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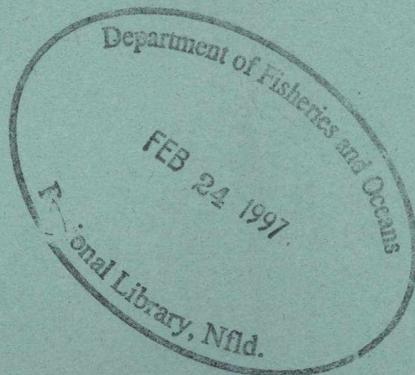


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Bottom trawl survey for rockfish in Queen Charlotte Sound, September 11 to 22, 1995

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ABSTRACT

Yamanaka, K. L., L. J. Richards and G. D. Workman. 1995. Bottom trawl survey for rockfish in Queen Charlotte Sound, September 11 to 22, 1995. Can. Manuscr. Rep. Fish. Aquat. Sci. 2362: 116 p.

A bottom trawl survey for rockfish was conducted by the fishing vessels OCEAN SELECTOR and FROSTI, in Goose Island Gully, Queen Charlotte Sound, from September 11 to 22, 1995. Objectives of the survey were to compare catch rates between the two vessels and to estimate the relative biomass of the Pacific ocean perch stock in Goose Island Gully. Biomass estimates were also compared for the F/V OCEAN SELECTOR between 1994 and 1995, and over the series of surveys between 1965 and 1995. In addition, biological information was collected for Pacific ocean perch (*Sebastes alutus*), yellowmouth rockfish (*S. reedi*), redstripe rockfish (*S. proriger*), and shortspine thornyhead (*Sebastolobus alascanus*) caught during the surveys. There were no differences in the catch rates between the F/V OCEAN SELECTOR and the F/V FROSTI. Relative biomass estimates were 26,634 tonnes (CV 16%) and 25,041 tonnes (CV 13%) for the F/V OCEAN SELECTOR and F/V FROSTI, respectively. Although the point biomass estimate for the 1995 survey by the F/V OCEAN SELECTOR was higher than for the 1994 survey (16,583 tonnes; CV 10%), the increase was not statistically significant. Other differences between the 1994 and 1995 surveys included survey design and timing and the use of a cod end net liner in 1995.

RÉSUMÉ

Yamanaka, K. L., L. J. Richards and G. D. Workman. 1995. Bottom trawl survey for rockfish in Queen Charlotte Sound, September 11 to 22, 1995. Can. Manuscr. Rep. Fish. Aquat. Sci. 2362: 116 p.

Une campagne d'étude des sébastes a été réalisée au chalut de fond par les bateaux de pêche OCEAN SELECTOR et FROSTI dans la passe de l'île Goose, bassin de la Reine-Charlotte, du 11 au 22 septembre 1995. La campagne avait pour objectifs de comparer les taux de capture des deux bateaux et d'estimer la biomasse relative du stock de sébaste à longue mâchoire dans la passe de l'île Goose. On a aussi comparé les estimations de la biomasse fournies par l'OCEAN SELECTOR en 1994 et en 1995. De plus on a recueilli des données biologiques sur le sébaste à longue mâchoire (*Sebastes alutus*), le sébaste à bouche jaune (*S. reedi*), le sébaste à raie rouge (*S. proriger*) et le sebastolobe à courtes épines (*Sebastobulus alascanus*) capturés pendant la campagne. Il n'y avait pas de différence dans le taux de capture entre l'OCEAN SELECTOR et le FROSTI. Les estimations de la biomasse relative étaient de 26 634 tonnes (CV : 16 % et) 25 041 tonnes (CV : 13 %) respectivement pour l'OCEAN SELECTOR et le FROSTI. L'estimation ponctuelle de la biomasse pendant la campagne de 1995 de l'OCEAN SELECTOR était plus élevée que celle du relevé de 1994 (16 583 tonnes; CV : 10 %), mais l'augmentation n'a pas été jugée statistiquement significative. D'autres différences existaient entre les campagnes de 1994 et 1995, notamment dans la conception et le calendrier, et à cause de l'emploi en 1995 d'une doublure de cul de chalut.

INTRODUCTION

Investigations on the distribution, abundance and biology of Pacific ocean perch (*Sebastes alutus*) in the eastern Pacific ocean began at the Pacific Biological Station in 1963. Eight exploratory trawl surveys were conducted for Pacific ocean perch between 1963 and 1966, covering an area from Cape Blanco, Oregon to Unalaska Island, Alaska (Westrheim 1967a). Since 1967, research trawl hauls have been completed in the Goose Island Gully portion of Queen Charlotte Sound on at least 13 groundfish surveys. Ten systematic surveys to estimate the biomass of the Goose Island Pacific ocean perch stock have been conducted (Westrheim 1967b; Westrheim et al. 1968, 1976; Harling et al. 1969, 1970, 1971, 1973; Harling and Davenport 1977; Nagtegaal et al. 1986; Hand et al. 1995). These surveys were to provide fishery independent estimates of relative abundance for use in stock assessments.

The earliest groundfish research surveys were conducted using the R/V G. B. REED. In 1979, the F/V SOUTHWARD HO was chartered to conduct an exploratory rockfish survey in Queen Charlotte Sound (Nagtegaal and Farlinger 1980). When the R/V G. B. REED was to be replaced in 1984, the F/V EASTWARD HO was chartered to conduct a comparison of catch rates between the R/V G. B. REED and a commercial vessel (Nagtegaal et al. 1986). In 1994, the F/V OCEAN SELECTOR was chartered to conduct a trawl survey using the same stratified systematic survey design employed by the R/V G. B. REED in earlier surveys (Hand et al. 1995). A concurrent hydroacoustic survey was conducted by the R/V W. E. RICKER. In 1995, two commercial fishing vessels were chartered to conduct a rockfish survey of Goose Island Gully using a stratified random survey design.

This report documents the trawl survey design and sampling procedures and summarizes the catch, biological, and temperature data collected. Relative biomass estimates for the Goose Island Gully stock of Pacific ocean perch are also presented.

METHODS

VESSELS AND GEAR

Two commercial fishing vessels, the OCEAN SELECTOR and the FROSTI were chartered to conduct a bottom trawl survey of Goose Island Gully between September 11 and 22, 1995. The F/V OCEAN SELECTOR is a 47.8-m, 800-hp stern trawler, equipped with a Western IIA bottom trawl net with 18-inch roller gear. The F/V FROSTI is a 39.3-m, 1000-hp stern trawler, equipped with a Western II 'box' bottom trawl net with 21-inch roller gear. Both vessels used 4.5-inch cod end mesh with 1.5-inch prawn web liners on their nets and a pair of Thybron trawl doors. The F/V OCEAN SELECTOR lost the cod end half of its net on September 14, after catching a boulder during haul number 14. The net was rebuilt, but for three subsequent hauls (numbers 15, 16 and 17), no net liner was in place. A net liner was sewn into the cod end for haul number 18 and remained in place until the end of the survey.

Both vessels embarked scientific staff in Port Hardy, and began fishing in Goose Island Gully on September 11. The F/V OCEAN SELECTOR returned to Port Hardy after fishing on September 17 to unload its catch, and resumed fishing on September 19. Both vessels completed their charters and disembarked scientific staff in Port Hardy on September 22.

SURVEY DESIGN

The survey was conducted to determine the relative biomass of Pacific ocean perch in Goose Island Gully using an area swept method. Survey sites were selected using a stratified random design. Based on previous surveys for Pacific ocean perch in Goose Island Gully, the survey area was defined by a depth range of 80-160 fathoms (Hand et al. 1995), where the maximum depth extended to the deepest part of the gully. This survey area was divided into a grid of two kilometre square units. Grid units were assigned to one of four depth strata based on previous surveys, with a minor adjustment to metres from fathoms (Table 1). Within a stratum, grid units were randomly selected as survey sites. Given a fixed total number of survey sites, the sample size for each stratum was determined using Neymann allocation and was approximately proportional to the average stratum catch rate variance in previous surveys weighted by the number of stratum grid units.

Each survey site was fished once by each vessel, where possible. Adjacent sites were fished on the same day and an attempt was made to select sites in different portions of the gully on consecutive days. On the first day of the survey, different fishing sites were assigned to each vessel. Fishing sites were then rotated between vessels for the following day. Thus, new sites were fished approximately every second day. Precise fishing locations were determined by the first vessel to fish a site. This information was communicated to the skipper of the second vessel who attempted to replicate the tow when he visited the site. A standard tow was 20 min in duration, measured from the time the hydraulics were locked after the net was deployed to the time the hydraulics were unlocked to retrieve the net.

This survey design differed from that used in the 1994 and earlier surveys. The original design was based on a stratified systematic approach, where trawling effort was allocated to 20 fa depth strata along selected LORAN A lines. Fishing sites were retained in later surveys despite the replacement of LORAN A with LORAN C. As a consequence, fishing sites were concentrated on the north side of the gully. With the current design, fishing sites are randomly distributed throughout the gully, providing a more representative coverage of the entire gully area. We also shortened the standard tow time from 30 to 20 min, to reduce the volume of fish to be processed.

CATCH PROCESSING

Methods for processing the catch were similar on both vessels. Visual estimates of the total catch weight were made when the cod end was on the trawl deck. If the catch was estimated to be less than 500 kg, the entire catch was processed; larger catches were subsampled prior to processing. Processing of the catch was carried out after the cod end was emptied onto the trawl deck. Fish were washed down to a holding bin, then moved by

conveyer to a sorting area. The subsample was selected by filling baskets with fish directly from the conveyer at the beginning, middle and end of the process (Westrheim 1967c). The whole haul or a subsample of nine baskets was then sorted to species, weighed and sampled. For large hauls, the remaining portion of the catch was sorted by the crew into 'keepers' and 'discards'. An estimate of the 'keeper' weight was made prior to emptying the 'keeper' bins into the fish hold. Species composition of the catch was determined from the whole haul or subsampled catch. For subsampled hauls, the ratio of 'keepers' to 'discards' was first determined from the subsample. This ratio was then applied to the total known weight of the 'keepers' to obtain the total catch weight.

BIOLOGICAL SAMPLING

Biological sampling for length, weight, sex, maturity and double sagittal otoliths for ageing was conducted for Pacific ocean perch, yellowmouth rockfish, redstripe rockfish, and shortspine thornyhead. Other rockfish species were sampled opportunistically from hauls that contained at least 150 kg of a single rockfish species. Random subsamples of approximately 50 fish were collected for biological samples from the sorted catch of a haul. Length-sex frequency data were obtained for every haul that contained at least 50 kg of a single rockfish species. An attempt was made to collect length-sex data for all Pacific ocean perch sorted from the haul, excluding those fish, if any, that were set aside for a biological sample.

All the yellowmouth rockfish ($n=449$), redstripe rockfish ($n=191$) and shortspine thornyhead ($n=367$) otoliths collected were aged. A subsample of 400 of the 1281 Pacific ocean perch otoliths were aged. The number of Pacific ocean perch otoliths selected for ageing from each depth stratum was approximately proportional to the estimated Pacific ocean perch biomass in that stratum. Given a defined number of otoliths to be aged within a stratum, an equal number of otoliths was randomly selected from each individual sample collected, regardless of vessel

A temperature sensor was attached to the cod end of the net of both vessels. The F/V OCEAN SELECTOR lost the sensor along with half of the net on haul number 14. The sensor attached to the cod end of the F/V FROSTI was retrieved and the temperature data were extracted.

RESULTS AND DISCUSSION

GENERAL

A total of 57 hauls was made by the F/V OCEAN SELECTOR, of which 54 were useable. A total of 58 hauls was made by the F/V FROSTI, of which 57 were useable. Fifty-four survey sites were fished by both vessels (Fig. 1). A total of 23 rockfish species, 24 other fish and three invertebrate groups was caught during the survey (Appendix Table 1) Bridge log and catch data by haul for the F/V OCEAN SELECTOR and the F/V FROSTI are in Appendix Tables 2 and 3, respectively. Sampling densities for both vessels combined were

5.3 hauls/100 nm² for the 140-173 m depth interval, 10.6 hauls/100 nm² for the 174-220 m depth interval, 8.9 hauls/100 nm² for the 221-260 m depth interval and 11.0 hauls/100 nm² for the 261-300 m depth interval. Pacific ocean perch was by far the most common species in the catch at 59% of the total combined catch weight, followed by yellowmouth rockfish at 16% (Table 2).

BIOLOGICAL DATA

Length/sex frequency samples were collected for 12 species of rockfish and for shortspine thornyhead (Table 3). Length/sex frequency data for each rockfish species by vessel and haul number are shown in Appendix Table 4. Length/weight/sex/maturity/otolith samples were collected from three species of rockfish and for shortspine thornyhead (Table 3). Length-weight relationships for these species are given in Table 4 and illustrated in Fig. 2 and Fig. 3.

The sample proportion of female Pacific ocean perch was not related to the depth interval and had an average value of 56% (Table 5). The mean length of both female and male Pacific ocean perch was smaller in the shallowest depth interval, and, for each depth interval, mean length of female Pacific ocean perch was larger than that of males. Mean age by depth interval also tended to be higher for females than for males (Table 6). Most of the sampled fish were 35 cm or longer in length, with a maximum length of 50 cm (Fig. 4a,b). Pacific ocean perch ranged in age from 4 to 59 years (Fig. 5a,b). Modes in the age composition at 11, 15, and 19 years correspond to the 1984, 1980 and 1976 year-classes, respectively.

For yellowmouth rockfish, the sex ratio was dependent on the depth interval, with only 8-12% females for the deepest interval and 56-65% females for the other three intervals (Table 5). Female and male yellowmouth rockfish were similar in mean length, with no consistent depth-related trend. Most of the yellowmouth rockfish sampled were 35 cm or longer in length, with a maximum length of 50 cm (Fig. 6a). Yellowmouth rockfish ranged in age from 6 to 53 years (Fig. 6b). Modes in the age composition at 11 and 13 years represent the 1984 and 1982 year-classes, respectively.

Redstripe rockfish were sampled from the shallowest two depth intervals, only with a sex ratio of 50% female for the F/V OCEAN SELECTOR and 39% female for the F/V FROSTI (Table 5). Mean lengths were larger for female redstripe rockfish than for males. Redstripe rockfish tended to be smaller than Pacific ocean perch or yellowmouth rockfish; redstripe rockfish were sampled most frequently in the length range of 25 to 32 cm (Fig. 7a). Redstripe rockfish ranged in age from 4 to 47 years (Fig. 7b). The prominent mode in the age composition at 7 years represents the 1988 year-class.

Shortspine thornyhead were sampled infrequently from the shallowest depth interval and the sex ratio was highly variable at that depth (Table 5). Over all depths, female shortspine thornyhead accounted for 43% of the fish for which sex could be determined. There were no consistent trends in mean size related to sex or depth. However, shortspine thornyhead tended to be smaller and younger than the sampled rockfish (Fig. 8). Shortspine

thornyhead ranged in age from 3 to 50 years, with a mode in the age distribution at 7 years (Fig. 8b).

Ninety-eight percent of the Pacific ocean perch sampled for sexual maturity were identified as mature fish (Table 7). The maturity condition of most male Pacific ocean perch was classified as "spent", while the maturity condition of females was classified as "maturing" or "mature". Unfortunately, maturity codes were interpreted differently by staff on the two vessels. The "maturing" females coded on the F/V FROSTI included females that both had and had not spawned previously. The "maturing" females coded on the F/V OCEAN SELECTOR only included females who had not spawned previously.

Bottom temperatures recorded by the net sensor on the F/V FROSTI decreased with increasing depth (Table 8). Mean temperature dropped from 6.3° C for the shallowest depth interval to 5.7° C for deepest interval.

CATCH RATES AND BIOMASS ESTIMATES

Vessels and fishing gear used to conduct the Pacific ocean perch surveys have varied in recent years; early surveys were conducted with a consistent methodology by the R/V G. B. REED. In 1984, the trawl net sweep-length on the G. B. REED was altered and a commercial vessel was used concurrently. In 1994 and 1995, other commercial vessels were chartered to conduct the survey. A comparison of catch rates over time must therefore consider differences in fishing efficiency among vessels.

In order to standardize for the different net dimensions, catch per unit effort is expressed in terms of catch per area of bottom fished per unit time, or catch density. An estimate K_a of the area swept in one hour of fishing is calculated as the product of vessel speed (nm/h) and effective path width of the trawl net (nm). The value of K_a has been modified in different analyses with changing assumptions about path width and vessel speed (Nagtegaal et al. 1986, Hand et al. 1995). In particular, Nagtegaal et al. (1986) considered the distance between the trawl doors as the effective path width rather than the distance between the trawl wing tips (wingspread) because of evidence that the doors and sweeps herd the fish toward the net opening (Kimura et al. 1978, Leaman and Nagtegaal 1982, Krieger 1993). We continue to use the door spread as the measure of path width.

In 1995, the two fishing vessels used similar Atlantic Western II trawl nets (Table 9). However, net dimensions differed slightly between the two vessels, as did the trawling speed. We estimated mean trawling speed for each vessel from the haul duration and the start and end position of each haul. We determined the wingspread by adding the headrope and footrope lengths and dividing by four (B. M. Leaman, pers. comm.). The distance between the trawl doors, or doorspread, was estimated from the wingspread, using the method of Carrothers (1980). This method required a wire-rope catenary parameter (A_w) which could not be estimated. Instead, we calculated a range of doorspreads based on values of A_w from 600 to 1400 in 100 unit increments (extremes of A_w in Carrothers 1980) and estimated the doorspread for each net from the mean value. For consistency, we also applied this approach to

recalculate wingspread (based on published net dimensions) for the nets used on all previous surveys. Table 9 lists the modified values of K_a for the 1994 and earlier surveys along with the calculated 1995 values.

One of our objectives was to compare catch densities between the two vessels to determine how individual vessel effects might complicate the interpretation of biomass estimates from different surveys. Vessel effects include factors such as vessel type, horsepower, noise level, skipper, and crew. Unlike in the 1984 survey, we could find no measurable vessel effect in any analyses of the 1995 rockfish data. Table 10 summarizes total catch, total rockfish catch, Pacific ocean perch catch and rockfish and Pacific ocean perch catch densities by station for each vessel. There were no significant differences in Pacific ocean perch catch densities between vessels at a station in replicate hauls (Wilcoxon signed rank test $p > 0.10$) (Fig. 9). Similarly, catch densities of total rockfish at a station did not differ significantly between vessels ($p > 0.10$). We also compared Pacific ocean catch densities between the first and second vessel to visit a station and could find no significant timing effect ($p > 0.10$). In our survey design, stations were predetermined and replicate hauls were repeated exactly by the second vessel. Thus, there was little opportunity for the skipper to use his skill to 'find fish'. Had the design allowed for the skipper to set in locations of his choice, the results may have depended more on the level of skipper experience. We conclude that different commercial vessels can be used to replicate a rockfish survey, provided that the vessels are similar in size and horsepower and use similar nets. Total flatfish catch densities did differ significantly between vessels ($p < 0.05$), with the F/V OCEAN SELECTOR catching more flatfish. The smaller roller gear and bobbins used on the F/V OCEAN SELECTOR may have allowed more flatfish to be caught in the net.

Another of our objectives was to compare catch densities of Pacific ocean perch by the F/V OCEAN SELECTOR in 1994 and 1995, recognizing that differences in survey design did occur between years. We found no significant year effect ($p > 0.10$) for a linear model using power-transformed Pacific ocean perch catch densities as the dependent variable and year and depth interval as independent factors. The depth effect was highly significant in this analysis ($p < 0.001$). Residual analysis indicated that the model provided a reasonable fit to the data.

Mean Pacific ocean perch catch densities by depth for all surveys conducted in Goose Island Gully are shown in Table 11. Catch densities tended to increase and coefficients of variation decrease with depth. Catch densities in 1995 are the highest recorded for the two middle depth intervals, where a few large catches had a high leverage on the mean value. For the shallow and deepest depth intervals, higher catch rates occurred in the mid to late 1960s.

Estimates of total relative biomass and the variance in biomass were calculated from sampling theory for a stratified random design (Cochran 1977). Biomass estimates depend on the mean catch density within a depth interval and the total bottom area covered by the interval. This approach is valid for the 1995 design, but provides approximate estimates only for the earlier surveys. Bottom areas also differed from those used for the 1994 survey because of a minor change in the definition of the depth intervals (Table 1). Biomass estimates for 1995 and recalculated estimates from previous survey data are given in Table 12.

Nagtegaal et al. (1986) had estimated Pacific ocean perch biomass for fish larger than 30 cm from all usable hauls from each survey. Hand et al. (1995) had estimated biomass for fish larger than 30 cm but used only standard stations for each survey. They also modified values of K_a and stratum bottom area from those used by Nagtegaal et al. (1986). We updated the estimates of Hand et al. (1995) sequentially with (a) modified values of K_a from new door spread calculations, (b) added data from non-standard stations, and (c) added data from fish smaller than 30 cm. Thus, our final estimates of relative biomass and 95% confidence intervals are based on all available data (Fig. 10).

Estimates of 1995 relative biomass are 18,179 to 35,090 tonnes and 18,712 to 31,369 tonnes for the F/V OCEAN SELECTOR and F/V FROSTI, respectively. These estimates are the largest in the survey series and have the highest variance, although the coefficients of variation are similar to those of previous surveys. Because of the high variance, the 1995 biomass estimates are statistically indistinguishable from the 1994 and 1984 estimates obtained from the F/V OCEAN SELECTOR and the F/V EASTWARD HO, respectively. Much of the apparent increase in biomass in 1995 results from large catches at four stations by each vessel. If these outliers are omitted from the analysis, the biomass estimates are 18,548 tonnes and 19,545 tonnes for the F/V OCEAN SELECTOR and F/V FROSTI, respectively, similar to the 1994 estimates. Biomass estimates obtained by chartered commercial vessels beginning in 1984 do differ significantly from the 1984 biomass estimate obtained by the R/V G. B. REED. We should emphasize that comparisons between the 1995 and earlier surveys are complicated by the survey design change in 1995. We do not know how the design change may have affected the biomass estimates. We do believe, however, that the coverage of the gully in 1995 was more comprehensive than that of earlier surveys.

We intend that the biomass estimates be used as relative indices only, for example in tuning catch-age analysis. A series of assumptions must be met if the estimates are to be interpreted as absolute biomass:

1. All fish encountered in the path between the trawl doors are captured by the net.
2. For each depth interval, the haul locations fished are representative.
3. There are no fish in the water column that cannot be caught by the net.

For the surveys, these assumptions are suspect. First, we cannot be certain that all fish encountered in the path of the net are caught. Some unknown proportion of fish pass over or under the net, tending to make our estimates conservative. Second, our hauls covered a fraction of the total bottom area of Goose Island Gully. Although haul locations were selected at random, fishing could not occur at a few stations which were considered untrawlable (such as OS haul # 14). Rockfish are known to be present at these stations, but their density and species composition cannot be measured with current technologies. Our analysis assumes that rockfish are present in these areas at densities similar to those in trawlable areas. Finally, acoustic work (Hand et al. 1995) and depth sounders onboard the vessels indicated the presence of fish in the water column above the trawl net. Provided that some of these fish are Pacific ocean perch, our estimates are probably conservative. Overall, we conclude that our

analyses provide an estimate of the minimum Pacific ocean perch biomass in Goose Island Gully.

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Table 1. Total trawlable area (nm^2), by depth interval, of Goose Island Gully fishing grounds; previous and recalculated estimates.

Depth Interval fathoms	Nagtegaal et al. (1986)	1994 Survey	Depth Interval metres	1995 Survey
80- 99	432	386	140 - 173	340
100-119	351	382	174 - 220	489
120-139	190	228	221 - 260	213
140-160	174	210	261 - 300	200

Table 2. Summary of catch (kg) by species and percent occurrence for the F/V OCEAN SELECTOR, F/V FROSTI and total combined catch during the rockfish survey September 11 to 22, 1995.

Species	OCEAN SELECTOR		FROSTI		Total Combined	
	Catch	%	Catch	%	Catch	%
Pacific ocean perch	42227	58.2	29881	60.7	72108	59.2
Yellowmouth rockfish	12054	16.6	7279	14.8	19333	15.9
Arrowtooth flounder	3440	4.7	2452	5.0	5892	4.8
Sharpchin rockfish	1564	2.2	1678	3.4	3242	2.7
Dover sole	2244	3.1	961	2.0	3205	2.6
Sablefish	1422	2.0	636	1.3	2058	1.7
Redbanded rockfish	1253	1.7	692	1.4	1945	1.6
Shortspine thornyhead	901	1.2	806	1.6	1707	1.4
Rex sole	1016	1.4	584	1.2	1600	1.3
Walleye pollock	964	1.3	544	1.1	1508	1.2
Redstripe rockfish	663	0.9	652	1.3	1315	1.0
Yellowtail rockfish	718	1.0	449	0.9	1167	0.9
Canary rockfish	605	0.8	472	1.0	1077	0.8
Silvergray rockfish	383	0.5	548	1.1	931	0.7
Darkblotched rockfish	607	0.8	267	0.5	874	0.6
Bocaccio	442	0.6	315	0.6	757	0.4
Splitnose rockfish	334	0.5	103	0.2	437	0.3
Pacific cod	274	0.4	150	0.3	424	0.3
Spiny dogfish	272	0.4	144	0.3	416	0.3
Pacific halibut	329	0.5	43	0.1	372	0.3
Rougheye rockfish	176	0.2	130	0.3	306	0.2
Greenstriped rockfish	104	0.1	83	0.2	187	0.1
Rosethorn rockfish	91	0.1	70	0.1	161	0.1
Widow rockfish	74	0.1	83	0.2	157	0.1
Yelloweye rockfish	92	0.1	28	0.1	120	0.1
Spotted ratfish	27	0.0	49	0.1	76	0.1
Skates	44	0.1	22	0.0	66	0.1
Lingcod	42	0.1	19	0.0	61	0.2
Slender sole	58	0.1	0	0.0	58	0.0
English sole	39	0.1	18	0.0	57	0.0
Shortraker rockfish	9	0.0	36	0.1	45	0.0
Others ^a	88	0.1	13	0.0	101	0.1
Total	72,556	100	49,207	100	121,763	100

^a Includes all species that comprised < 0.1 % of the vessel catch.

