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Data Report: 1980 Demersal Trawl Survey of the Eastern Bering Sea Continental Shelf

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ABSTRACT

This data report is one of a planned series to describe results of resource assessment surveys for groundfish in the eastern Bering Sea. The report describes methods used and summarizes results of the 1980 survey, in the form of a series of tables and figures and in data appendices. Summarized in the results section are a list of species taken during the survey, abundance estimates of major taxonomic groups of fish, and rankings of individual species of groundfish in terms of relative abundance, For principal species of groundfish, geographic distributions and size and age composition are illustrated and abundance estimates given. The appendices contain detailed station and catch data and computer listings of abundance estimates and biological characteristics of the sampled populations of principal species of groundfish.

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INTRODUCTION

The Resource Assessment and Conservation Engineering (RACE) Division of the Northwest and Alaska Fisheries Center (NWAFC) has conducted annual resource assessment surveys for crab and groundfish in the eastern Bering Sea since 1971. Earlier investigations (1971-74) were limited to the southeast Bering Sea, and it was not until 1975 that a major portion of the eastern Bering Sea continental shelf was sampled in a comprehensive multivessel survey. The 1975 survey served as a baseline trawl survey (Pereyra et al. 1976) and has remained a standard in design and comparison for subsequent Bering Sea surveys.

A larger more intensive investigation than the 1975 baseline study was conducted in the eastern Bering Sea in 1979. The 1979 survey was conducted with the cooperation of the Far Seas Fisheries Research Laboratory of the Fisheries Agency of Japan, Shimizu, and was the first in a series of major comprehensive surveys planned by RACE on a triennial basis. Surveys of lesser intensity are planned for intervening years; the 1980 survey constituted one of these smaller scale efforts.

From May-July 1980, two vessels were used to assess, with demersal trawls, the relative abundance and biological condition of demersal fish and invertebrates on the eastern Bering Sea continental shelf. This report presents abundance and biological information on major groundfish obtained from the survey. It consists of three main sections which describe (1) the methods used during the survey, (2) the abundance and distribution of major groups of groundfish and invertebrates, and (3) the abundance, distribution and biological characteristics of principal individual species of groundfish. In addition, the appendices present basic station and catch data and computer listings of the analyses of survey data.

Results for principal species of invertebrates are presented in reports issued by the Kodiak, Alaska, facility of the NWAFC.

SURVEY METHODS

Survey Area

The 1980 survey area and station pattern are illustrated in Figure 1. Sampling was restricted to continental shelf waters (<200 m in depth). The survey area and its subdivisions generally follow those established for the 1975 Bering Sea survey (Pereyra et al. 1976), although in 1980, an additional subarea (5) was delineated to incorporate sampling around St. Matthew Island.

Geographical sizes of subareas and sampling effort by subarea are given in Table 1. Sampling effort was relatively uniform across all subareas (one station per grid) except in subarea 3 South (3S) around the Pribilof Islands, where sampling was intensified to provide increased coverage of the blue king crab stock of those waters. To avoid bias of abundance estimates from the nonuniform sampling density in that area, subarea 3S was divided into two subdivisions for the analyses of data (Fig. 1).

Vessels and Fishing Gear

The NOAA ship Oregon and the chartered vessel Ocean Harvester participated in the survey; vessel characteristics are given in Table 2. Both vessels fished the 400-mesh eastern trawl; gear dimensions are listed in Table 3. The 400-mesh eastern trawl has a mean vertical opening of 1.5 meters (5 ft) and a path width of 12.2 m (40 ft) while fishing.

Relative fishing powers of the two vessels were examined in a comparative trawling experiment with vessels fishing alternate rows of stations in part

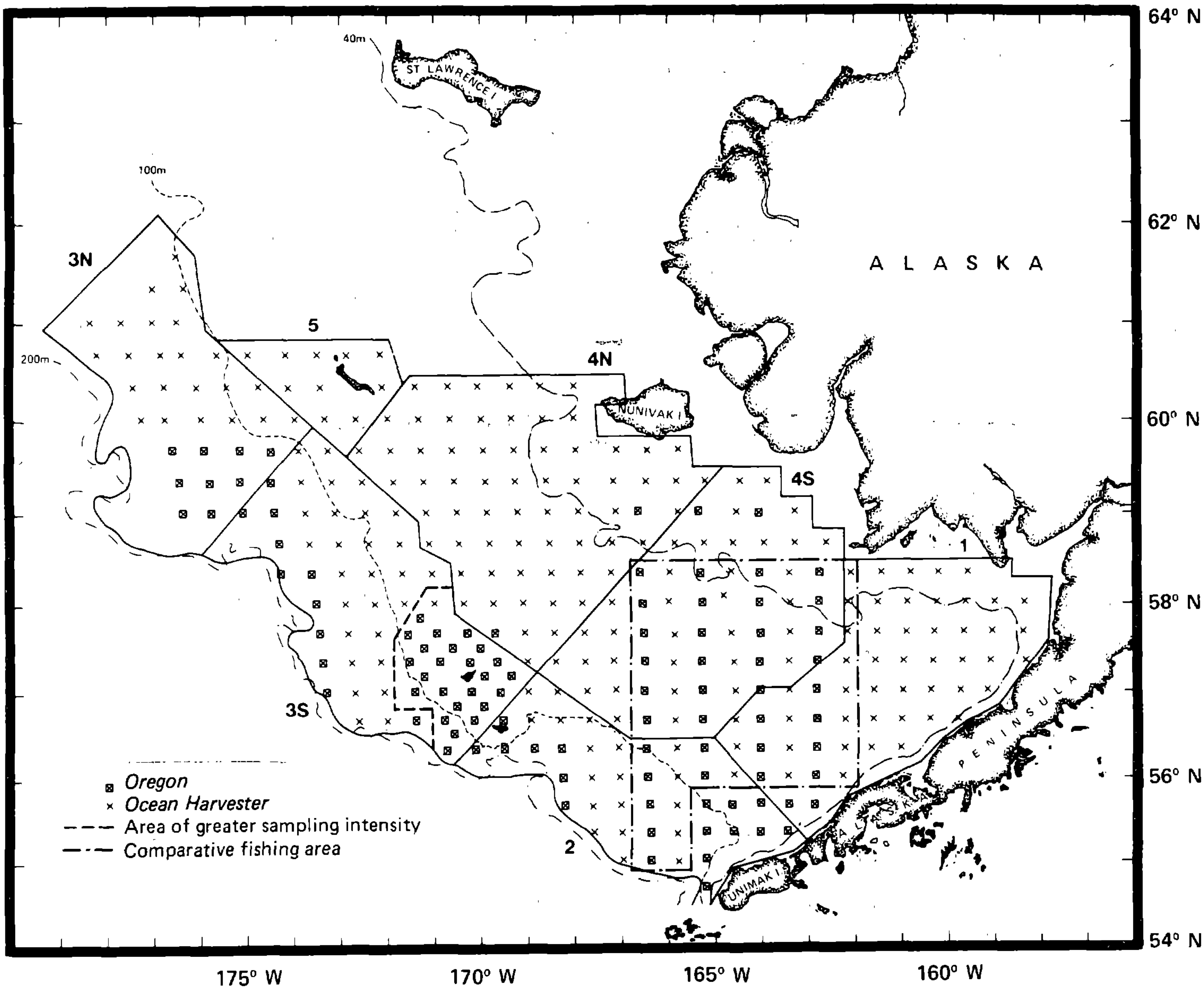

Figure 1. --Sampling stations and survey subareas used in the analysis of the 1980 survey data. Subarea 3S was divided into two strata (shown by dashed lines) because of differences in sampling densities; data from these strata were analyzed independently and then combined for the total subarea. The comparative fishing area for the two vessels is outlined in subareas 1, 2, and 4S.

