/Nootka Sound-Clayoquot Sound  
(Course headings 140 - 105 - 305)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
S01	10/08/88	1045	120	3	0	0	57	80	9	0	0	0	
S02		1245	60	1	0	1	0	3	0	0	0	0	
S03		1345	75	0	0	0	1	0	0	0	0	0	
P01		1415	105	0	0	0	2	6	0	0	0	0	1 Wolf-eel
S04		1500	120	0	0	0	36	15	0	0	0	0	
P02		1600	120	0	0	0	6	42	0	0	0	0	
S05		1700	120	1	0	0	9	17	5	0	0	0	
P03		1800	120	0	0	1	26	88	0	0	0	0	5 Un. Fish
S06		1900	150	0	0	0	22	31	0	0	0	0	
P04		2000	60	0	0	0	8	5	0	0	0	0	
<b>SUBTOTAL</b>			17.5 (hours)	5	0	2	167	287	14	0	0	0	1 Wolf-eel 5 Un. Fish

**Table 4** - 1990 catch by set

**TRANSECT T01**

**AREA** - Queen Charlotte Sound  
(Course heading 072)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	07/09/90	0300	60	0	0	0	0	0	0	0	0	0	1 Un. Juv. Rockfish
S01		0310	60	0	0	0	0	0	0	0	0	0	1 California Headlightfish 6 Blue Lanternfish
P02		0400	60	0	0	0	0	0	0	0	1	0	1 Blue Shark 10 Blue Lanternfish
S02		0410	60	0	0	0	0	0	0	5	1	0	9 Blue Lanternfish 1 Northern Spearnose Poacher Euphausiids
P03		0500	60	1	0	0	2	1	0	7	0	0	1 Un. Juv. Cod 1 Blue Lanternfish
S03		0510	60	0	0	0	1	2	1	0	1	0	1 Un. Juv. Rockfish 2 Un. Juv. Cod 2 Blue Lanternfish 1 Blue Lanternfish
P04		0600	60	1	0	0	1	1	3	1	2	0	
S04		0610	60	1	0	0	4	8	1	0	0	0	
P05		0700	60	0	0	0	2	30	0	0	1	0	
S05		0710	60	0	0	2	3	38	0	0	0	0	1 Northern Spearnose Poacher
P06		0800	60	0	0	0	1	4	0	0	0	0	
S06		0810	60	1	0	0	0	10	0	0	0	1	
P07		0900	60	0	0	0	0	0	0	0	0	0	
S07		0910	60	0	0	0	0	0	0	0	0	0	
P08		1000	60	0	0	0	0	0	0	0	0	0	
S08		1010	60	0	0	0	0	3	0	0	0	0	
P09		1100	60	0	0	0	1	6	0	0	0	0	1 Un. Juv. Cod
S09		1110	60	0	0	0	2	1	0	0	0	0	
P10		1200	60	0	0	0	0	2	0	0	0	0	
S10		1210	60	0	0	0	0	0	0	0	0	0	
P11		1300	60	0	0	0	0	1	0	0	1	0	
S11		1310	60	0	0	0	0	0	0	0	0	0	
P12		1400	60	0	0	0	2	1	0	0	0	1	1 Un. Juv. Cod 1 Bay Pipefish
S12		1410	60	0	0	2	0	2	0	0	3	0	1 Prowfish 1 Un. Juv. Fish 2 Un. Juv. Cod
P13		1500	60	0	0	1	0	0	0	0	0	0	
S13		1510	60	0	0	0	0	2	0	0	0	1	
P14		1600	60	0	0	0	0	0	0	0	0	0	
S14		1610	60	0	0	0	0	0	0	0	0	0	1 Un. Juv. Fish
P15		1700	60	0	0	0	0	1	0	0	0	0	
S15		1710	60	0	0	0	0	1	0	0	0	0	
P16		1800	60	0	0	0	2	6	3	0	6	0	1 Un. Juv. Cod 3 Un. Juv. Rockfish
S16		1810	60	0	0	0	9	5	5	0	5	0	1 Un. Juv. Fish 1 Prowfish
P17		1900	60	0	1	0	5	1	0	0	1	0	
S17		1910	60	0	0	0	14	3	2	0	2	0	1 Un. Juv. Fish
P18		2000	60	0	0	1	0	1	2	0	0	0	
S18		2010	60	0	0	0	2	0	12	0	0	0	
P19		2100	60	0	0	0	2	9	5	0	0	0	
S19		2110	60	0	0	0	0	7	16	0	0	0	1 Un. Juv. Cod
P20		2200	60	0	0	1	0	4	12	0	0	0	1 Shrimp
S20		2210	60	0	0	0	0	3	9	0	0	0	
P21		2300	60	0	0	0	0	1	19	0	0	0	
S21		2310	60	0	0	0	0	0	11	0	0	0	4 Un. Juv. Rockfish (3 Kelp Crabs, few amphipods, juv. clingfish, turban snail)

**Table 4:** (cont'd)

**TRANSECT T01** (cont'd.)

**AREA** - Queen Charlotte Sound  
(Course heading 072)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P22	08/09/90	0000	60	0	0	0	0	0	40	0	0	0	1 Murrelet 1 Juv. Clingfish
S22		0010	60	0	0	0	0	0	23	0	0	4 j	1 Un. Juv. Rockfish
<b>SUBTOTAL</b>			44.0 (hours)	4	1	7	53	154	164	13	24	3 4 j	1 Blue Shark 1 California Headlightfish 29 Blue Lanternfish 9 Un. Juv. Cod 1 Bay Pipefish 2 Prowfish 2 Northern Spearnose Poacher 10 Un. Juv. Rockfish 4 Un. Juv. Fish 1 Shrimp Euphausiids

**TRANSECT T02**

**AREA** - Queen Charlotte Sound  
(Course heading 251)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	08/09/90	0525	35	21	0	0	0	17	110	0	0	0	
S01		-NO SET-		-	-	-	-	-	-	-	-	-	
P02		0600	60	9	0	0	5	19	80	0	13	0	
S02		0545	85	1	0	1	3	28	95	0	2	0	1 Blue Shark
P03		0700	60	1	0	0	0	3	62	0	0	0	
S03		0710	60	0	0	0	2	2	16	0	0	0	
P04		0800	60	0	0	0	5	4	6	0	0	0	1 Un. Juv. Cod
S04		0810	60	1	0	0	3	8	4	0	0	0	
P05		0900	60	0	0	0	0	0	3	0	1	0	1 Clingfish
S05		0910	60	3	0	0	28	10	8	0	0	0	
P06		1000	60	0	0	0	0	0	0	0	0	0	1 Un. Juv. Cod 1 Un. Juv. Flatfish 2 Un. Juv. Rockfish
S06		1010	60	0	0	0	0	0	0	0	0	0	
P07		1100	60	0	0	0	1	0	0	0	0	0	
S07		1110	60	0	0	0	1	1	0	1	1	0	
P08		1200	60	0	0	0	0	3	0	0	0	0	1 Blue Shark
S08		1210	60	0	0	0	4	0	0	0	0	0	1 Blue Shark 1 Un. Juv. Rockfish
P09		1300	60	0	0	0	0	0	0	1	1	0	
S09		1310	60	0	0	0	0	2	0	0	0	0	
P10		1400	60	0	0	0	0	0	0	0	2	0	3 Un. Juv. Rockfish 1 Spotted Snailfish
S10		1410	60	0	0	0	2	3	0	0	0	0	
P11		1500	60	0	0	0	2	2	0	0	1	0	1 Un. Juv. Rockfish
S11		1510	60	0	0	0	0	2	1	0	0	0	1 Un. Juv. Cod 1 Un. Juv. Rockfish 1 Un. Juv. Fish 2 Clingfish

**Table 4:** (cont'd)

**TRANSECT T02** (cont'd.)  
**AREA** - Queen Charlotte Sound  
 (Course heading 251)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS	
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK						
P12	08/09/90	1600	60	1	0	0	3	1	0	3	0	0		
S12		1610	60	0	0	0	4	3	1	3	0	0		
P13		1700	60	0	0	0	4	3	0	0	28	0	2 Un. Juv. Rockfish 1 Un. Juv. Rockfish	
S13		1710	60	0	0	0	0	5	0	1	23	0		
P14		1800	60	0	0	0	4	2	0	32	2	0	1 Blue Shark	
S14		1810	60	0	0	0	3	1	0	15	1	0	2 Un. Juv. Rockfish	
P15		1900	60	0	0	0	0	2	0	11	2	0		
S15		1910	60	0	0	0	1	1	0	5	0	0		
P16		2000	60	1	0	0	0	2	1	108	7	10	16 Un. Juv. Rockfish	
S16		2010	60	0	0	0	1	3	0	6	32	0	1 Blue Shark	
P17		2100	60	0	0	0	1	4	3	31	3	0	12 Un. Juv. Rockfish	
S17		2110	60	0	0	0	0	1	3	48	1	0	7 Un. Juv. Rockfish	
P18		2200	60	0	0	0	0	0	0	9	5	0	7 Un. Juv. Rockfish 1 Blue Lanternfish Euphausiids	
S18		2210	60	0	0	0	0	0	0	4	4	0	8 Un. Juv. Rockfish	
P19		2300	60	0	0	0	0	1	0	14	0	0	2 Un. Juv. Rockfish 4 Blue Lanternfish	
S19		2310	60	0	0	0	0	0	0	41	0	0	1 Un. Juv. Rockfish 2 Blue Lanternfish 1 Un. Juv. Fish	
P20	09/09/90	0000	60	0	0	0	0	0	0	10	0	1	1 Un. Juv. Rockfish 51 Blue Lanternfish	
S20		0010	60	0	0	0	0	0	0	33	0	0	1 Blue Shark 1 Un. Juv. Rockfish 37 Blue Lanternfish	
P21		0100	60	0	0	0	0	0	0	75	21	0	1 Blue Shark 1 Un. Juv. Rockfish 31 Blue Lanternfish	
S21		0110	60	0	0	0	0	0	0	58	725	1 j	1 Blue Shark	
P22		0200	60	0	0	0	0	0	0	10	0	0	7 Blue Lanternfish 1 Un. Juv. Fish	
S22		0210	60	0	0	0	0	0	0	4	0	0		
P23		0300	60	0	0	0	0	0	0	6	0	1	12 Blue Lanternfish	
S23		0310	60	0	0	0	0	0	0	13	0	2	4 Blue Lanternfish	
P24		0400	60	0	0	0	0	0	0	57	0	2	7 Blue Lanternfish	
S24		0410	60	0	0	0	0	0	0	21	0	0	2 Blue Lanternfish	
<b>SUBTOTAL</b>			47.0 (hours)	38	0	1	77	133	393	620	875	16	1 j	8 Blue Shark 158 Blue Lanternfish 3 Un. Juv. Cod 69 Un. Juv. Rockfish 1 Un. Juv. Flatfish 1 Spotted Snailfish 3 Un. Juv. Fish 3 Clingfish Euphausiids

**Table 4:** (cont'd)

**TRANSECT T03**

**AREA - Queen Charlotte Sound**  
(Course heading 072)

SET	DATE	START TIME	SET TIME (min)	SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
				SOCK	CHIN	COHO	CHUM	PINK					
P01	09/09/90	1000	60	0	0	0	0	0	0	0	0	0	
S01		0950	80	0	0	0	0	0	0	349	0	0	
P02		1100	60	0	0	0	0	0	0	0	0	0	
S02		1110	60	0	0	0	0	0	0	1650	0	0	
P03		1200	60	0	0	0	0	0	0	0	0	0	
S03		1210	60	0	0	0	0	0	0	965	0	0	
P04		1300	60	0	0	0	0	0	0	0	0	0	
S04		1310	60	0	0	0	0	0	0	100	0	0	
P05		1400	60	0	0	0	0	0	0	0	0	0	1 Blue Shark
S05		1410	60	0	0	0	0	0	0	3	0	0	
P06		1500	60	0	0	0	0	0	0	0	0	0	
S06		1510	60	0	0	0	0	0	0	2	0	0	2 Blue Shark
P07		1600	60	0	0	0	0	0	0	10	0	0	6 Un. Juv. Rockfish
S07		1610	60	0	0	0	0	1	0	0	0	0	
P08		1700	60	0	0	0	0	0	1	1	3	1 j	2 Un. Juv. Rockfish 27 Un. Juv. Fish
S08		1710	60	0	0	0	0	2	30	19	9	0	1 Wolf-eel
P09		1800	60	0	0	0	1	0	1	19	5	8 j	5 Un. Juv. Fish
S09		1810	60	0	0	0	3	2	8	0	2	0	3 Juv. Walleye Pollock 1 Un. Juv. Rockfish
P10		1900	60	0	0	0	0	2	3	1	1	1	2 Un. Juv. Rockfish 3 Un. Juv. Fish
S10		1910	60	0	0	0	1	2	6	1	2	0	1 Un. Juv. Fish
P11		2000	60	2	0	0	17	43	2	0	0	1 j	
S11		2010	60	1	0	0	8	8	4	6	2	0	1 Juv. Walleye Pollock
P12		2100	60	0	0	0	33	16	0	0	1	0	2 Juv. Walleye Pollock 1 Prowfish
S12		2110	60	0	0	0	21	7	0	1	4	0	2 Juv. Walleye Pollock 1 Prowfish
P13		2200	60	0	0	1	25	23	0	0	7	0	
S13		2210	60	0	0	1	32	17	0	1	2	0	1 Prowfish
P14		2300	60	0	0	0	6	3	0	0	0	0	
S14		2310	60	0	0	0	4	0	0	0	0	0	
P15	10/09/90	0000	60	0	0	0	13	8	0	0	1	8 j	
S15		0010	60	0	0	0	17	9	1	1	2	7 j	
P16		0100	60	0	0	1	2	7	2	0	5	4 j	
S16		0110	60	0	0	0	9	15	2	0	3	3 j	1 Curlfin Sole
P17		0200	60	0	0	0	5	16	0	0	0	0	
S17		0210	60	0	0	0	6	18	0	0	1	0	
P18		0300	60	0	0	0	4	2	0	0	136	3 j	
S18		0310	60	0	0	0	4	4	0	0	0	0	
P19		0400	60	0	0	0	8	4	0	0	1	0	1 Black Rockfish
S19		0410	60	0	0	0	6	1	0	0	4	8 j	
P20		0500	60	0	0	0	7	2	0	0	32	1 j	
S20		0510	60	0	0	0	7	3	0	0	7	7 j	1 Un. Juv. Rockfish 1 Juv. Ragfish
P21		0600	60	0	0	0	1	0	0	0	1614	3 j	7 Un. Juv. Rockfish 1 Un. Juv. Fish
S21		0610	60	0	0	0	3	1	0	0	5	4	1 Un. Juv. Rockfish
P22		0700	60	0	0	0	1	0	0	0	11	0	1 Un. Juv. Rockfish
S22		0710	60	0	0	0	0	0	0	0	1	0	
P23		0800	60	0	0	0	0	0	0	0	1	0	1 Un. Juv. Rockfish
S23		0810	60	0	0	0	0	0	0	0	1	0	5 Un. Juv. Rockfish
P24		0900	60	0	0	0	0	0	0	0	0	0	
S24		0910	60	0	0	0	2	1	0	0	0	0	1 Un. Juv. Rockfish

**Table 4:** (cont'd)

**TRANSECT T03** (cont'd.)  
**AREA** - Queen Charlotte Sound  
 (Course heading 072)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P25	10/09/90	1000	60	0	0	0	0	1	0	0	0	0	1 Threespine Stickleback
S25		1010	60	0	0	0	0	0	0	0	2	0	3 Un. Juv. Rockfish
<b>SUBTOTAL</b>			24.8 (hours)	3	0	3	246	218	60	3129	1865	5 54 j	3 Blue Shark 8 Juv. Walleye Pollock 1 Threespine Stickleback 1 Wolf-eel 3 Prowfish 1 Juv. Ragfish 1 Black Rockfish 1 Curlfin Sole 31 Un. Juv. Rockfish 37 Un. Juv. Fish