Table 3. Number of fish sampled by species for length, sex (L/S) and combined length, weight, sex, maturity and otoliths (L/S/M/O) for the F/V OCEAN SELECTOR, F/V FROSTI and total combined number during the rockfish survey, September 11 to 22, 1995.

Species	OCEAN SELECTOR		FROSTI		Combined	
	L/S	L/W/S/M/O	L/S	L/W/S/M/O	L/S	L/W/S/M/O
Pacific ocean perch	10100	661	5693	620	16454	1281
Yellowmouth rockfish	748	54	607	137	1009	449
Redstripe rockfish	338	264	707	185	1719	191
Shortspine thornyhead	1204	177	1212	190	2593	367
Rougheye rockfish	62		0		62	0
Sharpchin rockfish	1096		619		1711	0
Redbanded rockfish	302		0		302	0
Splitnose rockfish	215		92		295	0
Yellowtail rockfish	106		0		106	0
Silvergrey rockfish	48		55		101	0
Canary rockfish	24		10		34	0
Darkblotched rockfish	47		0		47	0
Greenstriped rockfish	59		30		89	0

Table 4. Length-weight relationships for Pacific ocean perch, yellowmouth rockfish, redstripe rockfish and shortspine thornyhead sampled from Goose Island Gully, September 11 to 22, 1995.

Species	sex	weight = a x length ^b	
		a	b
Pacific ocean perch	females	4.97617×10^{-6}	3.18058
Pacific ocean perch	males	1.49103×10^{-5}	2.99892
yellowmouth rockfish	combined	4.295642×10^{-5}	2.82976
redstripe rockfish	combined	1.882627×10^{-5}	2.945725
shortspine thornyhead	combined	5.460709×10^{-6}	3.142385

Table 5. Sex composition, and mean length by sex, depth interval and vessel for Pacific ocean perch, yellowmouth rockfish, redstripe rockfish and shortspine thornyhead sampled from Goose Island Gully, September 11 to 22, 1995. Sample sizes are shown in brackets.

Depth (m)	Percent Female	OCEAN SELECTOR			Percent Female	FROSTI		
		Mean Length (cm)				Mean Length (cm)		
		Total	Male	Female		Total	Male	Female
Pacific ocean perch								
140 - 173	58	29.9 (783)	29.0 (317)	31.6 (430)	50	29.5 (343)	28.4 (171)	30.6 (171)
174 - 220	62	39.0 (4744)	36.8 (1789)	40.4 (2950)	62	39.8 (2586)	37.0 (986)	41.5 (1600)
221 - 260	53	39.8 (2433)	38.5 (1135)	41.0 (1296)	57	40.5 (1155)	38.9 (501)	41.6 (653)
261 - 300	46	38.5 (2801)	37.8 (1514)	39.4 (1280)	52	39.8 (1609)	38.9 (780)	40.6 (829)
Total	56	(10761)	(4755)	(5956)	57	(5693)	(2438)	(3253)
Yellowmouth rockfish								
140 - 173	60	38.5 (380)	38.4 (152)	38.7 (227)	59	39.7 (92)	39.3 (38)	40.1 (54)
174 - 220	61	40.5 (398)	39.7 (155)	40.9 (242)	56	39.6 (446)	39.1 (195)	40.0 (250)
221 - 260	57	44.4 (51)	43.8 (22)	44.8 (29)	65	44.1 (23)	43.6 (8)	44.3 (15)
261 - 300	8	41.3 (183)	41.2 (169)	42.3 (14)	12	41.8 (146)	41.4 (129)	44.6 (17)
Total	51	(1012)	(498)	(512)	44	(760)	(370)	(336)
Redstripe rockfish								
140 - 173	49	30.3 (316)	28.1 (160)	32.5 (156)	43	30.3 (212)	28.3 (120)	32.9 (92)
174 - 220	50	30.5 (86)	27.6 (43)	33.5 (43)	37	29.5 (395)	28.1 (249)	31.7 (146)
221 - 260	-	-	-	-	-	-	-	-
261 - 300	-	-	-	-	-	-	-	-
Total	50	(402)	(203)	(199)	39	(607)	(369)	(238)
Shortsp. Thornyhead								
140 - 173	94	28.2 (18)	28.0 (1)	28.2 (17)	0	24.7 (74)	24.7 (74)	-
174 - 220	47	26.2 (580)	27.3 (286)	26.3 (249)	40	25.7 (525)	25.8 (315)	25.7 (207)
221 - 260	51	22.5 (93)	23.3 (40)	23.4 (42)	55	24.9 (159)	25.7 (67)	25.4 (81)
261 - 300	43	24.6 (690)	26.1 (341)	25.3 (259)	43	24.5 (454)	24.7 (257)	24.5 (190)
Total	46	(1381)	(668)	(567)	40	(1212)	(713)	(478)

Table 6. Sex composition, and mean age by sex, depth interval and vessel for Pacific ocean perch, yellowmouth rockfish, redstripe rockfish and shortspine thornyhead sampled from Goose Island Gully, September 11 to 22, 1995. Sample sizes are shown in brackets.

Depth (m)	Percent Female	OCEAN SELECTOR			Percent Female	FROSTI		
		Mean Age (yr)				Mean Age (yr)		
		Total	Male	Female		Total	Male	Female
Pacific ocean perch								
140 - 173	83	30 (18)	25 (3)	31 (15)	61	5 (18)	5 (7)	6 (11)
174 - 220	70	20 (107)	17 (32)	21 (75)	66	21 (58)	16 (20)	23 (38)
221 - 260	62	19 (37)	16 (14)	21 (23)	55	21 (74)	21 (33)	20 (41)
261 - 300	54	22 (35)	21 (16)	24 (19)	53	21 (53)	20 (25)	21 (28)
Total	67	(197)	(65)	(132)	58	(203)	(85)	(118)
Yellowmouth rockfish								
140 - 173	59	14 (104)	14 (39)	14 (64)	-	-	-	-
174 - 220	53	17 (105)	16 (44)	18 (60)	56	14 (126)	14 (55)	15 (70)
221 - 260	-	-	-	-	-	-	-	-
261 - 300	4	21 (55)	21 (53)	13 (2)	12	23 (59)	22 (52)	29 (7)
Total	38	(264)	(136)	(126)	44	(185)	(107)	(77)
Redstripe rockfish								
140 - 173	70	18 (54)	15 (16)	20 (38)	76	18 (37)	17 (9)	18 (28)
174 - 220	-	-	-	-	56	15 (100)	15 (44)	14 (56)
221 - 260	-	-	-	-	-	-	-	-
261 - 300	-	-	-	-	-	-	-	-
Total	70	(54)	(16)	(38)		(137)	(53)	(84)
Shortsp. thornyheads								
140 - 173	-	-	-	-	-	-	-	-
174 - 220	47	13 (50)	17 (24)	11 (21)	28	17 (53)	18 (32)	15 (21)
221 - 260	-	-	-	-	-	-	-	-
261 - 300	46	16 (127)	17 (65)	15 (56)	37	14 (137)	15 (85)	12 (49)
Total	46	(177)	(89)	(77)	37	(190)	(117)	(70)

Table 7. Summary of maturity data by sex for rockfish species examined on the F/V OCEAN SELECTOR and F/V FROSTI, during the rockfish survey, September 11-22, 1995.

Maturity ^a	Pacific ocean perch				Redstripe rockfish				Yellowmouth rockfish			
	OCEANS		FROSTI		OCEANS		FROSTI		OCEANS		FROSTI	
	M	F	M	F	M	F	M	F	M	F	M	F
1	7	6	18	5	0	0	0	0	3	0	10	2
2	10	19	13	195	0	1	4	28	14	18	4	23
3	6	379	26	68	0	27	19	2	10	76	55	0
4	8	2	1	0	0	0	23	0	5	1	1	0
5	0	0	1	0	0	0	0	0	0	0	0	0
6	216	0	135	0	10	0	1	0	89	4	1	6
7	5	2	72	85	6	10	6	54	15	27	36	46

^a Description of rockfish maturity codes.

Maturity Code Gonad Condition

0	unknown
1	immature
Females	
2	maturing (small, yellow eggs; translucent or opaque)
3	mature (large, yellow or orange eggs; opaque)
4	fertilized (large, orange-yellow eggs; translucent)
5	embryos or larvae (include eyed eggs; translucent)
6	spent (large, flaccid, red ovaries. A few larvae maybe present)
7	resting (moderate size, firm, orange-grey ovaries: some with dark blotches)
Males	
2	maturing (stringlike, slight swelling, translucent)
3	developing (swelling, brown-white)
4	developed (large, white; easily broken)
5	running (running sperm)
6	spent (white-brown; sperm still in duct)
7	resting (triangular in cross-section; small, brown)

Table 8. Temperature (°C) data by depth interval, station, haul number, time and depth (fm) from the F/V FROSTI.

Dep	St	Haul	Time	Depth	Temperature
1	2	2	801	84	6.28
1	3	19	1611	90	6.43
1	4	1	1641	95	6.12
1	5	29	1358	85	6.28
1	5	30	1457	88	6.12
1	7	38	1350	81	6.43
1	10	13	1442	84	5.97
1	11	55	718	90	5.97
1	12	57	1106	91	6.28
1	14	58	1201	83	6.28
2	0	24	1523	98	5.97
2	1	18	1319	97	6.12
2	2	51	954	113	5.65
2	3	4	1141	109	6.12
2	4	8	801	107	6.12
2	5	16	1028	115	6.12
2	6	54	1324	110	5.81
2	7	3	929	105	6.12
2	8	39	802	105	5.81
2	9	10	1032	107	6.12
2	10	12	1329	108	6.28
2	11	17	1201	115	6.12
2	12	49	752	115	5.81
2	14	11	1223	106	6.28
2	15	47	1353	100	5.97
2	16	44	935	109	6.12
2	17	5	1312	108	6.12
2	18	53	1210	118	5.97
2	19	6	1408	105	6.28
2	20	45	1047	105	6.12
2	22	7	1623	104	6.12
2	23	9	938	107	6.28
2	24	48	1543	115	5.97
2	25	52	1116	120	5.81
2	26	50	855	119	5.81
2	27	56	957	102	6.12
2	28	46	1220	105	6.12
3	1	28	1156	140	5.97
3	2	20	853	129	5.81
3	4	37	1042	138	6.12
3	6	21	1018	140	5.81
3	7	23	1339	128	5.81
3	8	15	900	129	5.97
3	11	14	750	132	5.81
3	12	22	1154	125	5.81
3	14	40	933	125	5.81
3	15	43	1555	127	6.28
4	1	36	752	154	5.65
4	3	34	1316	160	5.49
4	4	35	1454	155	5.65
4	5	31	818	160	5.49
4	6	41	1201	152	5.65
4	7	26	910	157	5.81
4	8	25	750	161	5.81
4	9	27	1035	162	5.81
4	10	32	954	140	5.81
4	11	33	1100	144	5.81
4	13	42	1403	148	5.65

Table 9. Summary of net dimensions (ft), trawling speed (nm/h), doorspread (ft and nm) and resulting values of K_a (nm²/h). Doorspreads have been recalculated for all nets. Consequently, values of K_a differ from previously published values.

Vessel	Year	Net Type	Net Dimensions (feet)				Trawling Speed (nm/h)	Doorspread		K_a (nm ² /h)	Ref ¹
			Footrope	Headrope	Wingspread	Bridles+Sweeps		(ft)	(nm)		
G.B. Reed	1965-77	Eastern 400	109.0	78.0	46.8	210	3.0	202.2	0.03333	0.09998	1
Southward Ho	1979	Skagen	114.9	78.8	48.4	240	3.2	231.2	0.03811	0.12194	2
G.B. Reed	1984	Granton	116.8	78.1	48.7	180	3.2	192.0	0.03165	0.10127	3
Eastward Ho	1984	Rockhopper Box	139.8	116.8	64.2	120	3.0	142.0	0.02340	0.07021	3
Ocean Selector	1994	Western IIA	108.3	79.1	46.9	180	3.2	178.6	0.02944	0.09421	4
Ocean Selector	1995	Western IIA	108.3	79.1	46.9	180	3.3	178.6	0.02944	0.09714	5
Frosti	1995	Western II	105.0	78.0	45.8	180	2.6	175.3	0.02889	0.07512	5

¹References for net dimensions and trawling speeds:

1. Westrheim (1965)
2. Nagtegaal and Farlinger (1980)
3. Nagtegaal et al. (1986)
4. Hand et al. (1995)
5. this study

Table 10. Summary of total, rockfish, and Pacific ocean perch catch (kg) and rockfish and Pacific ocean perch density (kg/nm²) by depth, station, vessel, haul number and day and time fished.

Dep	St	Vesl	H#	Day	Time	Total catch	Rockfish Catch	Percent Rockfish	Rockfish per nm ²	POP Catch	POP per nm ²
1	2	OS	8	13	729	278	70	25	2276	0	0
1	2	FR	2	12	801	182	103	57	5485	0	0
1	3	OS	13	13	1317	234	62	26	2128	21	721
1	3	FR	19	14	1611	168	62	37	2751	39	1731
1	4	OS	7	12	1433	856	436	51	14174	370	12028
1	4	FR	1	11	1641	291	51	18	2716	18	958
1	5	OS	32	17	1200	4954	4953	100	152965	68	2100
1	5	FR	29	16	1358	0	0		0	0	0
1	5	FR	30	16	1457	2495	2486	100	110312	0	0
1	6	OS	33	17	1334	0	0		0	0	0
1	7	OS	34	17	1458	180	104	58	3212	2	62
1	7	FR	38	18	1350	116	83	72	3900	10	470
1	10	OS	6	12	1301	398	110	28	3576	6	195
1	10	FR	13	13	1442	475	236	50	10472	29	1287
1	11	OS	54	22	744	470	291	62	8559	7	206
1	11	FR	55	22	718	265	102	38	5092	4	200
1	12	OS	56	22	1121	555	377	68	11643	231	7134
1	12	FR	57	22	1106	264	206	78	9679	145	6813
1	14	OS	57	22	1221	131	20	15	618	10	309
1	14	FR	58	22	1201	97	41	42	1926	13	611
2	0	OS	27	16	1336	1551	1271	82	39253	1169	36103
2	0	FR	24	15	1523	2495	2383	96	105742	2332	103479
2	1	OS	22	15	1402	5252	4970	95	146181	4142	121827
2	1	FR	18	14	1319	3629	3628	100	152514	2555	107407
2	2	OS	45	20	1346	454	238	52	7000	144	4235
2	2	FR	51	21	954	250	195	78	8653	68	3017
2	3	OS	10	13	932	2586	1516	59	55081	1465	53228
2	3	FR	4	12	1141	907	656	72	27577	627	26358
2	4	FR	8	13	801	213	150	70	7987	45	2396
2	5	OS	20	15	1100	1557	1078	69	33292	982	30327
2	5	FR	16	14	1028	907	295	33	13090	264	11715
2	6	OS	48	21	746	345	159	46	4677	105	3088
2	6	FR	54	21	1324	277	160	58	7100	110	4881
2	7	OS	9	13	828	659	319	48	10370	230	7477
2	7	FR	3	12	929	557	433	78	18202	249	10467
2	8	FR	39	19	802	303	299	99	14048	1	47
2	9	OS	3	12	933	544	312	57	10706	304	10432
2	9	FR	10	13	1032	492	244	50	10827	224	9940
2	10	OS	5	12	1150	454	292	64	10020	253	8682
2	10	FR	12	13	1329	647	431	67	19125	408	18104
2	11	OS	21	15	1251	1800	1671	93	51606	1371	42341
2	11	FR	17	14	1201	1134	1084	96	50930	829	38949
2	12	OS	43	20	1121	516	353	68	10383	296	8706
2	12	FR	49	21	752	247	170	69	7543	127	5635
2	14	OS	4	12	1053	464	125	27	4542	88	3197
2	14	FR	11	13	1223	451	284	63	12602	267	11848
2	15	OS	51	21	1139	11340	11132	98	327421	5331	156799
2	15	FR	47	20	1353	3175	3096	98	137380	641	28443
2	16	OS	53	21	1503	1361	1230	90	37986	840	25942
2	16	FR	44	20	935	816	741	91	34815	435	20438
2	17	OS	11	13	1058	1309	1163	89	35917	835	25788
2	17	FR	5	12	1312	680	620	91	27512	461	20456
2	18	OS	47	20	1558	476	332	70	9765	227	6677
2	18	FR	53	21	1210	328	256	78	11360	153	6789
2	19	OS	12	13	1143	2268	1766	78	51943	736	21648
2	19	FR	6	12	1408	984	733	74	32526	474	21033
2	20	OS	52	21	1358	1324	1187	90	34913	966	28413
2	20	FR	45	20	1047	998	879	88	41299	327	15364

Table 10. continued

Dep	St	Vesl	HI#	Day	Time	Total Catch	Rockfish Catch	Percent Rockfish	Rockfish per nm ²	POP Catch	POP per nm ²
2	22	OS	1	11	1625	279	121	43	3934	100	3251
2	22	FR	7	12	1623	384	203	53	9008	163	7233
2	23	OS	2	12	810	544	393	72	14279	366	13298
2	23	FR	9	13	938	537	303	56	14236	236	11088
2	24	OS	49	21	839	531	279	53	8616	229	7072
2	24	FR	48	20	1543	680	546	80	24228	378	16773
2	25	OS	46	20	1506	495	383	77	11828	255	7875
2	25	FR	52	21	1116	333	289	87	12824	217	9629
2	26	OS	44	20	1220	446	284	64	8353	245	7206
2	26	FR	50	21	855	177	127	72	5635	103	4570
2	27	OS	55	22	1010	1233	578	47	17851	501	15473
2	27	FR	56	22	957	464	306	66	14377	269	12639
2	28	OS	50	21	1013	1458	1172	80	34472	878	25824
2	28	FR	46	20	1220	1361	1155	85	54266	778	36553
3	1	OS	31	17	1054	1645	1510	92	49088	1428	46422
3	1	FR	28	16	1156	2268	2174	96	91391	2118	89036
3	2	OS	15	14	1058	1414	1294	92	38060	1271	37383
3	2	FR	20	15	853	907	853	94	37851	832	36919
3	4	OS	35	19	732	1186	1111	94	32677	749	22030
3	4	FR	37	18	1042	1361	1333	98	59150	901	39980
3	5	OS	14	13	1437	0	0		0	0	0
3	5	OS	41	19	1737	648	577	89	16971	379	11147
3	6	OS	16	14	1219	3849	3682	96	113712	3616	111674
3	6	FR	21	15	1018	794	750	94	31529	709	29805
3	7	OS	26	16	1206	1378	1230	89	36178	1168	34354
3	7	FR	23	15	1339	1134	1062	94	47125	1012	44906
3	8	OS	19	15	946	557	471	85	15312	445	14466
3	8	FR	15	14	900	488	413	85	18326	374	16596
3	11	OS	18	15	826	1031	922	89	28474	892	27548
3	11	FR	14	14	750	568	516	91	24244	468	21988
3	12	OS	17	14	1434	1575	1468	93	41215	1388	38969
3	12	FR	22	15	1154	1134	1106	98	49077	1034	45882
3	14	OS	42	20	734	0	0		0	0	0
3	14	FR	40	19	933	816	785	96	34833	432	19169
3	15	FR	43	19	1555	419	371	89	16463	219	9718
4	1	OS	38	19	1151	1702	1670	98	49119	898	26413
4	1	FR	36	18	752	2268	2245	99	94375	1585	66630
4	3	OS	37	19	1010	401	295	74	8677	237	6971
4	3	FR	34	17	1316	336	187	56	7861	156	6558
4	4	OS	36	19	840	451	403	89	12446	344	10624
4	4	FR	35	17	1454	1225	1187	97	49899	1109	46620
4	5	OS	23	16	744	1065	969	91	28501	927	27266
4	5	FR	31	17	818	907	869	96	36531	794	33378
4	6	OS	39	19	1337	4293	4274	100	138942	2745	89236
4	6	FR	41	19	1201	4082	3998	98	168068	2084	87607
4	7	OS	29	17	835	683	479	70	15572	424	13784
4	7	FR	26	16	910	424	281	66	11222	245	9784
4	8	OS	28	17	737	488	338	69	9490	314	8816
4	8	FR	25	16	750	680	532	78	23607	490	21743
4	9	OS	30	17	948	1032	775	75	25194	645	20968
4	9	FR	27	16	1035	1814	1683	93	70750	1597	67135
4	10	OS	24	16	924	1207	1093	91	35532	756	24577
4	10	FR	32	17	954	185	174	94	7315	156	6558
4	11	OS	25	16	1013	971	730	75	18787	658	16934
4	11	FR	33	17	1100	680	519	76	21818	393	16521
4	13	OS	40	19	1527	366	259	71	7272	170	4773
4	13	FR	42	19	1403	771	735	95	32614	652	28931

Table 11. Pacific ocean perch mean catch densities (t/nm^2), with coefficient of variation (%) and number of hauls (N), by year, vessel and depth interval for all surveys conducted in Queen Charlotte Sound between 1965 and 1995.

YEAR	VESSEL	DEPTH	N	CATCH DENSITY	CV	DEPTH	N	CATCH DENSITY	CV
1965	G.B. Reed	80-99	1	0.30	-	100-119	4	9.56	94
1966	G.B. Reed	"	2	14.05	128	"	4	14.05	44
1967	G.B. Reed	"	6	6.42	100	"	10	19.44	69
1969	G.B. Reed	"	7	20.16	81	"	11	9.22	54
1970	G.B. Reed	"	5	3.55	140	"	10	17.65	78
1971	G.B. Reed	"	9	2.99	127	"	20	10.18	80
1973	G.B. Reed	"	7	3.40	162	"	11	5.90	130
1976	G.B. Reed	"	7	1.78	107	"	15	11.58	120
1977	G.B. Reed	"	9	0.76	153	"	10	8.06	92
1979	Southward Ho	"	11	1.38	196	"	14	5.37	118
1984	G.B. Reed	"	11	2.86	90	"	15	10.62	105
1984	Eastward Ho	"	2	1.67	141	"	9	18.18	52
1994	Ocean Selector	"	10	4.24	111	"	16	18.85	76
1995	Ocean Selector	77-95	9	2.53	167	96-121	25	27.00	136
1995	Frosti	"	8	1.39	164	"	28	20.22	129
1965	G.B. Reed	120-139	1	32.07	-	140-160	1	41.29	-
1966	G.B. Reed	"	4	17.00	35	"	2	23.79	60
1967	G.B. Reed	"	5	22.44	30	"	6	26.39	49
1969	G.B. Reed	"	6	14.24	42	"	6	19.14	92
1970	G.B. Reed	"	6	15.84	103	"	4	9.72	53
1971	G.B. Reed	"	13	18.43	77	"	13	19.78	34
1973	G.B. Reed	"	7	7.42	100	"	7	12.11	93
1976	G.B. Reed	"	8	11.12	47	"	5	14.88	50
1977	G.B. Reed	"	8	8.29	86	"	6	10.88	46
1979	Southward Ho	"	1	14.39	-	"	0	-	-
1984	G.B. Reed	"	10	7.63	45	"	6	8.66	96
1984	Eastward Ho	"	7	16.50	78	"	8	26.88	39
1994	Ocean Selector	"	12	15.01	74	"	12	20.87	43
1995	Ocean Selector	122-143	9	35.79	84	144-165	11	24.75	99
1995	Frosti	"	11	32.78	71	"	10	38.49	71

Table 12. Relative biomass estimates (t) of Pacific ocean perch in Goose Island Gully.

Year	Vessel	Pacific ocean perch biomass (t)							CV %
		(1)	(2)	(3)	(4)	(5)	lower 95% CI	upper 95% CI	
		Published (Nagtegaal et al.)	Published (Hand et al.)	>30cm new Ka's	>30cm all hauls	all fish all hauls			
1965	G.B. Reed	-	-	-	-	19,748	-	-	-
1966	G.B. Reed	12,508	15,300	16,863	14,836	15,621	10,327	20,916	17
1967	G.B. Reed	14,901	17,147	18,903	18,086	20,563	16,029	25,096	11
1969	G.B. Reed	14,240	14,644	16,145	16,145	18,568	12,821	24,316	16
1970	G.B. Reed	10,116	10,388	11,452	11,452	13,769	8,941	18,597	18
1971	G.B. Reed	10,749	11,734	12,936	12,936	13,399	10,862	15,936	10
1973	G.B. Reed	6,130	6,787	7,484	7,303	7,803	4,629	10,977	21
1976	G.B. Reed	9,099	9,430	10,397	10,292	10,774	7,615	13,934	15
1977	G.B. Reed	6,323	6,577	7,254	7,232	7,547	5,282	9,811	15
1984	G.B. Reed	6,763	7,663	7,486	7,479	8,718	6,054	11,383	16
1984	Eastward Ho	16,201	13,652	14,450	14,633	16,529	12,721	20,337	12
1994	Ocean Selector	-	16,050	15,839	15,839	16,583	13,261	19,905	10
1995	Ocean Selector	-	-	-	-	26,634	18,179	35,090	16
1995	Frosti	-	-	-	-	25,041	18,712	31,369	13

(1) Nagtegaal et al. (1986)

(2) Hand et al. (1995).

(3) Recalculated from Hand et al. (1995) with updated estimates of K_a (Table 8).

(4) As in (3) but with the inclusion of non-standard stations.

(5) As in (4) but with the inclusion of fish ≤ 30 cm.