Table 1.--Size of subareas used during the 1980 demersal trawl survey and planned and actual sampling densities by subarea (Fig. 1).

Subarea	Area km^2	Proportion of total area	Planned sampling density No. stns.	Planned sampling density km^2/sta.	Actual sampling density No. stns.	Actual sampling density km^2/sta.
1	83,366	0.178	59	1,413	58	1,437
2	60,964	0.130	44	1,386	41	1,487
3N	55,631	0.119	35	1,589	32	1,738
3S[a/]	78,739	0.168	54	1,458	64	1,230
4N	91,913	0.197	55	1,671	67	1,372
4S	81,540	0.174	45	1,812	57	1,431
5	15,371	0.033	11	1,397	10	1,537
Total survey area	467,524	1.000	303	1,543	329	1,421

a/ Subarea 3S was further divided into two subdivisions for analysis because of the higher sampling density around the Pribilof Islands.

Table 2.--Vessels participating in the 1980 demersal trawl survey.

Vessel	Overall length (m)	Gross tonnage	Horsepower	Survey period Start	Survey period Finish
Oregon	30.4	219	600	5 May	15 July
Ocean Harvester	32.9	199	1,125	9 May	26 July

Table 3.--Demersal trawls used during the 1980 survey.

Trawl	Headrope length (m)	Footrope length (m)	Mesh sizes: Wing and body (mm)	Mesh sizes: Inter-mediate (mm)	Mesh sizes: Codend (mm)	Mesh sizes: Cod end liner (mm)	Accessory gear: Door width & length (m)	Accessory gear: Dandyline length (m)
400-mesh eastern	21.6	28.7	102	89	89	32	1.5 x 2.1	45.5

of the survey area (Fig. 1). Seventy hauls (35 hauls/vessel) were used to compare relative fishing powers.

A method described by Geisser and Eddy (1979) has been used to decide whether the catch per unit effort (CPUE) of a given species in a common area fished by two vessels came from the same or different populations. Vessels were considered to have equal fishing powers for a particular species if that species was determined to be from the same population. If the CPUE values for that species were determined to come from distinct populations, the estimates from the more efficient vessel were considered to be the most representative of actual population abundance. Catch rates of the least efficient vessel were then adjusted to the most efficient vessel by applying the ratio of the mean catch rates (less efficient vessel/more efficient vessel) derived from the comparative fishing experiment.

Table 4 lists mean CPUE values for major fish species and species groups for each vessel from the comparative fishing area. Geisser and Eddy (1979) procedures indicate that the vessels sampled distinct populations of yellowfin sole, Alaska plaice, Greenland turbot, and eelpouts. The Oregon was more efficient in catching those species; therefore, fishing power adjustments to the catches of the Ocean Harvester were indicated.

Biomass estimates adjusted for differences in fishing powers for eelpouts and the three species of flatfish are shown in Table 5. Also shown are unadjusted biomass estimates from the 1980 survey data and estimates from a comparable area sampled in 1979. These data illustrate that the application of the 1980 fishing power coefficients increased biomass estimates for these taxa approximately two to three times the estimates from unadjusted 1980 data. Increases in abundance of this magnitude are unreasonable and

Table 4.--Comparison of relative fishing powers of the chartered vessel Ocean Harvester and the NOAA ship Oregon in the comparative tow area.

Species	Mean catch rates (kg/ha) Ocean Harvester	Mean catch rates (kg/ha) Oregon	Ratio of catch rates Ocean Harvester/Oregon
Walleye pollock	9.04	8.61	1.11
Pacific cod	9.02	11.00	0.84
Sablefish	0.62	0.11	0.61
Pacific ocean perch	-	-	-
Pacific herring	0.24	0.03	7.48
Yellowfin sole	47.13	84.71	0.56 b/
Rock sole	3.92	5.74	0.70
Flathead sole	2.04	2.93	0.76
Alaska plaice	6.47	15.19	0.41 b/
Greenland turbot	0.12	0.29	0.45 b/
Arrowtooth flounder	0.82	0.62	1.49
Pacific halibut	1.17	1.26	0.96
Other flounders	1.71	1.93	0.82
Smelts	0.19	0.31	0.59
Sculpins	0.62	1.02	0.56
Snailfishes	0.01	0.04	0.25
Poachers	0.11	0.15	0.67
Eelpouts	0.90	2.87	0.32 b
Skates	1.80	3.46	0.52
Other fish	<0.01	<0.01	0.54

a/ 35 stations were trawled by each vessel in the comparative fishing area between 162°W and 167°W (Fig. 1).

b/ Geisser and Eddy (1979) procedure indicates that the two vessels sampled distinct populations.

Table 5.--Comparisons of mean biomass estimates for yellowfin sole, Alaska plaice, Greenland turbot, and eelpouts for subareas 1-4, derived from 1980 survey data (adjusted and unadjusted for differences in fishing powers between survey vessels) and from 1979 survey data.

	Mean biomass estimates metric tons (t)		
		1980	
Species	1979	Unadjusted	Adjusted
Yellowfin sole	1,907,685	1,911,200	2,994,233
Alaska plaice	283,000	343,600	693,430
Greenland turbot	143,300	168,600	364,607
Eelpouts	360,800	345,700	921,532

biologically untenable, especially for long-lived species such as the flatfish. Fishing powers from the 1980 comparative fishing experiments were therefore considered unreliable and were not used in the analyses of the survey data.

Reasons for the poor results are unknown, although an important contributing factor may have involved vessel logistics. The vessels fished the comparative area approximately 10 days apart which may have been sufficient time to allow shifts in populations and, consequently, sampling of different concentrations by the two vessels.

Data Collection and Sampling Methods

Sampling procedures used during the 1980 survey are described in detail by Wakabayashi et al. (1983). Tow duration was 30 min at each station. Catches weighing less than approximately 2,500 lb (1,150 kg) were processed completely, while those larger than 2,500 lb were subsampled according to methods described by Hughes (1976). Total catches or the subsampled portion were sorted and identified to species, and the catches of each species weighed and counted. Weights and numbers of individuals from a subsampled catch were expanded to the total catch.

Biological information was obtained from commercially important species: length measurements[1] were taken from random samples of fish and stratified samples of age structures collected. Scales were taken from Pacific cod and otoliths from all other species; all age structures were stratified by sex and size-class. Table 6 lists the numbers of fish measured and age structures collected during the survey.

1/ Lengths were measured from the anterior tip of the head to the end of the mid-caudal rays; and depending on the shape of the tail, this represented measurements of total length or fork length. The measurements represented total lengths for rattails, yellowfin sole, rock sole, flathead sole, Alaska plaice, longhead dab, starry flounder, and rex sole for fork lengths for other species.

Table 6.--Numbers of fish measured and age structures collected during the 1980 demersal trawl survey in the eastern Bering Sea.