**TRANSECT T04**  
**AREA** - Queen Charlotte Sound  
 (Course heading 250)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	10/09/90	1520	40	0	0	0	0	0	0	0	0	0	1 Blue Shark 1 Juv. Walleye Pollock 1 Un. Juv. Rockfish
S01		1530	40	0	0	0	0	0	0	0	1	0	
P02		1600	60	0	0	0	0	1	0	0	1	0	
S02		1610	60	0	0	0	0	0	0	0	0	0	
P03		1700	60	0	0	0	0	0	0	0	8	0	
S03		1710	60	0	0	0	0	0	0	0	0	0	
P04		1800	60	0	0	0	0	1	0	0	0	0	
S04		1810	60	0	0	0	0	1	0	0	0	0	1 Pacific Tomcod
P05		1900	60	0	0	0	0	8	0	0	110	0	
S05		1910	60	0	0	0	1	1	0	0	0	0	
P06		2000	60	0	0	0	11	15	144	0	3	3 j	1 Un. Juv. Rockfish
S06		2010	60	0	0	0	2	24	34	0	5	0	1 Northern Spearnose Poacher
P07		2100	60	0	0	0	22	27	58	0	0	0	2 Un. Juv. Rockfish
S07		2110	60	0	0	0	10	22	76	0	1	8 j	1 Un. Juv. Rockfish 2 Northern Spearnose Poacher 2 Shrimp
P08		2200	60	0	0	0	19	21	57	0	6	0	6 Un. Juv. Rockfish 1 Northern Spearnose Poacher
S08		2210	60	0	0	0	12	23	32	0	4	0	
P09		2300	60	0	0	0	14	16	46	0	5	0	4 Un. Juv. Rockfish 1 Northern Spearnose Poacher
S09		2310	60	0	0	0	4	19	15	0	2	1 j	
P10	11/09/90	0000	60	0	0	0	19	37	14	0	4	0	
S10		0010	60	0	0	0	13	29	8	0	7	0	1 Un. Juv. Rockfish 1 Northern Spearnose Poacher
P11		0100	60	0	0	0	12	33	4	0	4	0	
S11		0110	60	0	0	0	5	55	2	0	1	0	
P12		0200	60	0	0	0	13	20	5	0	5	0	
S12		0210	60	1	0	0	4	26	5	0	3	0	
P13		0300	60	0	0	0	13	11	20	0	3	0	
S13		0310	60	1	0	0	17	25	16	0	6	0	1 Chub Mackerel
P14		0400	60	0	0	0	1	10	8	0	7	0	
S14		0410	60	0	0	0	10	17	5	0	5	0	1 Un. Juv. Cod 1 Blue Shark



**Table 4:** (cont'd)

**TRANSECT T04** (cont'd.)

**AREA** - Queen Charlotte Sound  
(Course heading 250)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P15	11/09/90	0500	60	0	0	0	10	5	11	0	16	0	
S15		0510	60	1	0	0	16	6	6	0	44	0	
P16		0600	60	0	0	0	15	11	5	0	11	0	
S16		0610	60	0	0	0	12	17	0	0	7	0	
P17		0700	60	0	0	0	3	1	0	1	0	0	
S17		0710	60	1	0	0	2	1	0	2	1	0	1 Juv. Walleye Pollock 1 Un. Juv. Rockfish 1 Chub Mackerel 1 Un. Juv. Fish 1 Un. Juv. Cod
P18		0800	60	0	0	0	1	2	0	0	1	0	
S18		0810	60	0	0	0	1	0	0	0	2	0	
P19		0900	60	0	0	0	0	2	0	0	0	0	
S19		0910	60	0	0	0	0	1	0	0	0	0	
P20		1000	60	0	0	0	0	1	0	20	0	0	
S20		1010	60	0	0	0	0	3	0	0	0	0	
P21		1100	60	0	0	0	0	1	0	2	0	0	1 Un. Juv. Rockfish
S21		1110	60	0	0	0	1	0	0	0	23	0	1 Medusafish
P22		1200	60	0	0	0	0	0	0	0	13	0	1 Un. Juv. Rockfish
S22		1210	60	0	0	0	0	1	0	0	0	0	
P23		1300	60	0	0	0	0	0	0	0	0	0	
S23		1310	60	0	0	0	0	0	0	0	3	0	
P24		1400	60	0	0	0	0	0	0	43	1	0	
S24		1410	60	0	0	0	0	0	0	48	15	0	
P25		1500	60	0	0	0	0	0	0	35	12	0	
S25		1510	60	0	0	0	0	0	0	160	0	0	
P26		1600	60	0	0	0	0	0	0	5	0	0	1 Un. Juv. Cod
S26		1610	60	0	0	0	0	0	0	30	87	0	
P27		1700	60	0	0	0	0	0	0	933	1	0	
S27		1710	60	0	0	0	0	0	0	1	0	0	
P28		1800	60	0	0	0	0	0	0	744	0	0	
S28		1810	60	0	0	0	0	0	0	6	0	0	
P29		1900	60	0	0	0	0	0	0	369	0	0	
S29		1910	60	0	0	0	0	0	0	4	0	0	
<u>SUBTOTAL</u>			57.25 (hours)	4	0	0	263	494	571	2403	428	12 j	2 Blue Shark 2 Juv. Pollock 1 Juv. Tomcod 2 Chub Mackerel 1 Medusafish 6 Northern Spearnose Poacher 19 Un. Juv. Rockfish 3 Un. Juv. Cod 1 Un. Juv. Fish 2 Un. Shrimp

**Table 4:** (cont'd)

**TRANSECT T05**

**AREA** - West Coast of Queen Charlotte Islands  
(Course heading 070)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	12/09/90	-NO SET-		-	-	-	-	-	-	-	-	-	
S01		0700	60	0	0	0	0	0	0	912	0	0	
P02		0800	60	0	0	0	0	0	0	83	0	0	1 Ragfish
S02		-NO SET-		-	-	-	-	-	-	-	-	-	
P03		0900	60	0	0	0	0	0	0	91	0	0	
S03		-NO SET-		-	-	-	-	-	-	-	-	-	
P04		1000	60	0	0	0	0	0	0	25	1	0	
S04		1010	60	0	0	0	0	0	0	28	0	0	
P05		1100	30	0	0	0	0	0	0	0	3	0	
S05		1110	30	0	0	0	0	2	0	7	0	0	1 Un. Juv. Rockfish
<b>SUBTOTAL</b>			6.0 (hours)	0	0	0	0	2	0	1146	4	0	1 Ragfish 1 Un. Juv. Rockfish

**TRANSECT T06**

**AREA** - West Coast of Queen Charlotte Islands  
(Course heading 072)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	12/09/90	1700	60	0	0	0	0	0	0	292	0	0	8 Medusafish 5 Un. Larval Fish
S01		1700	60	0	0	0	0	0	0	511	0	0	
P02		1800	60	0	0	0	0	0	0	478	0	0	1 Medusafish
S02		1810	60	0	0	0	0	0	0	0	0	0	
P03		1900	60	0	0	0	0	0	0	189	0	0	
S03		-NO SET-		-	-	-	-	-	-	-	-	-	
P04		2000	60	0	0	0	0	0	0	30	0	100 j	1 Un. Juv. Rockfish
S04		2010	60	0	0	0	0	0	0	7	0	1	
P05		2100	60	0	0	0	0	1	0	34	0	50 j	5 Blue Lanternfish
S05		2110	60	0	0	0	0	1	0	13	0	1	1 Blue Lanternfish
P06		2200	60	0	0	0	0	0	0	9	0	0	29 Blue Lanternfish 1 Medusafish
S06		2210	60	0	0	0	0	0	0	14	0	2 G	1 Blue Shark
<b>SUBTOTAL</b>			11.0 (hours)	0	0	0	0	2	0	1577	0	3 2 G 200 j	1 Blue Shark 87 Blue Lanternfish 10 Medusafish 1 Un. Juv. Rockfish 5 Un. Larval Fish

**Table 4:** (cont'd)

**TRANSECT T07**

**AREA - West Coast of Queen Charlotte Islands**  
(Course heading 070)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	13/09/90	0330	60	0	0	0	0	0	0	160	0	0	1 Blue Lanternfish 1 Ragfish
S01		0340	60	0	0	0	0	0	0	276	0	0	1 Ragfish 16 Medusafish
P02		0430	60	0	0	0	0	0	0	224	0	0	2 Blue Lanternfish
S02		0440	60	0	0	0	0	0	0	444	0	0	2 Blue Shark 1 California Headlightfish 2 Medusafish
P03		0530	60	0	0	0	0	0	0	8	0	0	1 Ribbon Barracudina 3 California Headlightfish 1 Blue Lanternfish
S03		0540	60	0	0	0	0	0	0	10	0	0	2 California Headlightfish 1 Blue Lanternfish
P04		0630	60	0	0	0	0	1	0	10	0	6 j	1 Un. Juv. Rockfish 2 California Headlightfish
S04		0640	60	0	0	0	0	0	0	32	0	8 j	2 California Headlightfish 6 Blue Lanternfish 1 Un. Juv. Rockfish
P05		0730	60	0	0	0	0	0	0	6	0	0	1 Ragfish
S05		0740	60	0	0	0	0	0	0	22	1	0	1 Medusafish
<u>SUBTOTAL</u>			10.0 (hours)	0	0	0	0	1	0	1192	1	14 j	2 Blue Shark 1 Ribbon Barracudina 10 California Headlightfish 11 Blue Lanternfish 19 Medusafish 3 Ragfish 2 Un. Juv. Rockfish

**TRANSECT T08**

**AREA - West Coast of Queen Charlotte Islands - Cape St. James - Hecate Strait**  
(Course heading 070)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	13/09/90	2000	60	0	0	0	0	0	0	394	2	0	3 Un. Juv. Rockfish 1 Medusafish
S01		2010	60	0	0	0	0	0	0	298	2	50 j	1 California Headlightfish 2 Medusafish
P02		2100	60	0	0	0	0	0	0	66	0	1 j	1 California Headlightfish 3 Medusafish
S02		2110	60	0	0	0	0	0	0	30	0	0	1 Blue Shark 3 California Headlightfish 1 Un. Juv. Cod
P03		2200	60	0	0	0	0	1	0	62	0	0	2 Northern Spearnose Poacher 4 California Headlightfish 2 Blue Lanternfish
S03		2210	60	0	0	0	0	1	0	84	0	0	1 Un. Juv. Rockfish 6 Blue Lanternfish 1 Ragfish
P04		2300	60	0	0	0	0	0	0	150	0	0	12 California Headlightfish 13 California Headlightfish 1 Blue Lanternfish
S04		2310	60	0	0	0	0	0	0	68	0	0	2 Medusafish 1 Ragfish 28 California Headlightfish 1 Medusafish 1 Northern Spearnose Poacher

**Table 4:** (cont'd)

**TRANSECT T08** (cont'd.)

**AREA** - West Coast of Queen Charlotte Islands - Cape St. James - Hecate Strait  
(Course heading 070)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P05	14/09/90	0000	60	0	0	0	0	0	0	22	0	0	1 Un. Juv. Rockfish 1 Pygmy Rockfish 1 California Headlightfish
S05		0010	60	0	0	0	1	0	1	7	0	0	
P06		-NO SET-		-	-	-	-	-	-	-	-	-	
S06		0110	60	0	0	0	0	1	0	2	0	0	2 Un. Juv. Rockfish
P07		0200	60	0	0	0	0	5	1	0	0	0	
S07		0210	60	0	0	0	1	2	2	1	1	0	
P08		0300	60	0	0	0	12	6	10	0	0	0	
S08		0310	60	0	0	0	9	14	6	1	0	0	
P09		0400	60	0	0	0	11	12	8	5	0	0	
S09		0410	60	0	0	0	17	18	10	3	1	0	
P10		0500	60	0	0	0	9	3	11	30	2	0	
S10		0510	60	0	0	0	13	6	8	30	0	0	
P11		0600	60	0	0	0	41	23	3	4	0	0	
S11		0610	60	0	0	0	14	9	0	6	3	0	
P12		0700	60	0	0	0	1	1	0	1	0	0	
S12		0710	60	0	0	0	1	0	1	0	1	0	
P13		0800	60	0	0	0	3	5	0	3	0	0	
S13		0810	60	0	0	0	1	4	4	14	2	0	
P14		0900	60	0	0	0	0	0	0	0	0	0	
S14		0910	60	0	0	0	0	0	1	1	1	0	
P15		1000	60	0	0	0	0	0	0	0	0	0	
S15		1010	60	0	0	0	1	3	1	46	0	0	
P16		-NO SET-		-	-	-	-	-	-	-	-	-	
S16		-NO SET-		-	-	-	-	-	-	-	-	-	
P17		1220	40	0	0	0	0	0	0	0	0	0	
S17		1110	120	0	0	0	2	0	0	24	0	0	
P18		1300	60	0	0	0	0	0	0	0	13	0	
S18		1310	60	0	0	0	1	1	0	28	1	0	
P19		1400	60	0	0	0	0	0	0	0	1	0	
S19		1410	60	0	0	0	0	2	1	12	0	0	
P20		1500	60	0	0	0	0	1	0	1	0	0	
S20		1510	60	0	0	0	0	1	0	34	3	0	1 Black Rockfish
P21		1600	60	0	0	0	0	0	0	18	0	0	
S21		1610	60	0	0	0	3	7	44	142	2	0	
P22		1700	60	0	0	0	0	1	1	134	0	0	
S22		1710	60	0	0	0	0	13	1	63	7	0	
P23		1800	60	0	0	0	0	2	0	11	0	0	
S23		1810	60	0	0	0	2	5	0	54	5	0	
P24		1900	60	0	0	0	0	1	0	3	0	0	
S24		1910	60	0	0	0	0	2	0	0	4	1	
P25		2000	60	0	0	0	0	10	3	2	12	0	1 Medusafish 1 Un. Juv. Rockfish
S25		2010	60	0	0	0	1	3	0	0	0	0	
P26		2100	60	0	0	0	3	14	32	0	2	0	
S26		2110	60	0	0	0	12	6	23	0	2	0	~20 Shrimp
P27		2200	60	1	0	0	11	15	96	0	7	2	
S27		2210	60	0	0	0	12	9	86	0	1	0	
P28		2300	60	1	0	0	14	14	79	0	1	4	2 Un. Juv. Rockfish
S28		2310	60	0	1	0	11	15	78	0	0	1	
P29	15/09/90	0000	60	2	0	0	16	36	117	0	0	0	
S29		0010	60	3	0	0	14	47	293	0	1	0	1 Prowfish

**Table 4:** (cont'd)

**TRANSECT T08** (cont'd.)

**AREA** - West Coast of Queen Charlotte Islands - Cape St. James - Hecate Strait  
(Course heading 070)

SET	DATE	SET TIME		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P30	15/09/90	0100	60	3	0	0	6	110	104	0	0	0	1 Un. Juv. Rockfish
S30		0110	60	1	0	1	9	78	317	0	5	0	
<b>SUBTOTAL</b>			60.0	11	1	1	252	507	1342	1854	82	28	1 Blue Shark 63 California Headlightfish 9 Blue Lanternfish 11 Un. Juv. Rockfish 1 Black Rockfish 1 Un. Juv. Cod 1 Pygmy Rockfish 1 Prowfish 3 Northern Spearnose Poacher 10 Medusafish 2 Ragfish 20 Shrimp
			(hours)										