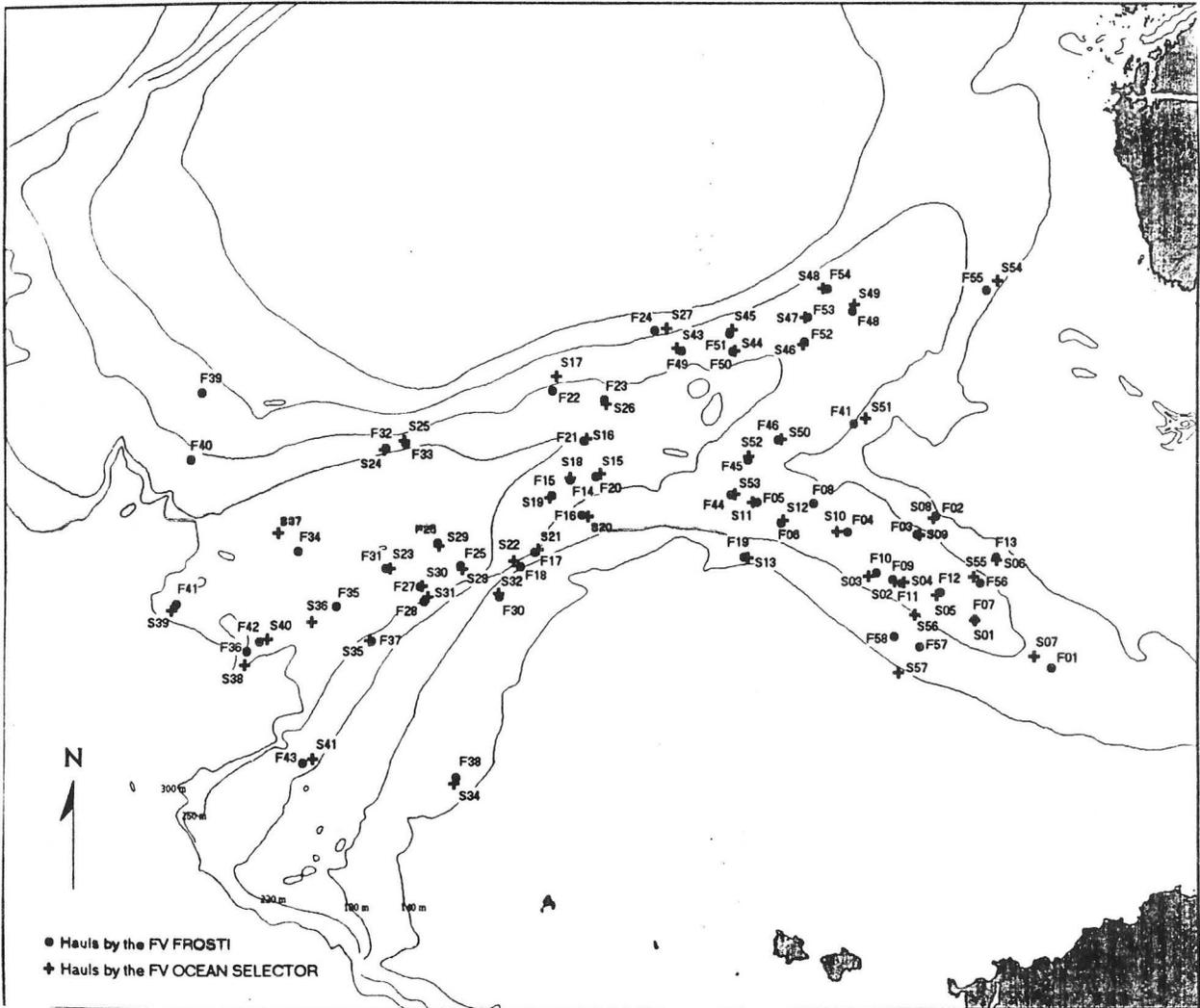


Fig. 1. Haul location and number for the F/Vs OCEAN SELECTOR (S) and FROSTI (F) during the bottom trawl survey of Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

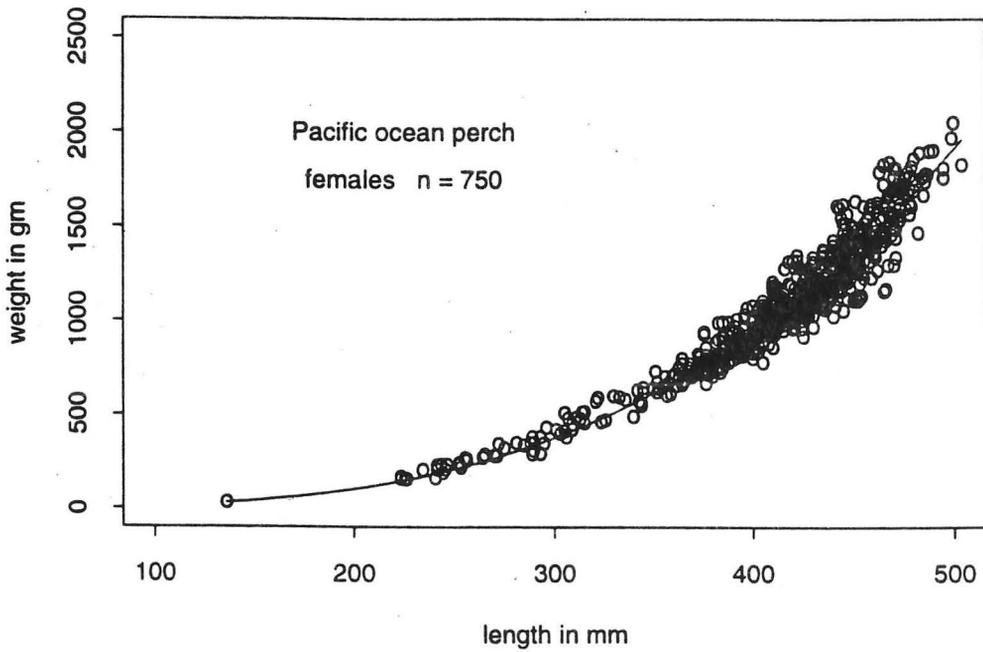


Fig. 2a

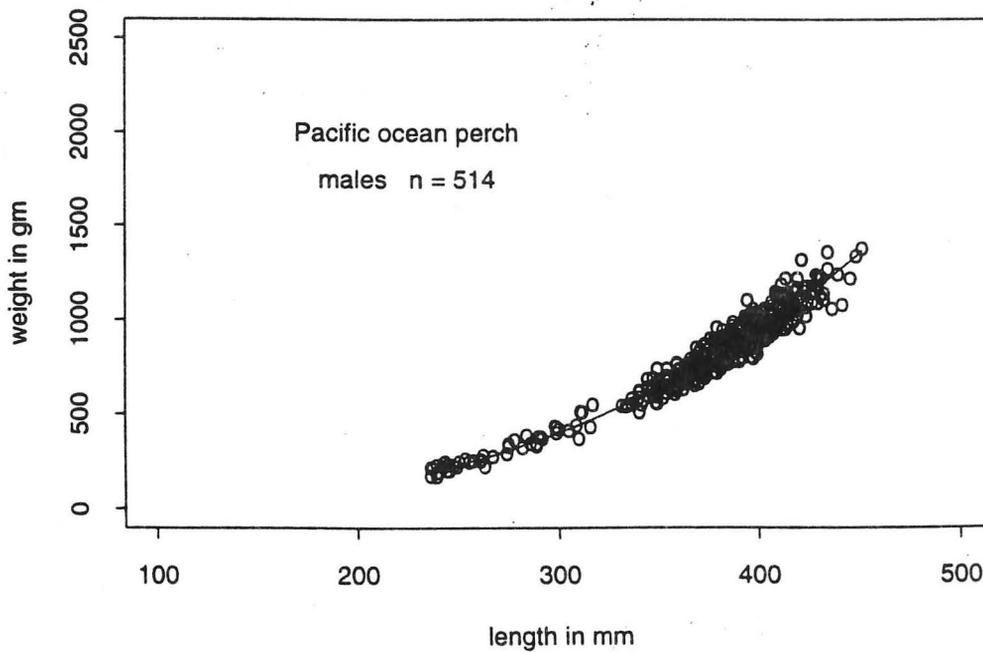


Fig. 2b Length-weight relationship for Pacific ocean perch female and males from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

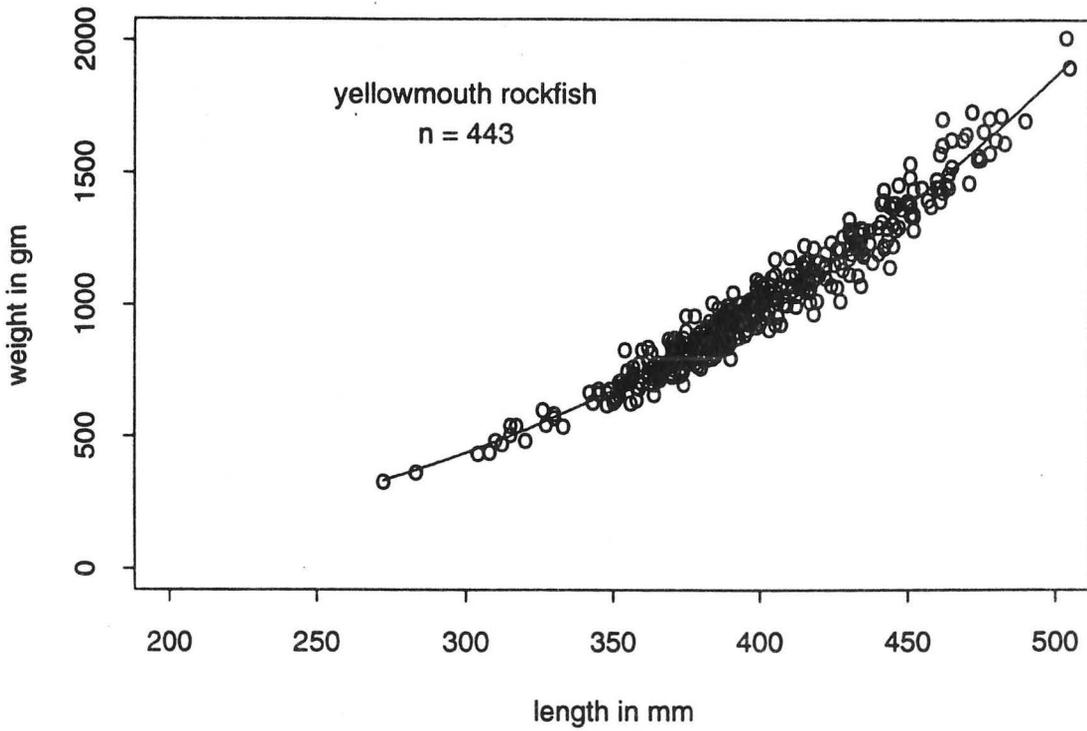


Fig. 3a

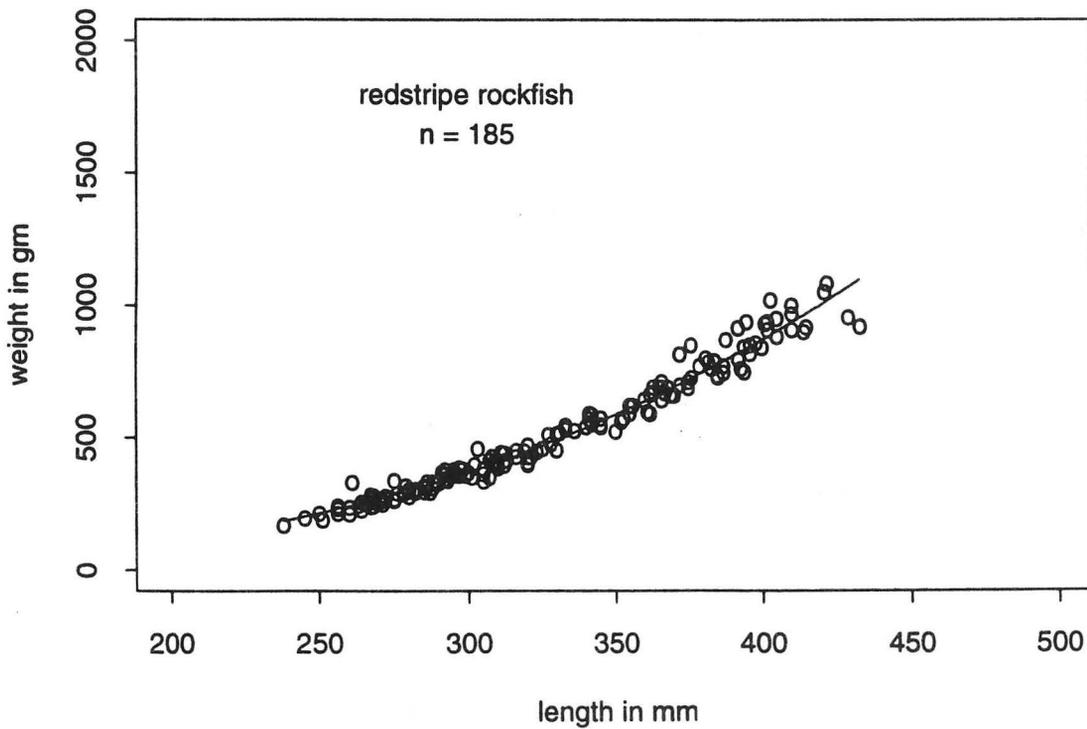


Fig. 3b

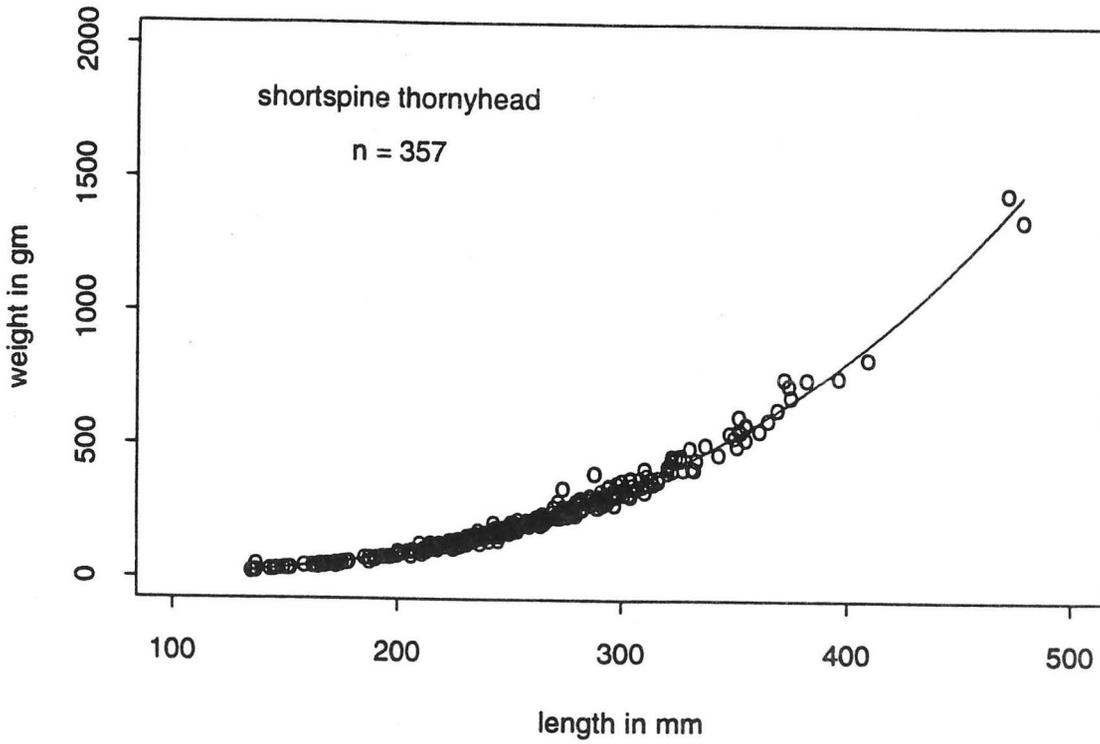


Fig. 3c Length-weight relationship for yellowmouth and redstripe rockfish and shortspine thornyhead, sexes combined from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

Pacific ocean perch females n = 9209

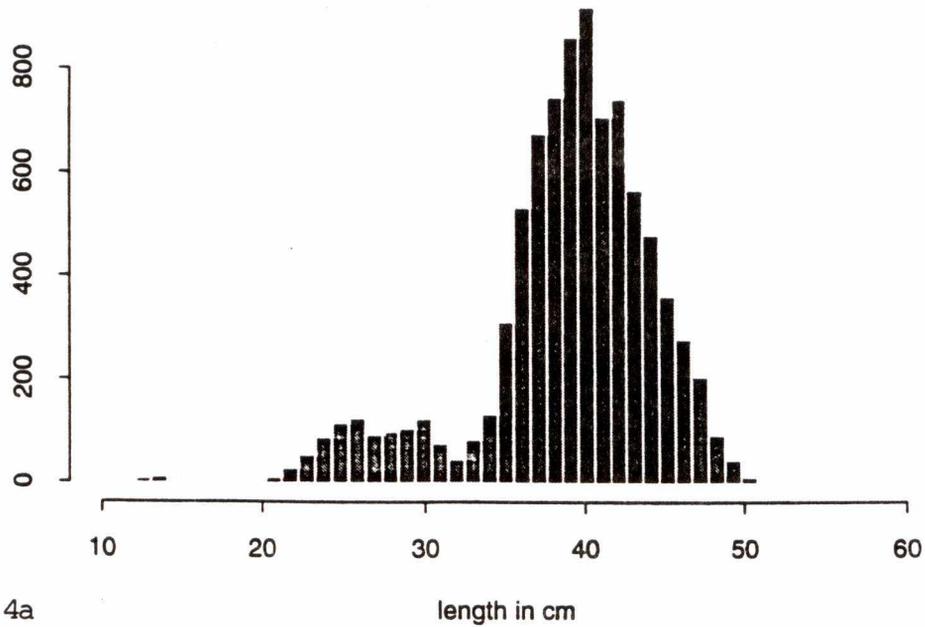


Fig. 4a

Pacific ocean perch males n = 7193

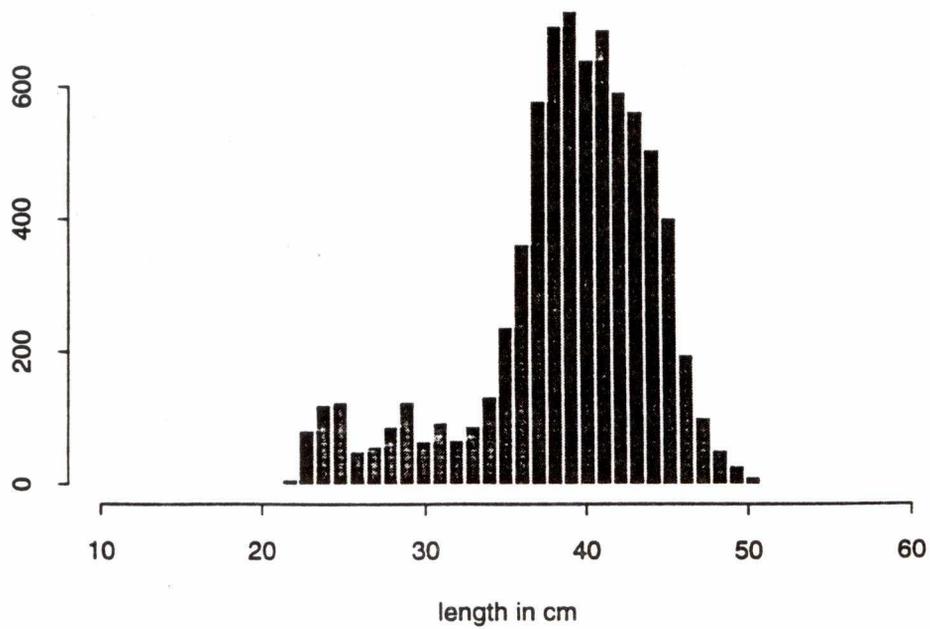


Fig. 4b Length-frequency distribution for Pacific ocean perch female and males from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

Pacific ocean perch females n = 250

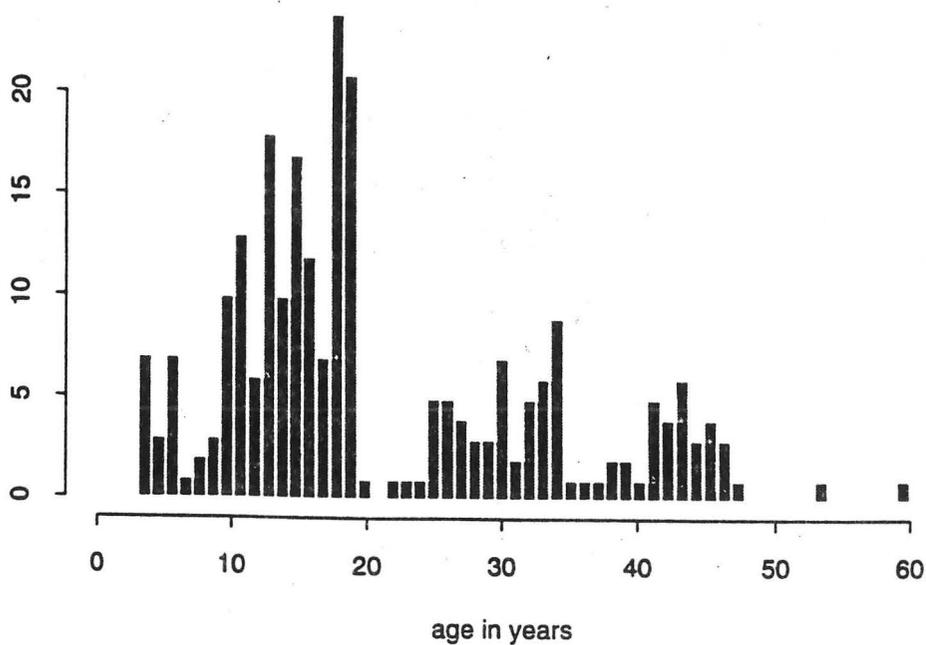


Fig. 5a

Pacific ocean perch males n = 150

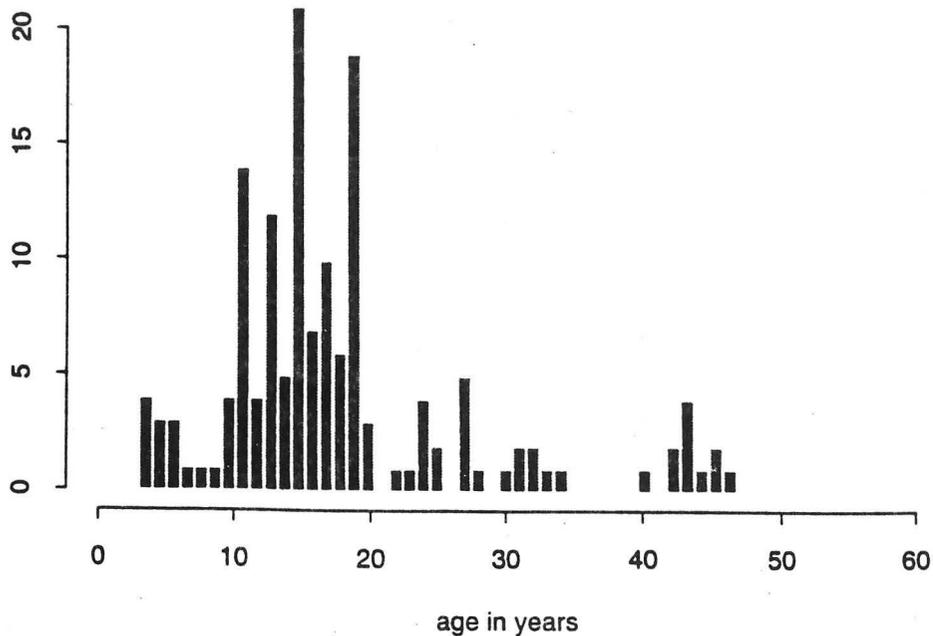


Fig. 5b Age Frequency distribution for Pacific ocean perch females and males from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

yellowmouth rockfish n = 1716

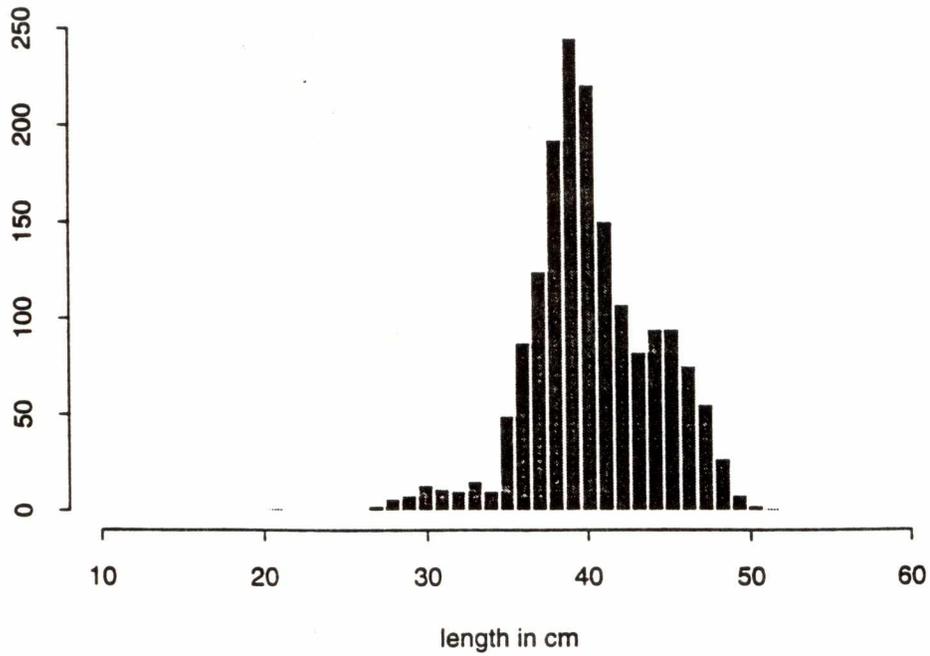


Fig. 6a

yellowmouth rockfish n = 446

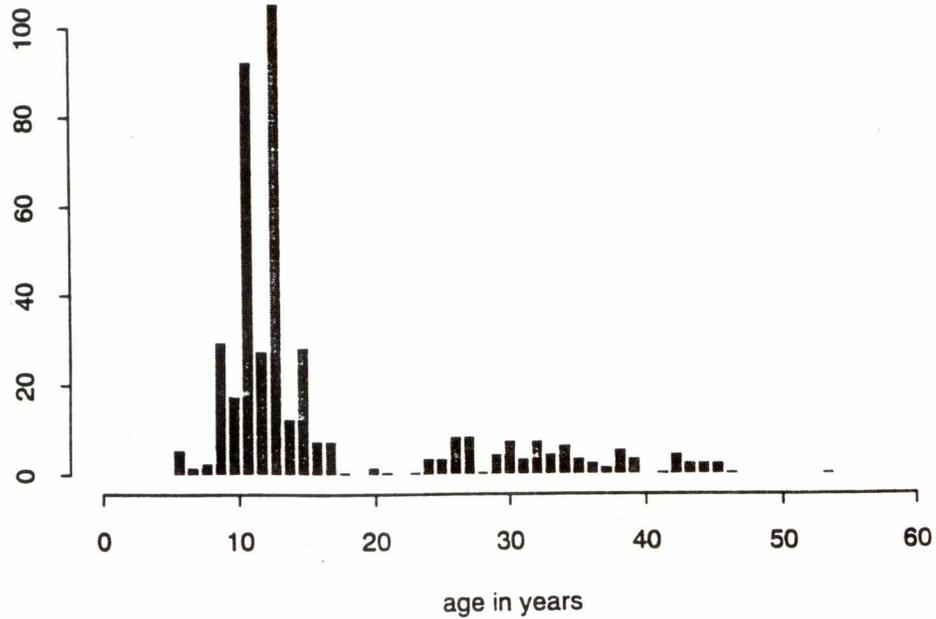


Fig. 6b Length-frequency distribution for yellowmouth rockfish, sexes combined from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