Species	Number measured	Number of age structures collected
Yellowfin sole	36,641	836
Walleye pollock	33,318	1,859
Pacific cod	12,266	1,233
Flathead sole	9,142	450
Rock sole	7,500	376
Alaska plaice	5,756	-
Greenland turbot	5,314	393
Arrowtooth flounder	2,464	459
Pacific halibut	996	-
Longhead dab	956	-
Saffron cod	590	-
Sablefish	204	-
Arctic cod	3	
Total	115,150	5,606

Data Analysis

A detailed description of the methods of analysis of the demersal trawl data are given by Wakabayashi et al. (1983). In general terms, catches at each station were standardized to basic sampling unit (kilogram/hectare (kg/ha) trawled). Mean CPUE values by species and strata were then computed from the standardized catch rates and summed over strata after being weighted by the size of each strata to obtain mean catch rates for the overall survey area. Standing stock (biomass) estimates were derived using the "area swept" method of Alverson and Pereyra (1969).

In estimating the length composition of the sampled populations, the number of individuals within sex and size-classes for each station were derived by expanding the length-frequency subsample to the total catch per standard sampling unit. The individual station data were then expanded to the total strata and summed over strata to obtain estimates for the total survey area. Age composition was estimated by proportioning the computed population distribution to ages using age-length keys that were stratified by sex and size categories.

Subsequent to the 1979 survey, it was discovered that aging methods for Pacific cod based on counting annuli from scales were unreliable (Bakkala 1981). Better results were produced by a computer program (MacDonald and Pitcher 1979) which uses an iterative procedure to fit normal curves to the modes in a length-frequency distribution. Prior estimates of length-at-age (such as from a von Bertalanffy curve) are used as starting points for the program. This program was, therefore, used for estimating the age composition for cod rather than the age readings from scales.

RESULTS

Haul and Catch Data

Appendix A lists station and catch data for the NOAA ship Oregon and the chartered vessel Ocean Harvester. Station data include haul number, date, location, tow-depth, tow duration, and distance fished. Catch data list the weights in kilograms of fish and invertebrates taken at each station.

Environmental Conditions

Surface and bottom water temperature contours are shown in Figures 2 and 3. Bottom temperatures ranged from -0.9°C to 10.8°C and surface temperatures from 0.3°C to 11.2°C. Figure 4 compares annual mean bottom temperatures in the southeastern Bering Sea from 1963 to 1983. These data illustrate the annual variability of summer temperature conditions that are characteristic of near bottom waters on the eastern Bering Sea shift and demonstrate that the summer of 1980 was relatively warm.

Species Taken

Table 7 lists all species of fish taken during the survey. Nineteen families were represented, from which 93 fish were identified to species.

Overall Abundance of Major Fish and Invertebrate Groups and Distribution of Fish Groups

Table 8 summarizes estimated abundances of major fish and invertebrate groups in the survey area; Figures 5-11 illustrate the distribution of total fish and major fish groups (cods, flounders, sculpins, eelpouts, poachers, and skates) during May-July 1980. A biomass of 8.72 million metric tons (t) was estimated

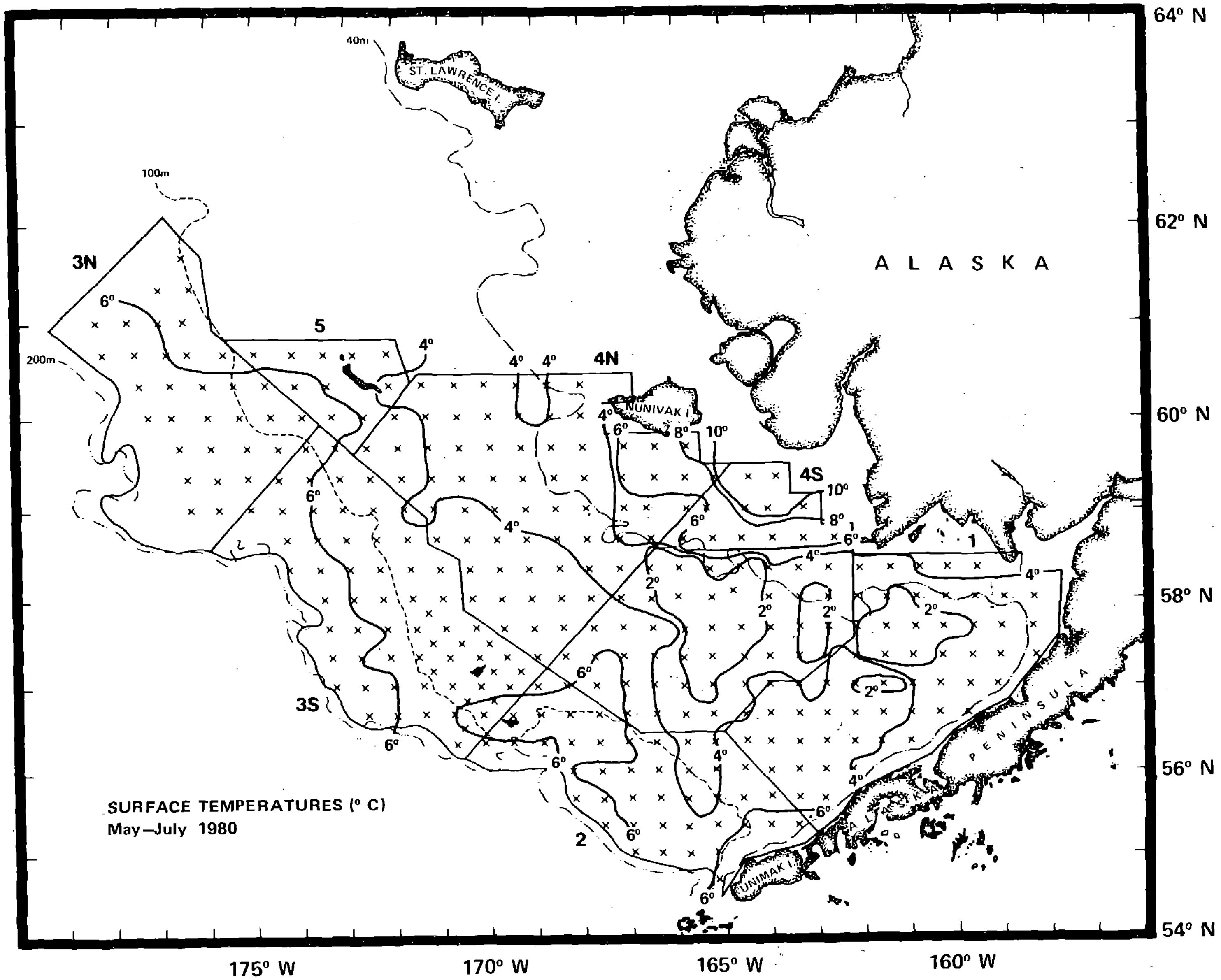

Figure 2.--Distribution of surface water temperatures observed during the 1980 survey.