**TRANSECT T09**

**AREA** - Hecate Strait  
(Course heading 252)

SET	DATE	SET TIME		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	15/09/90	0700	60	0	0	0	0	0	0	0	1	0	
S01		0715	55	0	0	0	0	1	0	0	0	0	
P02		0800	60	0	0	0	0	1	0	0	12	0	
S02		0810	60	0	0	0	0	2	0	0	4	0	
P03		0900	60	0	0	0	0	0	0	0	1	0	
S03		0910	60	0	0	0	0	0	0	1	0	0	
P04		1000	60	0	0	0	0	0	0	5	0	0	
S04		1010	60	0	0	0	0	0	0	0	0	0	
P05		1100	60	0	0	0	0	0	0	0	1	0	
S05		1110	60	0	0	0	0	0	0	0	0	0	
P06		1200	60	0	0	0	0	0	0	0	0	0	
S06		1210	60	0	0	0	0	0	0	0	0	0	
P07		1300	60	0	0	0	0	3	0	37	0	0	1 Medusafish 2 Un. Juv. Fish 1 Un. Juv. Cod
S07		1310	60	0	0	0	0	0	0	0	0	0	
P08		1400	60	0	0	0	0	1	1	370	0	0	
S08		1410	60	0	0	0	0	0	0	1	0	0	
P09		1500	60	0	0	0	0	0	0	100	0	0	
S09		1510	60	0	0	0	0	1	0	0	0	0	
P10		1600	60	0	0	0	0	0	0	8	3	0	
S10		1610	60	0	0	0	0	0	0	0	1	0	
P11		1700	60	0	0	0	0	0	0	4	0	0	
S11		1710	60	0	0	0	0	0	0	0	1	0	1 Un. Juv. Rockfish
P12		1800	60	0	0	0	0	0	0	0	0	0	
S12		1810	60	0	0	0	0	1	0	0	2	0	
P13		1900	60	0	0	0	0	0	0	0	1	0	
S13		1910	60	0	0	0	0	2	1	0	0	0	
P14		2000	60	0	0	0	0	0	1	0	0	0	
S14		2010	60	0	0	0	0	3	2	0	14	0	
P15		2100	60	0	0	0	0	0	9	0	0	0	
S15		2110	60	0	0	0	0	8	18	0	1	0	
P16		2200	60	0	0	0	0	8	33	1	0	0	
S16		2210	60	0	0	0	0	9	30	0	1	6	1 Un. Juv. Rockfish
<b>SUBTOTAL</b>			31.9	0	0	0	0	40	95	527	43	6	1 Un. Juv. Cod 1 Medusafish 2 Un. Juv. Rockfish 2 Un. Juv. Fish
			(hours)										

**Table 4:** (cont'd)

**TRANSECT T10**

**AREA** - West Coast of Vancouver Island  
(Course heading 070)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	16/09/90	1610	50	0	0	0	0	0	2	2	0	3 j	
S01		1545	85	0	0	0	0	0	0	136	0	0	1 Blue Shark 1 Un. Juv. Rockfish
P02		1700	60	0	0	0	0	0	0	7	0	0	
S02		1710	60	0	0	0	0	0	0	48	0	0	1 Ragfish 1 Medusafish
P03		1800	60	0	0	0	0	0	0	57	0	0	
S03		1810	60	0	0	0	0	0	0	33	0	0	1 Medusafish
P04		1900	60	0	0	0	0	0	0	600	0	0	
S04		1910	60	0	0	0	0	0	0	300	0	0	1 Un. Juv. Cod
P05		2000	60	0	0	0	0	0	0	141	0	0	1 Blue Lanternfish
S05		2010	60	0	0	0	0	0	0	65	0	60 j	2 Blue Lanternfish
P06		2100	60	0	0	0	0	0	0	24	0	2	3 California Headlightfish 17 Blue Lanternfish
S06		2110	60	0	0	0	0	0	0	15	0	26	1 Northern Spearnose Poacher 2 California Headlightfish 25 Blue Lanternfish
P07		2200	60	0	0	0	0	0	0	30	0	0	100 Blue Lanternfish
S07		2210	60	0	0	0	0	0	0	10	2	1	65 Blue Lanternfish
P08		2300	60	1	0	2	8	31	3	0	0	1	28 Blue Lanternfish
S08		2310	60	0	0	2	8	51	15	0	1	1	1 Un. Larval Fish 1 California Headlightfish 5 Blue Lanternfish
P09	17/09/90	0000	60	0	0	1	5	14	6	0	1	2	1 Un. Larval Fish 1 Blue Lanternfish
S09		0010	60	0	0	0	7	8	6	0	2	3	1 Un. Larval Fish
<b>SUBTOTAL</b>			18.25 (hours)	1	0	5	28	104	32	1468	6	36 63 j	1 Blue Shark 6 California Headlightfish 244 Blue Lanternfish 1 Un. Juv. Cod 2 Medusafish 1 Ragfish 2 Northern Spearnose Poacher 1 Un. Juv. Rockfish 3 Un. Larval Fish

**TRANSECT T11**

**AREA** - West Coast of Vancouver Island  
(Course heading 330)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	TIME (min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	17/09/90	0100	60	1	0	2	43	100	150	0	3	7	
S01		0110	60	0	0	6	68	133	100	0	1	56	
P02		0200	60	0	0	7	36	78	51	0	12	0	
S02		-NO SET-		0	0	0	0	0	0	0	0	0	
P03		-NO SET-		0	0	0	0	0	0	0	0	0	
S03		0310	60	0	0	7	0	1	0	0	23	1	1 Blue Shark
P04		0400	60	0	0	2	0	0	0	0	11	1	1 Northern Spearnose Poacher
S04		-NO SET-		0	0	0	0	0	0	0	0	0	
P05		0500	60	0	0	1	0	12	0	0	32	0	
S05		0510	60	0	0	0	0	11	0	0	25	0	

**Table 4:** (cont'd)

TRANSECT T11 (cont'd.)

AREA - West Coast of Vancouver Island  
(Course heading 330)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P06	17/09/90	0600	60	0	0	3	0	33	2	0	21	0	
S06		0610	60	0	0	2	1	27	0	0	15	0	
P07		0700	60	1	0	0	4	4	3	0	3	0	2 Wolf-eel
S07		0710	60	0	0	1	4	5	0	0	1	0	1 Blue Lanternfish
<u>SUBTOTAL</u>			11.0	2	0	31	156	404	306	0	147	65	1 Blue Shark 1 Blue Lanternfish 2 Wolf-eel 1 Northern Spearnose Poacher
			(hours)										

TRANSECT T12

AREA - West Coast of Vancouver Island  
(Course heading 250)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	17/09/90	0800	60	0	0	0	14	7	0	0	3	0	
S01		0810	60	0	0	0	77	46	1	0	6	0	
P02		0900	60	0	0	0	1	0	0	0	0	0	
S02		0910	60	0	0	0	3	11	0	0	3	0	
P03		1000	60	0	0	0	0	0	0	0	0	0	1 Un. Juv. Rockfish
S03		1010	60	0	0	0	0	2	0	0	0	0	4 Un. Juv. Rockfish
P04		1100	60	0	0	0	0	0	0	0	0	0	1 Ocean Sunfish
S04		1110	60	0	0	0	0	0	0	200	0	0	1 Un. Juv. Rockfish
P05		1200	60	0	0	0	0	0	0	0	0	0	2 Un. Juv. Rockfish
S05		1210	60	0	0	0	0	0	0	21	0	0	
P06		1300	60	0	0	0	0	0	0	0	0	0	
S06		1310	60	0	0	0	0	0	0	1	0	0	
P07		1400	60	0	0	0	0	0	0	2	0	0	
S07		1410	60	0	0	0	0	0	0	32	0	0	
P08		1500	60	0	0	0	0	0	0	5	0	0	
S08		1510	60	0	0	0	0	0	0	158	8	0	
P09		1600	60	0	0	0	0	0	0	4	3	0	
S09		1610	60	0	0	0	0	0	0	256	0	0	
<u>SUBTOTAL</u>			17.0	0	0	0	95	66	1	679	23	0	8 Un. Juv. Rockfish 1 Ocean Sunfish
			(hours)										

**Table 4: (cont'd)**

**TRANSECT 13**

**AREA - Queen Charlotte Sound / Triangle Island - Cape Caution**  
(Course heading 070 - 131)

SET	DATE	SET		SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		START TIME	(min)	SOCK	CHIN	COHO	CHUM	PINK					
P01	18/09/90	1400	60	0	0	0	0	0	0	1382	0	0	
S01		-NO SET-		-	-	-	-	-	-	-	-	-	
P02		1500	60	0	0	0	0	0	0	2	0	0	
S02		-NO SET-		-	-	-	-	-	-	1	-	-	
P03		1600	60	0	0	0	0	0	0	1	0	0	2 Un. Juv. Rockfish (2 sp)
S03		1610	60	0	0	0	0	0	0	0	0	0	
P04		1700	60	0	0	0	0	1	0	0	0	0	
S04		1710	60	0	0	0	0	0	0	0	0	0	
P05		1800	60	0	0	0	0	0	0	0	0	0	1 Un. Juv. Fish
S05		1810	60	0	0	0	0	0	0	0	4	0	
P06		1900	60	0	0	0	0	0	117	0	14	0	
S06		1910	60	0	0	0	0	0	84	0	2	0	1 Un. Juv. Rockfish 2 Un. Juv. Fish
P07		2000	60	0	0	0	0	1	47	0	0	0	
S07		2010	60	0	0	0	0	2	4	0	0	1	
P08		2100	60	0	0	0	0	10	27	0	0	0	
S08		2110	60	0	0	0	2	23	34	0	0	0	2 Un. Juv. Fish
P09		2200	60	0	0	0	2	22	27	0	2	2	1 Un. Juv. Rockfish
S09		2210	60	0	0	2	1	18	17	0	5	1	
P10		2300	60	0	0	0	0	3	60	0	5	0	
S10		2310	60	0	0	2	0	3	73	0	2	0	1 Northern Spearnose Poacher
P11	19/09/90	0000	60	1	0	5	5	47	99	0	4	7	
S11		0010	60	3	0	7	10	61	113	0	2	1	
P12		0100	60	15	0	2	19	139	189	0	0	2	
S12		0110	60	4	0	0	2	7	81	0	0	1	
P13		-NO SET-		-	-	-	-	-	-	-	-	-	
S13		0210	60	8	0	0	6	44	276	0	3	0	
P14		0300	60	8	0	0	1	22	0	0	2	0	15 Pink Shrimp
S14		-NO SET-		-	-	-	-	-	-	-	-	-	
P15		0400	60	1	0	1	3	7	0	0	2	0	
S15		-NO SET-		-	-	-	-	-	-	-	-	-	
P16		-NO SET-		-	-	-	-	-	-	-	-	-	
S16		0510	60	2	0	5	0	2	329	0	9	0	
P17		0600	60	0	0	0	1	0	21	0	14	0	
S17		-NO SET-		-	-	-	-	-	-	-	-	-	
P18		0700	60	1	0	1	5	8	1	0	135	0	
S18		0710	60	0	0	1	27	19	0	0	2	0	
P19		0800	60	0	0	0	0	6	0	0	0	0	
S19		0810	60	0	0	0	2	3	0	0	4	0	
P20		0900	60	0	0	0	0	2	0	0	0	0	
S20		0910	60	0	0	0	0	1	1	0	0	0	
P21		1000	60	0	0	0	0	0	0	0	0	0	
S21		1010	60	0	0	0	0	0	0	0	2	0	
P22		1100	60	0	0	0	0	0	0	0	0	0	
S22		1110	60	0	0	0	0	0	0	0	0	0	
<b>SUBTOTAL</b>			37.75 (hours)	43	0	26	86	451	1600	1386	213	15	1 Northern Spearnose Poacher 4 Un. Juv. Rockfish 5 Un. Juv. Fish 15 Pink Shrimp



**Table 5 - Summary of Total Catch by Species for 1988 and 1990**

**TRANSECTS T01 - T15, 1988 SURVEY**

**AREA - West Coast of Vancouver Island**

	TIME	SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		SOCK	CHIN	COHO	CHUM	PINK					
<b><u>OVERALL TOTAL:</u></b>	170.5 (hours)	109 (2)	45 (2)	135 (15)	819 (8)	1057 (25)	21114	5354	6	146	1 Steelhead Trout 1 Blue Shark 1 Slender Snipe Eel 1214 California Headlightfish 50 Bigfin Lanternfish 18554 Blue Lanternfish 41 Pacific Hake 1 Walleye Pollock 3 Wolf-eel 2 Prowfish 1 Pacific Sand Lance 1 Yellowtail Rockfish 2 Black Rockfish 1 Arrowtooth Flounder 1 Un. Rockfish 57 Un. Juv. Fish

**TRANSECTS T01 - T13, 1990 SURVEY**

**AREA - Queen Charlotte Sound, Hecate Strait, West Coast of the Queen Charlotte Sound and the West Coast of Vancouver Island**

	TIME	SALMON					HERR	SAURY	SABLE	SQUID	OTHERS
		SOCK	CHIN	COHO	CHUM	PINK					
<b><u>OVERALL TOTAL:</u></b>	375.95 (hours)	106	2	74	1256	2576	4564	15994	3711	177 2 G 399 j	13 Blue Shark 1 Ribbon Barracudina 81 California Headlightfish 539 Blue Lanternfish 10 Juv. Walleye Pollock 2 Juv. Pacific Tomcod 20 Un. Juv. Cod 1 Threespine Stickleback 1 Bay Pipefish 3 Wolf-eel 6 Prowfish 2 Chub Mackerel 43 Medusafish 8 Ragfish 2 Black Rockfish 1 Pygmy Rockfish 15 Northern Spearnose Poacher 1 Spotted Snailfish 1 Curlfin Sole 1 Ocean Sunfish 160 Un. Juv. Rockfish 1 Un. Juv. Flatfish 52 Un. Juv. Fish 3 Un. Larval Fish Shrimp Euphausiids

Table 6 - 1988 Salmonid length frequency distribution (Total Catch T01 - T15).