redstripe rockfish n = 1009

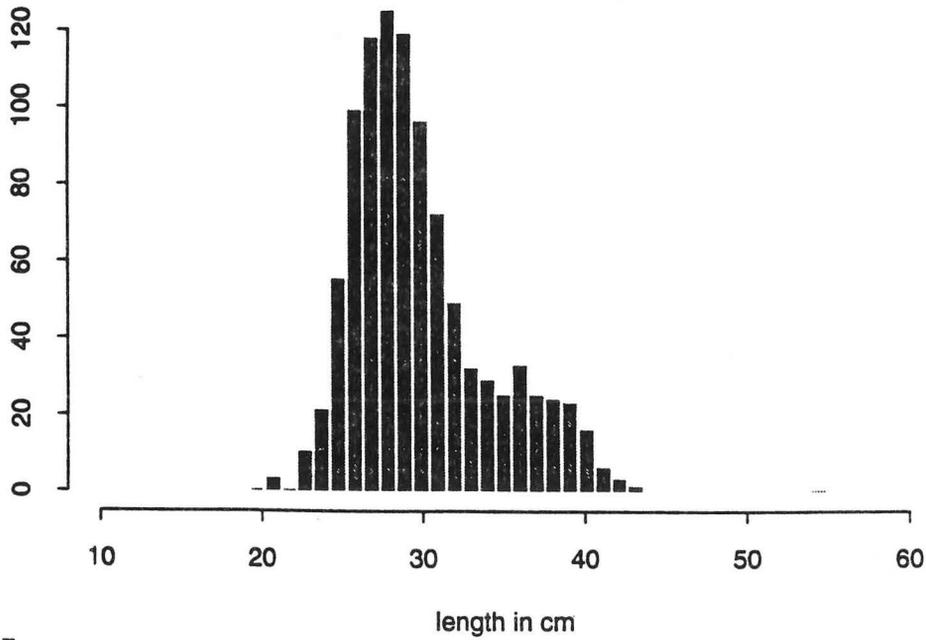


Fig. 7a

redstripe rockfish n = 191

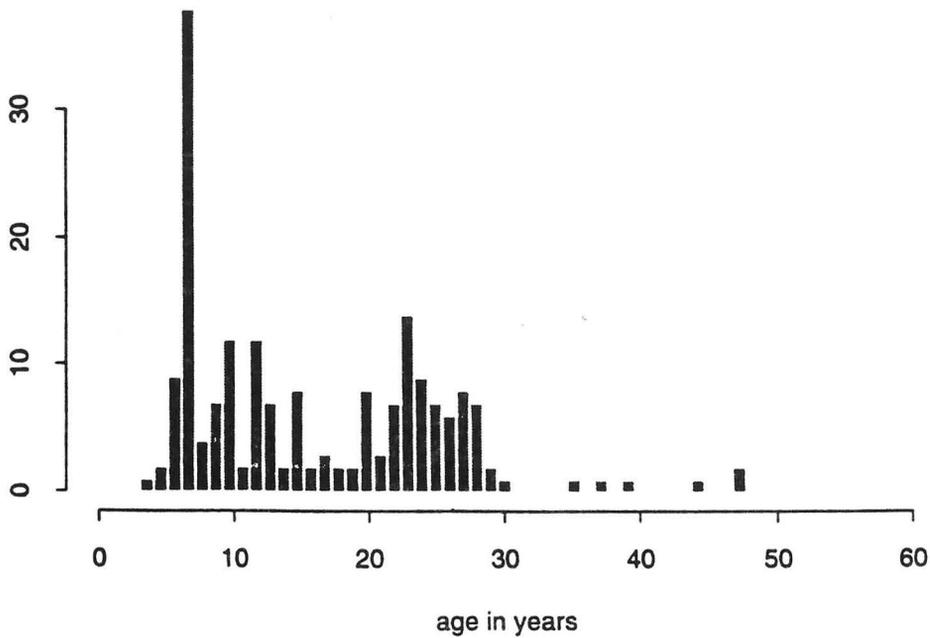


Fig. 7b Length-frequency and age frequency distribution for redstripe rockfish, sexes combined from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

shortspine thornyhead n = 2426

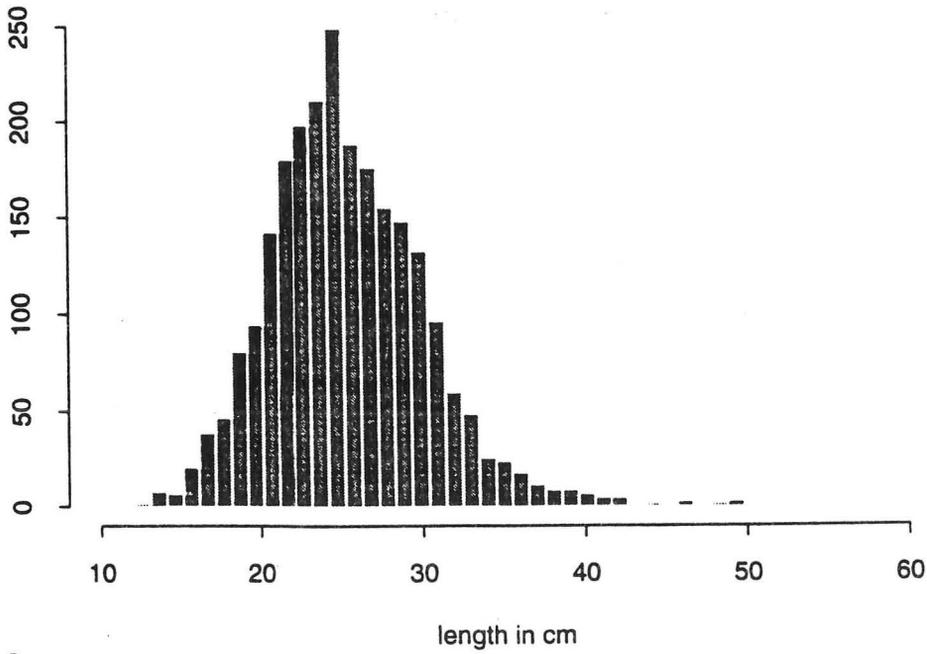


Fig. 8a

shortspine thornyhead n = 353

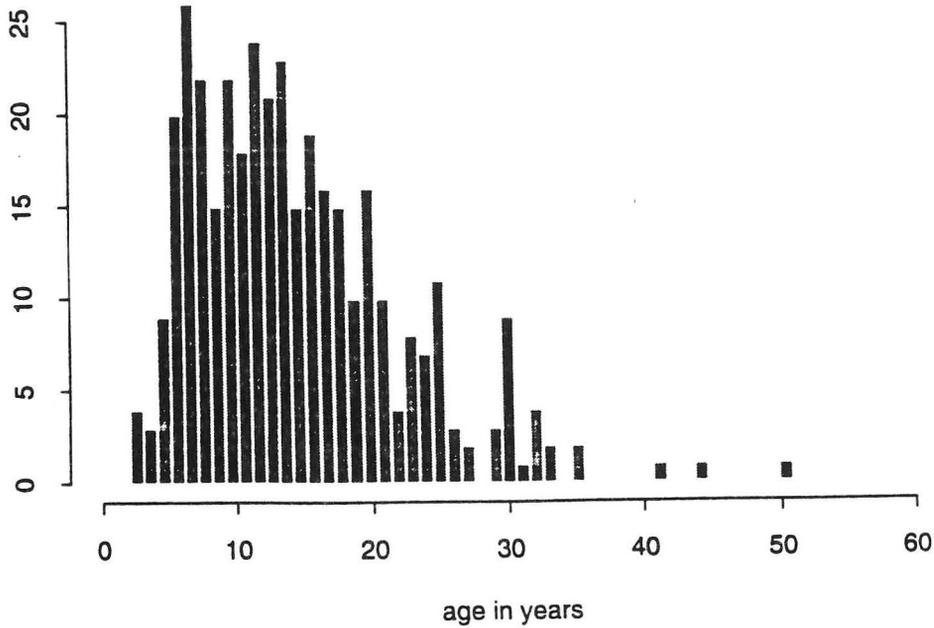


Fig. 8b Length-frequency and age frequency for shortspine thornyhead, sexes combined from Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

Catch densities of POP by station

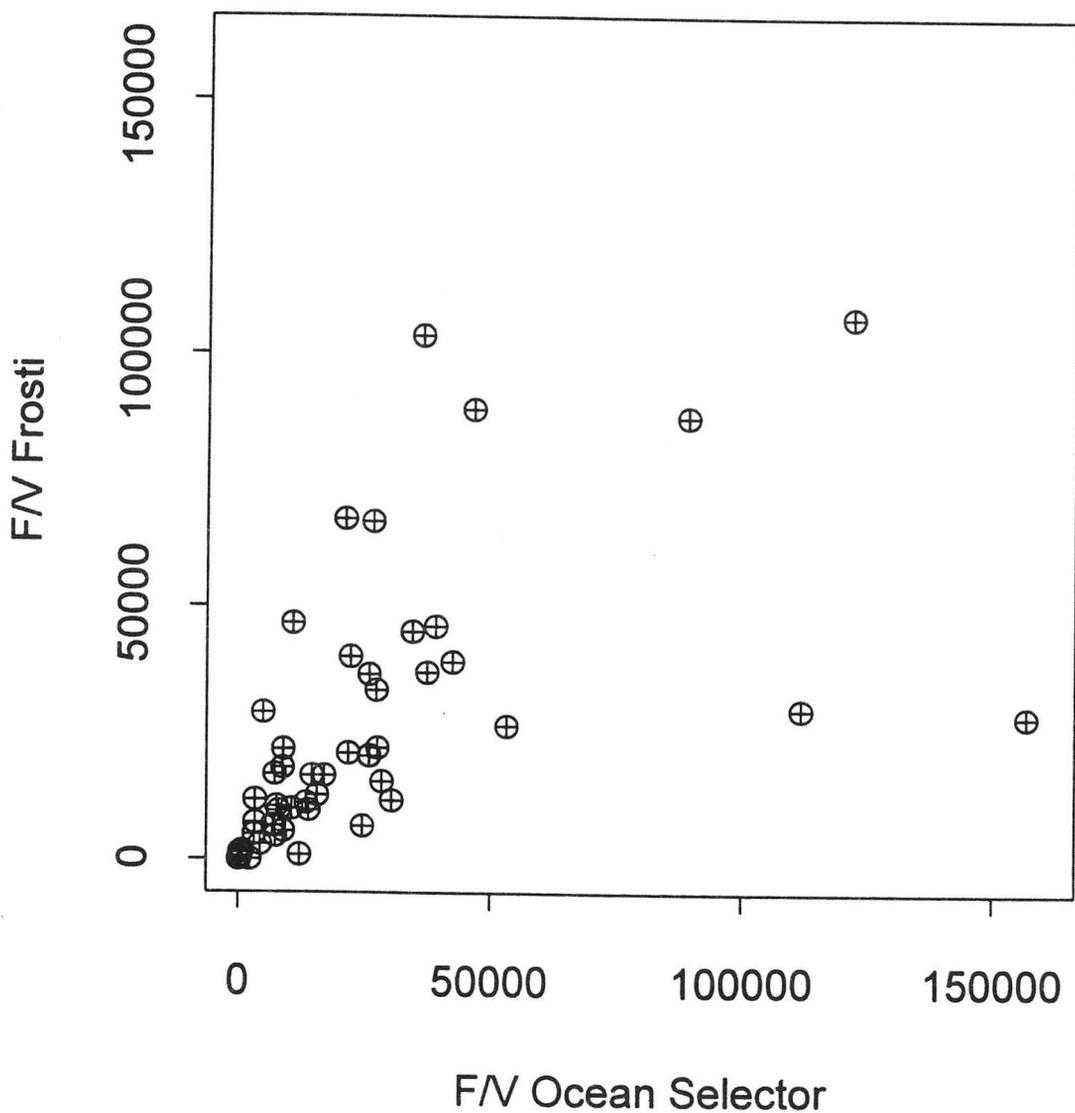


Fig. 9 Comparison of the F/Vs OCEAN SELECTOR and FROSTI catch densities of Pacific ocean perch by station in Goose Island Gully, Queen Charlotte Sound, September 11 to 22, 1995.

Trawl survey estimates of POP biomass

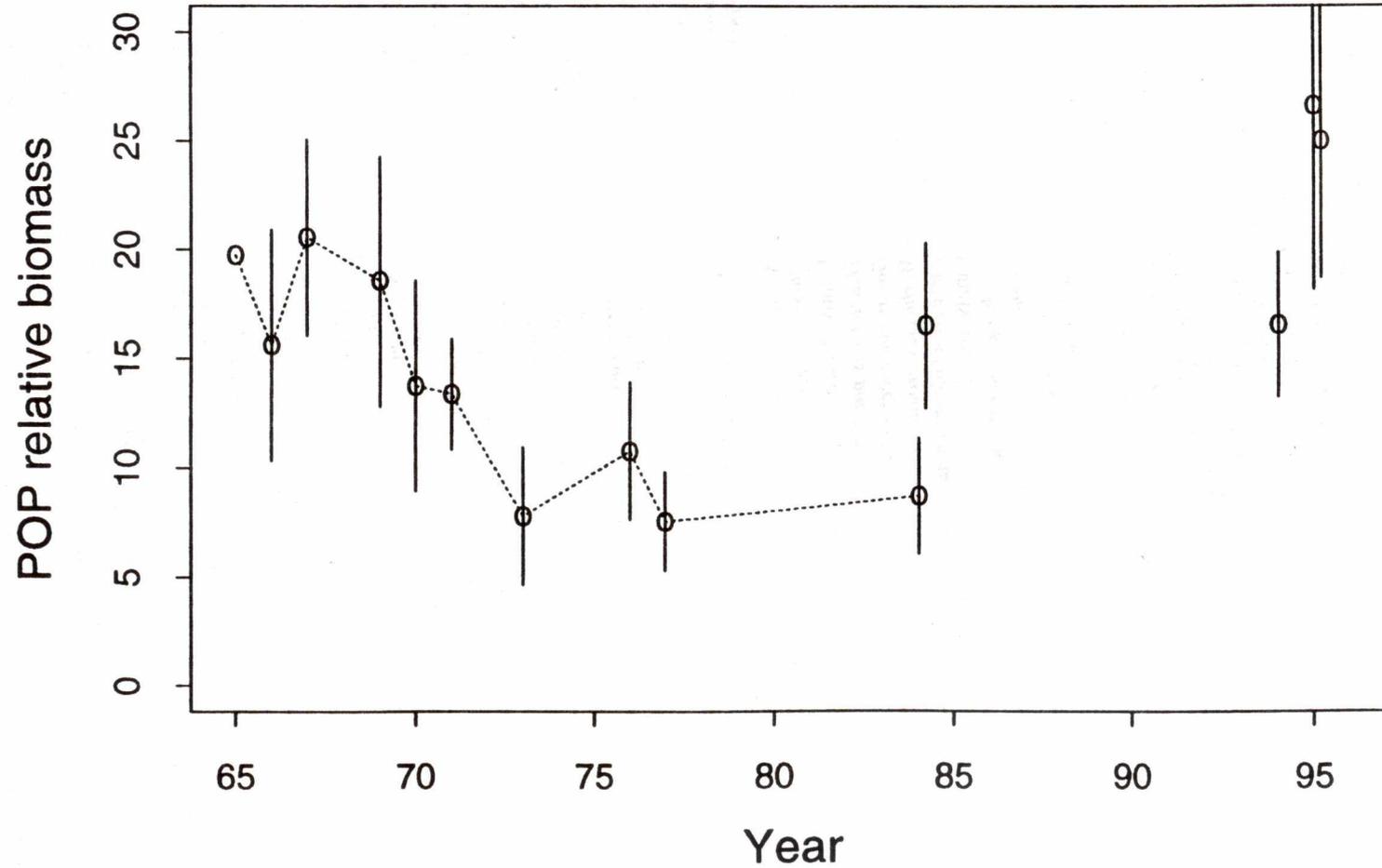


Fig. 10' Trawl survey estimates of Pacific ocean perch relative biomass and 95 % confidence intervals for Goose Island Gully, Queen Charlotte Sound, from 1965 to 1995. The order of surveys follows Table 12.

Appendix Table 1. List of common and scientific names of all species encountered during the rockfish survey in Goose Island Gully, September 11 to 22, 1995.

ROCKFISH	
Rougheye rockfish	<i>Sebastes aleutianus</i>
Pacific ocean perch	<i>S. alutus</i>
Redbanded rockfish	<i>S. babcocki</i>
Shortraker rockfish	<i>S. borealis</i>
Silvergray rockfish	<i>S. brevispinis</i>
Copper rockfish	<i>S. caurinus</i>
Darkblotched rockfish	<i>S. crameri</i>
Splitnose rockfish	<i>S. diploproa</i>
Greenstriped rockfish	<i>S. elongatus</i>
Widow rockfish	<i>S. entomelas</i>
Yellowtail rockfish	<i>S. flavidus</i>
Chilipepper rockfish	<i>S. goodei</i>
Rosethorn rockfish	<i>S. helvomaculatus</i>
Shortbelly rockfish	<i>S. jordani</i>
Bocaccio	<i>S. paucispinis</i>
Canary rockfish	<i>S. pinniger</i>
Redstripe rockfish	<i>S. proriger</i>
Yellowmouth rockfish	<i>S. reedi</i>
Yelloweye rockfish	<i>S. ruberrimus</i>
Harlequin rockfish	<i>S. varietatus</i>
Pygmy rockfish	<i>S. wilsoni</i>
Sharpchin rockfish	<i>S. zacentrus</i>
Shortspine thornyhead	<i>Sebastolobus alascanus</i>
ROUND FISH	
American shad	<i>Alosa sapidissima</i>
Pacific herring	<i>Clupea pallasii</i>
Smelts	Family Osmeridae
Eulachon	<i>Thaleichthys pacificus</i>
Pacific cod	<i>Gadus macrocephalus</i>
Pacific hake	<i>Merluccius productus</i>
Walleye pollock	<i>Theragra chalcogramma</i>
Eelpouts	Family Zoarcidae
Jack Mackerel	<i>Trachurus symmetricus</i>
Sablefish	<i>Anoplopoma fimbria</i>
Lingcod	<i>Ophiodon elongatus</i>
Sculpins	Family Cottidae
FLATFISH	
Arrowtooth flounder	<i>Atheresthes stomias</i>
Petrale sole	<i>Eopsetta jordani</i>
Rex sole	<i>Errex zachirus</i>
Flathead sole	<i>Hippoglossoides elassodon</i>
Pacific halibut	<i>Hippoglossus stenolepis</i>
Rock sole	<i>P. bilineatus</i>
Slender sole	<i>Eopsetta exilis</i>
Dover sole	<i>Microstomus pacificus</i>
English sole	<i>Pleuronectes vetulus</i>
SELACHII	
Spiny Dogfish	<i>Squalus acanthus</i>
Skates	Family Rajidae
Spotted Ratfish	<i>Hydrolagus colliei</i>
INVERTEBRATES	
Squid	Tenthoidea
Octopus	Family Octopodidae
Shrimp	Family Pandalidae

Appendix Table 2. Haul information for the F/V OCEAN SELECTOR during the rockfish survey in Goose Island Gully, September 11 to 22, 1995.

OCEAN SELECTOR

HAUL NO.	1		2		3	
DATE (1995)	SEP 11		SEP 12		SEP 12	
DURATION (H)	0.32		0.28		0.30	
DIRECTION (DEG. TRUE)	67		350		350	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	16:25	16:44	8:10	8:27	9:33	9:51
LONG. (DEG,MIN)	51 08.4	51 08.7	51 11.1	51 12.1	51 11.4	51 12.4
DEPTH (FA)	128 22.2	128 20.9	128 31	128 31.5	128 33.5	128 33.9
	103	101	102	108	104	107
SPECIES CATCH(KG.)						
Pacific ocean perch	100		366		304	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	7		-		-	
Greenstriped rockfish	1		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	7		14		-	
Redstripe rockfish	-		-		4	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	TRACE		9		-	
Sharpchin rockfish	-		-		4	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	2		-		-	
Silvergray rockfish	1		-		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		4		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		-		-	
Yellowtail rockfish	3		-		-	
Arrowtooth flounder	38		28		49	
Dover sole	33		7		7	
English sole	-		-		7	
Flathead sole	9		14		27	
Pacific halibut	-		12		-	
Petrале sole	-		-		-	
Rex sole	40		21		14	
Slender sole	2		7		5	
Eelpouts	TRACE		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	9		12		11	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	20		14		23	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		TRACE		-	
Walleye pollock	2		26		84	
Skates	-		-		-	
Spiny dogfish	4		8		4	
Spotted ratfish	1		1		TRACE	
Octopus	-		-		-	
Shrimp (other)	TRACE		-		TRACE	
Squid	-		-		-	
TOTAL CATCH (KG.)	279		544		544	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	4		5		6	
DATE (1995)	SEP 12		SEP 12		SEP 12	
DURATION (H)	0.28		0.30		0.32	
DIRECTION (DEG. TRUE)	185		35		332	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 10.1	51 09.2	51 10.2	51 11.1	51 12.3	51 13.2
LONG. (DEG,MIN)	128 29.9	128 30	128 26.2	128 25.4	128 20.9	128 21.4
DEPTH (FA)	104	102	106	104	83	74
SPECIES CATCH(KG.)						
Pacific ocean perch	88		253		6	
Bocaccio	9		13		-	
Canary rockfish	-		-		1	
Darkblotched rockfish	2		-		-	
Greenstriped rockfish	-		-		2	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	11		15		-	
Redstripe rockfish	4		-		50	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		7		-	
Sharpchin rockfish	3		-		27	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		4		TRACE	
Silvergray rockfish	-		-		16	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		4	
Yellowmouth rockfish	3		-		-	
Yellowtail rockfish	5		-		4	
Arrowtooth flounder	37		20		94	
Dover sole	4		51		57	
English sole	11		3		2	
Flathead sole	42		10		25	
Pacific halibut	6		19		-	
Petrале sole	-		-		-	
Rex sole	34		21		65	
Slender sole	6		5		2	
Eelpouts	-		-		-	
Eulachon	-		-		3	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	6		-		-	
Pacific hake	-		-		-	
Pacific herring	-		-		TRACE	
Poachers	-		-		-	
Sablefish	11		10		17	
Sculpins	-		-		TRACE	
Shad	-		-		-	
Smelt	-		-		TRACE	
Walleye pollock	165		17		5	
Skates	-		-		9	
Spiny dogfish	15		4		8	
Spotted ratfish	TRACE		-		-	
Octopus	-		-		-	
Shrimp (other)	TRACE		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	464		454		398	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	7		8		9	
DATE (1995)	SEP 12		SEP 13		SEP 13	
DURATION (H)	0.32		0.32		0.32	
DIRECTION (DEG. TRUE)	101		303		290	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	14:33	14:52	7:29	7:48	8:28	8:47
LAT. (DEG,MIN)	51 06	51 05.9	51 14.7	51 15.3	51 13.7	51 14.4
LONG. (DEG,MIN)	128 16.1	128 14.3	128 27.6	128 29	128 29	128 30.5
DEPTH (FA)	94	91	85	85	104	104
SPECIES CATCH(KG.)						
Pacific ocean perch	370		-		230	
Bocaccio	-		4		-	
Canary rockfish	-		7		4	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	3		2		4	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	3		4		20	
Redstripe rockfish	8		4		3	
Rosethorn rockfish	-		-		1	
Rougheye rockfish	-		-		TRACE	
Sharpchin rockfish	TRACE		1		3	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		6		19	
Silvergray rockfish	26		28		20	
Splitnose rockfish	-		-		-	
Widow rockfish	13		-		-	
Yelloweye rockfish	-		7		1	
Yellowmouth rockfish	-		-		-	
Yellowtail rockfish	13		7		14	
Arrowtooth flounder	87		107		49	
Dover sole	26		36		100	
English sole	-		1		-	
Flathead sole	18		2		3	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	74		21		29	
Slender sole	TRACE		1		1	
Eelpouts	-		-		TRACE	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		4		-	
Pacific hake	3		-		-	
Pacific herring	-		-		TRACE	
Poachers	-		-		-	
Sablefish	39		31		64	
Sculpins	-		2		1	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	165		-		76	
Skates	-		-		6	
Spiny dogfish	8		2		11	
Spotted ratfish	-		1		TRACE	
Octopus	-		-		-	
Shrimp (other)	-		TRACE		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	856		278		659	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	10		11		12	
DATE (1995)	SEP 13		SEP 13		SEP 13	
DURATION (H)	0.28		0.33		0.35	
DIRECTION (DEG. TRUE)	350		95		272	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	51 14	51 14.8	51 15.3	51 15	51 14.3	51 14.2
LONG. (DEG, MIN)	128 35.5	128 35.8	128 43.7	128 41.8	128 42.6	128 44.5
DEPTH (FA)	108	109	107	104	103	103
SPECIES CATCH(KG.)						
Pacific ocean perch	1465		835		736	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		4		-	
Harlequin rockfish	-		TRACE		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	22		8		13	
Redstripe rockfish	-		45		117	
Rosethorn rockfish	-		8		-	
Rougheye rockfish	-		-		-	
Sharpchin rockfish	-		166		13	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	TRACE		16		13	
Silvergray rockfish	-		12		33	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	29		69		841	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	302		69		424	
Dover sole	359		8		20	
English sole	-		-		-	
Flathead sole	29		-		TRACE	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	50		4		7	
Slender sole	7		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	36		TRACE		-	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	43		65		7	
Sculpins	-		TRACE		TRACE	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	237		-		26	
Skates	-		-		-	
Spiny dogfish	7		-		20	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	2586		1309		2268	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	13		14		15	
DATE (1995)	SEP 13		SEP 13		SEP 14	
DURATION (H)	0.30		0.27		0.35	
DIRECTION (DEG. TRUE)	322		315		260	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	13:17	13:35	14:37	14:53	10:58	11:19
LONG. (DEG,MIN)	51 12.4	51 13.1	51 18.2	51 18.5	51 17.1	51 17
DEPTH (FA)	128 45.8	128 47.1	128 54.6	128 55.7	128 59.9	129 01.6
	88	89	127	122	126	130
SPECIES CATCH(KG.)						
Pacific ocean perch	21	-	-	-	1271	-
Bocaccio	-	-	-	-	-	-
Canary rockfish	-	-	-	-	-	-
Darkblotched rockfish	-	-	-	-	-	-
Greenstriped rockfish	1	-	-	-	TRACE	-
Harlequin rockfish	-	-	-	-	-	-
Pygmy rockfish	-	-	-	-	-	-
Redbanded rockfish	-	-	-	-	9	-
Redstripe rockfish	5	-	-	-	-	-
Rosethorn rockfish	-	-	-	-	-	-
Rougheye rockfish	-	-	-	-	-	-
Sharpchin rockfish	-	-	-	-	TRACE	-
Shortbelly rockfish	-	-	-	-	-	-
Shortraker rockfish	-	-	-	-	-	-
Shortspine thornyhead	-	-	-	-	14	-
Silvergray rockfish	17	-	-	-	-	-
Splitnose rockfish	-	-	-	-	-	-
Widow rockfish	-	-	-	-	-	-
Yelloweye rockfish	-	-	-	-	-	-
Yellowmouth rockfish	18	-	-	-	-	-
Yellowtail rockfish	-	-	-	-	-	-
Arrowtooth flounder	150	-	-	-	9	-
Dover sole	1	-	-	-	74	-
English sole	4	-	-	-	-	-
Flathead sole	-	-	-	-	-	-
Pacific halibut	9	-	-	-	-	-
Petrале sole	-	-	-	-	-	-
Rex sole	2	-	-	-	28	-
Slender sole	TRACE	-	-	-	-	-
Eelpouts	-	-	-	-	-	-
Eulachon	-	-	-	-	-	-
Jack Mackerel	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-
Pacific cod	4	-	-	-	-	-
Pacific hake	1	-	-	-	-	-
Pacific herring	-	-	-	-	-	-
Poachers	-	-	-	-	-	-
Sablefish	1	-	-	-	-	-
Sculpins	-	-	-	-	-	-
Shad	-	-	-	-	-	-
Smelt	-	-	-	-	-	-
Walleye pollock	-	-	-	-	9	-
Skates	-	-	-	-	-	-
Spiny dogfish	-	-	-	-	TRACE	-
Spotted ratfish	-	-	-	-	TRACE	-
Octopus	-	-	-	-	-	-
Shrimp (other)	-	-	-	-	-	-
Squid	-	-	-	-	-	-
TOTAL CATCH (KG.)	234	-	0	-	1414	-
REMARKS	USABLE	-	UNUSABLE	-	USABLE	-