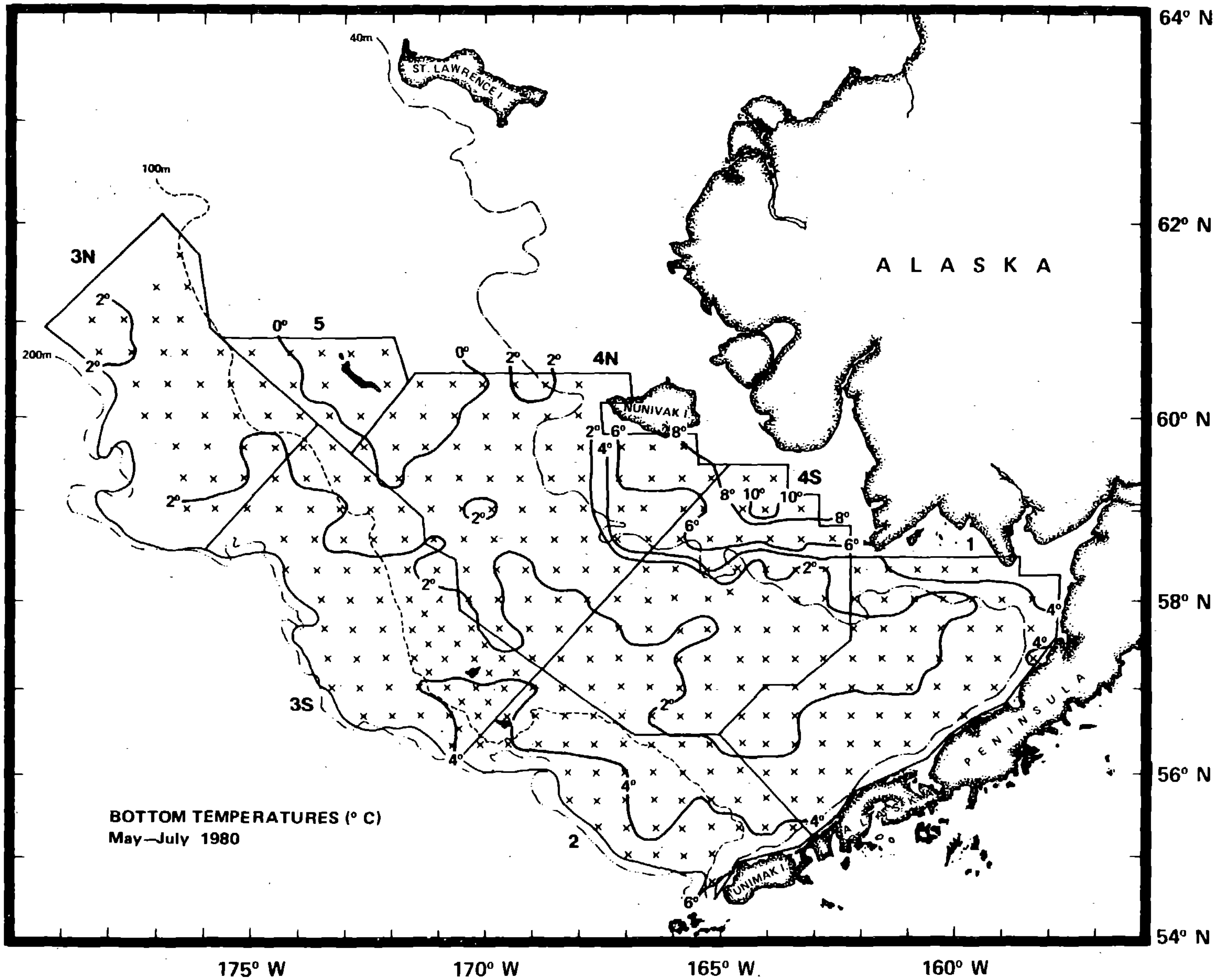

Figure 3.--Distribution of bottom water temperatures observed during the 1980 survey.

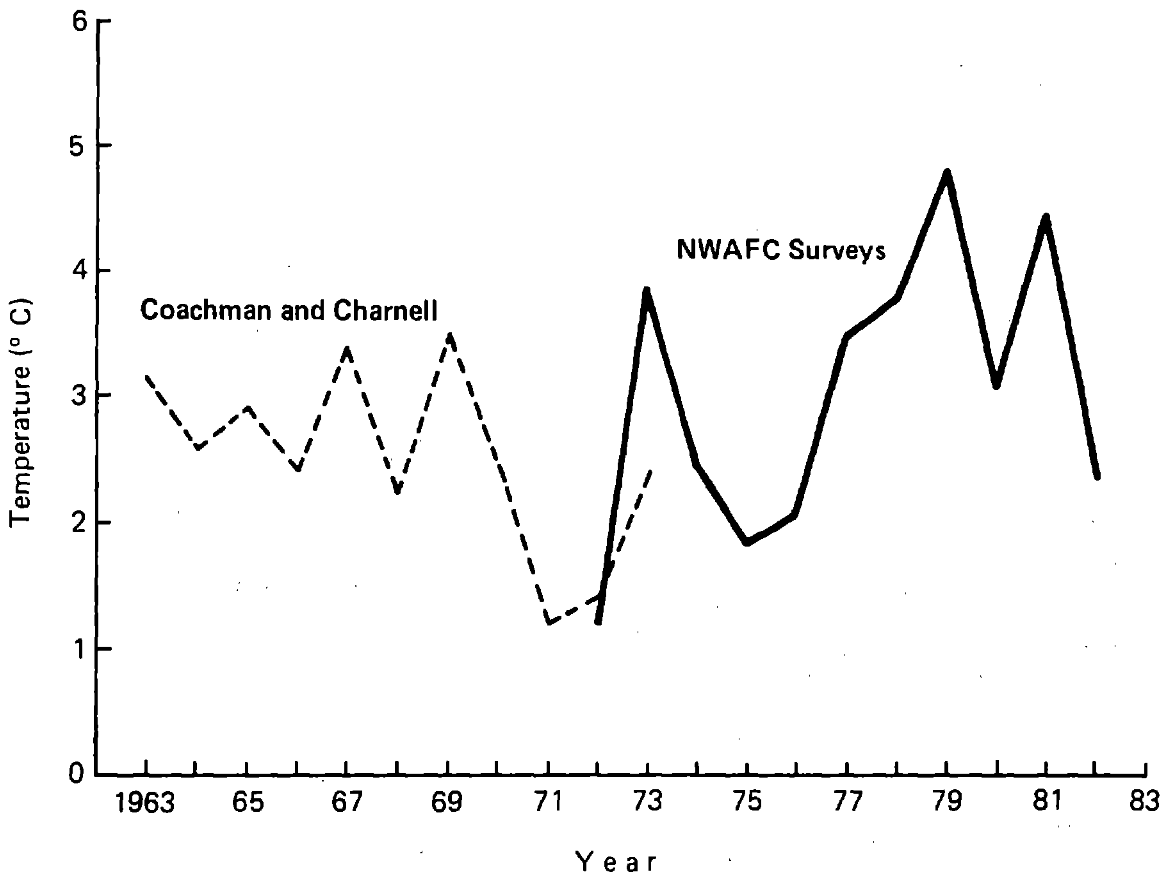

Figure 4.--Mean bottom temperatures in the southeastern Bering Sea (1973-83) based on data from Japanese trawl fisheries (Coachman and Charnell 1979) and from U.S. research vessel data (data on file at Northwest and Alaska Fisheries Center, Seattle, WA 98112).

Table 7.--List of fish species taken during the 1980 demersal trawl survey.