LENGTH (mm)	SOCKEYE		PINK		CHUM		COHO		CHINOOK	
	N	%	N	%	N	%	N	%	N	%
75-79										
80-84	2	1.83								
85-89	1	0.92								
90-94	3	2.75								
95-99	3	2.75								
100-104	1	0.92	2	0.28						
105-109	2	1.83								
110-114			16	2.26	4	0.5	1	0.79		
115-119	1	0.92	34	4.81						
120-124	9	8.26	58	8.20	5	0.7	1	0.79		
125-129	13	11.93	81	11.46	13	1.8				
130-134	12	11.01	122	17.25	27	3.8				
135-139	14	12.84	100	14.14	26	3.6				
140-144	15	13.76	108	15.28	48	6.7				
145-149	6	5.50	63	8.91	57	8.0				
150-154	9	8.26	46	6.51	83	11.6				
155-159	6	5.50	32	4.53	87	12.2				
160-164	3	2.75	18	2.55	93	13.1				
165-169	2	1.83	12	1.70	83	11.6				
170-174	3	2.75	10	1.41	67	9.4	1	0.79		
175-179	1	0.92	3	0.42	47	6.6	1	0.79		
180-184	1	0.92	2	0.28	33	4.6	1	0.79		
185-189					13	1.8				
190-194	1	0.92			10	1.4	2	1.57		
195-199	1	0.92			5	0.7	1	0.79	2	4.65
200-204					6	0.8	2	1.57		
205-209					2	0.2	3	2.36	2	4.65
210-214					1	0.1	4	3.15	3	6.98
215-219							4	3.15	2	4.65
220-224							4	3.15	1	2.32
225-229							1	0.79	1	2.32
230-234							6	4.72	2	4.65
235-239							4	3.15	5	11.63
240-244							1	0.79	4	9.30
245-249							10	7.87	1	2.32
250-254							5	3.94	2	4.65
255-259							5	3.94		
260-264							7	5.51	1	2.32
265-269							7	5.51	3	6.98
270-274						1	6	4.72	3	6.98
275-279							7	5.51	1	2.32
280-284							10	7.87	4	9.30
285-289							9	7.09		
290-294							10	7.87		
295-299							1	0.79	1	2.32





**Table 7** - 1990 Salmonid length frequency distribution.  
(Total Catch T1 - T13 excluding T11 catch see text)

LENGTH (mm)	SOCKEYE		PINK		CHUM		COHO		CHINOOK	
	N	%	N	%	N	%	N	%	N	%
105-109	1	1.07								
110-114	2	2.15								
115-119	5	5.38	4	0.19						
120-124	6	6.45	11	0.53						
125-129	5	5.38	8	0.38						
130-134	5	5.38	38	1.82	2	0.18				
135-139	7	7.53	50	2.40	4	0.37				
140-144	9	9.68	82	3.94	5	0.47				
145-149	8	8.60	134	6.43	6	0.56				
150-154	9	9.68	198	9.50	8	0.74				
155-159	10	10.75	206	9.89	12	1.11				
160-164	13	13.98	268	12.87	26	2.42				
165-169	5	5.38	247	11.86	25	2.32				
170-174	5	5.38	256	12.29	38	3.53				
175-179	3	3.23	194	9.31	40	3.72				
180-184			140	6.72	53	4.93				
185-189			91	4.37	56	5.20				
190-194			77	3.70	85	7.90				
195-199			32	1.54	82	7.62	1	2.78		
200-204			26	1.25	83	7.71				
205-209			9	0.43	91	8.46				
210-214			9	0.43	108	10.37				
215-219					86	7.99				
220-224			1	0.05	94	8.74	1	2.78		
225-229			1	0.05	60	5.58				
230-234					49	4.55				
235-239					27	2.51				
240-244			1	0.05	19	1.77	2	5.56		
245-249					4	0.37	1	2.78		
250-254					3	0.28	1	2.78		
255-259					3	0.28	1	2.78		
260-264					2	0.19	4	11.11		
265-269							1	2.78		
270-274										
275-279							2	5.56	1	100.0
280-284							4	11.11		
285-289					1	0.09	6	16.67		
290-294					3	0.28	3	8.33		
295-299							1	2.78		
300-304					1	0.28	2	5.56		
305-309										
310-315							2	5.56		
315-319							2	5.56		
320-324										
325-329							1	2.78		

**Table 8** - 1988 Incidental catch length frequency distribution.  
(Total Catch T1 - T15)

LENGTH (mm)	SABLEFISH		HERRING		SAURY		HAKE	
	N	%	N	%	N	%	N	%
30- 34			1	0.42				
35- 39			1	0.42				
40- 44			1	0.42				
45- 49			1	0.42				
50- 54								
55- 59								
60- 64			2	0.85				
65- 69			2	0.85				
70- 74			2	0.85				
75- 79								
80- 84								
85- 89								
90- 94								
95- 99								
100-104								
105-109								
110-114								
115-119								
120-124								
125-129								
130-134								
135-139			1	0.42				
140-144			2	0.85				
145-149			14	5.96	2	1.06		
150-154			26	11.06	1	0.53		
155-159			11	4.68	1	0.53		
160-164			1	0.42	3	1.60		
165-169			3	1.28	6	3.19		
170-174			2	0.85	8	4.25		
175-179			2	0.85	9	4.79		
180-184			4	1.70	4	2.13		
185-189			6	2.55	15	7.98		
190-194			12	5.11	17	9.04		
195-199			12	5.11	12	6.38		
200-204			15	6.38	20	10.64		
205-209			13	5.53	19	10.11		
210-214			18	7.66	16	8.51		
215-219			10	4.25	17	9.04		
220-224			20	8.51	7	3.72		
225-229			11	4.68	7	3.72		
230-234			16	6.81	4	2.13		
235-239			6	2.55	3	1.60		
240-244			7	2.98	3	1.60		
245-249			5	2.13	1	0.53		
250-254			4	1.70				
255-259			4	1.70	1	0.53		
260-264					1	0.53		



**Table 9** - 1990 Incidental catch length frequency distribution.  
(Total Catch T1 - T13 excluding T11 catch; see text)

LENGTH (mm)	SABLEFISH		HERRING		SAURY		HAKE	
	N	%	N	%	N	%	N	%
85- 89			2	0.09				
90- 94			9	0.41				
95- 99			26	1.19				
100-104			53	2.42				
105-109			39	1.78				
110-114			26	1.19				
115-119			27	1.23				
120-124			33	1.51				
125-129			42	1.92	3	0.06		
130-134			79	3.61	2	0.04		
135-139			123	5.61	6	0.12		
140-144			137	6.25	18	0.36		
145-149			141	6.43	53	1.06		
150-154			146	6.66	76	1.52		
155-159			257	11.73	87	1.74		
160-164			258	11.77	166	3.32		
165-169	1	0.07	184	8.40	174	3.48		
170-174	1	0.07	133	6.07	221	4.42		
175-179	1	0.07	68	3.10	201	4.02		
180-184	8	0.56	30	1.37	221	4.42		
185-189	8	0.56	23	1.05	222	4.44		
190-194	13	0.91	12	0.55	270	5.40		
195-199	14	0.98	23	1.05	233	4.66		
200-204	42	2.93	15	0.68	253	5.06		
205-209	43	3.00	19	0.87	296	5.92		
210-214	68	4.74	19	0.87	339	6.78		
215-219	77	5.37	20	0.91	291	5.82		
220-224	142	9.90	28	1.28	327	6.54		
225-229	125	8.71	26	1.19	245	4.90		
230-234	156	10.87	32	1.46	253	5.06		
235-239	176	12.26	42	1.92	191	3.82		
240-244	162	11.29	31	1.41	142	2.84		
245-249	117	8.15	30	1.37	135	2.70		
250-254	120	8.36	22	1.00	86	1.72		
255-259	67	4.67	18	0.82	83	1.66		
260-264	35	2.44	9	0.41	90	1.80		
265-269	19	1.32	4	0.18	56	1.12		
270-274	24	1.67	4	0.18	54	1.08		
275-279	6	0.42			42	0.84		
280-284	5	0.35			37	0.74		
285-289	3	0.21	1	0.05	28	0.56		
290-294	2	0.14			28	0.56		
295-299					17	0.34		





Table 10 - Statistical Summary of Total Catch length frequency distribution.

<u>1988</u>	Specie	Sample	Mean Length	S.D.	Group Range
	Sockeye	109	134.8	31.7	80 - 199 mm
	<u>O. nerka</u>	1	385.0	----	385
		1	615.0	----	615
	Pink	707	137.6	13.3	100 - 184
	<u>O. gorbuscha</u>	23	455.5	34.7	400 - 534
	Chum	710	159.5	13.3	110 - 214
	<u>O. keta</u>	1	270.0	----	270
		2	384.5	3.5	380 - 389
		7	644.4	34.9	590 - 650
	Coho	2	117.0	7.1	110 - 129
	<u>O. kisutch</u>	127	258.6	40.6	170 - 329
		7	454.9	47.8	370 - 524
		10	608.1	24.7	580 - 650
	Chinook	45	255.3	37.8	195 - 329
	<u>O. tshawytscha</u>	2	695.0	56.6	655 - 735
	Sablefish	6	385.3	66.4	290 - 484
	<u>Anoplopoma fimbria</u>				
	Herring	235	191.8	42.9	30 - 259
	<u>Clupea harengus pallasii</u>				
	Saury	188	206.0	30.9	145 - 304
	<u>Cololabis saira</u>				
	Hake	35	390.6	21.9	350 - 439
	<u>Merluccius productus</u>				
<u>1990</u>	Specie	Sample	Mean Length	S.D.	Group Range
	Sockeye	93	146.5	17.5	105 - 179 mm
	<u>O. nerka</u>				
	Pink	2083	165.5	16.4	115 - 244
	<u>O. gorbuscha</u>				
	Chum	1076	203.2	23.0	130 - 304
	<u>O. keta</u>				
	Coho	36	280.9	31.4	195 - 329
	<u>O. kisutch</u>				
	Chinook	1	275.0	----	275
	<u>O. tshawytscha</u>				
	Sablefish	1435	234.2	18.8	165 - 339
	<u>Anoplopoma fimbria</u>				
	Herring	2191	163.1	35.6	85 - 289
	<u>Clupea harengus pallasii</u>				
	Saury	4999	209.9	33.7	125 - 454
	<u>Cololabis saira</u>				

**Table 11** - 1990 Miscellaneous incidental catch statistics. **NUMBER** refers to catch of each species sized; see Table 4 (1990) for total catch by species. **MEAN LENGTH** = MEAN FORK LENGTH; **MEAN LENGTH** with '\*' = MEAN TOTAL BODY LENGTH. **MEAN LENGTH** for **SQUID** = MANTLE LENGTH.

SPECIE	NUMBER	x LEN. (mm)	SD	RANGE
Blue Shark <u>Prionace glauca</u>	22	1250.0*	0.3	850-1900
Ribbon Barracudina <u>Notolepis rissoi rissoi</u>	1	230.0		
California Headlightfish <u>Diaphus theta</u>	71	63.3	9.4	47 - 84
	5	101.0	4.4	95 - 105
Blue Lanternfish <u>Tarletonbeania crenularis</u>	195	57.4	10.3	38 - 78
Threespine Stickleback <u>Gasterosteus aculeatus</u>	1	46.0		
Bay Pipefish <u>Synqnathus griseolineatus</u>	1	90.0		
Wolf-eel <u>Anarrhichthys ocellatus</u>	2	307.5*	3.5	305 - 310
Prowfish <u>Zaprora silenus</u>	6	191.8	31.8	135 - 228
Chub Mackerel <u>Scomber japonicus</u>	2	323.5	26.2	305 - 342
Medusafish <u>Icichthys lockingtoni</u>	44	73.4	36.4	38 - 230
Ragfish <u>Icosteus aenicmaticus</u>	8	199.9	92.5	70 - 340
Black Rockfish <u>Sebastes melanops</u>	2	422.5	88.4	360 - 485
Pygmy Rockfish <u>Sebastes wilsoni</u>	1	280.0		
Northern Spearnose Poacher <u>Agonopsis emmelane</u>	19	58.1	11.9	37 - 73
Spotted Snailfish <u>Liparis callyodon</u>	1	71.0		
Curlfin Sole <u>Pleuronichthys decurrens</u>	1	220.0		
Ocean Sunfish <u>Mola mola</u>	1	1000.0*		
Unidentified Juv. Cod	2	77.5	10.6	55 - 95
Unidentified Juv. Rockfish	162	52.7	10.7	27 - 93
Unidentified Juv. Fish	28	42.6	14.1	22 - 65
Squid <u>Loligo opalescence</u>	52	31.6	7.3	17 - 52
<u>Loligo opalescence</u>	173	90.9	51.8	65 - 138
<u>Ommastrephes bartrami</u>	4	297.3	76.6	204 - 360

**Table 12** - 1988 Length (mm), sex, and stomach content data of potential juvenile salmonid predators.

TRANSECT/ SET	DATE	SPECIES	LENGTH (mm)	SEX	STOMACH CONTENTS
T01/P01	03/08/88	Black rockfish ( <u>Sebastes melanops</u> )	560		digested
T01/P03		Pink salmon ( <u>Oncorhynchus gorbuscha</u> )	423	F	empty
T01/P04		Pink salmon ( <u>O. gorbuscha</u> )	430	F	crab megalopae
T01/P05		Arrowtooth flounder ( <u>Atheresthes stomias</u> )	435	F	empty
T01/S06		Pink salmon ( <u>O. gorbuscha</u> )	442	F	empty
		Chinook salmon ( <u>O. tshawytscha</u> )	324	M	digested
		Sablefish ( <u>Anoplopoma fimbria</u> )	362		empty
T01/P06		Coho salmon ( <u>O. kisutch</u> )	310		digested fish
T01/S07		Pink salmon ( <u>O. gorbuscha</u> )	440	F	empty
T01/P10	04/08/88	Pink salmon ( <u>O. gorbuscha</u> )	457	F	empty
T03/S01		Black rockfish ( <u>S. melanops</u> )	406		empty
T04/P01	05/08/88	Pink salmon ( <u>O. gorbuscha</u> )	455 458	F F	empty empty
T04/P03		Pink salmon ( <u>O. gorbuscha</u> )	440	F	digested
T05/P02		Pink salmon ( <u>O. gorbuscha</u> )	485	M	euphausiids
		Chum salmon ( <u>O. keta</u> )	594	F	euphausiids
		Pacific hake ( <u>Merluccius productus</u> )	510 438 508 530		euphausiids empty euphausiids euphausiids
T05/S03	06/08/88	Chum salmon ( <u>O. keta</u> )	387 380	M F	euphausiids digested
		Pacific hake ( <u>M. productus</u> )	520 505		euphausiids euphausiids

Table 12 - (cont'd.)

TRANSECT/ SET	DATE	SPECIES	LENGTH (mm)	SEX	STOMACH CONTENTS
T06/P01	06/08/88	Coho salmon	420	M	empty
		( <u>O. kisutch</u> )			
		Chum salmon	675	F	digested euphausiids
		( <u>O. keta</u> )			
		Pacific hake	530		euphausiids
		( <u>M. productus</u> )	490		euphausiids
T06/S01		Pacific hake	485		euphausiids
		( <u>M. productus</u> )	497		euphausiids
T06/P02		Pink salmon	400	M	California headlightfish
		( <u>O. gorbuscha</u> )			
			433	F	euphausiids
			440	F	euphausiids
		Coho salmon	320	M	euphausiids
		( <u>O. kisutch</u> )	310	M	euphausiids
		Pacific hake	498		digested
( <u>M. productus</u> )	458		euphausiids		
T06/S02		Pink salmon	450	F	euphausiids
		( <u>O. gorbuscha</u> )			
		Chum salmon	620	F	euphausiids
		( <u>O. keta</u> )			
		Sablefish	355		euphausiids
		( <u>A. fimbria</u> )			
T06/P03		Pink salmon	447	F	euphausiids
		( <u>O. gorbuscha</u> )			
		Coho salmon	475	F	euphausiids
		( <u>O. kisutch</u> )			
		Chum salmon	685	M	euphausiids
		( <u>O. keta</u> )			
T07/S02		Sockeye salmon	615	F	empty
		( <u>O. nerka</u> )			
T07/P02		Pink salmon	450	F	herring; euphausiids
		( <u>O. gorbuscha</u> )			
			442	F	euphausiids
T07/P03		Pink salmon	472	M	crab megalopae; euphausiids
		( <u>O. gorbuscha</u> )			
			432	F	herring; crab megalopae; euphausiids
		Coho salmon	441	F	lanternfish
		( <u>O. kisutch</u> )	484	M	empty
		Chum salmon	620	M	lanternfish; euphausiids
( <u>O. keta</u> )					
			675	M	lanternfish; euphausiids

Table 12 - (cont'd.)