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	16		17		18	
DATE (1995)	SEP 14		SEP 14		SEP 15	
DURATION (H)	0.33		0.37		0.33	
DIRECTION (DEG. TRUE)	225		254		230	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 18.9	51 18.2	51 22.5	51 21.7	51 16.6	51 16
LONG. (DEG,MIN)	129 01.7	129 02.9	129 04.9	129 06.5	129 03.6	129 05.3
DEPTH (FA)	138	138	124	126	132	132
SPECIES CATCH(KG.)						
Pacific ocean perch	3616		1388		892	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	TRACE		5		3	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	11		28		10	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		14		-	
Sharpchin rockfish	-		-		3	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		9		-	
Shortspine thornyhead	55		14		14	
Silvergray rockfish	-		-		-	
Splitnose rockfish	-		5		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		5		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	78		14		10	
Dover sole	55		33		24	
English sole	-		-		-	
Flathead sole	-		9		3	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	11		33		31	
Slender sole	-		5		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	22		-		-	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	-		9		28	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		TRACE		-	
Walleye pollock	-		5		10	
Skates	-		-		-	
Spiny dogfish	-		TRACE		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	3849		1575		1031	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	19		20		21	
DATE (1995)	SEP 15		SEP 15		SEP 15	
DURATION (H)	0.32		0.33		0.33	
DIRECTION (DEG. TRUE)	254		250		249	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	9:46	10:05	11:00	11:20	12:51	13:11
LONG. (DEG, MIN)	51 15.5	51 15	51 14.5	51 14.3	51 12.3	51 11.8
DEPTH (FA)	129 05.5	129 07.1	129 01.9	129 03.7	129 06.6	129 08.1
	130	131	113	119	120	118
SPECIES CATCH (KG.)						
Pacific ocean perch	445		982		1371	
Bocaccio	-		-		24	
Canary rockfish	-		-		176	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		TRACE	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	8		70		41	
Redstripe rockfish	-		TRACE		TRACE	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		-		-	
Sharpchin rockfish	1		4		TRACE	
Shortbelly rockfish	-		-		-	
Shorthead rockfish	-		-		-	
Shortspine thornyhead	17		13		TRACE	
Silvergray rockfish	-		-		12	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		9		47	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	14		360		88	
Dover sole	30		26		6	
English sole	-		4		-	
Flathead sole	1		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	25		39		12	
Slender sole	1		TRACE		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	1		4		6	
Pacific hake	2		9		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	4		-		6	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	TRACE		-		-	
Walleye pollock	7		26		-	
Skates	-		-		-	
Spiny dogfish	-		9		12	
Spotted ratfish	1		-		-	
Octopus	TRACE		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	557		1557		1800	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	22		23		24	
DATE (1995)	SEP 15		SEP 16		SEP 16	
DURATION (H)	0.35		0.35		0.32	
DIRECTION (DEG. TRUE)	240		263		79	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	14:02	14:23	7:44	8:05	9:24	9:43
LAT. (DEG,MIN)	51 11.3	51 10.2	51 11.4	51 11.4	51 18.7	51 18.9
LONG. (DEG,MIN)	129 08.9	129 10.2	129 21.3	129 23.1	129 20.3	129 18.8
DEPTH (FA)	103	100	159	158	140	140
SPECIES CATCH(KG.)						
Pacific ocean perch	4142		927		756	
Bocaccio	296		-		-	
Canary rockfish	266		3		-	
Darkblotched rockfish	-		-		4	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	15		16		27	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		TRACE		8	
Sharpchin rockfish	TRACE		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		23		20	
Silvergray rockfish	44		-		-	
Splitnose rockfish	-		-		278	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	207		-		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	59		10		20	
Dover sole	-		16		55	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	104		-		-	
Petrable sole	-		-		-	
Rex sole	-		-		20	
Slender sole	-		-		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		-	
Pacific hake	-		55		8	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	104		16		12	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	15		-		-	
Skates	-		-		-	
Spiny dogfish	-		-		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		TRACE		-	
TOTAL CATCH (KG.)	5252		1065		1207	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	25		26		27	
DATE (1995)	SEP 16		SEP 16		SEP 16	
DURATION (H)	0.40		0.35		0.33	
DIRECTION (DEG. TRUE)	120		276		275	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 18.8	51 18.2	51 21.4	51 21.6	51 25.7	51 25.6
LONG. (DEG,MIN)	129 18.3	129 16.8	129 00.1	129 02	128 54.1	128 55.9
DEPTH (FA)	144	150	129	127	96	96
SPECIES CATCH(KG.)						
Pacific ocean perch	658		1168		1169	
Bocaccio	-		17		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	6		-		4	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	3		33		45	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Roughey rockfish	18		4		-	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	12		8		22	
Silvergray rockfish	-		-		-	
Splitnose rockfish	33		-		-	
Widow rockfish	-		-		13	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		-		9	
Yellowtail rockfish	-		-		9	
Arrowtooth flounder	60		25		85	
Dover sole	96		54		22	
English sole	-		-		-	
Flathead sole	-		-		9	
Pacific halibut	-		-		54	
Petrale sole	-		-		-	
Rex sole	9		17		18	
Slender sole	TRACE		4		TRACE	
Eelpouts	TRACE		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		12		4	
Pacific hake	45		12		4	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	30		25		13	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		-		4	
Walleye pollock	-		-		63	
Skates	-		-		-	
Spiny dogfish	-		-		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	971		1378		1551	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	28		29		30	
DATE (1995)	SEP 17		SEP 17		SEP 17	
DURATION (H)	0.37		0.32		0.32	
DIRECTION (DEG. TRUE)	268		90		60	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	7:37	7:59	8:35	8:54	9:48	10:07
LAT. (DEG,MIN)	51 11.4	51 11.5	51 12.8	51 12.9	51 10.5	51 10.8
LONG. (DEG,MIN)	129 14.2	129 16.1	129 14.7	129 12.9	129 16.4	129 14.7
DEPTH (FA)	162	163	156	152	162	159
SPECIES CATCH(KG.)						
Pacific ocean perch	314		424		645	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	7		10		65	
Redstripe rockfish	-		TRACE		-	
Rosethorn rockfish	-		-		3	
Roughey rockfish	3		4		9	
Sharpchin rockfish	TRACE		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	14		37		50	
Silvergray rockfish	-		-		-	
Splitnose rockfish	-		-		3	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		4		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	26		29		27	
Dover sole	82		139		77	
English sole	-		-		-	
Flathead sole	2		TRACE		-	
Pacific halibut	-		-		33	
Petrale sole	-		-		-	
Rex sole	2		2		6	
Slender sole	TRACE		TRACE		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		6	
Pacific hake	30		12		33	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	9		10		68	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	TRACE		-		-	
Walleye pollock	-		-		-	
Skates	-		-		-	
Spiny dogfish	-		12		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		9	
TOTAL CATCH (KG.)	488		683		1032	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	31		32		33	
DATE (1995)	SEP 17		SEP 17		SEP 17	
DURATION (H)	0.32		0.33		0.33	
DIRECTION (DEG. TRUE)	68		200		17	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	10:54	11:13	12:00	12:20	13:34	13:54
LAT. (DEG, MIN)	51 09.9	51 10.3	51 09.4	51 08.4	51 01.4	51 02.5
LONG. (DEG, MIN)	129 16	129 14.6	129 10	129 10.5	129 12.9	129 12.3
DEPTH (FA)	145	145	87	87	82	83
SPECIES CATCH(KG.)						
Pacific ocean perch	1428		68		-	
Bocaccio	-		-		-	
Canary rockfish	-		136		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	5		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	26		27		-	
Redstripe rockfish	-		191		-	
Rosethorn rockfish	10		-		-	
Rougheye rockfish	5		-		-	
Sharpchin rockfish	-		560		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	26		TRACE		-	
Silvergray rockfish	-		55		-	
Splitnose rockfish	TRACE		TRACE		-	
Widow rockfish	-		27		-	
Yelloweye rockfish	-		68		-	
Yellowmouth rockfish	10		3821		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	26		-		-	
Dover sole	41		-		-	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	-		-		-	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	10		-		-	
Lingcod	-		-		-	
Pacific cod	5		-		-	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	41		-		-	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	5		-		-	
Skates	-		-		-	
Spiny dogfish	-		-		-	
Spotted ratfish	5		-		-	
Octopus	-		-		-	
Shrimp (other)	TRACE		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	1645		4954		0	
REMARKS	USABLE		USABLE		UNUSABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	34		35		36	
DATE (1995)	SEP 17		SEP 19		SEP 19	
DURATION (H)	0.33		0.35		0.33	
DIRECTION (DEG. TRUE)	23		224		80	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	14:58	15:18	7:32	7:53	8:40	9:00
LONG. (DEG,MIN)	50 59.2	51 00.2	51 06.7	51 05.9	51 08.2	51 08.3
DEPTH (FA)	129 13.5	129 12.7	129 22.9	129 24	129 27.1	129 25.2
	80	80	135	135	156	154
SPECIES CATCH(KG.)						
Pacific ocean perch	2		749		344	
Bocaccio	4		-		-	
Canary rockfish	2		-		-	
Darkblotched rockfish	-		-		5	
Greenstriped rockfish	5		TRACE		-	
Harlequin rockfish	-		-		TRACE	
Pygmy rockfish	TRACE		-		-	
Redbanded rockfish	7		11		7	
Redstripe rockfish	19		-		-	
Rosethorn rockfish	-		11		1	
Rougheye rockfish	-		-		TRACE	
Sharpchin rockfish	TRACE		71		1	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		16		25	
Silvergray rockfish	28		-		-	
Splitnose rockfish	-		TRACE		TRACE	
Widow rockfish	-		7		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		246		20	
Yellowtail rockfish	37		-		-	
Arrowtooth flounder	20		11		9	
Dover sole	TRACE		4		3	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrале sole	-		-		-	
Rex sole	9		11		9	
Slender sole	4		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	8		4		-	
Pacific hake	24		29		13	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	5		7		-	
Sculpins	TRACE		-		TRACE	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	-		-		-	
Skates	-		-		12	
Spiny dogfish	6		11		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		TRACE	
Squid	-		-		TRACE	
TOTAL CATCH (KG.)	180		1186		451	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	37		38		39	
DATE (1995)	SEP 19		SEP 19		SEP 19	
DURATION (H)	0.35		0.35		0.32	
DIRECTION (DEG. TRUE)	105		37		312	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	10:10	10:31	11:51	12:12	13:37	14:10
LONG. (DEG,MIN)	51 13.3	51 13	51 06.1	51 07.1	51 09.2	51 10
DEPTH (FA)	129 30.6	129 28.9	129 34.2	129 33.6	129 42.4	129 43.6
	159	160	149	147	154	154
SPECIES CATCH(KG.)						
Pacific ocean perch	237		898		2745	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	1		-		539	
Greenstriped rockfish	TRACE		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	14		3		-	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		10		15	
Rougheye rockfish	4		-		-	
Sharpchin rockfish	1		125		154	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	32		35		51	
Silvergray rockfish	-		-		-	
Splitnose rockfish	1		-		13	
Widow rockfish	2		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	3		599		757	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	6		-		-	
Dover sole	27		TRACE		TRACE	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	6		-		-	
Petrale sole	-		-		-	
Rex sole	4		-		TRACE	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		27		-	
Pacific cod	-		-		-	
Pacific hake	33		5		19	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	24		-		-	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	TRACE		-		-	
Walleye pollock	-		-		-	
Skates	-		-		-	
Spiny dogfish	3		-		-	
Spotted ratfish	1		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	2		-		-	
TOTAL CATCH (KG.)	401		1702		4293	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	40		41		42	
DATE (1995)	SEP 19		SEP 19		SEP 20	
DURATION (H)	0.37		0.35		0.08	
DIRECTION (DEG. TRUE)	71		277		122	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	15:27	15:49	17:37	17:58	7:34	7:39
LAT. (DEG,MIN)	51 07.1	51 07.6	51 00.1	51 00.1	51 17.4	0
LONG. (DEG,MIN)	129 31.7	129 30.4	129 28.6	129 30.2	129 40	0
DEPTH (FA)	151	156	126	131	128	128
SPECIES CATCH(KG.)						
Pacific ocean perch	170		379		-	
Bocaccio	-		8		-	
Canary rockfish	-		6		-	
Darkblotched rockfish	7		4		-	
Greenstriped rockfish	-		14		-	
Harlequin rockfish	-		TRACE		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	1		30		-	
Redstripe rockfish	TRACE		TRACE		-	
Rosethorn rockfish	6		2		-	
Roughey rockfish	-		-		-	
Sharpchin rockfish	5		124		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	35		8		-	
Silvergray rockfish	-		-		-	
Splitnose rockfish	1		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	31		2		-	
Yellowtail rockfish	3		-		-	
Arrowtooth flounder	29		6		-	
Dover sole	16		20		-	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	12		-		-	
Petrale sole	-		-		-	
Rex sole	9		12		-	
Slender sole	TRACE		TRACE		-	
Eelpouts	TRACE		TRACE		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		2		-	
Pacific hake	14		3		-	
Pacific herring	-		-		-	
Poachers	TRACE		-		-	
Sablefish	10		18		-	
Sculpins	-		TRACE		-	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	-		-		-	
Skates	17		-		-	
Spiny dogfish	-		10		-	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	1		-		-	
Squid	TRACE		-		-	
TOTAL CATCH (KG.)	366		648		0	
REMARKS	USABLE		USABLE		UNUSABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	43		44		45	
DATE (1995)	SEP 20		SEP 20		SEP 20	
DURATION (H)	0.35		0.35		0.35	
DIRECTION (DEG. TRUE)	84		267		274	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	11:21	11:42	12:20	12:41	13:46	14:07
LAT. (DEG,MIN)	51 24.5	51 24.4	51 24.3	51 24.1	51 25.5	51 25.2
LONG. (DEG,MIN)	128 51.2	128 49.2	128 47.4	128 49.3	128 47.6	128 49.5
DEPTH (FA)	114	116	117	118	110	109
SPECIES CATCH(KG.)						
Pacific ocean perch	296		245		144	
Bocaccio	-		-		-	
Canary rockfish	-		-		2	
Darkblotched rockfish	2		1		6	
Greenstriped rockfish	-		1		TRACE	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	21		16		19	
Redstripe rockfish	TRACE		-		-	
Rosethorn rockfish	TRACE		TRACE		-	
Rougheye rockfish	TRACE		4		11	
Sharpchin rockfish	2		1		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	16		16		20	
Silvergray rockfish	2		-		36	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	14		-		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	51		35		95	
Dover sole	29		45		55	
English sole	TRACE		-		-	
Flathead sole	10		4		3	
Pacific halibut	9		-		-	
Petrable sole	-		-		-	
Rex sole	31		44		34	
Slender sole	1		1		1	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	8		4		4	
Pacific hake	9		2		TRACE	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	13		23		14	
Sculpins	-		TRACE		-	
Shad	-		-		-	
Smelt	2		3		2	
Walleye pollock	-		-		-	
Skates	-		-		-	
Spiny dogfish	-		1		8	
Spotted ratfish	-		-		-	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	516		446		454	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	46		47		48	
DATE (1995)	SEP 20		SEP 20		SEP 21	
DURATION (H)	0.33		0.35		0.35	
DIRECTION (DEG. TRUE)	66		88		77	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	15:06	15:26	15:58	16:19	7:46	8:07
LONG. (DEG,MIN)	51 25	51 25.5	51 26.4	51 26.5	51 28.2	51 28.4
DEPTH (FA)	128 38.8	128 37	128 38.6	128 36.8	128 36.8	128 34.9
	117	116	113	114	107	107
SPECIES CATCH(KG.)						
Pacific ocean perch	255		227		105	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Darkblotched rockfish	2		7		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	78		55		31	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	26		29		-	
Sharpchin rockfish	TRACE		-		TRACE	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	16		10		23	
Silvergray rockfish	4		4		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	2		-		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	48		56		48	
Dover sole	33		43		92	
English sole	-		TRACE		TRACE	
Flathead sole	TRACE		-		3	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	11		5		7	
Slender sole	TRACE		TRACE		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		-		-	
Pacific cod	3		22		7	
Pacific hake	4		-		12	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	9		11		-	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	2		1		TRACE	
Walleye pollock	-		1		10	
Skates	-		-		-	
Spiny dogfish	1		4		6	
Spotted ratfish	1		1		1	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	495		476		345	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	49		50		51	
DATE (1995)	SEP 21		SEP 21		SEP 21	
DURATION (H)	0.33		0.35		0.35	
DIRECTION (DEG. TRUE)	259		251		248	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	8:39	8:59	10:13	10:34	11:39	12:00
LONG. (DEG,MIN)	51 27	51 26.8	51 19.1	51 18.9	51 20.1	51 19.5
DEPTH (FA)	128 35.5	128 37.2	128 42.7	128 44.5	128 34.4	128 36.1
	113	113	105	107	99	102

SPECIES CATCH(KG.)

Pacific ocean perch	229	878	5331
Bocaccio	-	31	-
Canary rockfish	-	-	-
Darkblotched rockfish	2	-	-
Greenstriped rockfish	-	4	29
Harlequin rockfish	TRACE	-	-
Pygmy rockfish	-	-	-
Redbanded rockfish	12	8	147
Redstripe rockfish	-	27	88
Rosethorn rockfish	-	12	-
Roughey rockfish	15	-	-
Sharpchin rockfish	-	20	-
Shortbelly rockfish	-	TRACE	-
Shortraker rockfish	-	-	-
Shortspine thornyhead	18	86	29
Silvergray rockfish	3	-	-
Splitnose rockfish	-	-	-
Widow rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowmouth rockfish	-	98	5007
Yellowtail rockfish	-	8	501
Arrowtooth flounder	68	74	29
Dover sole	44	8	-
English sole	TRACE	-	-
Flathead sole	3	-	-
Pacific halibut	56	-	-
Petrable sole	-	-	29
Rex sole	5	16	TRACE
Slender sole	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Jack Mackerel	-	-	-
Lingcod	-	-	-
Pacific cod	15	4	29
Pacific hake	3	-	-
Pacific herring	-	-	-
Poachers	-	-	-
Sablefish	47	172	118
Sculpins	-	8	TRACE
Shad	-	-	-
Smelt	TRACE	-	-
Walleye pollock	-	-	-
Skates	-	-	-
Spiny dogfish	7	4	-
Spotted ratfish	4	-	-
Octopus	-	-	-
Shrimp (other)	-	-	-
Squid	-	-	-
TOTAL CATCH (KG.)	531	1458	11340
REMARKS	USABLE	USABLE	USABLE

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	52		53		54	
DATE (1995)	SEP 21		SEP 21		SEP 22	
DURATION (H)	0.35		0.33		0.35	
DIRECTION (DEG. TRUE)	277		273		215	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 18.2	51 18.2	51 16	51 16.1	51 28	51 27.1
LONG. (DEG,MIN)	128 45.9	128 47.6	128 47.2	128 48.8	128 21	128 22.1
DEPTH (FA)	105	109	107	109	88	85
SPECIES CATCH(KG.)						
Pacific ocean perch	966		840			7
Bocaccio	-		-			7
Canary rockfish	-		-			-
Darkblotched rockfish	-		-			-
Greenstriped rockfish	28		-			1
Harlequin rockfish	-		-			-
Pygmy rockfish	-		-			-
Redbanded rockfish	12		TRACE			192
Redstripe rockfish	16		39			9
Rosethorn rockfish	8		4			TRACE
Rougheye rockfish	-		-			-
Sharpchin rockfish	4		268			3
Shortbelly rockfish	TRACE		TRACE			-
Shorthead rockfish	-		-			-
Shortspine thornyhead	32		12			2
Silvergray rockfish	-		12			24
Splitnose rockfish	-		-			-
Widow rockfish	-		-			2
Yelloweye rockfish	-		12			-
Yellowmouth rockfish	109		39			-
Yellowtail rockfish	12		4			44
Arrowtooth flounder	44		43			84
Dover sole	-		-			31
English sole	-		-			3
Flathead sole	-		-			5
Pacific halibut	-		-			-
Petrable sole	-		-			-
Rex sole	16		8			6
Slender sole	-		-			TRACE
Eelpouts	-		-			-
Eulachon	-		-			-
Jack Mackerel	-		-			-
Lingcod	-		-			-
Pacific cod	4		TRACE			4
Pacific hake	-		-			2
Pacific herring	-		-			-
Poachers	-		-			-
Sablefish	60		59			7
Sculpins	4		-			1
Shad	-		-			3
Smelt	-		-			TRACE
Walleye pollock	-		-			10
Skates	-		-			TRACE
Spiny dogfish	8		20			24
Spotted ratfish	TRACE		TRACE			-
Octopus	-		-			-
Shrimp (other)	-		-			-
Squid	-		-			-
TOTAL CATCH (KG.)	1324		1361			470
REMARKS	USABLE		USABLE			USABLE

Appendix Table 2 continued.

OCEAN SELECTOR

HAUL NO.	55		56		57	
DATE (1995)	SEP 22		SEP 22		SEP 22	
DURATION (H)	0.33		0.33		0.33	
DIRECTION (DEG. TRUE)	152		163		327	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	10:10	10:30	11:21	11:41	12:21	12:41
LONG. (DEG,MIN)	51 10.3	51 09.2	51 08	51 06.8	51 05.7	51 06.8
DEPTH (FA)	128 22.5	128 21.6	128 28.6	128 28.3	128 30.6	128 31.2
	102	102	94	87	78	79
SPECIES CATCH(KG.)						
Pacific ocean perch	501		231		10	
Bocaccio	19		10		-	
Canary rockfish	-		-		2	
Darkblotched rockfish	-		TRACE		-	
Greenstriped rockfish	TRACE		-		-	
Harlequin rockfish	-		-		-	
Pygmy rockfish	-		-		-	
Redbanded rockfish	19		2		-	
Redstripe rockfish	3		30		1	
Rosethorn rockfish	-		-		-	
Rougeye rockfish	6		-		-	
Sharpchin rockfish	TRACE		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	19		1		-	
Silvergray rockfish	6		-		-	
Splitnose rockfish	-		TRACE		-	
Widow rockfish	-		4		2	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		53		2	
Yellowtail rockfish	5		46		3	
Arrowtooth flounder	151		67		72	
Dover sole	252		3		TRACE	
English sole	-		TRACE		4	
Flathead sole	22		22		11	
Pacific halibut	9		-		-	
Petrable sole	-		-		1	
Rex sole	98		32		14	
Slender sole	5		-		-	
Eelpouts	-		TRACE		TRACE	
Eulachon	-		-		-	
Jack Mackerel	-		-		-	
Lingcod	-		12		3	
Pacific cod	9		5		TRACE	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Poachers	-		-		-	
Sablefish	101		4		TRACE	
Sculpins	-		-		-	
Shad	-		-		-	
Smelt	-		-		-	
Walleye pollock	-		TRACE		-	
Skates	-		-		-	
Spiny dogfish	-		31		4	
Spotted ratfish	6		2		2	
Octopus	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	1233		555		131	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3. Haul information for the F/V FROSTI during the rockfish survey in Goose Island Gully, September 11 to 22, 1995.