Family and Species[a]	Common name [a]
Squalidae	
Squalus acanthias	Spiny dogfish
Rajidae	
Raja sp.	Skate unidentified
Raja aleutica	Aleutian skate
Raja binoculata	Big skate
Raja parmifera	Alaska skate
Raja stellulata	Starry skate
Clupeidae	
Clupea harengus pallasi	Pacific herring
Osmeridae	
Osmeridae sp.	Smelt unidentified
Osmerus mordax	Rainbow smelt
Mallotus villosus	Capelin
Thaleichthys pacificus	Eulachon
Gadidae	
Boreogadus saida	Arctic cod
Eleginus gracilis	Saffron cod
Gadus macrocephalus	Pacific cod
Theragra chalcogramma	Walleye pollock
Zoarcidae	
Zoarcidae sp.	Eelpout unidentified
Lycodes brevipes	Shortfin eelpout
Lycodes concolor[b]	Eelpout unidentified
Lycodes palearis	Wattled eelpout
Lycodes raridens[b]	Sparse toothed lycod
Lycodes turneri	Polar eelpout
Scorpaenidae	
Sebastes aleutianus	Rougheye rockfish
Sebastes alutus	Pacific ocean perch
Sebastes borealis	Shortraker rockfish
Sebastes crameri	Darkblotched rockfish
Sebastes polyspinis	Northern rockfish

Table 7.--Continued.

Family and species	Common name
Hexagrammidae	
Hexagrammos sp.	Greenling unident.
Hexagrammos decagrammus	Kelp greenling
Hexagrammos lagocephalus	Rock greenling
Hexagrammos stelleri	Whitespotted greenling
Pleurogrammus monopterygius	Atka mackerel
Anoplopomatidae	
Anoplopoma fimbria	Sablefish
Cottidae	
Cottidae sp.	Sculpin unidentified
Artediellus sp.	Sculpin unidentified
Artediellus uncinatus	Arctic hookear sculpin
Blepsias bilobus	Crested sculpin
Dasycottus setiger	Spinyhead sculpin
Enophrys sp.	Sculpin unidentified
Gymnocanthus sp.	Sculpin unidentified
Gymnocanthus galeatus	Armorhead sculpin
Gymnocanthus pistilliger[b/]	Threaded sculpin
Gymnocanthus tricuspis	Arctic staghorn sculpin
Hemilepidotus sp.	Irish lord unidentified
Hemilepidotus hemilepidotus	Red Irish lord
Hemilepidotus jordani	Yellow Irish lord
Hemilepidotus spinosus	Brown Irish lord
Hemilepidotus zapus	Longfin Irish lord
Hemitripterus bolini	Bigmouth sculpin
Icelus sp.	Sculpin unidentified
Icelus spatula	Spatulate sculpin
Icelus spiniger	Thorny sculpin
Leptocottus armatus	Pacific staghorn sculpin
Malacocottus kincaidi	Blackfin sculpin
Melletes papilio	Butterfly sculpin
Microcottus sellaris	Brightbelly sculpin
Myoxocephalus sp.	Sculpin unidentified
Myoxocephalus jaok	Plain sculpin
Myoxocephalus polyacanthocephalus	Great sculpin
Myoxocephalus scorpius	Shorthorn sculpin
Myoxocephalus verrucosus[b/]	Warty sculpin
Radulinus asprellus	Slim sculpin
Triglops sp.	Sculpin unidentified
Triglops forficata	Scissortail sculpin
Triglops pingeli	Ribbed sculpin

Table 7.--Continued.

Family and species	Common name
Agonidae	
Agonidae sp.	Poacher unidentified
Agonus acipenserinus	Sturgeon poacher
Anoplagonus inermis	Smooth alligatorfish
Aspidophoroides bartoni	Aleutian alligatorfish
Aspidophoroides olriki	Arctic alligatorfish
Bathyagonus infraspinatus	Spinycheek starsnout
Bathyagonus nigripinnis	Blackfin poacher
Occella dodecaedron	Bering poacher
Occella verrucosa	Warty poacher
Pallasina barbata	Tubenose poacher
Percis japonicus[b/]	Poacher unidentified
Sarritor frenatus	Sawback poacher
Sarritor leptorhynchus	Longnose poacher
Cyclopteridae	
Cyclopteridae sp.	Snailfish unidentified
Aptocyclus ventricosus	Smooth lumpsucker
Careproctus melanurus	Blacktail snailfish
Careproctus rastrinus[b/]	Snailfish unidentified
Eumicrotremus orbis	Pacific spiny lumpsucker
Liparis sp.	Snailfish unidentified
Liparis dennyi	Marbled snailfish
Liparis pulchellus	Showy snailfish
Trichodontidae	
Trichodon trichodon	Pacific sandfish
Bathymasteridae	
Bathymaster signatus	Searcher
Anarhichadidae	
Anarhichas orientalis	Bering wolffish
Stichaeidae	
Stichaeidae sp.	Prickleback unidentified
Chirolophis decoratus	Decorated warbonnet
Lumpenella longirostris	Longsnout prickleback
Lumpenus mackayi	Pighead prickleback
Acantholumpenus maculatus[b/]	Daubed shanny
Lumpenus sagitta	Snake prickleback

Table 7.--Continued.

Family and Species	Common name
Zaproridae	
Zaprora silenus	Prowfish
Ammodytidae	
Ammodytes hexapterus	Pacific sand lance
Pleuronectidae	
Atheresthes stomias	Arrowtooth flounder
Glyptocephalus zachirus	Rex sole
Hippoglossoides elassodon	Flathead sole
Hippoglossus stenolepis	Pacific halibut
Isopsetta isolepis	Butter sole
Lepidopsetta bilineata	Rock sole
Limanda aspera	Yellowfin sole
Limanda proboscidea	Longhead dab
Lyopsetta exilis	Slender sole
Platichthys stellatus	Starry flounder
Pleuronectes quadrituberculatus	Alaska plaice
Psettichthys melanostictus	Sand sole
Reinhardtius hippoglossoides	Greenland turbot[c/]

a/ Nomenclature from Robins (1980), unless otherwise noted.
b/ Nomenclature from Quast and Hall (1972).
c/ Market name.

Table 8.--Summary of apparent biomasses of major taxonomic groups from the 1980 summer survey.