TRANSECT/ SET	DATE	SPECIES	LENGTH (mm)	SEX	STOMACH CONTENTS
T08/S01		Coho salmon ( <u>O. kisutch</u> )	655	F	euphausiids
T08/P01		Pink salmon ( <u>O. gorbuscha</u> )	460	F	lanternfish; jellyfish; euphausiids
			485	F	lanternfish; euphausiids
		Coho salmon ( <u>O. kisutch</u> )	617	F	lanternfish; euphausiids
			595	M	lanternfish; herring (1); euphausiids
T08/S02	07/08/88	Pink salmon ( <u>O. gorbuscha</u> )	500	F	euphausiids
		Pacific hake ( <u>M. productus</u> )	530	M	euphausiids
			445		lanternfish; euphausiids
T09/S01		Pacific hake ( <u>M. productus</u> )	497		euphausiids
			465		euphausiids
			467		euphausiids
			465		euphausiids
			470		euphausiids
			495		euphausiids
			495		euphausiids
T09/P01		Coho salmon ( <u>O. kisutch</u> )	595	M	herring
			620	F	empty
			590	F	herring
			520	M	empty
			580	M	empty
			595	F	herring
		Chinook salmon ( <u>O. tshawytcha</u> )	735	M	herring
			655	F	empty
T09/S02		Pink salmon ( <u>O. gorbuscha</u> )	444	F	empty
		Pacific hake ( <u>M. productus</u> )	498		euphausiids
			501		euphausiids
			435		euphausiids; herring (1)
T10/P01	07/08/88	Chum salmon ( <u>O. keta</u> )	640	F	digested
		Pacific hake ( <u>M. productus</u> )	510		euphausiids
			482		euphausiids; sockeye (121 mm)

Table 12 - (cont'd.)

TRANSECT/ SET	DATE	SPECIES	LENGTH (mm)	SEX	STOMACH CONTENTS
T10/S02		Pacific hake	460		digested
		( <u>M. productus</u> )	488		digested
			436		euphausiids
			480		empty
			467		euphausiids
			506		empty
			444		empty
			469		euphausiids
			492		digested
T11/S01	08/08/88	Pacific hake	472		euphausiids
		( <u>M. productus</u> )	454		digested
T11/P01		Sockeye salmon	389	M	digested
		( <u>O. nerka</u> )			
		Pacific hake	472		euphausiids
		( <u>M. productus</u> )			
T11/S02		Coho salmon	310		digested
		( <u>O. kisutch</u> )	272		digested
T11/S03		Coho salmon	640	M	empty
		( <u>O. kisutch</u> )			
		Blue shark	1360	F	squid
		( <u>Prionace glauca</u> )			
T12/P01		Rockfish	292		euphausiids
		( <u>Sebastes</u> sp.)			
T15/S02	10/08/88	Coho salmon	280		herring (2)
		( <u>O. kisutch</u> )			

**Table 13** - 1990 Length (mm), sex, and stomach content data of potential juvenile salmonid predators.

TRANSECT/ SET	DATE	SPECIES	LENGTH (mm)	SEX	STOMACH CONTENTS
T01/P02	07/09/90	Blue Shark ( <u>Prionace glauca</u> )	1000	F	euphausiids (<1% full)
T02/P08	08/09/90	Blue Shark ( <u>P. glauca</u> )	1278		digested
T03/P19	10/09/90	Black Rockfish ( <u>Sebastes melanops</u> )	360	M	empty
T04/S17	11/09/90	Chub Mackerel ( <u>Scomber japonicus</u> )	342		empty
T07/S02	13/09/90	Blue Shark ( <u>P. glauca</u> )	952	M	1 squid (60%); 1 prawn (10%); euphausiids (30%)
			1034	F	1 squid (4%); euphausiids (95%); kelp (1%)
T08/S02	13/09/90	Blue Shark ( <u>P. glauca</u> )	920	F	empty
T08/P05	14/09/90	Pygmy Rockfish ( <u>Sebastes wilsoni</u> )	280		empty
T08/S20	14/09/90	Black Rockfish ( <u>S. melanops</u> )	485	M	digested euphausiids



**LIST OF FIGURES:**

- Fig. 1 Map of coastal British Columbia outlining 1988 and 1990 survey areas.
- Fig. 2 Transect and haul (set) locations for the 1990 (top) and 1988 (bottom) surveys. Position of boxed labels denote start of transect; symbols along transect lines represent codend haul locations.
- Fig. 3 Catch per set of juvenile sockeye salmon.
- Fig. 4 Catch per set of juvenile pink salmon.
- Fig. 5 Catch per set of juvenile chum salmon.
- Fig. 6 Catch per set of juvenile coho salmon.
- Fig. 7 Catch per set of juvenile chinook salmon.
- Fig. 8 Catch per set of sablefish.
- Fig. 9 Catch per set of Pacific herring.
- Fig. 10 Catch per set of Pacific saury.

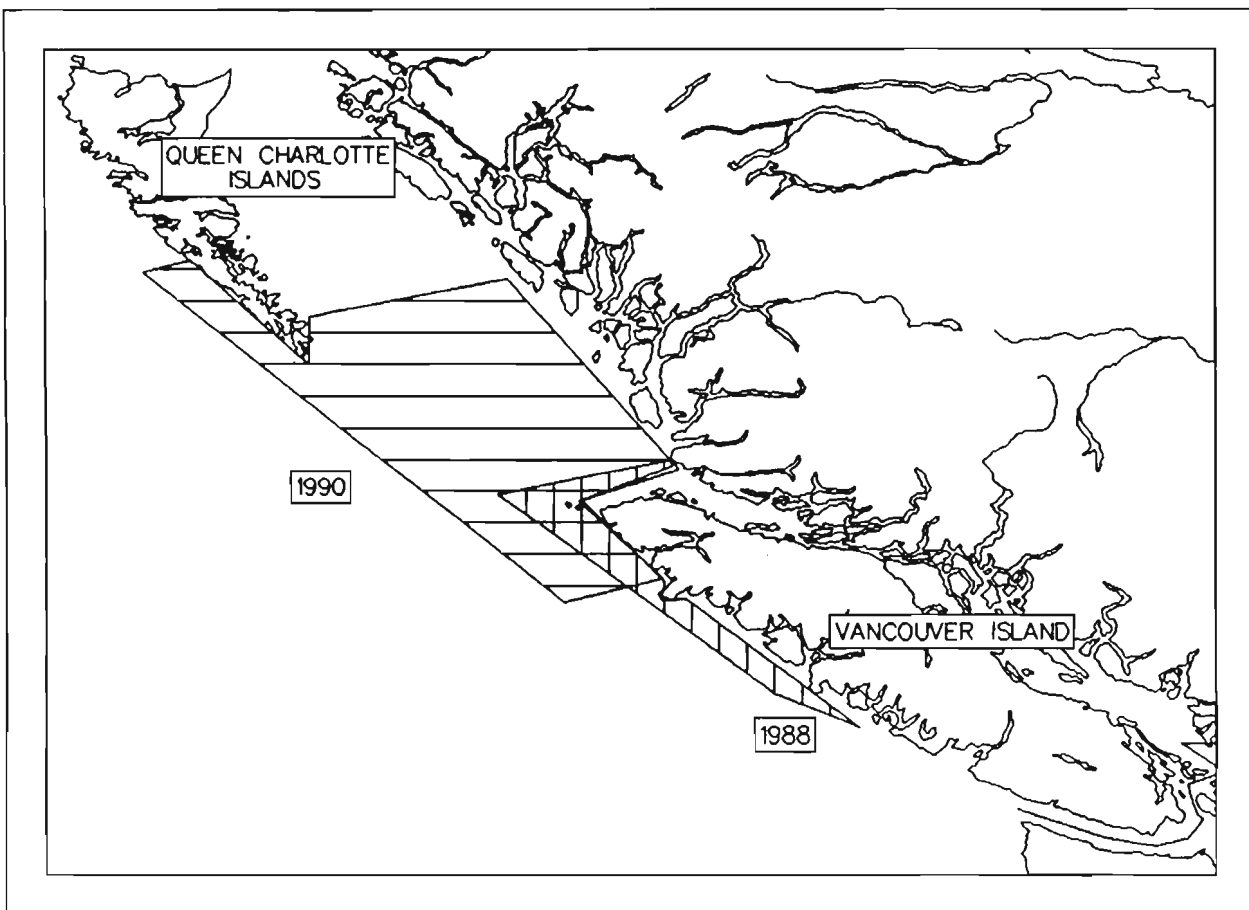


Figure 1 Survey Area: August 1 - 11, 1988; September 7 - 19, 1990



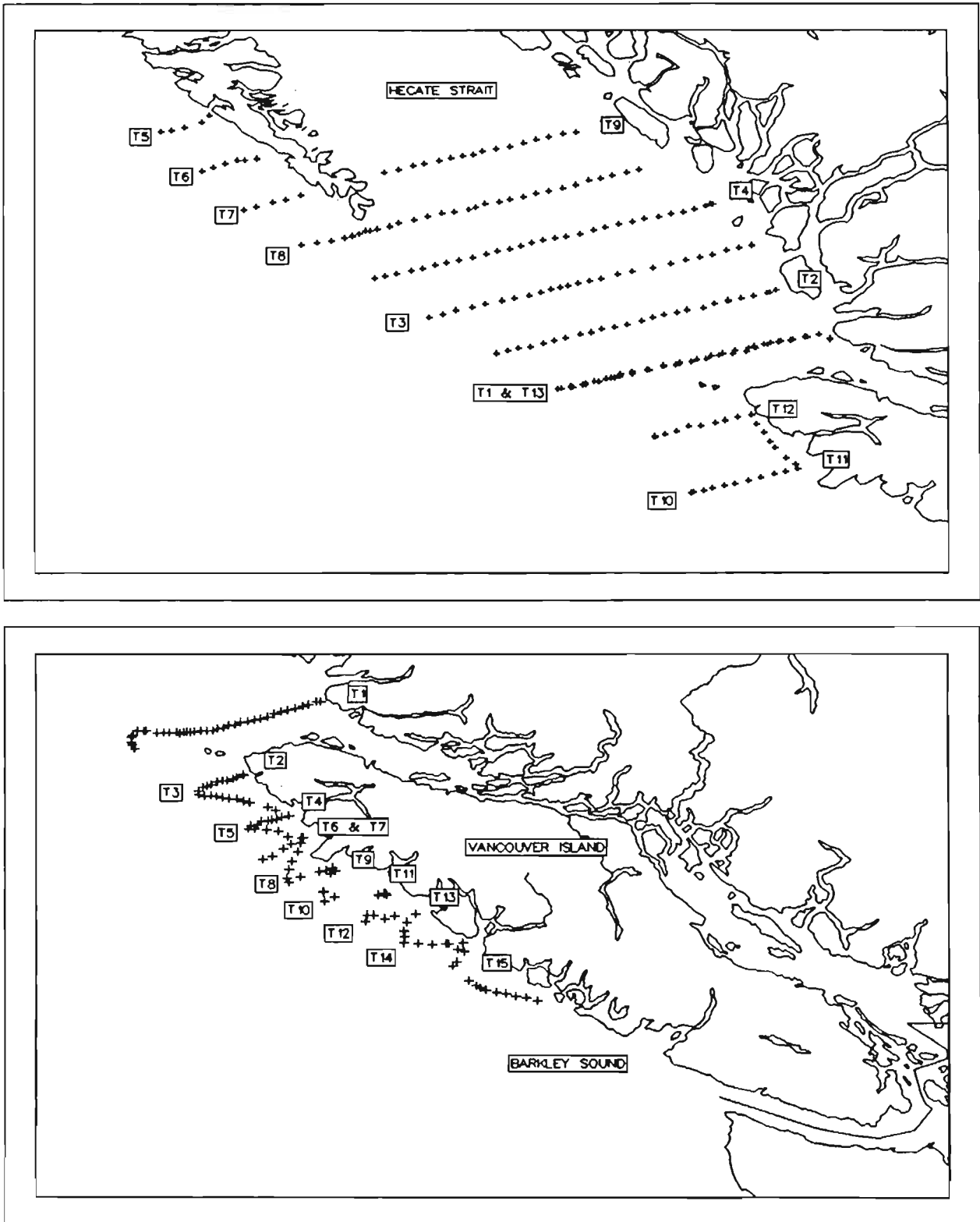
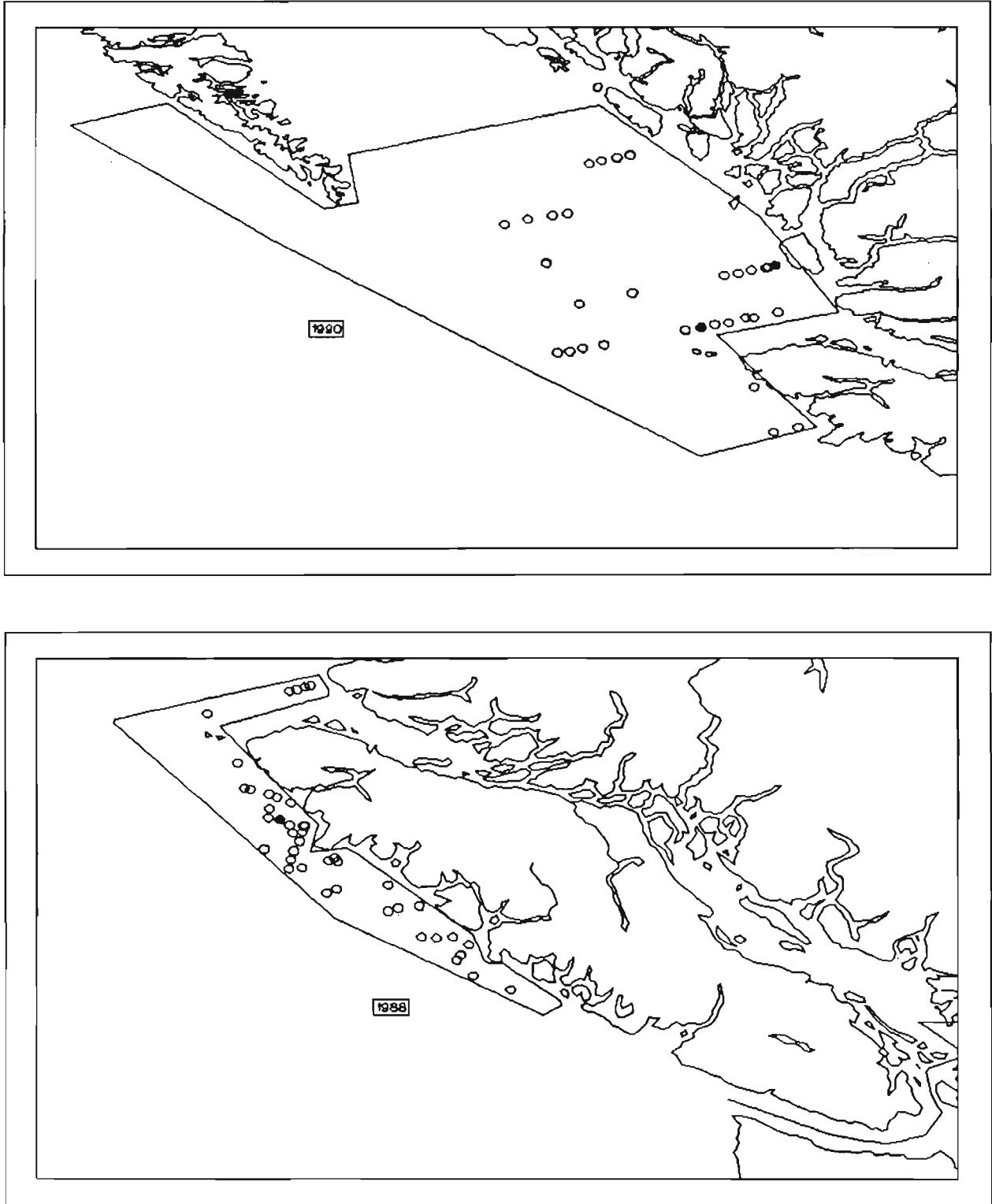