FROSTI

HAUL NO.	1		2		3	
DATE (1995)	SEP 11		SEP 12		SEP 12	
DURATION (H)	0.25		0.25		0.32	
DIRECTION (DEG. TRUE)	309		305		290	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	16:41	16:56	8:01	8:16	9:29	9:48
LAT. (DEG,MIN)	51 05.7	51 06.4	51 14.8	51 15.3	51 13.7	51 14.3
LONG. (DEG,MIN)	128 15.6	128 16.1	128 27.1	128 28	128 28.9	128 29.7
DEPTH (FA)	95	98	84	83	105	99
SPECIES CATCH(KG.)						
Pacific ocean perch	18		-		249	
Bocaccio	-		11		5	
Canary rockfish	-		26		35	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		2	
Greenstriped rockfish	TRACE		TRACE		1	
Harlequin rockfish	-		-		-	
Redbanded rockfish	5		-		47	
Redstripe rockfish	16		1		1	
Rosethorn rockfish	-		-		-	
Rougheyeye rockfish	2		-		-	
Sharpchin rockfish	9		-		1	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		-		9	
Silvergray rockfish	1		23		24	
Splitnose rockfish	-		-		-	
Widow rockfish	-		36		45	
Yelloweye rockfish	-		6		6	
Yellowmouth rockfish	-		-		1	
Yellowtail rockfish	-		-		7	
Arrowtooth flounder	53		34		52	
Dover sole	46		8		36	
English sole	TRACE		-		-	
Flathead sole	15		1		TRACE	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	62		18		2	
Slender sole	TRACE		TRACE		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	9		5		3	
Pacific hake	-		-		-	
Pacific herring	-		TRACE		-	
Sablefish	35		8		10	
Sculpins	-		TRACE		TRACE	
Walleye pollock	18		-		20	
Skates	-		-		-	
Spiny dogfish	1		4		-	
Spotted ratfish	1		1		1	
Shrimp (other)	TRACE		TRACE		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	291		182		557	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	4		5		6	
DATE (1995)	SEP 12		SEP 12		SEP 12	
DURATION (H)	0.32		0.30		0.30	
DIRECTION (DEG. TRUE)	352		97		260	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 13.9	51 14.6	51 15.4	51 15.3	51 14.2	51 14.2
LONG. (DEG,MIN)	128 35.4	128 35.5	128 43.6	128 42.4	128 42.5	128 43.8
DEPTH (FA)	109	109	108	107	105	104
SPECIES CATCH(KG.)						
Pacific ocean perch	627		461		474	
Bocaccio	24		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		2		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	5		TRACE		10	
Redstripe rockfish	TRACE		95		93	
Rosethorn rockfish	-		4		-	
Rougheye rockfish	-		-		-	
Sharpchin rockfish	-		33		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	TRACE		21		TRACE	
Silvergray rockfish	-		4		11	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		-		142	
Yellowtail rockfish	-		-		3	
Arrowtooth flounder	58		23		223	
Dover sole	29		TRACE		11	
English sole	-		-		TRACE	
Flathead sole	11		2		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		TRACE	
Rex sole	11		4		4	
Slender sole	-		-		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	3		-		-	
Pacific cod	3		-		-	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Sablefish	11		31		-	
Sculpins	-		-		-	
Walleye pollock	122		TRACE		8	
Skates	-		-		-	
Spiny dogfish	5		-		5	
Spotted ratfish	TRACE		TRACE		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	907		680		984	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	7		8		9	
DATE (1995)	SEP 12		SEP 13		SEP 13	
DURATION (H)	0.30		0.25		0.28	
DIRECTION (DEG. TRUE)	72		253		349	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	16:23	16:41	8:01	8:16	9:38	9:55
LONG. (DEG,MIN)	51 08.4	51 08.6	51 15.8	51 15.7	51 11.1	51 11.9
DEPTH (FA)	128 22.3	128 21.2	128 39	128 39.7	128 31	128 31.2
	104	104	107	108	107	109
SPECIES CATCH(KG.)						
Pacific ocean perch	163		45		236	
Bocaccio	-		-		5	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	2		-		3	
Greenstriped rockfish	TRACE		TRACE		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	22		7		5	
Redstripe rockfish	1		54		21	
Rosethorn rockfish	-		2		6	
Rougheye rockfish	TRACE		-		-	
Sharpchin rockfish	1		5		9	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	8		24		1	
Silvergray rockfish	2		3		6	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		9		2	
Yellowmouth rockfish	3		1		8	
Yellowtail rockfish	1		-		1	
Arrowtooth flounder	68		12		45	
Dover sole	27		2		5	
English sole	-		-		4	
Flathead sole	10		-		9	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	33		10		18	
Slender sole	TRACE		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	2		2		6	
Pacific hake	3		-		1	
Pacific herring	-		-		-	
Sablefish	31		32		37	
Sculpins	-		-		-	
Walleye pollock	TRACE		2		99	
Skates	-		-		-	
Spiny dogfish	5		2		10	
Spotted ratfish	2		-		-	
Shrimp (other)	-		1		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	384		213		537	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	10		11		12	
DATE (1995)	SEP 13		SEP 13		SEP 13	
DURATION (H)	0.30		0.30		0.30	
DIRECTION (DEG. TRUE)	357		180		352	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 11.5	51 12.3	51 10.1	51 09.3	51 10.3	51 11.1
LONG. (DEG,MIN)	128 32.6	128 32.8	128 30	128 29.9	128 26.3	128 26.4
DEPTH (FA)	107	109	106	99	108	107
SPECIES CATCH(KG.)						
Pacific ocean perch	224		267		408	
Bocaccio	4		4		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	1		-		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	8		1		9	
Redstripe rockfish	3		1		4	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	TRACE		-		2	
Sharpchin rockfish	1		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	TRACE		-		5	
Silvergray rockfish	-		4		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	3		1		-	
Yellowtail rockfish	-		6		3	
Arrowtooth flounder	44		60		57	
Dover sole	5		1		32	
English sole	6		6		TRACE	
Flathead sole	22		11		15	
Pacific halibut	-		-		-	
Petrale sole	-		-		-	
Rex sole	20		16		30	
Slender sole	-		-		TRACE	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		19	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Sablefish	16		10		27	
Sculpins	-		-		-	
Walleye pollock	128		57		23	
Skates	-		-		-	
Spiny dogfish	7		6		13	
Spotted ratfish	-		-		TRACE	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	492		451		647	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	13		14		15	
DATE (1995)	SEP 13		SEP 14		SEP 14	
DURATION (H)	0.30		0.28		0.30	
DIRECTION (DEG. TRUE)	339		232		253	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	14:42	15:00	7:50	8:07	9:00	9:18
LONG. (DEG, MIN)	51 12.4	51 13.2	51 16.6	51 16.2	51 15.6	51 15.1
DEPTH (FA)	128 20.9	128 21.2	129 03.3	129 04.4	129 05	129 06
	84	74	132	131	129	128
SPECIES CATCH(KG.)						
Pacific ocean perch	29		468		374	
Bocaccio	43		8		6	
Canary rockfish	3		2		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	TRACE		TRACE		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	6		16		14	
Redstripe rockfish	18		1		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		1		-	
Sharpchin rockfish	30		6		5	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	-		10		14	
Silvergray rockfish	28		3		-	
Splitnose rockfish	-		-		-	
Widow rockfish	2		-		-	
Yelloweye rockfish	14		-		-	
Yellowmouth rockfish	-		-		-	
Yellowtail rockfish	63		1		-	
Arrowtooth flounder	137		19		24	
Dover sole	16		9		17	
English sole	-		-		-	
Flathead sole	10		-		-	
Pacific halibut	-		-		5	
Petrable sole	-		-		-	
Rex sole	42		21		24	
Slender sole	TRACE		-		-	
Eelpouts	TRACE		-		-	
Eulachon	TRACE		-		-	
Lingcod	-		-		-	
Pacific cod	TRACE		-		-	
Pacific hake	-		TRACE		-	
Pacific herring	-		-		-	
Sablefish	29		TRACE		-	
Sculpins	TRACE		-		-	
Walleye pollock	3		2		-	
Skates	-		-		-	
Spiny dogfish	2		-		4	
Spotted ratfish	-		1		1	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	475		568		488	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	16		17		18	
DATE (1995)	SEP 14		SEP 14		SEP 14	
DURATION (H)	0.30		0.28		0.32	
DIRECTION (DEG. TRUE)	250		240		248	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	10:28	10:46	12:01	12:18	13:19	13:38
LONG. (DEG,MIN)	51 14.5	51 14.1	51 12.2	51 11.8	51 11.3	51 10.8
DEPTH (FA)	129 02.1	129 03.2	129 06.7	129 07.7	129 08.3	129 09.7
	115	117	115	116	97	103
SPECIES CATCH(KG.)						
Pacific ocean perch	264		829		2555	
Bocaccio	20		-		93	
Canary rockfish	-		177		82	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	2		32		-	
Redstripe rockfish	-		-		58	
Rosethorn rockfish	-		-		-	
Rougheyeye rockfish	-		-		-	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	9		TRACE		-	
Silvergray rockfish	-		-		93	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		46		677	
Yellowtail rockfish	-		-		70	
Arrowtooth flounder	584		14		-	
Dover sole	2		7		-	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	15		7		-	
Slender sole	TRACE		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		-	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Sablefish	-		18		-	
Sculpins	-		-		-	
Walleye pollock	7		4		-	
Skates	-		-		-	
Spiny dogfish	-		-		-	
Spotted ratfish	4		TRACE		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	907		1134		3629	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	19		20		21	
DATE (1995)	SEP 14		SEP 15		SEP 15	
DURATION (H)	0.30		0.30		0.32	
DIRECTION (DEG. TRUE)	320		252		220	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	16:11	16:29	8:53	9:11	10:18	10:37
LONG. (DEG, MIN)	51 12.4	51 13	51 16.9	51 16.7	51 18.9	51 18.4
DEPTH (FA)	128 46	128 46.9	129 00.8	129 02	129 01.8	129 02.7
	90	91	129	132	140	138
SPECIES CATCH(KG.)						
Pacific ocean perch	39		832		709	
Bocaccio	-		-		-	
Canary rockfish	2		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		TRACE		-	
Greenstriped rockfish	TRACE		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	-		9		12	
Redstripe rockfish	TRACE		-		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		-		TRACE	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shorthead rockfish	-		-		7	
Shortspine thornyhead	-		6		22	
Silvergray rockfish	15		6		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	6		-		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	102		15		-	
Dover sole	-		9		17	
English sole	1		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		12		-	
Petrable sole	TRACE		-		-	
Rex sole	1		6		5	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		TRACE	
Lingcod	-		-		-	
Pacific cod	-		3		-	
Pacific hake	-		TRACE		-	
Pacific herring	-		-		-	
Sablefish	TRACE		9		20	
Sculpins	-		-		-	
Walleye pollock	-		TRACE		-	
Skates	-		-		-	
Spiny dogfish	2		-		-	
Spotted ratfish	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	168		907		794	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	22		23		24	
DATE (1995)	SEP 15		SEP 15		SEP 15	
DURATION (H)	0.30		0.30		0.30	
DIRECTION (DEG. TRUE)	259		290		275	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	11:54	12:12	13:39	13:57	15:23	15:41
LONG. (DEG,MIN)	51 22	51 21.9	51 21.6	51 21.7	51 25.6	51 25.6
DEPTH (FA)	129 05.1	129 06.3	128 59.9	129 01	128 55	128 56.3
	125	125	128	130	98	96
SPECIES CATCH(KG.)						
Pacific ocean perch	1034		1012		2332	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		TRACE		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	20		36		TRACE	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Roughey rockfish	8		14		-	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shorttraker rockfish	20		-		-	
Shortspine thornyhead	4		TRACE		17	
Silvergray rockfish	12		-		17	
Splitnose rockfish	4		TRACE		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	4		-		-	
Yellowtail rockfish	-		-		17	
Arrowtooth flounder	8		7		17	
Dover sole	-		TRACE		26	
English sole	-		-		-	
Flathead sole	8		4		9	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	12		11		17	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		TRACE	
Lingcod	-		-		-	
Pacific cod	-		4		-	
Pacific hake	-		-		9	
Pacific herring	-		-		-	
Sablefish	-		29		9	
Sculpins	-		-		-	
Walleye pollock	-		18		17	
Skates	-		-		-	
Spiny dogfish	-		-		9	
Spotted ratfish	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	1134		1134		2495	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	25		26		27	
DATE (1995)	SEP 16		SEP 16		SEP 16	
DURATION (H)	0.30		0.33		0.32	
DIRECTION (DEG. TRUE)	256		80		60	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	7:50	8:08	9:10	9:30	10:35	10:54
LONG. (DEG, MIN)	51 11.5	51 11.4	51 12.8	51 12.6	51 10.5	51 10.9
DEPTH (FA)	129 14	129 15.1	129 15.1	129 13.8	129 16.9	129 15.8
	161	165	157	155	162	165
SPECIES CATCH(KG.)						
Pacific ocean perch	490		245		1597	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	TRACE		-		31	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Rougheyeye rockfish	-		6		12	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	9		-		-	
Shortspine thornyhead	33		28		43	
Silvergray rockfish	-		-		-	
Splitnose rockfish	TRACE		TRACE		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		2		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	33		24		19	
Dover sole	93		83		74	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	4		TRACE		-	
Slender sole	-		-		-	
Eelpouts	-		TRACE		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		-	
Pacific hake	11		15		TRACE	
Pacific herring	-		-		-	
Sablefish	-		11		25	
Sculpins	-		-		-	
Walleye pollock	-		-		6	
Skates	-		9		-	
Spiny dogfish	-		-		-	
Spotted ratfish	7		1		6	
Shrimp (other)	-		-		-	
Squid	TRACE		TRACE		-	
TOTAL CATCH (KG.)	680		424		1814	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	28		29		30	
DATE (1995)	SEP 16		SEP 16		SEP 16	
DURATION (H)	0.32		0.17		0.30	
DIRECTION (DEG. TRUE)	65		350		190	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	11:56	12:15	13:58	14:08	14:57	15:15
LONG. (DEG,MIN)	51 09.6	51 10	51 08.1	51 08.4	51 09.3	51 08.5
DEPTH (FA)	129 16.5	129 15.4	129 09.8	129 09.4	129 09.7	129 09.8
	140	144	85	85	88	86
SPECIES CATCH(KG.)						
Pacific ocean perch	2118	-	-	-	-	-
Bocaccio	-	-	-	-	-	-
Canary rockfish	-	-	-	-	135	-
Chilipepper	-	-	-	-	-	-
Darkblotched rockfish	-	-	-	-	-	-
Greenstriped rockfish	-	-	-	-	TRACE	-
Harlequin rockfish	-	-	-	-	-	-
Redbanded rockfish	16	-	-	-	-	-
Redstripe rockfish	-	-	-	-	97	-
Rosethorn rockfish	TRACE	-	-	-	TRACE	-
Rougheye rockfish	-	-	-	-	-	-
Sharpchin rockfish	-	-	-	-	725	-
Shortbelly rockfish	-	-	-	-	TRACE	-
Shortraker rockfish	-	-	-	-	-	-
Shortspine thornyhead	16	-	-	-	TRACE	-
Silvergray rockfish	-	-	-	-	39	-
Splitnose rockfish	TRACE	-	-	-	-	-
Widow rockfish	-	-	-	-	-	-
Yelloweye rockfish	-	-	-	-	-	-
Yellowmouth rockfish	24	-	-	-	1451	-
Yellowtail rockfish	-	-	-	-	39	-
Arrowtooth flounder	24	-	-	-	-	-
Dover sole	-	-	-	-	10	-
English sole	-	-	-	-	-	-
Flathead sole	-	-	-	-	-	-
Pacific halibut	-	-	-	-	-	-
Petrable sole	-	-	-	-	-	-
Rex sole	8	-	-	-	TRACE	-
Slender sole	-	-	-	-	-	-
Eelpouts	-	-	-	-	-	-
Eulachon	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-
Pacific cod	32	-	-	-	-	-
Pacific hake	-	-	-	-	-	-
Pacific herring	-	-	-	-	-	-
Sablefish	32	-	-	-	-	-
Sculpins	-	-	-	-	-	-
Walleye pollock	TRACE	-	-	-	-	-
Skates	-	-	-	-	-	-
Spiny dogfish	-	-	-	-	-	-
Spotted ratfish	-	-	-	-	-	-
Shrimp (other)	-	-	-	-	-	-
Squid	TRACE	-	-	-	-	-
TOTAL CATCH (KG.)	2268		0		2495	
REMARKS	USABLE		UNUSABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	31		32		33	
DATE (1995)	SEP 17		SEP 17		SEP 17	
DURATION (H)	0.32		0.32		0.32	
DIRECTION (DEG. TRUE)	270		70		120	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	8:18	8:37	9:54	10:13	11:00	11:19
LAT. (DEG,MIN)	51 11.4	51 11.4	51 18.8	51 19.1	51 18.8	51 18.5
LONG. (DEG,MIN)	129 21.5	129 22.7	129 20.2	129 18.9	129 18.4	129 17.3
DEPTH (FA)	160	159	140	136	144	150
SPECIES CATCH(KG.)						
Pacific ocean perch	794		156		393	
Bocaccio	-		-		-	
Canary rockfish	-		-		2	
Chilipepper	-		-		-	
Darkblotched rockfish	-		1		2	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		TRACE		-	
Redbanded rockfish	26		4		16	
Redstripe rockfish	-		1		-	
Rosethorn rockfish	4		TRACE		-	
Rougheyeye rockfish	TRACE		-		5	
Sharpchin rockfish	-		-		TRACE	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	45		1		23	
Silvergray rockfish	-		-		5	
Splitnose rockfish	-		11		73	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		TRACE		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	8		-		30	
Dover sole	4		7		96	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	TRACE		-		25	
Slender sole	-		-		TRACE	
Eelpouts	-		-		2	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		-	
Pacific hake	8		3		5	
Pacific herring	-		-		-	
Sablefish	8		1		-	
Sculpins	-		-		-	
Walleye pollock	-		-		-	
Skates	4		-		-	
Spiny dogfish	-		-		5	
Spotted ratfish	8		-		-	
Shrimp (other)	-		-		-	
Squid	-		TRACE		-	
TOTAL CATCH (KG.)	907		185		680	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	34		35		36	
DATE (1995)	SEP 17		SEP 17		SEP 18	
DURATION (H)	0.32		0.32		0.32	
DIRECTION (DEG. TRUE)	295		270		50	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	13:16	13:35	14:54	15:13	7:52	8:11
LONG. (DEG,MIN)	51 12.6	51 13.1	51 09.1	51 09.1	51 06.6	51 07
DEPTH (FA)	129 30	129 31	129 26.3	129 27.5	129 33.8	129 32.7
	160	160	155	154	154	151
SPECIES CATCH(KG.)						
Pacific ocean perch	156		1109		1585	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		23	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		TRACE		-	
Redbanded rockfish	6		12		TRACE	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	TRACE		TRACE		TRACE	
Roughey rockfish	TRACE		-		-	
Sharpchin rockfish	-		-		106	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	22		54		53	
Silvergray rockfish	-		-		-	
Splitnose rockfish	1		-		TRACE	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	2		12		478	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	12		12		15	
Dover sole	86		TRACE		TRACE	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	9		8		TRACE	
Slender sole	-		-		-	
Eelpouts	TRACE		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	-		-		-	
Pacific hake	35		17		8	
Pacific herring	-		-		-	
Sablefish	7		-		-	
Sculpins	-		-		-	
Walleye pollock	-		-		-	
Skates	-		-		-	
Spiny dogfish	-		-		-	
Spotted ratfish	-		-		-	
Shrimp (other)	-		-		-	
Squid	TRACE		-		-	
TOTAL CATCH (KG.)	336		1225		2268	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	37		38		39	
DATE (1995)	SEP 18		SEP 18		SEP 19	
DURATION (H)	0.30		0.28		0.28	
DIRECTION (DEG. TRUE)	255		19		275	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	10:42	11:00	13:50	14:07	8:02	8:19
LAT. (DEG,MIN)	51 07	51 06.9	50 59.4	51 00.1	51 21.9	51 22
LONG. (DEG,MIN)	129 22.7	129 23.9	129 13.5	129 13.1	129 39.7	129 41
DEPTH (FA)	138	141	81	82	105	108
SPECIES CATCH(KG.)						
Pacific ocean perch	901		10			1
Bocaccio	-		9			3
Canary rockfish	-		-			5
Chilipepper	-		TRACE			-
Darkblotched rockfish	-		-			-
Greenstriped rockfish	TRACE		7			3
Harlequin rockfish	-		-			-
Redbanded rockfish	9		3			15
Redstripe rockfish	5		6			16
Rosethorn rockfish	18		-			2
Rougheyeye rockfish	-		-			-
Sharpchin rockfish	184		-			221
Shortbelly rockfish	-		-			-
Shortraker rockfish	-		-			-
Shortspine thornyhead	69		3			-
Silvergray rockfish	9		30			7
Splitnose rockfish	-		-			-
Widow rockfish	-		-			-
Yelloweye rockfish	-		-			11
Yellowmouth rockfish	138		-			15
Yellowtail rockfish	-		15			-
Arrowtooth flounder	5		6			2
Dover sole	9		-			-
English sole	-		-			-
Flathead sole	-		-			-
Pacific halibut	-		-			-
Petrable sole	-		-			-
Rex sole	5		9			2
Slender sole	-		-			-
Eelpouts	-		-			-
Eulachon	-		-			-
Lingcod	-		-			-
Pacific cod	-		5			-
Pacific hake	9		9			-
Pacific herring	-		-			-
Sablefish	-		1			-
Sculpins	-		-			-
Walleye pollock	-		-			-
Skates	-		-			-
Spiny dogfish	-		3			-
Spotted ratfish	TRACE		-			-
Shrimp (other)	-		-			-
Squid	TRACE		-			-
TOTAL CATCH (KG.)	1361		116			303
REMARKS	USABLE		USABLE			USABLE

Appendix Table 3 continued.