Taxa	Estimated biomass for total survey area (t) [a]	Proportion of total biomass	Estimated biomass by subarea (t) 1	2	3N	3S	4N	4S	5
Gadidae (cods)	2,419,193	0.277	443,829	265,663	434,900	601,646	408,011	253,867	11,279
Pleuronectidae (flounders)	2,995,395	0.343	1,100,820	168,764	155,042	134,807	564,769	858,914	12,280
Cottidae (sculpins	281,052	0.032	22,630	37,217	9,242	43,707	97,693	28,321	42,242
Zoarcidae (eelpouts)	371,461	0.043	1,525	42,246	142,238	68,283	76,714	14,712	25,743
Agonidae (poachers)	17,340	0.002	4,050	318	87	1,007	9,176	2,697	4
Rajidae (skates)	114,858	0.013	2,074	44,832	11,896	42,849	3,854	9,316	37
Other fish	55,285	0.006	5,070	27,969	1,118	2,487	11,940	5,876	825
Total fish	6,254,584	0.717	1,579,998	587,009	754,523	894,785	1,172,157	1,173,703	92,408
Porifera (sponges)	24,327	0.003	9,156	13,320	0	874	717	23	236
Coelenterata (coelenterates)	12,024	.001	662	3,530	383	6,814	370	203	63
Mollusca	167,196	0.019	13,818	37,063	34,712	28,761	13,365	35,654	3,822
Gastropoda (snails)	148,734	0.017	13,694	28,894	31,403	22,807	13,259	35,190	3,487
Pelecypoda (bivalves)	762	<0.001	123	18	11	94	105	403	7
Cephalopoda (squids & octopuses)	17,395	0.002	0	8,151	3,299	5,860	0	61	24
Other mollusks	304	<0.001	0	0	0	0	0	0	304
Crustacea	1,317,039	0.151	233,786	113,045	154,520	428,241	176,229	147,402	63,815
Chionocetes sp. (Tanner crab)	808,006	0.093	49,353	96,555	140,518	263,521	130,599	78,775	48,687
Paralithodus sp. (king crab)	381,052	0.044	167,536	6,621	1,972	151,025	8,816	36,969	8,113
Other crab	117,392	0.013	16,876	9,464	4,295	11,793	36,523	31,637	6,804
Total crab	1,306,451	0.150	233,765	112,640	146,785	426,339	175,938	147,380	63,604
Total shrimp	10,490	0.001	18	405	7,735	1,902	291	22	117
Other crustaceans	98	<0.001	3	0	0	0	0	0	94
Echinodermata	702,705	0.081	173,616	31,552	60,631	87,445	152,224	193,632	3,606
Asteroidea (starfish)	607,114	0.070	141,368	3,167	47,877	72,670	150,613	189,934	1,485
Ophiuroidea (brittlestars)	55,726	0.006	1,065	23,628	11,983	11,889	1,534	3,698	1,929
Echinoidea (sea urchins, etc.)	30,913	0.004	25,658	1,965	162	2,868	77	0	182
Holothuroidea (sea cucumbers)	8,952	0.001	5,524	2,791	609	18	0	0	9
Ascidiacea	46,240	0.005	1,522	0	0	0	21,721	19,456	3,541
Other invertebrates	197,775	0.023	0	1,430	28	47,063	109,776	39,478	0
Total invertebrates	2,467,306	0.283	432,560	199,940	250,274	599,198	474,403	435,848	75,082
Total catch	8,721,890		2,012,558	786,949	1,004,797	1,493,983	1,646,560	1,609,551	167,490
Geographical area (km^2)	467,524		83,366	60,964	55,631	78,739	91,913	81,540	15,371

[a]/Rounding accounts for minor discrepancies between sums of subareas and total survey area and between sums of taxonomic subgroups and major groups.

TOTAL FISH

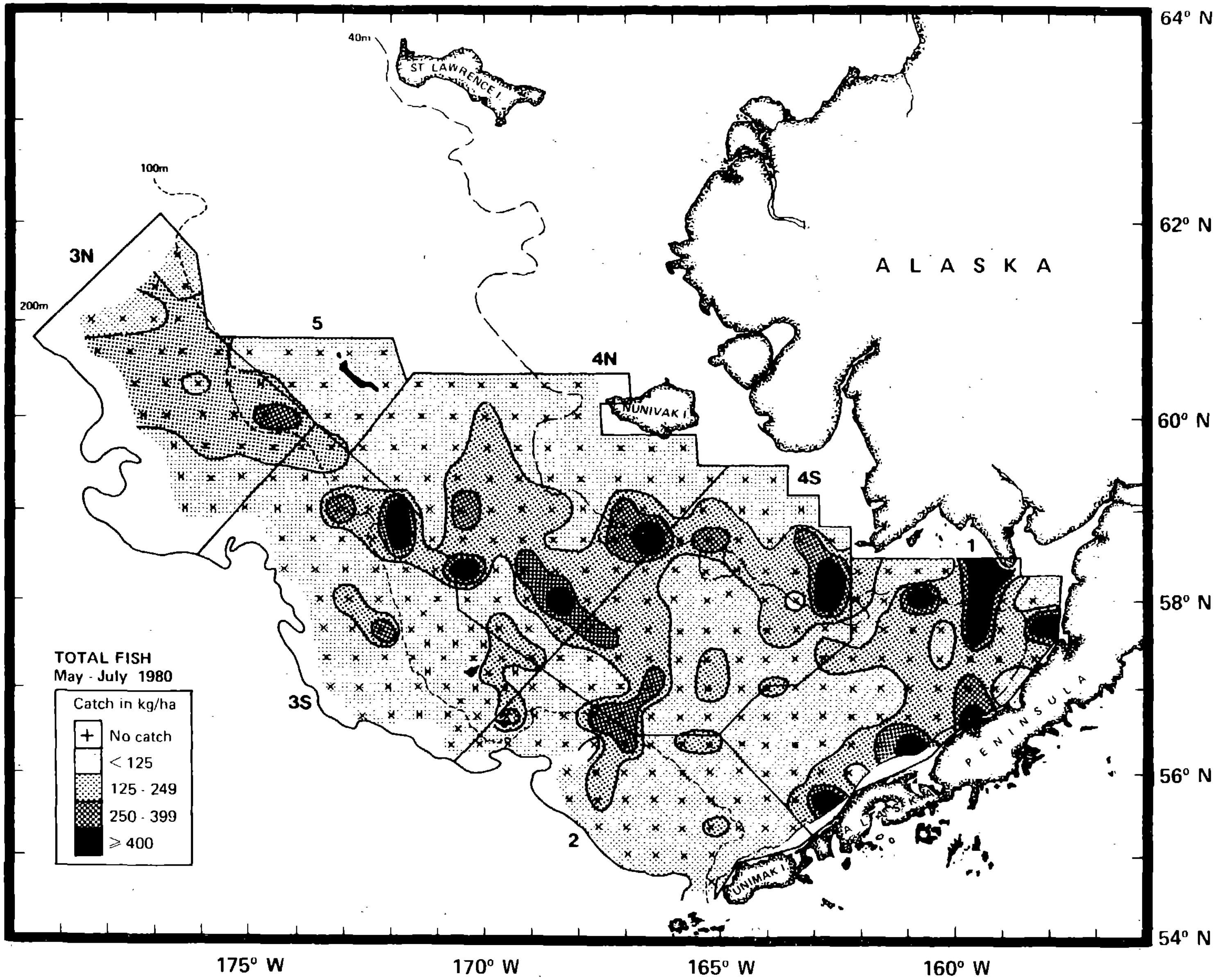

Figure 5.-- Distribution and relative abundance of total fish during the 1980 survey.