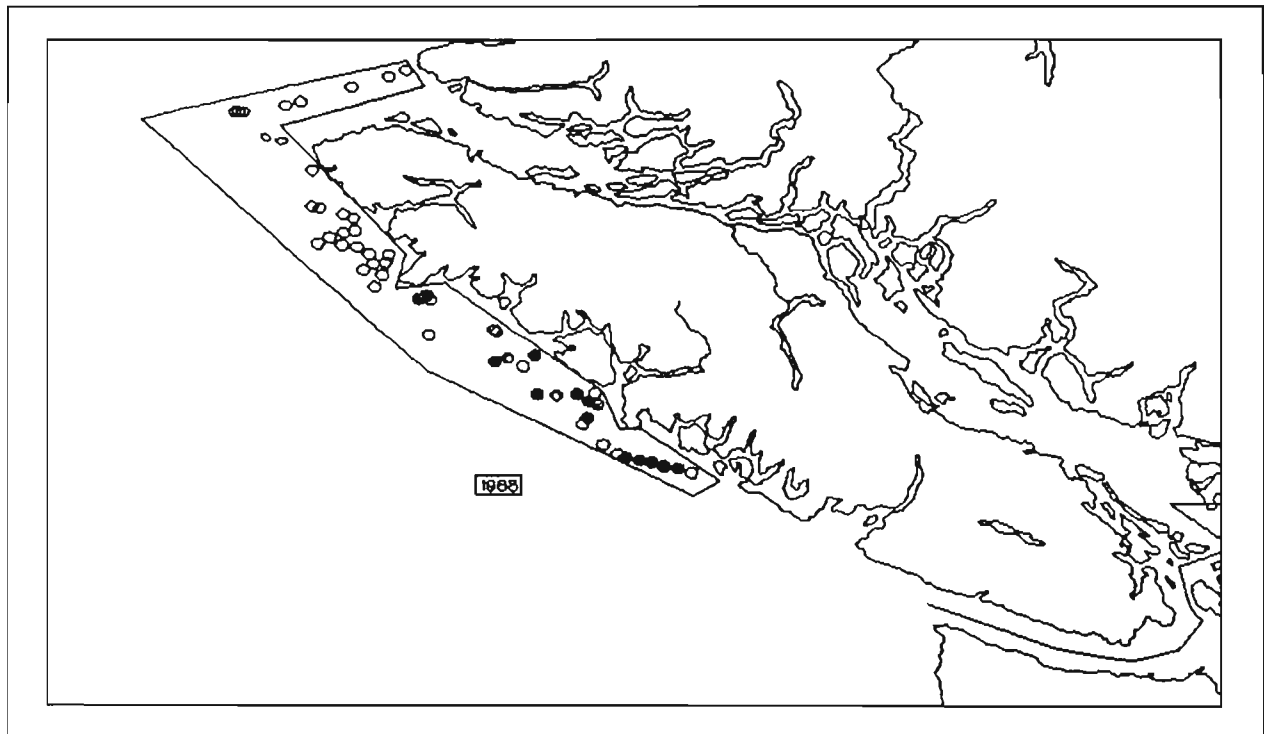
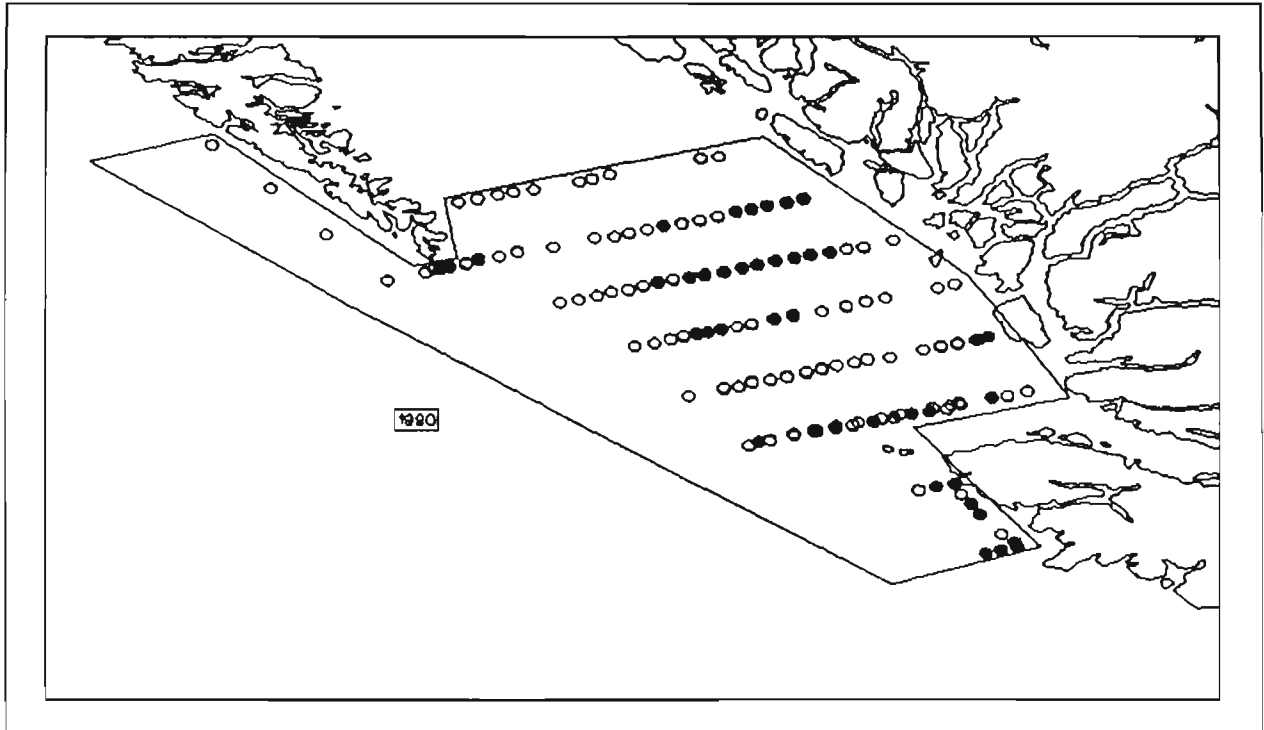
Figure 2 Survey Areas: 1990 (top) and 1988 (bottom). Symbols along transect lines represent codend haul locations.





**Figure 3** Sockeye catch by haul for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = >100





**Figure 4** Pink catch by haul for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = >100





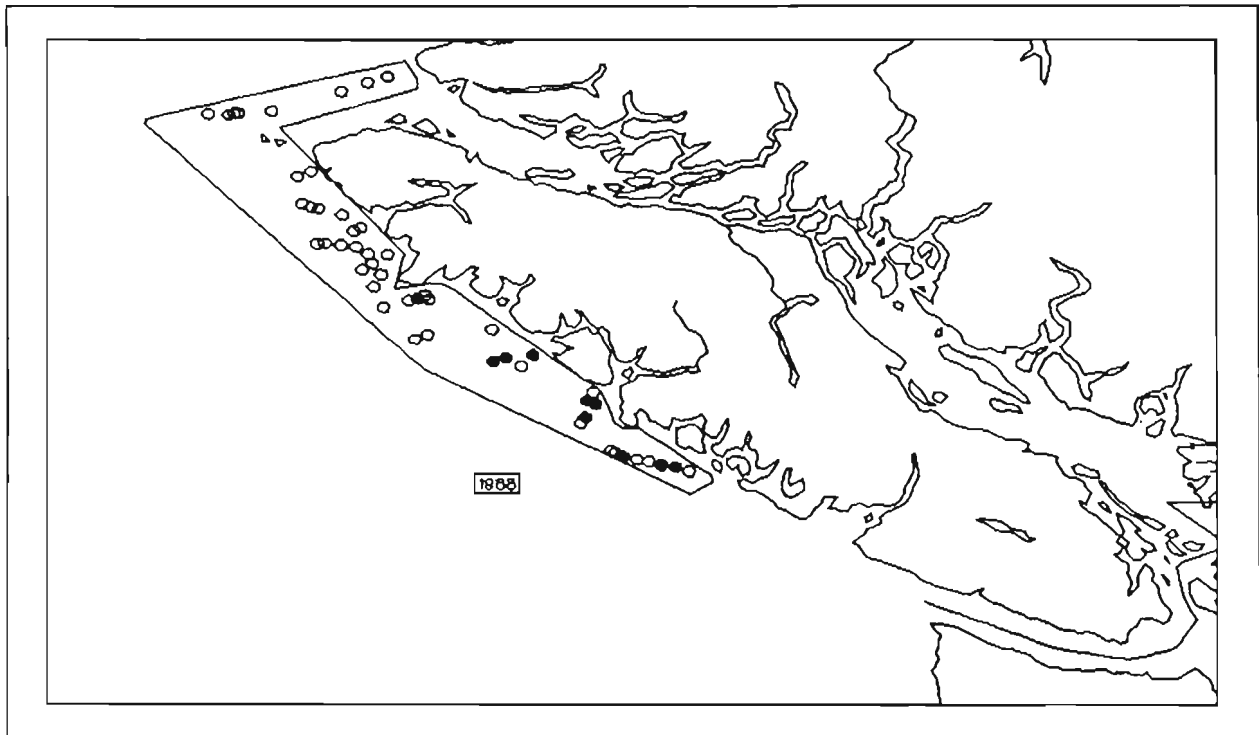
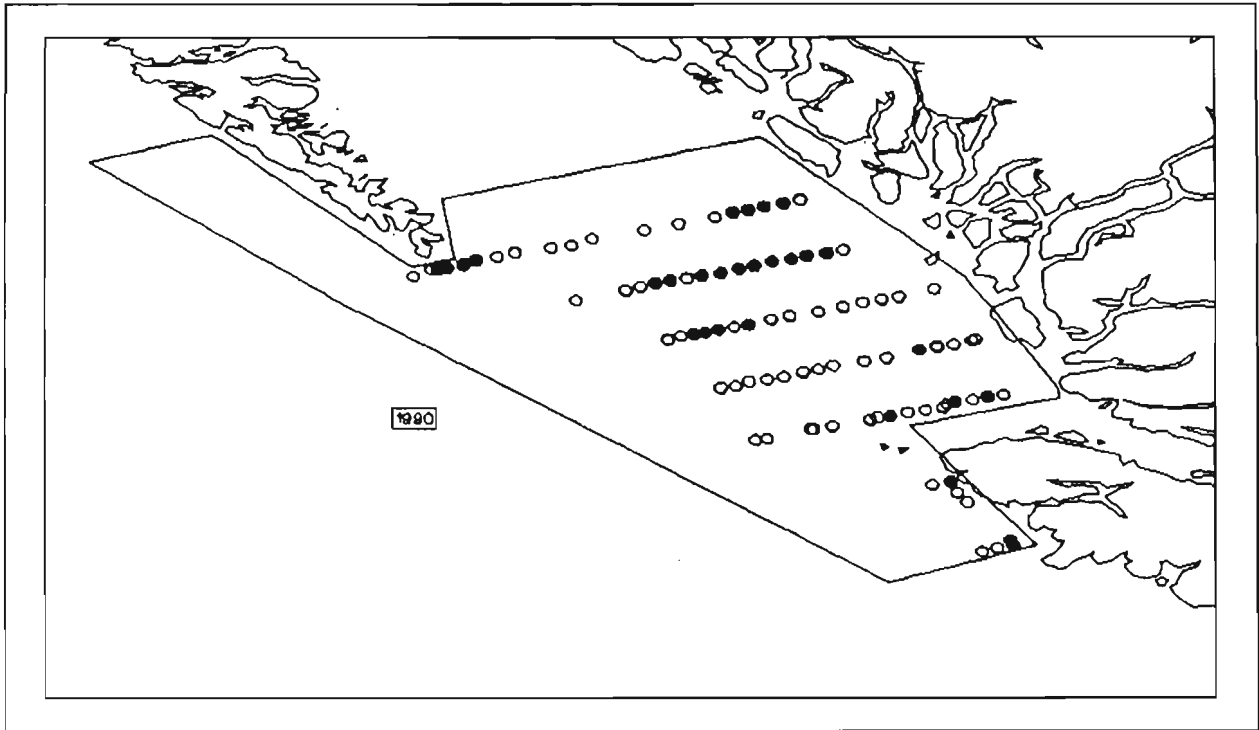
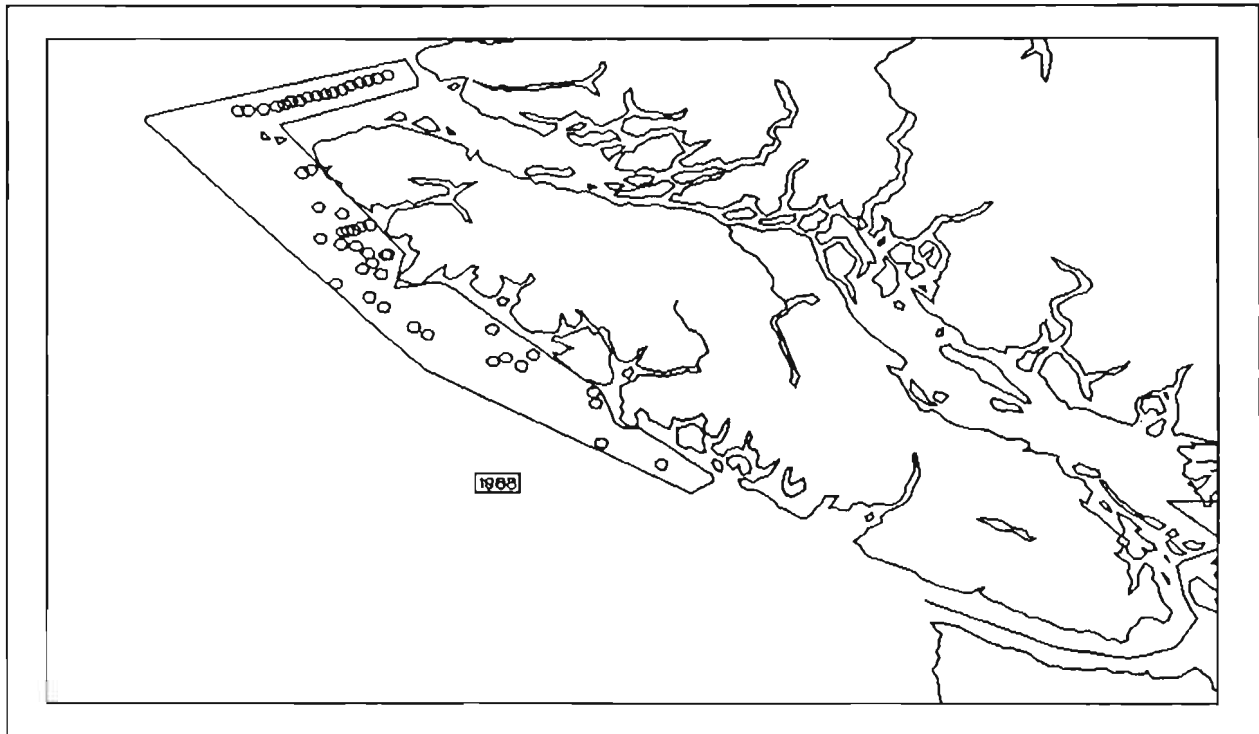
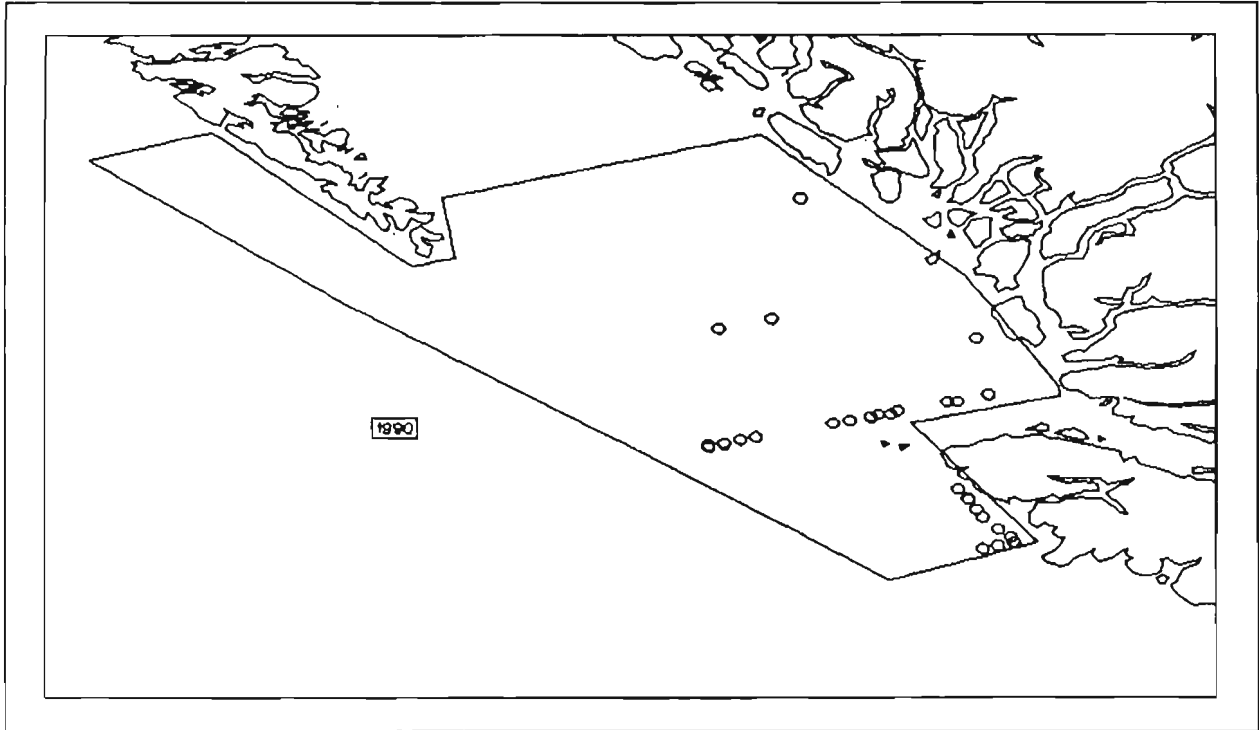