FROSTI

HAUL NO.	40		41		42	
DATE (1995)	SEP 19		SEP 19		SEP 19	
DURATION (H)	0.30		0.32		0.30	
DIRECTION (DEG. TRUE)	115		303		60	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	51 17.8	51 17.5	51 09.3	51 09.6	51 07.1	51 07.4
LONG. (DEG,MIN)	129 39.6	129 38.6	129 41.9	129 43	129 32.6	129 31.5
DEPTH (FA)	125	127	152	152	148	151
SPECIES CATCH(KG.)						
Pacific ocean perch	432		2084		652	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		213		5	
Greenstriped rockfish	TRACE		-		-	
Harlequin rockfish	-		TRACE		-	
Redbanded rockfish	6		-		TRACE	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	9		14		8	
Rougheyeye rockfish	-		-		-	
Sharpchin rockfish	269		142		TRACE	
Shortbelly rockfish	-		-		-	
Shorttraker rockfish	-		-		-	
Shortspine thornyhead	21		57		43	
Silvergray rockfish	-		-		-	
Splitnose rockfish	-		14		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	48		1474		27	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	TRACE		43		5	
Dover sole	-		14		TRACE	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	9		-		TRACE	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Lingcod	-		-		16	
Pacific cod	-		-		3	
Pacific hake	12		14		-	
Pacific herring	-		-		-	
Sablefish	9		14		11	
Sculpins	-		-		-	
Walleye pollock	TRACE		-		-	
Skates	-		-		-	
Spiny dogfish	-		-		TRACE	
Spotted ratfish	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	816		4082		771	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	43		44		45	
DATE (1995)	SEP 19		SEP 20		SEP 20	
DURATION (H)	0.30		0.28		0.28	
DIRECTION (DEG. TRUE)	270		270		280	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG, MIN)	50 59.9	50 60	51 16	51 16.2	51 18.1	51 18.4
LONG. (DEG, MIN)	129 29.3	129 30.4	128 47.4	128 48.6	128 45.7	128 46.9
DEPTH (FA)	127	131	109	110	105	107
SPECIES CATCH(KG.)						
Pacific ocean perch	219		435		327	
Bocaccio	-		-		-	
Canary rockfish	4		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	13		TRACE		TRACE	
Harlequin rockfish	TRACE		-		-	
Redbanded rockfish	18		6		16	
Redstripe rockfish	-		26		134	
Rosethorn rockfish	1		3		3	
Rougheye rockfish	-		-		-	
Sharpchin rockfish	109		216		62	
Shortbelly rockfish	-		-		3	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	5		6		-	
Silvergray rockfish	-		6		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	1		23		309	
Yellowtail rockfish	1		20		25	
Arrowtooth flounder	6		43		81	
Dover sole	11		-		-	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrале sole	-		-		-	
Rex sole	4		3		16	
Slender sole	-		-		-	
Eelpouts	3		-		-	
Eulachon	-		-		-	
Lingcod	-		-		-	
Pacific cod	4		-		TRACE	
Pacific hake	3		6		-	
Pacific herring	-		-		-	
Sablefish	16		23		22	
Sculpins	-		-		-	
Walleye pollock	-		-		-	
Skates	-		-		-	
Spiny dogfish	1		-		-	
Spotted ratfish	-		TRACE		TRACE	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	419		816		998	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	46		47		48	
DATE (1995)	SEP 20		SEP 20		SEP 20	
DURATION (H)	0.28		0.30		0.30	
DIRECTION (DEG. TRUE)	270		245		265	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	12:20	12:37	13:53	14:11	15:43	16:01
LAT. (DEG,MIN)	51 19.1	51 19	51 19.8	51 19.3	51 26.7	51 26.7
LONG. (DEG,MIN)	128 42.7	128 43.9	128 35.3	128 36.5	128 35.4	128 36.6
DEPTH (FA)	105	107	100	101	115	114
SPECIES CATCH(KG.)						
Pacific ocean perch	778		641		378	
Bocaccio	-		79		-	
Canary rockfish	4		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		TRACE	
Greenstriped rockfish	TRACE		59		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	-		TRACE		40	
Redstripe rockfish	35		10		-	
Rosethorn rockfish	9		-		-	
Rougheye rockfish	-		-		24	
Sharpchin rockfish	26		TRACE		TRACE	
Shorthelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	65		TRACE		43	
Silvergray rockfish	22		49		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	186		2179		61	
Yellowtail rockfish	30		79		-	
Arrowtooth flounder	39		-		69	
Dover sole	-		-		26	
English sole	-		-		-	
Flathead sole	-		-		-	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	9		TRACE		2	
Slender sole	-		-		-	
Eelpouts	-		-		TRACE	
Eulachon	-		-		TRACE	
Lingcod	-		-		-	
Pacific cod	-		20		4	
Pacific hake	134		20		-	
Pacific herring	-		-		-	
Sablefish	22		30		26	
Sculpins	TRACE		-		TRACE	
Walleye pollock	-		TRACE		-	
Skates	-		-		-	
Spiny dogfish	-		10		TRACE	
Spotted ratfish	4		TRACE		6	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	1361		3175		680	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	49		50		51	
DATE (1995)	SEP 21		SEP 21		SEP 21	
DURATION (H)	0.30		0.30		0.30	
DIRECTION (DEG. TRUE)	90		267		274	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	7:52	8:10	8:55	9:13	9:54	10:12
LAT. (DEG,MIN)	51 24.4	51 24.4	51 24.3	51 24.2	51 25.4	51 25.4
LONG. (DEG,MIN)	128 51.1	128 49.9	128 47.2	128 48.4	128 47.5	128 48.6
DEPTH (FA)	115	115	119	119	113	110
SPECIES CATCH(KG.)						
Pacific ocean perch	127		103		68	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	1		TRACE		1	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	13		16		4	
Redstripe rockfish	TRACE		-		-	
Rosethorn rockfish	-		-		-	
Rougheyeye rockfish	16		2		-	
Sharpchin rockfish	-		-		10	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	12		5		-	
Silvergray rockfish	-		-		112	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	1		1		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	28		17		34	
Dover sole	19		3		7	
English sole	-		-		-	
Flathead sole	5		TRACE		TRACE	
Pacific halibut	3		-		-	
Petrable sole	-		-		-	
Rex sole	11		12		6	
Slender sole	-		-		-	
Eelpouts	-		-		TRACE	
Eulachon	TRACE		TRACE		TRACE	
Lingcod	-		-		-	
Pacific cod	7		8		-	
Pacific hake	-		-		1	
Pacific herring	-		-		-	
Sablefish	2		9		6	
Sculpins	-		-		-	
Walleye pollock	-		1		-	
Skates	-		-		-	
Spiny dogfish	2		-		1	
Spotted ratfish	-		-		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	247		177		250	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	52		53		54	
DATE (1995)	SEP 21		SEP 21		SEP 21	
DURATION (H)	0.30		0.30		0.30	
DIRECTION (DEG. TRUE)	68		80		78	
TIME (PDT)	START	STOP	START	STOP	START	STOP
LAT. (DEG,MIN)	11:16	11:34	12:10	12:28	13:24	13:42
LONG. (DEG,MIN)	51 25	51 25.2	51 26.4	51 26.5	51 28.2	51 28.5
DEPTH (FA)	128 38.9	128 37.6	128 38.7	128 37.6	128 36.7	128 35.5
	120	118	118	116	110	111
SPECIES CATCH(KG.)						
Pacific ocean perch	217		153		110	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	TRACE		12		-	
Greenstriped rockfish	-		-		-	
Harlequin rockfish	-		-		-	
Redbanded rockfish	37		62		26	
Redstripe rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	10		17		11	
Sharpchin rockfish	-		-		-	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	18		12		13	
Silvergray rockfish	7		-		-	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		-		-	
Yellowtail rockfish	-		-		-	
Arrowtooth flounder	16		28		54	
Dover sole	10		12		17	
English sole	-		-		-	
Flathead sole	1		1		-	
Pacific halibut	-		10		13	
Petrale sole	-		-		-	
Rex sole	6		4		6	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	1		TRACE		1	
Lingcod	-		-		-	
Pacific cod	-		7		4	
Pacific hake	1		-		-	
Pacific herring	-		-		-	
Sablefish	1		7		12	
Sculpins	-		-		-	
Walleye pollock	-		1		-	
Skates	4		-		-	
Spiny dogfish	3		2		9	
Spotted ratfish	1		-		1	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	333		328		277	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO.	55		56		57	
DATE (1995)	SEP 22		SEP 22		SEP 22	
DURATION (H)	0.27		0.28		0.28	
DIRECTION (DEG. TRUE)	200		150		310	
	START	STOP	START	STOP	START	STOP
TIME (PDT)	7:18	7:34	9:57	10:14	11:06	11:23
LAT. (DEG,MIN)	51 27.6	51 27	51 10.1	51 09.4	51 07.1	51 07.9
LONG. (DEG,MIN)	128 21.9	128 22.6	128 22.1	128 21.7	128 28.5	128 29
DEPTH (FA)	90	89	102	102	91	91
SPECIES CATCH(KG.)						
Pacific ocean perch	4		269		145	
Bocaccio	4		-		-	
Canary rockfish	-		-		-	
Chilipepper	-		-		-	
Darkblotched rockfish	-		-		1	
Greenstriped rockfish	-		-		TRACE	
Harlequin rockfish	-		-		-	
Redbanded rockfish	58		14		-	
Redstripe rockfish	-		2		21	
Rosethorn rockfish	-		-		-	
Rougheye rockfish	-		-		-	
Sharpchin rockfish	-		2		1	
Shortbelly rockfish	-		-		-	
Shortraker rockfish	-		-		-	
Shortspine thornyhead	1		9		1	
Silvergray rockfish	5		-		7	
Splitnose rockfish	-		-		-	
Widow rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowmouth rockfish	-		-		18	
Yellowtail rockfish	30		10		12	
Arrowtooth flounder	61		47		19	
Dover sole	19		57		1	
English sole	-		-		-	
Flathead sole	10		TRACE		9	
Pacific halibut	-		-		-	
Petrable sole	-		-		-	
Rex sole	4		30		13	
Slender sole	-		-		-	
Eelpouts	-		-		-	
Eulachon	3		TRACE		-	
Lingcod	-		-		-	
Pacific cod	-		2		TRACE	
Pacific hake	30		4		-	
Pacific herring	-		-		-	
Sablefish	3		11		5	
Sculpins	-		-		-	
Walleye pollock	8		1		1	
Skates	5		-		-	
Spiny dogfish	20		2		10	
Spotted ratfish	-		4		-	
Shrimp (other)	-		-		-	
Squid	-		-		-	
TOTAL CATCH (KG.)	265		464		264	
REMARKS	USABLE		USABLE		USABLE	

Appendix Table 3 continued.

FROSTI

HAUL NO. 58
 DATE (1995) SEP 22
 DURATION (H) 0.28
 DIRECTION (DEG. TRUE) 162

	START	STOP
TIME (PDT)	12:01	12:18
LAT. (DEG,MIN)	51 06.9	51 06.1
LONG. (DEG,MIN)	128 30.6	128 30.3
DEPTH (FA)	83	83

SPECIES CATCH(KG.)

Pacific ocean perch	13
Bocaccio	-
Canary rockfish	-
Chilipepper	-
Darkblotched rockfish	-
Greenstriped rockfish	1
Harlequin rockfish	-
Redbanded rockfish	-
Redstripe rockfish	2
Rosethorn rockfish	-
Rougheye rockfish	-
Sharpchin rockfish	TRACE
Shortbelly rockfish	-
Shortraker rockfish	-
Shortspine thornyhead	-
Silvergray rockfish	8
Splitnose rockfish	-
Widow rockfish	-
Yelloweye rockfish	-
Yellowmouth rockfish	1
Yellowtail rockfish	16
Arrowtooth flounder	30
Dover sole	-
English sole	1
Flathead sole	10
Pacific halibut	-
Petrable sole	-
Rex sole	11
Slender sole	-
Eelpouts	-
Eulachon	-
Lingcod	-
Pacific cod	TRACE
Pacific hake	-
Pacific herring	-
Sablefish	1
Sculpins	-
Walleye pollock	-
Skates	-
Spiny dogfish	3
Spotted ratfish	-
Shrimp (other)	-
Squid	-
TOTAL CATCH (KG.)	97
REMARKS	USABLE

Appendix Table 4. Number of lengths (cm) by species, vessel, haul and sex for rockfish (*Sebastes sp.*) and shortspine thornyhead (*Sebastolobus alascanus*) collected during the rockfish survey in Goose Island Gully, September 11 to 22, 1995.

Species : *Sebastes aleutianus*

Vessel : **OCEAN SELECTOR**

Fork Length cm	Haul no.			
	46		47	
	M	F	M	F
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-
13	-	-	-	-
14	-	-	-	-
15	-	-	-	-
16	-	-	-	-
17	-	1	-	-
18	-	-	-	-
19	-	-	-	-
20	-	1	-	-
21	-	1	-	1
22	1	2	-	-
23	-	-	-	1
24	-	-	1	-
25	-	-	-	-
26	1	-	2	-
27	-	-	-	1
28	-	-	-	-
29	1	-	-	-
30	-	1	1	-
31	-	1	1	2
32	-	-	-	-
33	1	-	-	-
34	2	2	2	2
35	3	-	3	1
36	-	1	1	-
37	2	2	-	-
38	1	1	-	1
39	1	-	-	1
40	1	-	1	-
41	-	-	-	1
42	-	-	-	1
43	-	-	-	2
44	-	-	1	-
45	2	-	-	-
46	-	-	-	1
47	-	-	-	-
48	-	-	1	-
49	-	-	-	1
50	-	-	-	-
51	-	1	-	-
52	-	-	-	1
53	-	-	-	-
54	1	-	1	-
55	-	-	-	-
56	-	-	-	-
57	-	-	-	-
58	-	-	-	-
59	-	-	-	-
60	-	-	-	-
61	-	-	-	-
62	-	-	-	-
63	-	-	-	-
64	-	-	-	-
65	-	-	-	-
Total	17	14	14	17

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	1		2			3		4		5		7		9		10		11		
	M	F	M	F	U	M	F	M	F	M	F	M	F	M	F	M	F	M	F	U
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-
23	-	-	-	2	-	-	1	1	-	1	-	-	4	3	-	3	3	2	-	-
24	1	-	-	2	-	1	-	1	-	1	-	1	2	1	1	2	2	1	-	-
25	-	-	-	-	-	-	4	1	4	1	1	-	2	-	5	2	2	2	-	-
26	1	-	-	1	1	-	-	3	-	1	1	-	-	-	1	1	2	-	1	-
27	-	-	-	1	-	-	-	-	-	2	1	-	-	-	1	-	-	-	1	-
28	-	-	-	-	-	1	-	1	-	1	1	-	1	-	2	1	2	-	-	-
29	-	1	-	1	-	-	-	2	-	-	-	-	1	1	-	-	-	1	-	-
30	-	-	-	1	-	-	1	-	-	3	-	-	-	1	-	-	1	-	1	-
31	-	-	-	1	-	-	-	3	-	2	-	-	1	-	-	-	-	1	-	-
32	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
33	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	-	4	1	1
35	3	-	1	-	-	1	-	1	-	1	-	-	-	-	-	4	2	1	1	-
36	1	-	2	-	-	1	-	3	1	-	-	1	-	-	-	1	1	6	7	-
37	1	-	2	-	-	1	1	2	2	1	1	2	1	3	-	4	1	6	3	-
38	3	1	3	2	-	3	-	6	2	5	3	1	6	5	-	7	3	12	6	-
39	5	2	8	1	-	8	2	3	-	5	-	-	1	12	-	8	3	15	10	-
40	4	1	6	2	-	5	3	3	3	4	4	-	1	15	2	6	5	14	6	-
41	5	8	-	8	-	8	-	1	1	5	4	1	-	12	7	7	6	16	5	-
42	2	3	3	7	-	3	3	3	5	7	9	2	4	9	9	10	6	13	5	-
43	1	7	3	12	-	5	4	1	8	2	10	3	-	5	7	4	8	6	9	-
44	1	5	-	9	-	1	11	1	8	3	14	2	4	9	6	-	13	2	10	-
45	-	2	-	11	-	-	11	1	6	-	18	4	2	1	14	1	4	1	12	-
46	-	6	-	13	-	-	3	-	3	-	16	1	6	1	14	-	1	-	9	-
47	-	8	-	11	-	-	3	-	1	-	13	-	7	-	18	-	2	-	4	-
48	-	1	-	2	-	-	4	-	2	-	10	-	5	-	10	-	-	-	-	-
49	-	4	-	2	-	-	1	-	1	-	4	-	2	-	6	-	-	-	-	-
50	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	29	51	28	89	1	38	50	41	45	47	113	18	41	85	100	63	66	107	98	1

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	12		13		15		16		17		18		19		20		21		22	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-
22	-	1	-	-	-	1	-	-	-	3	-	-	-	-	-	-	2	-	-	-
23	4	4	-	1	-	1	-	-	2	4	-	-	-	-	2	1	2	-	-	-
24	10	11	1	-	1	1	-	-	-	3	-	-	-	-	-	-	-	2	-	-
25	10	8	-	-	-	-	-	-	1	1	-	-	-	-	1	1	2	-	-	-
26	6	11	-	2	1	-	1	1	-	2	-	1	-	-	-	-	-	1	-	-
27	9	5	1	-	-	2	1	-	-	3	-	1	-	1	-	-	-	-	-	-
28	7	6	1	1	-	1	-	-	2	2	-	1	1	-	-	-	1	-	-	-
29	16	12	2	3	-	-	-	2	1	6	-	-	-	-	1	-	-	-	-	-
30	10	13	5	3	-	-	-	-	3	2	-	-	1	-	-	-	1	1	-	-
31	11	13	2	2	-	-	-	1	3	1	-	-	-	-	-	-	-	-	-	-
32	4	7	-	1	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-
33	4	5	-	-	-	-	-	-	7	-	2	1	1	-	-	-	-	-	1	-
34	3	2	1	1	-	-	2	-	1	-	-	-	1	1	-	-	-	-	-	-
35	4	2	-	-	1	-	7	2	16	1	2	-	1	1	-	1	-	-	-	1
36	2	3	-	1	5	2	14	-	19	9	12	-	2	-	5	-	-	-	-	-
37	4	2	1	1	5	2	9	4	24	15	12	5	7	4	5	3	1	-	4	-
38	2	3	1	-	9	3	20	12	21	16	16	6	6	4	8	1	1	2	3	1
39	2	-	1	-	17	10	23	17	16	18	20	10	12	1	12	4	2	1	8	1
40	2	1	1	1	16	2	22	26	19	16	17	12	15	16	9	7	-	1	6	9
41	4	4	-	-	7	10	9	32	6	26	18	12	20	7	8	9	-	6	7	8
42	2	1	1	1	4	26	7	31	2	25	11	24	10	18	4	17	2	12	7	14
43	-	1	-	-	1	25	1	45	2	19	8	26	5	21	1	18	4	27	3	20
44	-	3	-	-	-	22	1	27	-	16	2	29	1	13	-	21	1	44	1	26
45	-	-	1	-	-	24	-	15	-	12	1	10	-	7	-	13	-	43	-	28
46	-	2	-	-	-	11	-	3	-	6	2	2	-	3	-	8	-	23	-	17
47	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	4	-	14	-	6
48	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	2	-	3
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	116	120	19	19	67	144	118	219	147	208	123	140	82	98	56	110	19	181	40	135

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	23		24		25		26		27		28		29		30		31			
	M	F	M	F	M	F	M	F	U	M	F	M	F	M	F	M	F	U	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
23	1	1	-	-	-	-	3	-	-	-	1	-	-	1	-	-	-	-	-	-
24	-	2	-	-	-	-	-	2	-	2	-	1	-	-	-	-	-	-	-	-
25	-	-	1	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-
26	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
27	-	-	-	-	-	1	1	1	-	-	-	-	1	1	-	-	-	-	1	2
28	-	-	-	-	1	4	1	5	-	-	1	-	-	1	-	-	-	-	2	-
29	-	-	1	1	-	4	1	1	-	1	1	-	-	1	1	-	-	-	-	1
30	-	-	-	-	2	1	3	2	-	1	1	-	-	-	1	1	-	-	-	-
31	-	1	-	-	-	-	2	3	-	2	-	-	-	1	-	1	1	-	-	-
32	-	-	-	-	3	4	1	-	-	-	-	2	-	2	-	-	-	-	-	-
33	-	2	1	-	7	5	1	3	-	2	2	1	1	2	1	2	3	-	2	-
34	6	3	4	1	5	4	6	-	-	2	2	-	-	3	-	8	1	-	3	-
35	13	8	14	1	20	12	9	3	-	5	4	6	2	7	1	14	6	-	3	5
36	13	7	9	8	16	6	19	6	-	7	-	15	12	4	10	16	4	-	9	1
37	21	18	25	6	28	16	31	15	-	4	5	20	15	20	11	22	12	-	11	3
38	28	13	21	13	32	15	17	17	-	8	9	18	14	13	8	19	19	-	23	3
39	24	21	21	14	25	25	18	15	-	17	7	20	19	14	23	14	17	-	27	2
40	23	9	14	14	18	6	12	21	-	10	17	12	15	12	13	13	17	-	30	10
41	6	13	9	17	3	7	8	17	-	21	7	2	7	3	11	9	9	-	14	7
42	2	6	1	17	2	9	-	12	-	10	22	4	9	3	10	4	18	-	11	22
43	2	14	1	8	-	4	-	5	-	4	25	1	12	-	9	2	10	-	2	27
44	2	6	-	2	-	1	-	15	-	1	29	1	1	-	1	1	8	-	3	23
45	-	8	-	1	-	2	-	6	-	-	21	-	3	-	3	-	1	-	-	21
46	-	1	-	3	-	1	-	4	-	-	6	-	1	-	2	-	1	-	-	11
47	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	2
48	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	141	135	122	106	162	127	135	153	2	100	162	102	114	83	111	127	128	7	141	142

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	35		36		37		38		39		40		41		43		44		45	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	-	-	1	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	-	
23	-	2	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	2	2	
24	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
25	-	-	1	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
27	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	2	1	1	
28	-	-	1	-	1	-	-	-	-	-	-	-	-	1	3	1	-	1	-	
29	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	6	1	2	
30	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	2	1	
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	1	
32	-	-	-	-	-	1	-	-	-	-	-	-	-	1	3	-	1	-	2	
33	-	1	-	1	4	4	1	1	2	-	2	-	-	3	1	1	1	1	-	
34	2	-	1	2	14	3	1	-	3	-	3	1	-	1	2	1	3	-	3	
35	3	2	6	8	19	6	8	2	11	1	6	-	3	-	2	1	7	4	2	
36	10	1	21	7	28	6	19	5	11	4	17	4	4	-	9	6	14	3	1	
37	11	3	17	13	26	16	23	2	38	7	15	3	4	6	9	9	6	7	6	
38	22	2	25	20	26	12	15	5	30	8	18	2	4	2	14	8	11	12	9	
39	26	6	22	7	21	8	15	9	23	13	11	6	13	1	13	11	8	9	9	
40	30	6	28	9	16	13	18	10	15	16	25	13	14	4	9	18	4	14	8	
41	24	9	20	8	10	13	15	6	9	18	20	10	15	6	8	15	4	11	6	
42	11	12	7	18	-	12	9	11	2	16	9	7	19	3	8	10	4	7	7	
43	12	5	6	11	1	15	-	13	-	16	3	6	15	3	2	10	-	6	5	
44	2	8	-	8	-	9	-	7	-	7	3	2	7	6	-	9	-	10	3	
45	-	7	-	9	-	3	-	2	-	4	-	1	1	7	-	4	-	5	2	
46	-	3	-	2	-	1	-	2	-	-	-	2	-	9	-	1	-	1	2	
47	-	1	-	1	-	-	-	-	-	1	-	2	-	4	-	1	-	-	-	
48	-	-	-	1	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	
49	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	154	69	159	126	167	124	124	75	144	111	132	60	99	56	84	117	65	104	63	72

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **OCEAN SELECTOR**

Fork Length cm	Haul no.																	
	46		47		48			49		50		51			52		53	
	M	F	M	F	M	F	U	M	F	M	F	M	F	U	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
22	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-
23	-	-	-	-	-	4	-	1	3	1	1	1	3	-	-	1	-	-
24	-	-	1	1	-	3	1	1	-	1	3	4	2	-	-	1	-	-
25	-	-	-	-	2	-	-	2	1	-	-	4	2	-	2	2	-	-
26	1	1	-	-	1	1	-	2	-	2	2	1	2	-	-	-	-	-
27	-	-	1	3	1	-	-	-	2	1	3	3	2	-	-	-	-	-
28	1	4	1	7	5	5	-	8	7	-	1	2	1	-	1	-	-	-
29	4	1	-	6	5	4	-	10	6	-	1	3	2	-	2	1	1	-
30	1	1	3	6	4	3	-	3	8	1	-	1	1	-	-	-	-	-
31	-	3	2	6	1	-	-	5	4	2	3	-	-	-	-	1	-	-
32	2	3	3	3	2	2	-	4	5	2	-	-	1	-	1	-	1	-
33	3	5	4	12	1	1	-	6	9	-	1	-	-	-	1	-	-	2
34	4	9	9	13	1	1	-	9	7	-	2	3	2	-	-	-	1	2
35	7	10	16	7	4	3	-	5	13	2	1	2	5	-	1	1	5	1
36	13	15	17	16	7	4	-	15	14	3	7	1	5	-	3	4	2	2
37	12	13	21	15	3	3	-	20	15	3	3	8	6	-	6	4	9	6
38	16	11	19	17	4	2	-	14	14	8	6	8	3	-	11	4	7	8
39	9	11	12	17	7	7	-	14	11	8	3	5	1	-	4	6	9	9
40	6	8	2	15	2	8	-	12	8	5	6	8	3	-	10	8	13	8
41	2	5	3	9	-	8	-	3	6	4	11	12	6	-	9	8	17	9
42	1	8	2	4	-	10	-	3	9	8	15	7	4	-	10	17	5	17
43	-	5	1	6	1	5	-	2	7	3	9	1	10	-	3	16	3	13
44	-	7	-	7	-	7	-	5	4	2	13	1	8	-	1	24	1	9
45	-	5	-	1	-	1	-	1	3	-	12	1	9	-	1	20	-	16
46	-	1	-	-	-	2	-	1	1	-	6	-	4	-	-	12	-	12
47	-	-	-	-	-	1	-	-	1	-	6	-	3	-	-	12	-	4
48	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	4	-	2
49	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	3	-	-
50	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	82	126	117	179	52	86	1	146	158	57	118	77	87	1	65	151	74	120

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **OCEAN SELECTOR**

Fork Length cm	Haul no.									
	54			55			56		57	
	M	F	U	M	F	U	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	2	1	2	-	-	3	-	-	1	-
13	1	2	6	-	-	4	2	-	1	-
14	1	2	-	-	-	2	1	1	-	2
15	-	-	1	-	-	-	-	-	-	-
16	-	-	1	-	-	-	-	-	-	-
17	-	1	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	1	1	-	-
19	-	-	-	-	-	-	1	1	-	-
20	1	1	-	-	-	1	-	-	-	-
21	-	-	-	-	-	6	1	2	-	-
22	-	2	1	-	-	2	1	8	1	-
23	2	1	-	-	-	1	14	16	2	-
24	1	-	-	-	5	3	25	36	3	1
25	-	1	-	1	-	3	35	44	4	3
26	-	-	-	-	-	-	27	37	5	-
27	-	-	-	-	-	-	22	22	3	1
28	-	-	-	1	-	-	13	20	1	-
29	-	-	-	-	-	-	18	19	1	-
30	-	-	-	-	-	-	25	20	-	-
31	-	-	-	-	1	-	18	18	-	4
32	-	-	-	-	-	-	4	8	-	-
33	-	-	-	-	-	-	3	4	-	1
34	-	-	-	1	-	-	4	5	-	-
35	-	1	-	1	-	-	6	2	-	-
36	-	-	-	1	-	-	4	3	-	-
37	-	1	-	-	-	-	1	1	-	-
38	-	-	-	2	2	-	2	1	-	-
39	-	-	-	3	1	-	1	3	-	-
40	-	-	-	3	5	-	3	3	-	-
41	2	-	-	1	5	-	2	7	1	-
42	-	-	-	-	6	-	1	2	-	-
43	-	-	-	-	7	-	3	3	-	-
44	-	-	-	-	8	-	-	1	-	-
45	-	-	-	-	13	-	-	4	-	-
46	-	1	-	-	6	-	1	5	-	-
47	-	-	-	-	10	-	-	4	-	-
48	-	-	-	-	2	-	-	2	-	-
49	-	-	-	-	2	-	-	1	-	-
50	-	-	-	-	-	-	-	1	-	-
51	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-
Total	10	14	11	14	73	25	239	305	23	12

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **FROSTI**

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

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **FROSTI**

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

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **FROSTI**

Fork Length cm	Haul no.																			
	23		24		25		26		27		28		31		32		33		34	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
23	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
29	1	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
31	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
33	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1	4	1
34	3	-	1	-	3	-	3	-	-	-	-	-	1	-	2	1	-	2	6	-
35	1	2	1	-	3	1	2	3	6	-	-	-	5	-	3	-	-	-	9	3
36	6	1	5	-	14	4	7	2	7	1	1	-	5	3	4	2	-	2	12	7
37	15	6	5	1	6	5	11	2	9	3	3	1	6	10	1	3	3	6	14	12
38	10	3	3	-	7	5	10	5	9	4	4	-	7	9	4	4	4	9	18	5
39	6	10	5	2	11	11	12	4	6	11	5	1	9	6	7	5	2	5	21	12
40	3	10	5	2	5	5	8	10	5	3	7	1	13	12	1	4	2	9	11	10
41	6	10	7	-	5	3	5	3	6	13	4	7	6	7	4	5	-	5	6	7
42	1	5	1	2	-	5	5	5	2	7	5	6	2	10	1	5	1	4	1	10
43	1	8	2	3	-	7	2	3	2	12	-	10	1	8	-	5	2	2	1	5
44	-	2	-	2	-	3	2	5	-	7	-	10	-	10	-	2	1	3	-	7
45	-	1	-	5	-	4	-	1	-	5	1	12	-	4	-	4	9	-	1	-
46	-	3	-	8	-	1	-	2	-	5	-	3	-	-	-	1	6	1	-	-
47	-	1	-	9	-	-	-	-	-	-	1	5	-	-	-	-	10	1	-	1
48	-	-	-	12	-	-	-	-	-	-	-	1	-	-	-	-	16	-	-	-
49	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-
50	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-
51	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
52	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	56	65	37	68	54	54	70	45	52	71	31	57	55	80	27	41	79	52	105	81

Appendix Table 4 continued.