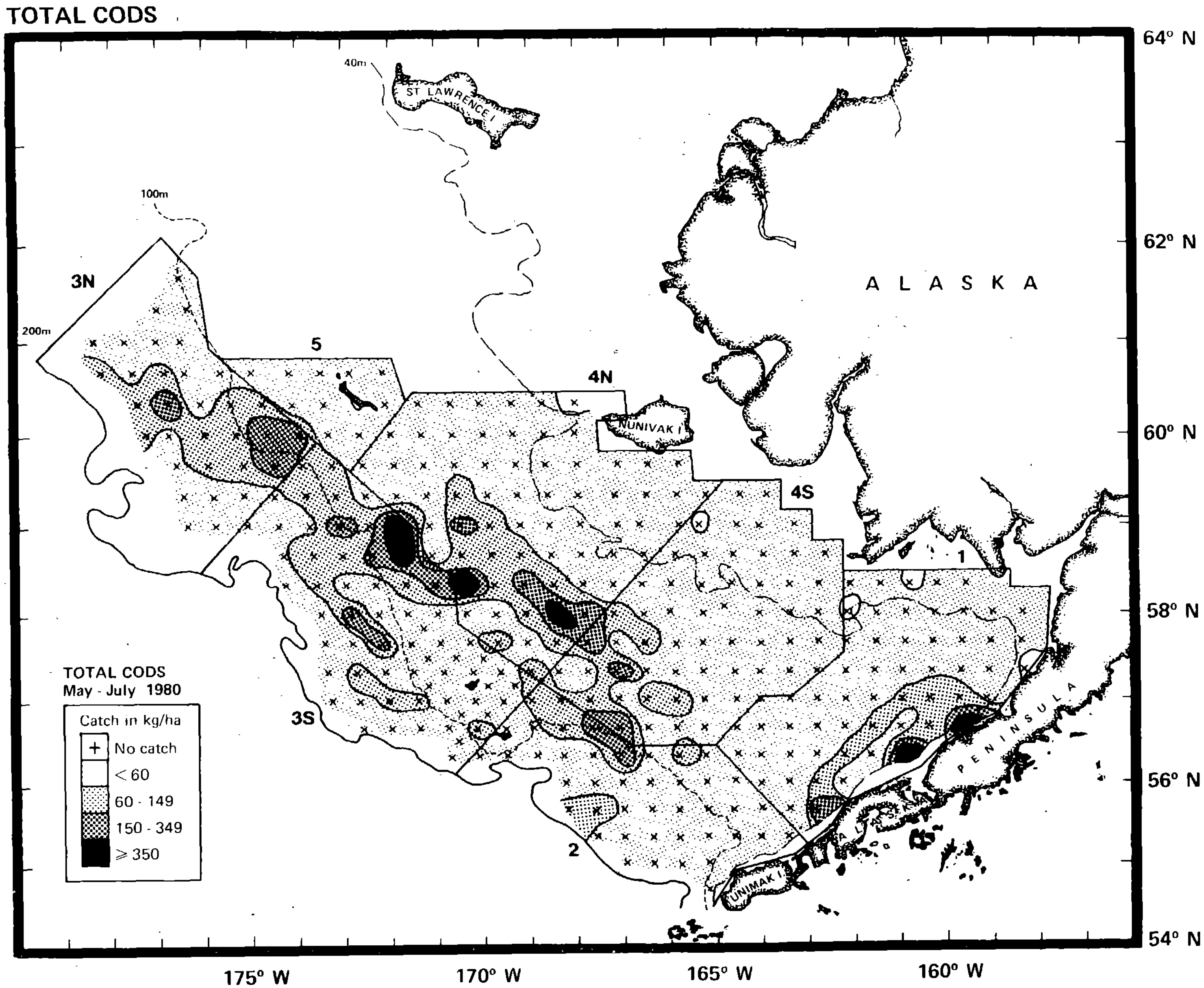

Figure 6.--Distribution and relative abundance of total cods during the 1980 survey.

TOTAL FLOUNDERS

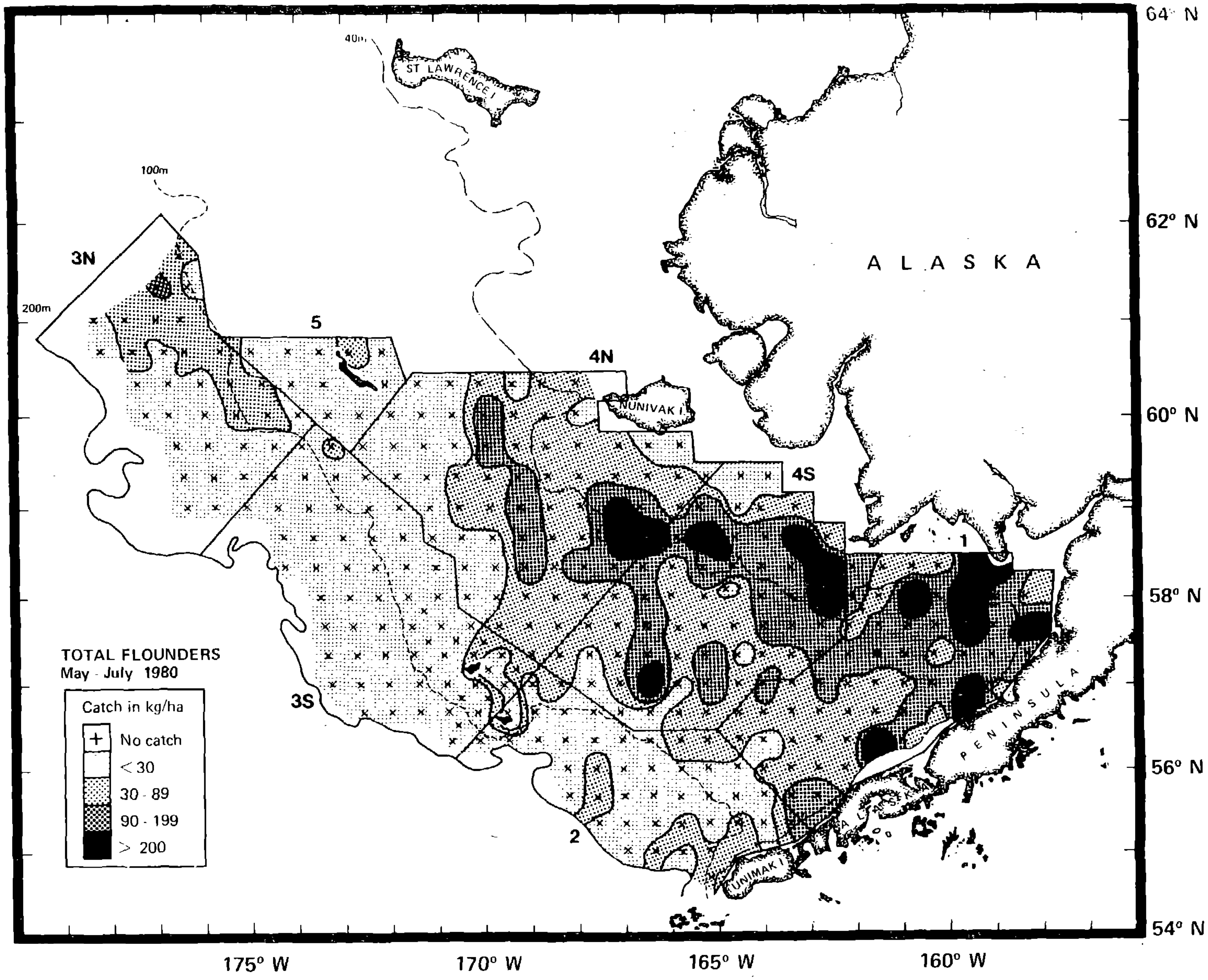

Figure 7.--Distribution and relative abundance of total flounders during the 1980 survey.