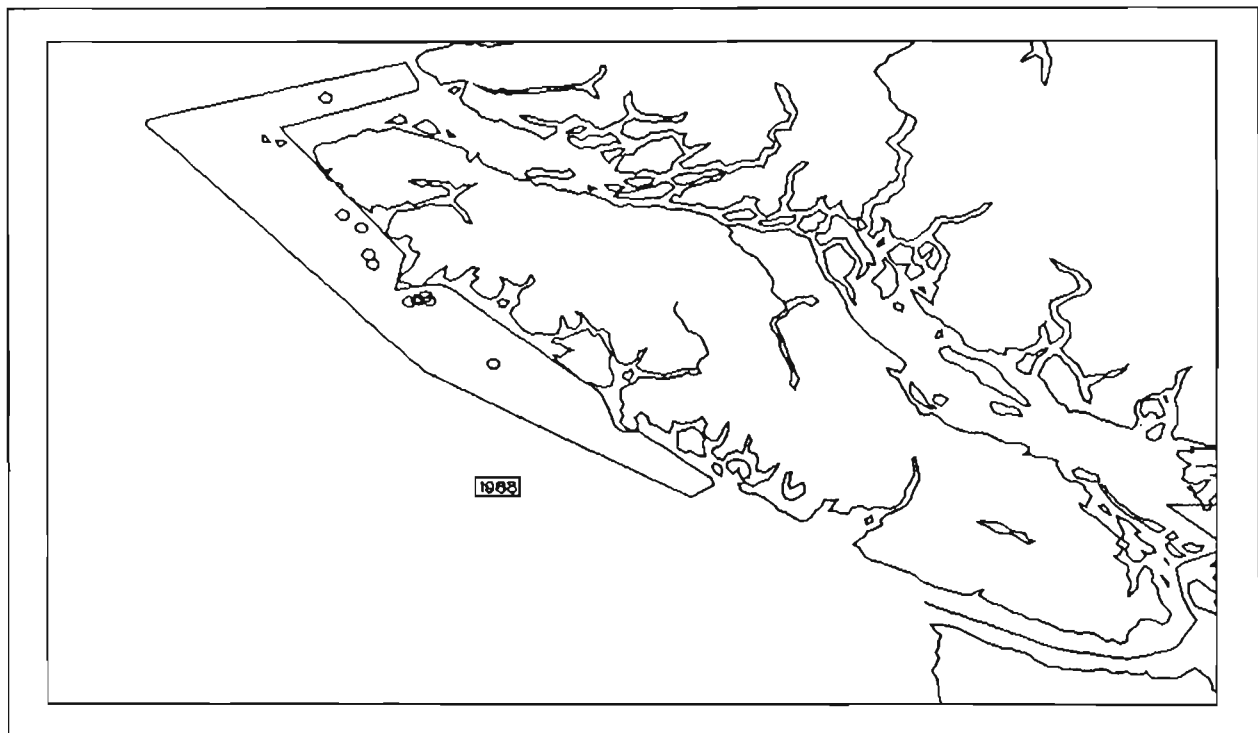
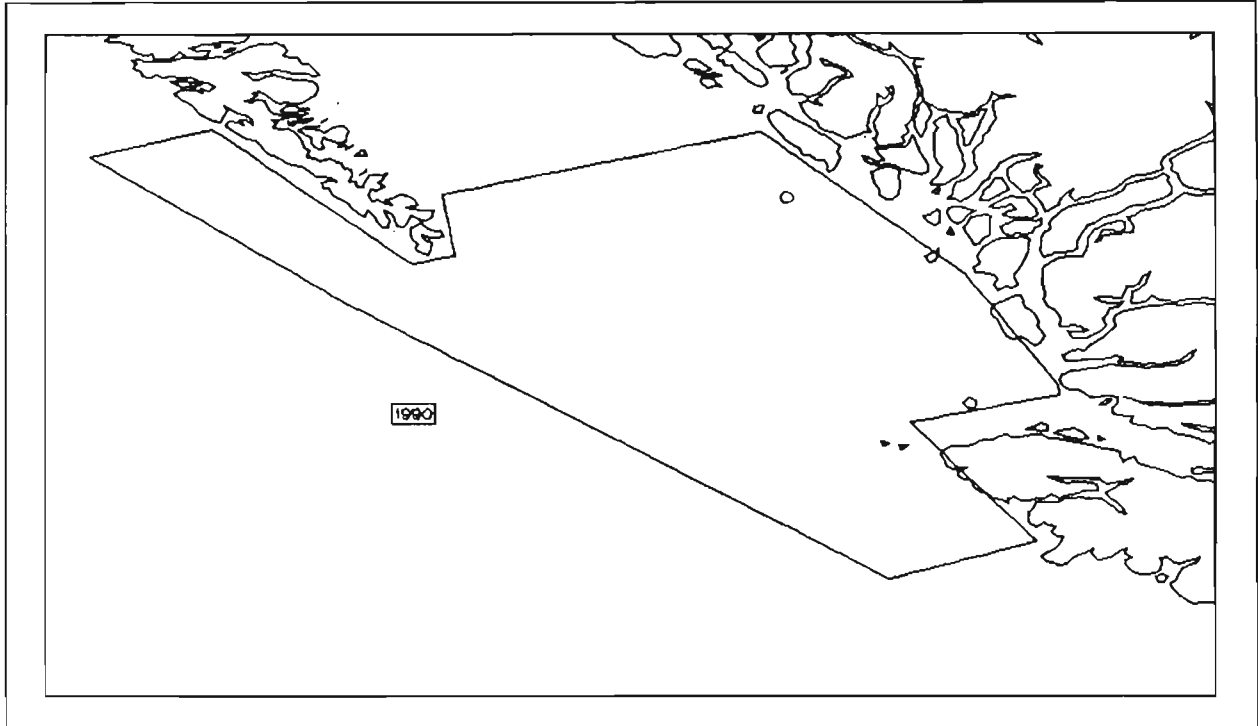
Figure 5 Chum catch by haul for 1990 (top) and 1988 (bottom). Survey area outlined by solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = >100





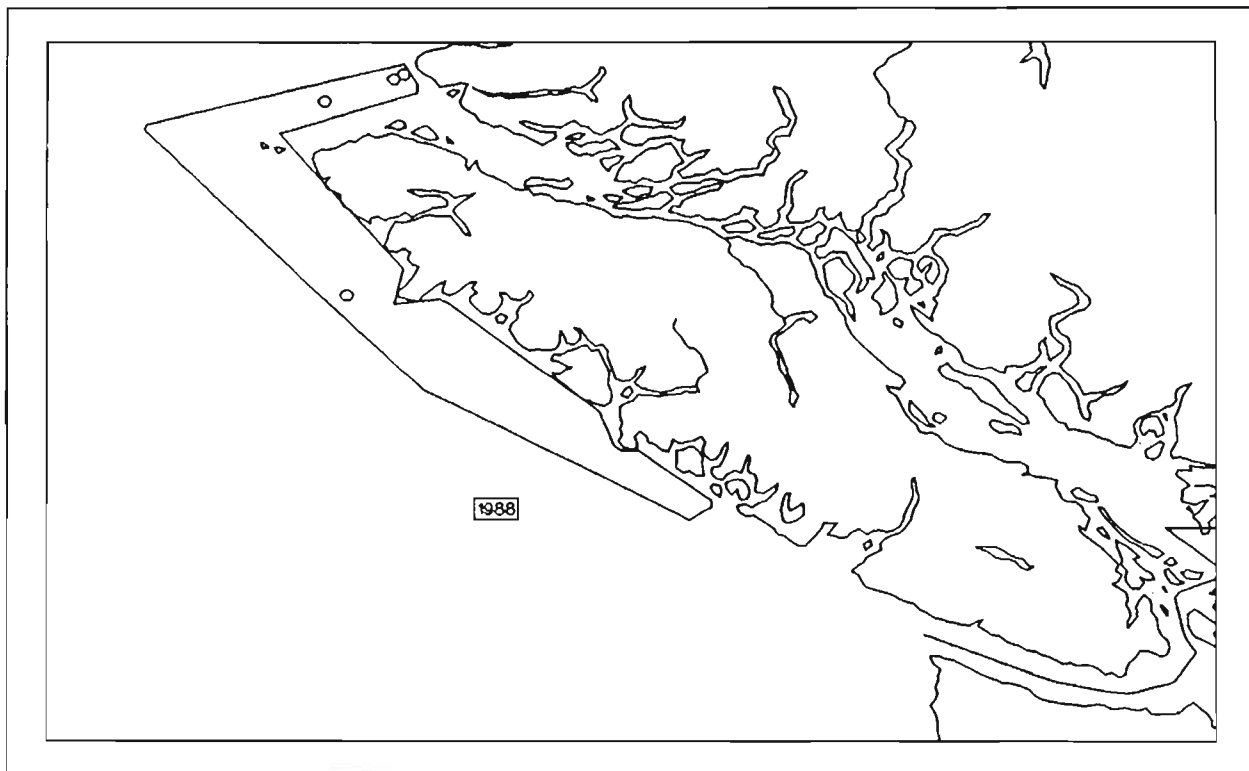
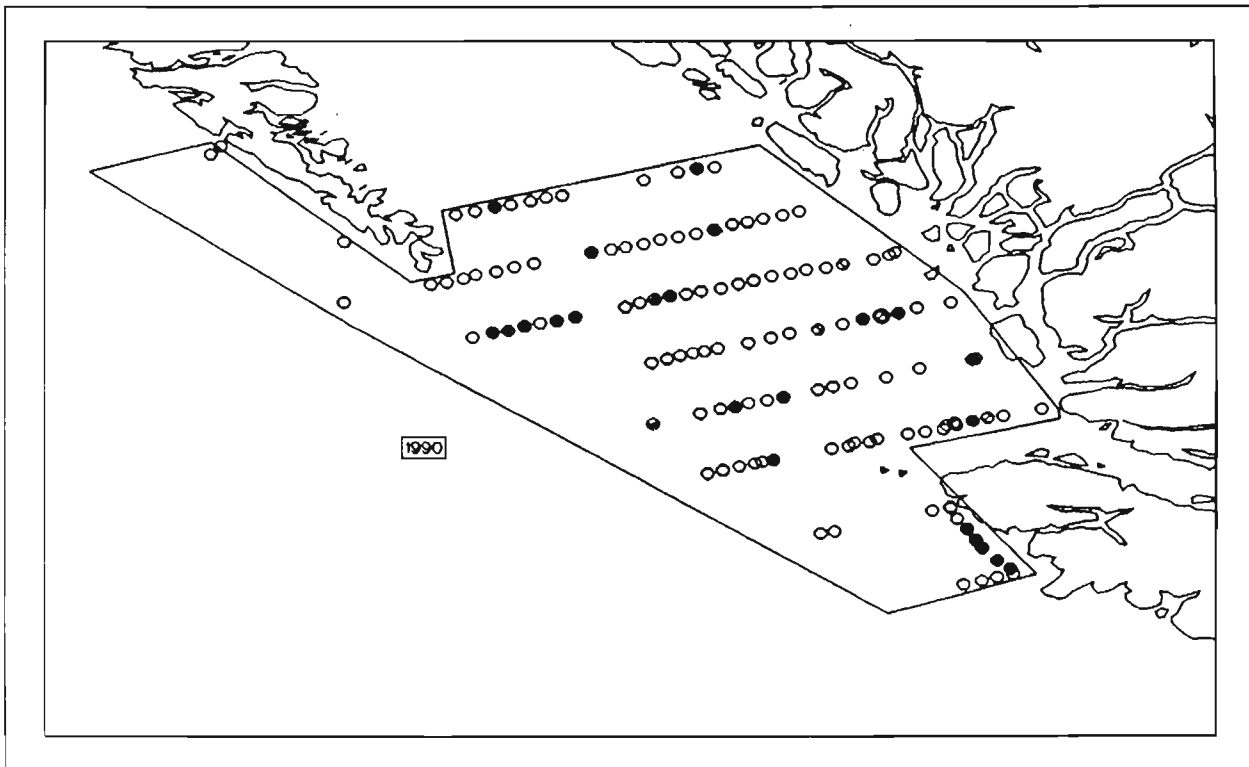
**Figure 6** Coho catch by haul for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = >100