Species : *Sebastes alutus*
 Vessel : **FROSTI**

Fork Length cm	Haul no.																			
	35		36		37		40		41		42		43		44		45		46	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	1
34	-	-	-	-	-	1	1	-	3	-	1	-	-	-	1	-	-	-	-	1
35	3	3	3	-	1	1	1	1	4	-	2	-	2	-	1	-	1	-	2	4
36	5	5	8	-	7	4	6	1	6	-	15	-	1	1	1	1	-	-	4	4
37	3	8	13	2	6	3	5	2	10	4	15	7	4	-	2	-	3	-	6	2
38	5	16	20	6	6	2	2	2	4	7	7	5	5	1	7	1	2	-	6	4
39	5	15	11	2	15	5	3	4	9	10	13	11	6	1	10	3	5	2	7	3
40	10	15	11	9	12	7	6	6	8	5	9	8	4	1	9	-	2	4	4	3
41	8	16	7	9	11	3	8	6	6	4	11	2	9	4	13	3	5	4	11	13
42	3	17	3	6	10	3	6	12	5	20	4	2	12	5	7	6	3	6	6	11
43	1	20	3	10	1	4	4	10	-	9	2	3	9	3	3	4	3	10	5	12
44	-	11	-	15	-	5	-	8	1	11	-	3	4	8	3	8	-	14	1	4
45	-	6	-	1	-	1	-	5	-	6	-	-	1	6	-	7	-	10	1	3
46	-	3	-	3	-	2	-	2	-	7	-	2	-	16	-	4	-	9	-	1
47	-	2	-	-	-	-	-	-	-	-	-	-	-	8	-	1	-	3	-	1
48	-	-	-	1	-	-	-	-	-	-	-	-	-	7	-	3	-	1	-	1
49	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	2	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	46	137	79	64	69	41	42	60	56	83	80	43	57	63	56	44	25	72	55	66

Appendix Table 4 continued.

Species : *Sebastes alutus*Vessel : **FROSTI**

Fork Length cm	Haul no.																				
	47		48		49		50		51		52		53		54		56		57		U
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-
23	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	6	-
24	4	-	2	-	1	-	-	-	1	-	-	-	-	-	1	1	-	-	16	10	-
25	1	1	1	-	2	3	-	2	-	-	-	-	-	-	1	-	1	19	22	-	-
26	3	2	2	-	2	3	1	-	-	1	1	-	1	-	-	2	1	-	12	7	-
27	1	-	-	-	2	3	1	3	2	-	-	-	1	-	-	3	-	-	7	8	-
28	2	3	3	2	2	4	1	2	1	2	-	1	-	-	2	1	-	11	5	-	-
29	3	-	2	-	2	1	2	4	3	1	1	-	3	1	3	4	1	-	6	11	-
30	-	2	2	-	4	-	-	2	1	-	-	-	2	-	1	3	1	-	6	12	-
31	1	1	6	1	3	1	1	1	-	1	-	1	-	1	-	1	1	-	6	2	-
32	-	-	-	1	3	2	-	1	-	1	-	1	1	1	1	1	-	-	7	3	-
33	-	-	2	1	3	-	-	-	1	-	-	1	2	2	1	-	-	-	3	3	-
34	2	1	2	2	4	2	-	-	-	-	5	3	2	-	1	2	-	-	1	2	-
35	2	-	6	4	8	-	5	1	2	1	12	2	2	5	6	-	1	-	-	1	-
36	5	4	5	5	6	7	7	1	2	1	3	4	9	4	6	3	-	1	1	5	-
37	5	2	10	4	8	9	6	1	4	3	10	5	12	7	5	1	-	-	2	2	-
38	7	2	4	8	8	6	5	4	3	7	10	5	8	7	7	7	3	6	-	1	-
39	4	3	10	8	3	9	3	14	3	5	3	14	8	6	3	8	3	8	2	-	-
40	1	2	3	10	3	10	2	11	-	4	6	10	3	7	5	7	4	5	-	-	-
41	1	-	-	6	1	12	1	3	-	5	1	5	1	14	1	11	-	7	-	3	-
42	5	4	1	4	-	10	-	5	1	4	-	9	-	7	1	14	-	7	-	-	-
43	-	2	-	5	-	6	-	3	-	7	-	7	-	4	2	5	4	11	1	-	-
44	3	3	-	3	-	5	-	3	-	5	-	3	-	3	-	5	1	9	-	1	-
45	-	1	-	2	-	6	-	2	-	3	-	2	-	2	-	2	-	15	-	1	-
46	-	1	-	1	-	2	-	-	-	-	-	2	-	2	-	2	1	8	-	-	-
47	-	3	-	2	-	-	-	-	-	-	-	1	-	-	-	1	-	5	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	53	37	63	69	65	101	35	60	24	50	53	75	56	72	46	86	22	89	116	108	1

Appendix Table 4 continued.

Species : *Sebastes babcocki*
 Vessel : **OCEAN SELECTOR**

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

Appendix Table 4 continued.

Species : *Sebastes brevispinis*

Vessel : OCEAN SELECTOR

FROSTI

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

Appendix Table 4 continued.

Species : *Sebastes crameri*
 Vessel : **OCEAN SELECTOR**

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

Appendix Table 4 continued.

Species : *Sebastes diploprora*

Vessel : OCEAN SELECTOR

FROSTI

Fork Length cm	Haul no.					
	24		25		33	
	M	F	M	F	M	F
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	1	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	1	-	-	-	-
22	4	2	-	-	-	2
23	10	4	-	-	10	7
24	3	6	3	1	3	7
25	8	6	-	-	6	6
26	9	8	2	3	6	4
27	14	12	3	3	9	5
28	24	13	2	2	6	5
29	11	12	-	1	1	3
30	5	9	1	2	1	3
31	2	15	-	1	1	2
32	1	1	-	-	-	1
33	2	3	-	-	1	1
34	2	-	1	-	-	-
35	-	1	-	-	1	1
36	-	-	-	1	-	-
37	-	-	-	-	-	-
38	-	-	-	-	-	-
39	-	-	-	-	-	-
40	-	-	-	-	-	-
41	-	-	-	-	-	-
42	-	-	-	-	-	-
43	-	-	-	-	-	-
44	-	-	-	-	-	-
45	-	-	-	-	-	-
46	-	-	-	-	-	-
47	-	-	-	-	-	-
48	-	-	-	-	-	-
49	-	-	-	-	-	-
50	-	-	-	-	-	-
51	-	-	-	-	-	-
52	-	-	-	-	-	-
53	-	-	-	-	-	-
54	-	-	-	-	-	-
55	-	-	-	-	-	-
56	-	-	-	-	-	-
57	-	-	-	-	-	-
58	-	-	-	-	-	-
59	-	-	-	-	-	-
60	-	-	-	-	-	-
61	-	-	-	-	-	-
62	-	-	-	-	-	-
63	-	-	-	-	-	-
64	-	-	-	-	-	-
65	-	-	-	-	-	-
Total	96	93	12	14	45	47

Appendix Table 4 continued.

Species : *Sebastes elongatus*

Vessel : OCEAN SELECTOR

FROSTI

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

Appendix Table 4 continued.

Species : *Sebastes flavidus*Vessel : **OCEAN SELECTOR**

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

Appendix Table 4 continued.

Species : *Sebastes pinniger*

Vessel : OCEAN SELECTOR

FROSTI

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

Appendix Table 4 continued.

Species : *Sebastes proriger*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.															
	6		8		12		32		34		50		53		54	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	2	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
24	10	3	-	-	-	1	-	-	-	1	-	1	-	-	-	-
25	6	-	1	-	-	-	-	-	2	-	4	-	4	1	-	-
26	14	7	-	-	-	-	1	1	2	1	4	1	4	3	-	-
27	13	7	1	-	1	-	1	1	-	1	-	3	5	1	1	-
28	22	11	1	-	3	1	1	1	2	1	1	-	1	1	-	1
29	16	4	-	-	1	1	1	-	3	2	-	3	-	6	-	-
30	6	7	-	-	1	2	3	-	2	1	-	-	2	1	7	-
31	-	3	-	-	1	3	6	2	3	3	-	-	2	-	2	-
32	2	4	-	-	2	-	4	1	-	2	-	-	-	-	-	1
33	-	2	-	-	1	-	2	-	6	-	-	-	-	-	-	-
34	-	3	-	-	-	-	-	1	-	4	-	-	-	-	-	-
35	-	1	-	-	1	-	-	4	-	5	-	-	-	-	-	-
36	-	4	-	1	-	2	-	1	-	5	-	-	-	2	-	1
37	-	5	-	-	-	1	-	1	-	-	-	-	-	-	-	2
38	-	-	-	2	-	3	-	1	-	-	-	4	-	-	-	-
39	-	-	-	2	-	3	-	-	-	-	-	1	-	1	-	-
40	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-
41	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	92	63	3	5	11	22	19	14	14	30	11	7	21	14	16	6

Appendix Table 4 continued.

Species : *Sebastes proriger*
 Vessel : **FROSTI**

Fork Length cm	Haul no.													
	1		5		8		13		30		39		44	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	1	-
23	2	-	3	-	1	-	-	-	-	-	-	-	-	1
24	1	-	-	-	-	-	-	-	-	1	-	2	1	-
25	4	1	6	2	3	-	4	-	2	1	2	1	3	6
26	5	1	21	3	3	2	5	1	4	-	4	-	1	2
27	7	1	21	3	6	4	6	5	3	1	5	-	4	1
28	2	3	20	6	7	4	5	2	9	2	5	-	1	-
29	4	-	20	3	12	2	4	2	12	1	7	-	-	-
30	5	-	7	4	7	1	3	1	10	3	8	-	2	1
31	1	-	6	2	4	5	3	1	4	3	1	-	-	-
32	-	1	3	2	3	5	1	-	2	2	3	-	-	-
33	-	4	-	2	-	-	2	-	-	5	-	-	-	-
34	-	1	-	4	-	4	-	3	-	3	-	-	-	-
35	-	2	-	1	-	2	-	1	1	1	-	-	-	-
36	-	-	-	1	-	4	-	1	-	2	-	-	-	-
37	-	-	-	1	-	1	-	-	-	3	-	-	-	1
38	-	-	-	3	-	-	-	-	-	2	-	-	-	-
39	-	-	-	2	-	-	-	-	-	3	-	-	1	-
40	-	-	-	-	-	1	-	-	-	1	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	1
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	31	14	107	39	46	35	33	17	47	33	36	1	16	15

Appendix Table 4 continued.

Species : *Sebastes reedi*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	12		13		22		32		35		38		39		40		43		50	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	1
30	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	-	-	2	-
32	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	1	1
34	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	4	8	-	-	-	-	-	-	-	-	-	-	-	1
36	-	2	-	2	-	1	11	9	-	1	-	-	2	-	1	-	-	-	1	1
37	1	6	-	-	1	1	13	14	-	-	3	-	2	-	-	-	-	-	1	-
38	6	1	1	3	-	1	23	21	-	1	5	-	6	1	4	-	-	-	2	1
39	5	6	-	1	-	1	21	22	2	-	9	1	8	-	5	-	1	1	3	3
40	6	8	-	1	1	-	16	17	-	1	4	-	5	-	5	-	1	-	1	6
41	6	12	-	3	1	2	7	15	2	1	1	1	3	1	-	-	-	-	2	2
42	-	4	1	2	-	-	5	8	2	1	3	1	2	-	3	1	-	-	-	1
43	1	-	-	1	-	-	2	4	1	3	2	-	1	-	1	1	-	-	1	-
44	-	-	-	1	1	2	-	-	2	3	8	1	6	-	1	-	4	1	-	-
45	-	-	-	1	-	1	-	2	4	6	5	-	8	-	2	1	1	-	1	-
46	-	4	-	-	-	-	-	3	4	3	5	-	2	1	2	1	-	1	-	-
47	-	-	-	-	-	1	1	1	4	3	-	-	1	1	-	-	2	2	-	-
48	-	1	-	-	-	-	-	3	-	3	-	-	1	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	25	44	2	16	4	10	111	147	22	29	45	4	47	4	24	4	8	5	11	17

Appendix Table 4 continued.

Species : *Sebastes reedi*
 Vessel : OCEAN SELECTOR

FROSTI

Fork Length cm	Haul no.																			
	51		52		6		18		30		37		39		41		46		47	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	-
29	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-
30	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	3	2	1	-
31	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1
33	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
34	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	1	-
35	2	1	1	-	3	1	-	-	1	1	-	-	-	-	-	-	5	-	1	5
36	2	1	-	-	1	4	2	1	1	2	-	-	1	-	3	-	4	3	1	3
37	4	7	1	-	3	2	-	1	2	4	-	-	-	-	4	-	5	1	3	2
38	6	10	2	2	4	2	1	-	7	5	-	1	2	-	10	-	-	4	5	5
39	5	8	1	1	4	8	1	1	5	9	1	-	1	-	10	1	2	5	7	11
40	8	15	2	4	7	6	1	4	9	12	-	1	2	-	8	1	1	5	7	11
41	4	7	1	3	5	4	1	2	7	4	-	-	1	-	3	-	-	2	8	11
42	5	8	2	-	1	1	1	1	1	3	1	2	-	5	-	-	-	-	4	11
43	-	5	2	-	1	1	-	1	2	1	2	2	-	7	1	-	-	3	8	8
44	3	6	1	-	1	2	-	2	-	4	1	3	-	10	1	1	-	5	5	5
45	4	5	1	1	2	1	-	1	-	4	2	3	3	2	4	3	-	-	4	3
46	-	8	-	-	1	1	1	1	2	-	-	2	-	3	8	-	-	-	4	4
47	1	7	-	-	-	-	-	1	1	2	-	2	1	3	4	2	-	1	3	4
48	-	3	-	-	-	1	-	3	-	-	1	-	-	-	1	1	-	-	2	1
49	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
50	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	48	93	15	13	34	33	9	21	38	54	8	15	12	8	77	10	24	29	61	89

Appendix Table 4 continued.

Species : *Sebastes ruberrimus*
 Vessel : **OCEAN SELECTOR**

Fork Length cm	Haul no.
	8 M
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	-
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
26	-
27	-
28	-
29	1
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	-
38	-
39	-
40	-
41	-
42	-
43	-
44	-
45	-
46	1
47	-
48	-
49	-
50	-
51	-
52	-
53	-
54	-
55	-
56	-
57	-
58	-
59	-
60	-
61	-
62	-
63	-
64	-
65	-
Total	2

Appendix Table 4 continued.

Species : *Sebastes zacentrus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																				
	6		11		32'			35		38		39		40		41		44		50	
	M	F	M	F	M	F	U	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	2	2	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	1	-
18	1	2	3	1	-	-	-	-	-	-	-	-	-	-	2	1	1	1	-	-	-
19	1	1	8	4	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-	9	1
20	2	-	8	8	2	2	-	-	-	-	-	-	1	1	2	1	-	1	3	1	1
21	1	1	7	3	3	2	-	3	1	-	-	-	1	-	3	-	1	2	2	5	5
22	-	-	16	7	-	4	-	-	1	-	-	-	1	1	2	2	1	1	3	3	3
23	-	-	15	13	-	1	-	-	-	-	-	-	-	-	5	2	1	1	2	2	2
24	1	-	15	9	4	3	-	-	-	-	-	-	-	1	1	3	3	1	2	2	2
25	3	-	12	11	8	3	-	-	-	-	-	-	-	-	6	1	-	-	-	1	1
26	4	-	5	11	3	4	-	2	1	-	1	2	-	2	-	10	1	-	1	1	-
27	2	2	3	7	1	2	-	1	-	3	-	-	-	-	13	1	1	2	-	-	-
28	1	2	1	4	3	3	-	3	-	3	2	2	2	1	1	9	3	1	-	-	-
29	-	5	2	3	4	4	-	5	-	3	-	1	1	-	2	1	1	-	-	-	-
30	-	4	-	1	1	5	-	4	-	3	5	-	1	-	3	6	-	-	-	-	-
31	-	12	-	1	-	13	-	-	4	-	3	-	2	-	2	2	11	-	-	-	1
32	-	11	-	2	-	9	-	-	1	-	4	-	6	-	3	-	9	-	-	-	-
33	-	6	-	1	-	7	-	-	3	-	4	-	4	-	2	-	15	-	-	-	-
34	-	2	-	-	-	8	-	-	3	-	7	-	1	-	1	-	8	-	-	-	-
35	-	1	-	2	-	6	-	-	5	-	7	-	4	-	-	11	-	-	-	-	-
36	-	-	-	1	-	3	-	-	4	-	7	-	1	-	4	-	7	-	-	-	-
37	-	-	-	-	-	2	-	-	2	-	-	-	1	-	-	-	2	-	-	-	-
38	-	1	-	1	-	1	-	-	2	-	1	-	-	-	-	-	8	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	20	50	98	92	30	85	1	18	27	12	41	5	24	5	16	60	95	11	10	22	16

Appendix Table 4 continued.

Species : *Sebastes zacentrus*

Vessel : OCEAN SELECTOR

FROSTI

Fork Length cm	Haul no.																			
	53		1		5		13		30		36		39		40		44		51	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
16	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	5	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
18	6	7	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
19	12	13	-	-	-	2	5	-	1	1	-	-	1	-	1	-	1	-	-	-
20	14	26	-	-	6	2	7	3	1	-	-	-	1	-	-	-	-	1	-	2
21	19	27	3	-	5	2	5	1	5	1	-	-	1	-	1	-	1	-	-	-
22	28	21	3	-	4	3	6	2	7	5	2	-	-	-	-	1	3	-	3	1
23	27	18	1	-	9	5	9	2	6	4	-	1	1	-	-	-	2	2	1	1
24	14	17	-	-	8	4	7	5	13	2	2	-	2	-	-	-	2	1	4	3
25	16	23	2	-	5	5	11	1	17	6	4	-	3	2	3	-	2	-	1	2
26	7	16	5	-	3	4	6	1	11	7	2	-	9	-	2	-	-	-	1	5
27	5	6	1	-	1	-	1	5	5	7	4	-	16	-	15	-	1	3	4	1
28	2	5	2	-	1	1	1	3	-	6	1	1	15	2	10	2	-	2	3	3
29	2	5	-	-	-	2	-	4	1	8	2	-	12	8	9	2	-	2	3	-
30	-	1	1	-	-	-	-	8	2	10	-	2	7	3	4	3	-	1	2	-
31	3	5	-	1	-	2	-	6	2	7	1	6	4	8	1	5	-	-	-	1
32	1	-	4	-	-	-	-	2	2	7	-	6	2	11	-	8	-	-	-	1
33	-	-	-	1	-	-	-	4	-	6	-	-	3	10	1	3	-	-	-	-
34	-	2	-	-	-	-	-	2	-	4	-	4	-	16	-	11	-	1	1	-
35	-	1	-	-	-	-	-	-	-	4	-	1	2	6	-	4	-	1	1	-
36	-	2	-	-	-	1	-	-	-	1	-	1	-	3	-	8	-	2	-	-
37	-	1	-	-	-	-	-	-	-	-	-	-	-	4	1	2	-	-	-	-
38	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-
39	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	157	201	22	2	42	33	61	49	74	90	18	22	79	74	47	51	11	16	24	20

Appendix Table 4 continued.

Species : *Sebastolobus alascanus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																			
	8		23		24		25		27		28		30		31		35		U	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
16	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	2
17	-	-	-	-	-	-	-	-	-	-	-	1	7	-	1	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	1	-	2	1	3	-	1	-	1	1
19	-	-	-	-	-	-	-	-	-	-	1	-	5	5	1	2	1	1	1	-
20	-	1	1	-	-	-	1	-	-	-	1	-	2	4	3	2	1	-	-	-
21	-	-	1	-	-	-	-	-	-	-	1	2	4	4	1	3	1	-	-	-
22	-	-	-	2	-	-	-	1	-	-	1	1	5	1	1	2	1	4	-	-
23	-	1	-	-	-	-	-	-	1	-	2	1	1	5	-	2	1	1	-	-
24	-	2	2	-	1	-	-	1	1	-	2	6	-	1	5	3	-	-	-	-
25	-	1	1	-	2	2	2	-	-	2	1	2	3	7	1	-	1	2	-	-
26	-	2	-	-	-	1	-	1	-	-	1	1	3	2	1	-	-	1	-	-
27	-	2	1	-	-	-	-	1	-	-	1	1	3	6	-	1	-	1	-	-
28	1	2	2	1	-	-	-	1	-	-	1	1	1	1	3	1	1	1	-	-
29	-	1	-	-	-	-	-	-	-	3	4	2	2	-	-	-	1	1	1	-
30	-	1	1	-	1	-	-	-	-	3	-	-	2	2	-	-	-	-	1	-
31	-	1	-	-	1	1	1	1	-	3	1	4	1	1	-	1	1	-	-	-
32	-	-	-	-	-	-	-	-	-	-	1	1	4	-	-	-	-	-	-	-
33	-	1	-	-	1	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-
34	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	17	9	3	7	6	5	8	2	13	16	19	52	41	17	19	13	12	4	

Appendix Table 4 continued.

Species : *Sebastolobus alascanus*
 Vessel : OCEAN SELECTOR

Fork Length cm	Haul no.																				
	45			36			37			39			40			41			43		
	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
10	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	2	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	4	-	-	-	-	-	1	-	-	1	-	-	-
14	-	-	-	-	-	-	-	-	2	-	-	-	-	-	4	-	-	1	-	-	-
15	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
16	-	-	1	-	-	-	-	-	1	1	-	-	-	-	13	-	-	1	-	-	1
17	-	-	-	-	-	1	-	-	-	-	-	1	-	-	16	-	-	2	-	-	-
18	-	-	2	1	4	1	-	-	2	-	-	-	1	2	13	-	-	-	-	-	-
19	-	1	2	3	2	1	2	2	-	-	-	-	2	2	4	-	-	1	-	-	-
20	-	1	2	5	2	2	-	2	2	-	-	-	3	2	1	-	1	1	-	1	-
21	2	1	1	2	-	-	1	4	-	-	1	-	3	5	1	1	1	-	1	-	-
22	2	4	-	3	-	-	4	1	1	-	-	-	7	4	1	-	2	-	-	-	-
23	5	4	-	1	-	-	5	6	1	-	3	-	7	4	-	-	3	-	-	1	-
24	5	2	-	2	2	-	3	6	-	1	2	-	6	7	-	3	1	-	1	-	-
25	4	3	-	4	2	-	3	8	-	1	-	-	7	4	-	-	3	-	1	-	-
26	2	6	-	5	5	-	3	4	-	-	-	-	6	4	-	3	-	-	-	1	-
27	3	3	-	5	1	-	3	7	-	1	1	-	9	5	-	1	-	-	-	1	-
28	4	2	-	9	1	-	2	2	-	-	-	-	9	3	-	1	-	-	-	-	-
29	1	2	-	3	-	-	5	4	-	-	1	-	6	1	-	1	-	-	-	1	-
30	3	3	-	5	1	-	3	-	-	1	-	-	9	3	-	-	-	-	1	1	-
31	3	3	-	5	1	-	-	2	-	1	-	-	3	-	-	-	-	-	1	-	-
32	3	-	-	3	1	-	-	-	-	1	-	-	1	-	-	-	-	-	2	-	-
33	2	-	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
34	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
37	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
41	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	42	35	8	59	21	9	35	48	14	8	8	1	85	49	60	10	11	7	7	8	2

Appendix Table 4 continued.

Species : *Sebastolobus alascanus*
Vessel : OCEAN SELECTOR

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

Appendix Table 4 continued.

Species : *Sebastolobus alascanus*Vessel : **FROSTI**

Fork Length cm	Haul no.																
	3			8		15		21		25			26			34	
	M	F	U	M	F	M	F	M	F	M	F	U	M	F	U	M	F
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
14	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	1
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
16	-	-	1	3	-	-	-	-	-	-	-	1	-	-	-	3	2
17	-	1	-	3	1	-	-	-	-	1	-	-	-	-	-	2	1
18	-	1	1	5	-	-	-	-	1	1	1	-	1	-	-	-	1
19	1	1	-	2	1	-	-	-	1	2	1	-	-	1	-	8	2
20	1	1	1	-	-	-	-	-	1	2	1	-	-	1	-	3	5
21	1	-	-	9	4	1	1	1	1	1	3	-	-	-	-	3	1
22	1	3	-	7	6	1	3	-	-	5	1	-	3	4	-	4	2
23	3	2	-	7	5	1	1	-	3	3	5	-	3	3	-	3	6
24	3	2	-	3	3	2	-	-	1	1	3	-	1	5	-	3	2
25	4	3	-	2	1	2	5	-	2	1	7	-	6	6	-	6	7
26	2	-	-	4	3	-	3	-	-	2	5	-	5	4	-	4	3
27	-	-	-	5	2	2	1	-	2	3	2	-	7	6	-	5	1
28	-	-	-	15	-	-	3	2	-	4	2	-	7	-	-	3	1
29	-	-	-	9	-	-	2	3	2	-	1	-	4	3	-	5	-
30	1	-	-	2	-	1	1	1	-	2	2	-	5	5	-	2	2
31	-	-	-	2	-	1	4	2	2	1	-	-	2	3	-	1	1
32	-	1	-	3	-	-	2	-	-	1	2	-	2	1	-	2	-
33	-	-	-	2	1	-	-	-	2	-	1	-	4	1	-	-	1
34	-	-	-	-	-	-	2	-	-	-	2	-	-	1	-	1	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
36	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	1
37	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
38	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
40	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	17	17	3	85	28	11	29	1	19	30	40	3	50	46	1	66	44

Appendix Table 4 continued.

Species : *Sebastolobus alascanus*
 Vessel : **FROSTI**

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