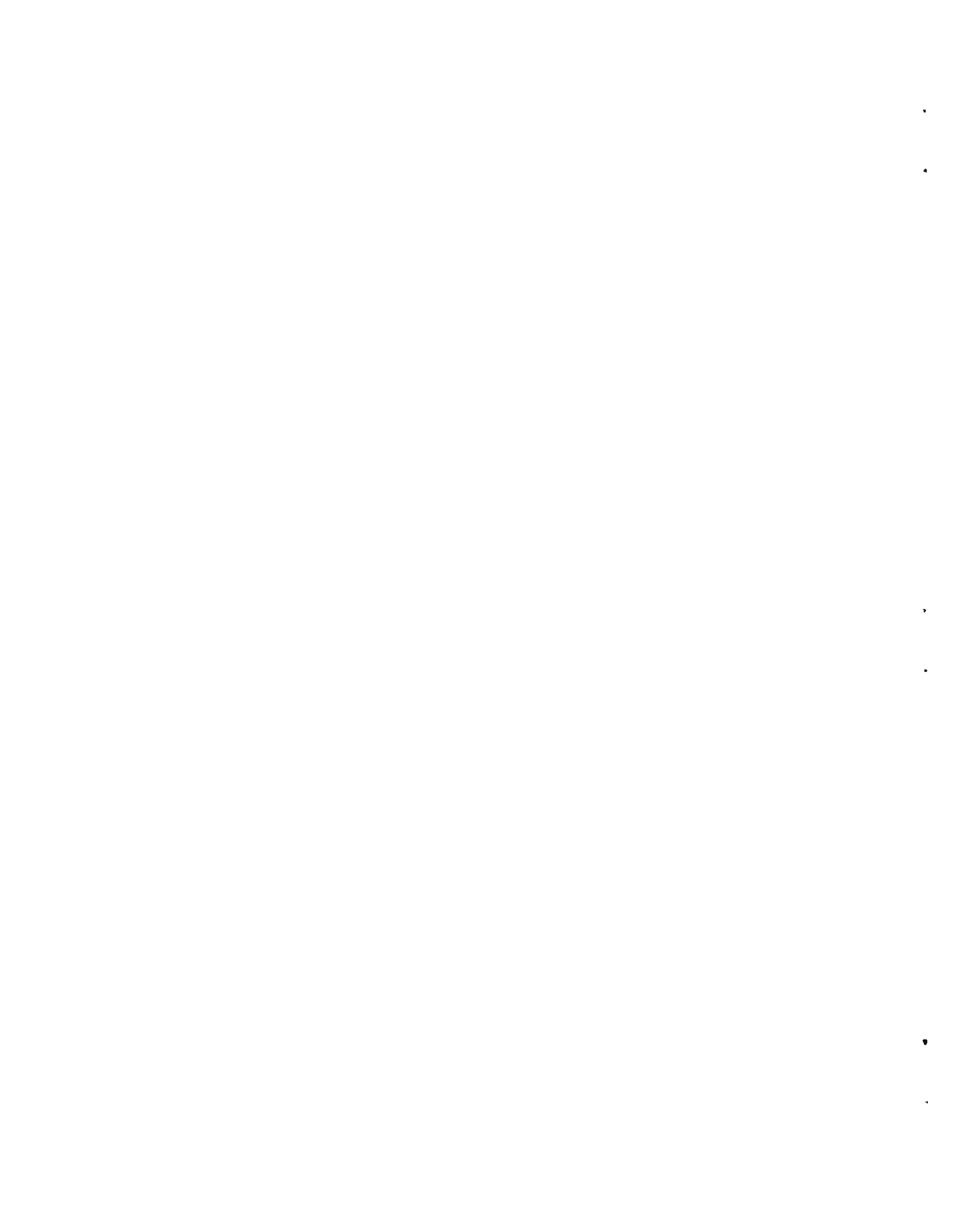
**Figure 7** Chinook catch by haul for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = >100





**Figure 8** Sablefish catch for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = 101 - 1000; **LARGE HATCHED** = >1000





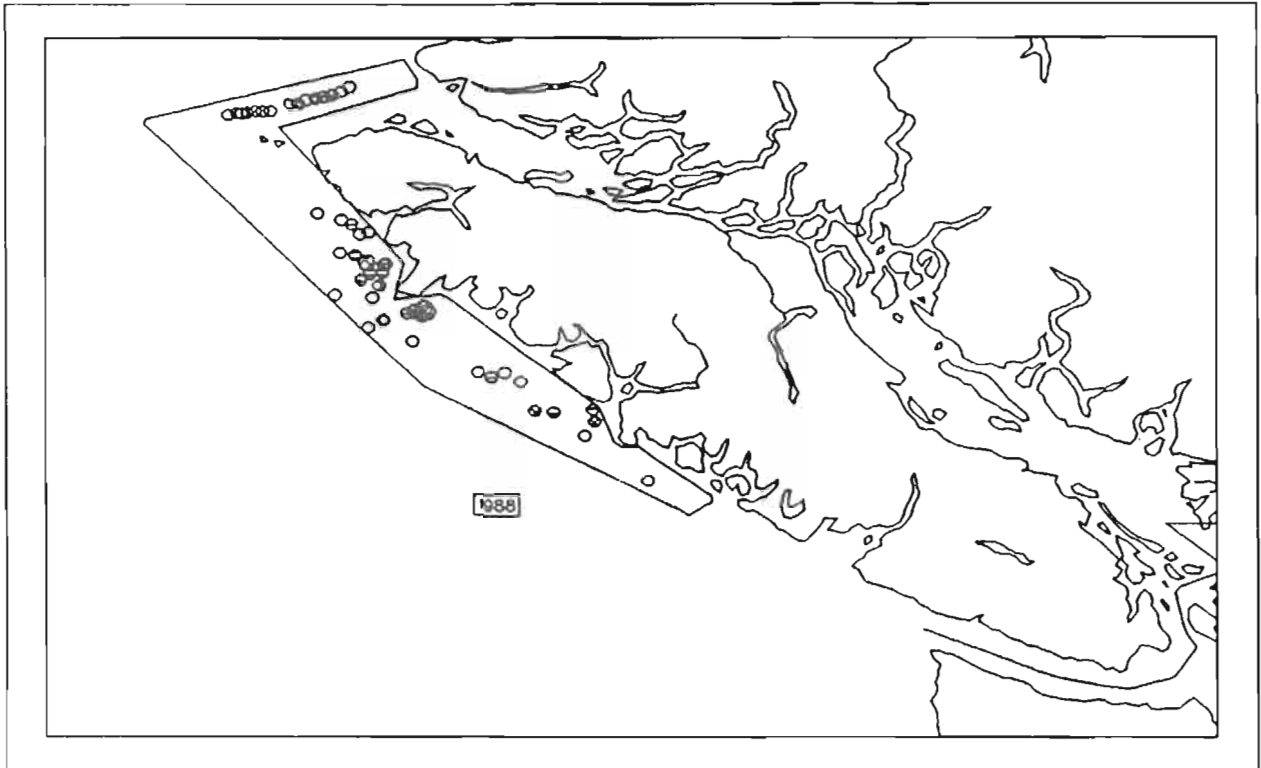
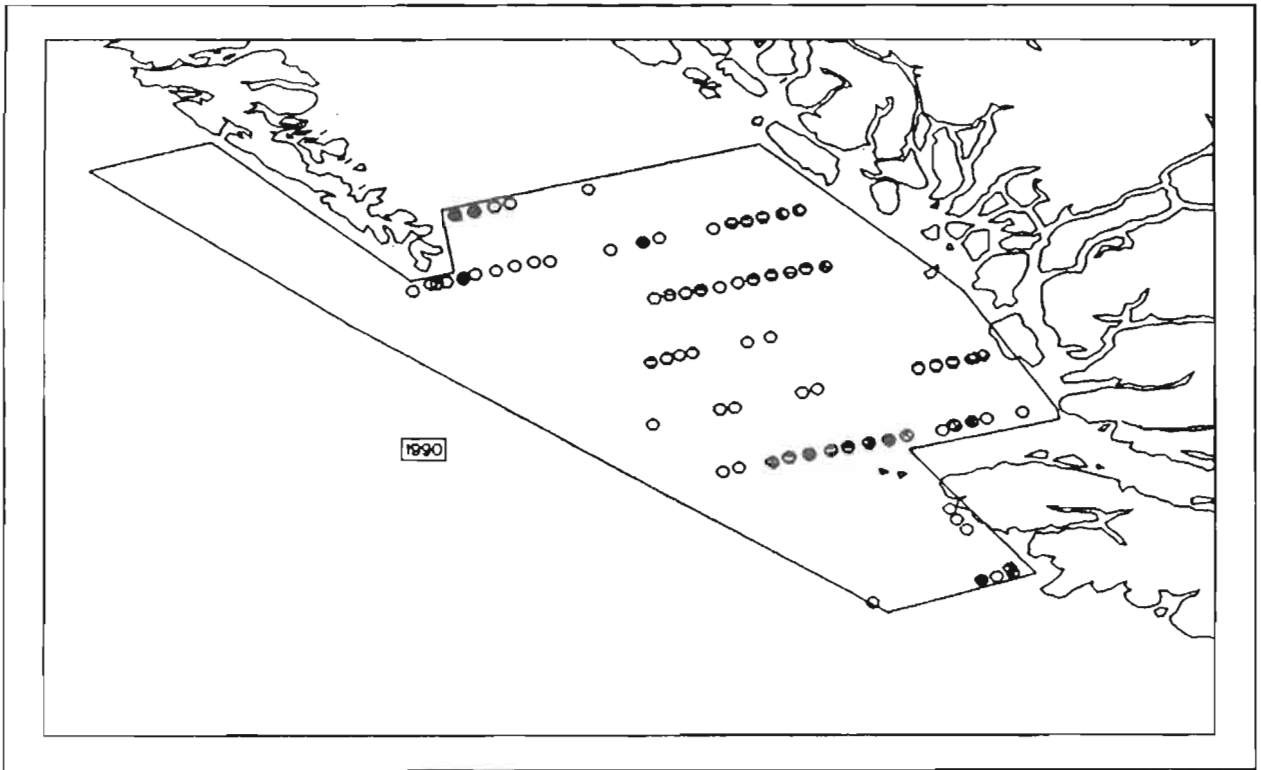


Figure 9 Herring catch for 1990 (top) and 1988 (bottom). Survey area outlined in solid line. Circles represent catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = 101 - 1000; **LARGE HATCHED** = >1000



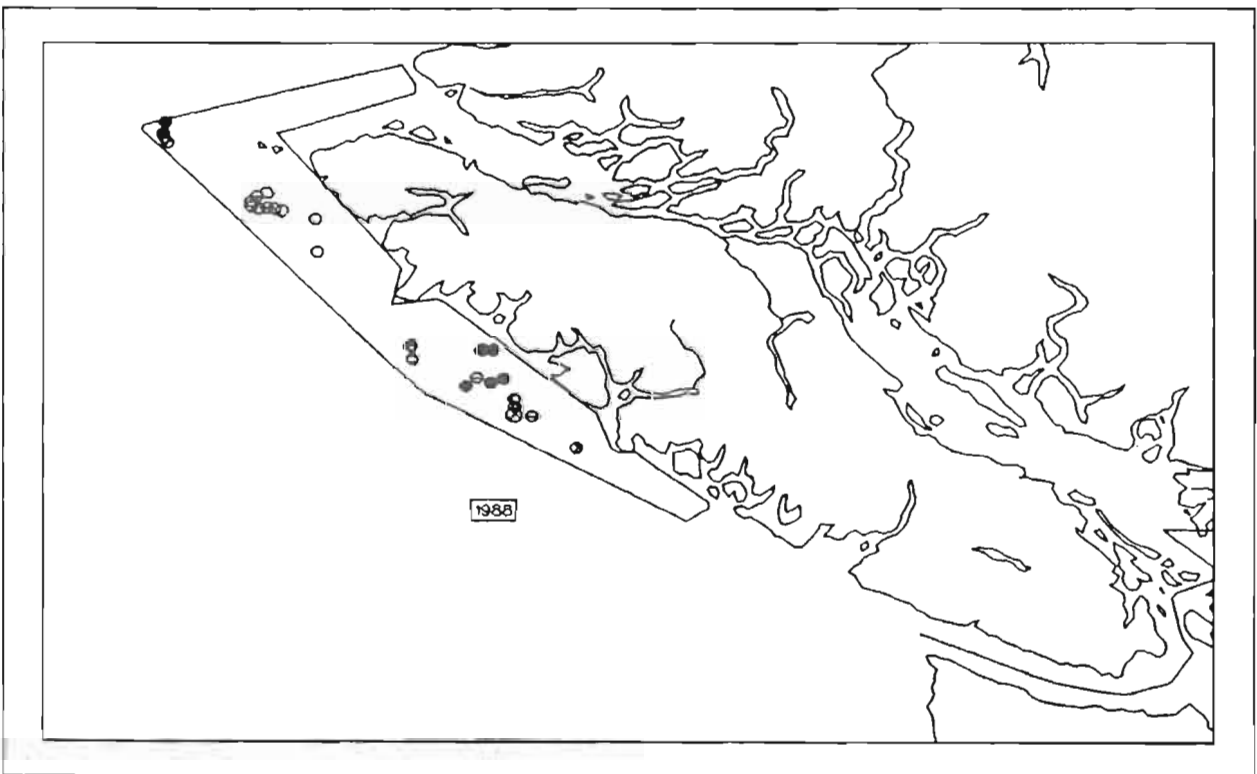
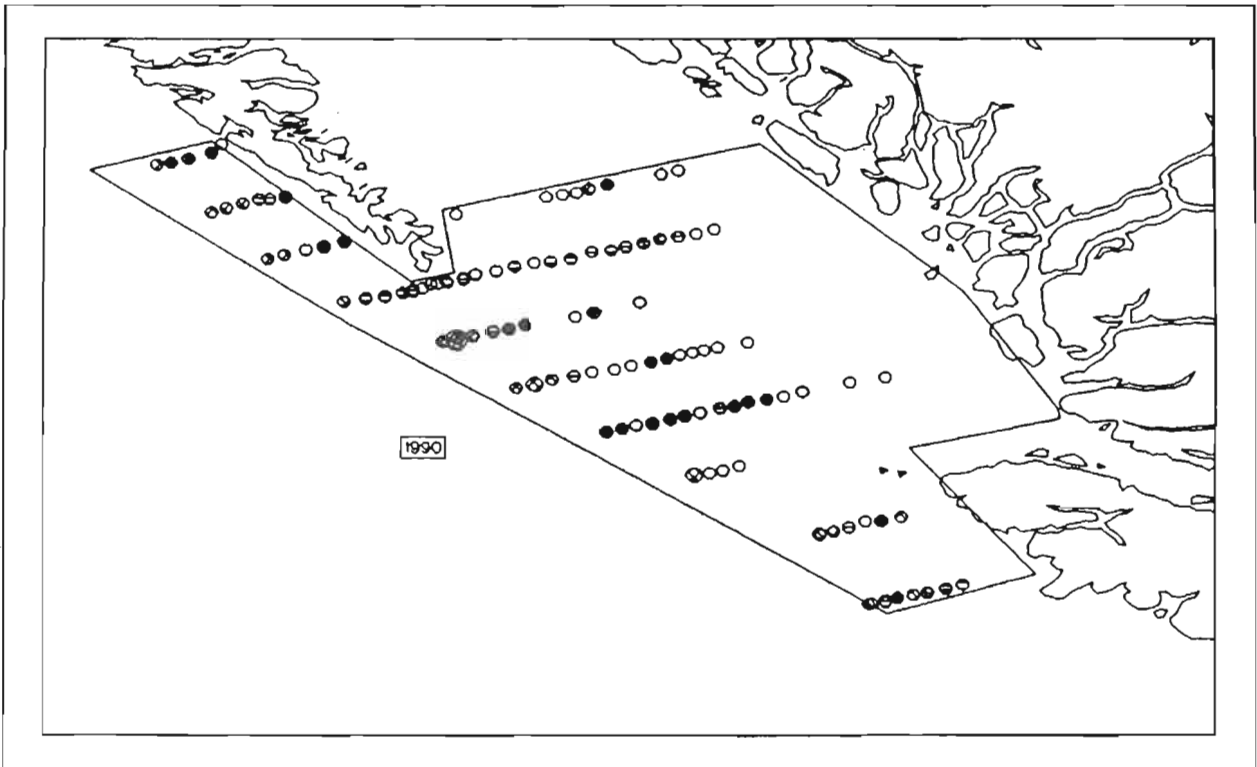


Figure 10 Pacific Saury catch for 1990 (top) and 1988 (bottom).  
Survey area outline in solid line. Circles represent  
catch: **OPEN** = 1 - 10; **CLOSED** = 11 - 100; **HATCHED** = 101 -  
1000; **LARGE HATCHED** = >1000