TOTAL SCULPINS

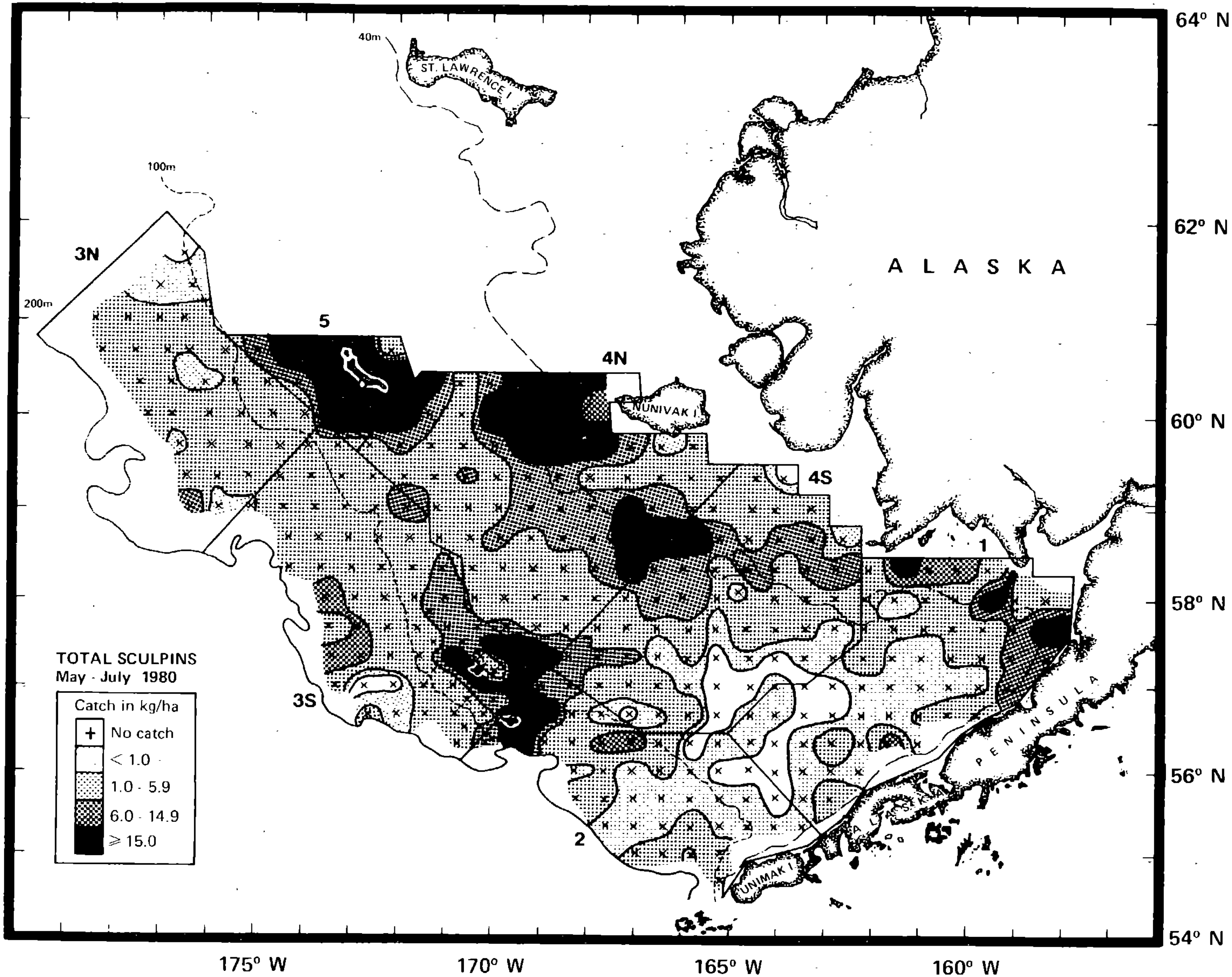

Figure 8.--Distribution and relative abundance of total sculpins during the 1980 survey.

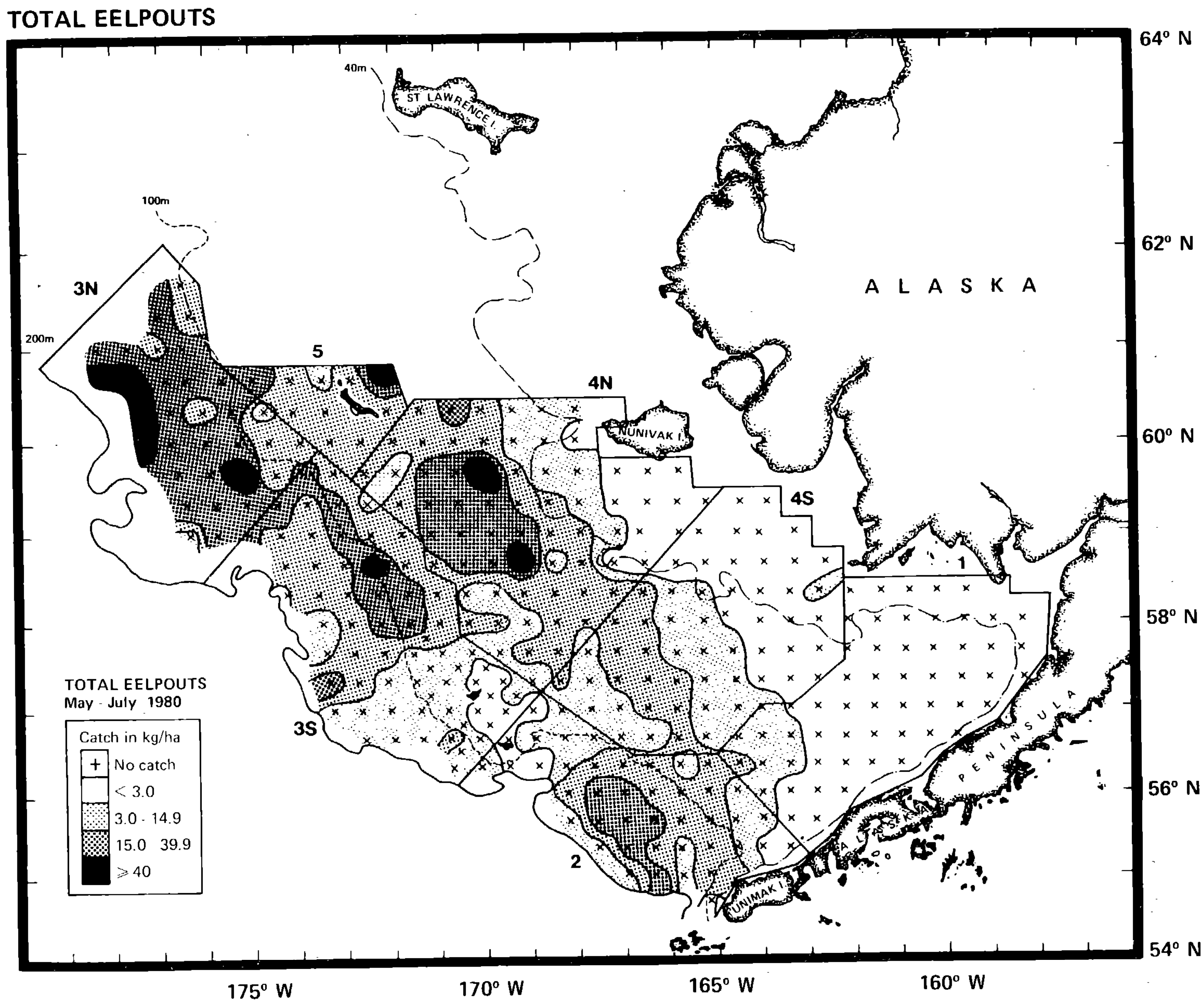

Figure 9.--Distribution and relative abundance of total eelpouts during the 1980 survey.

TOTAL POACHERS

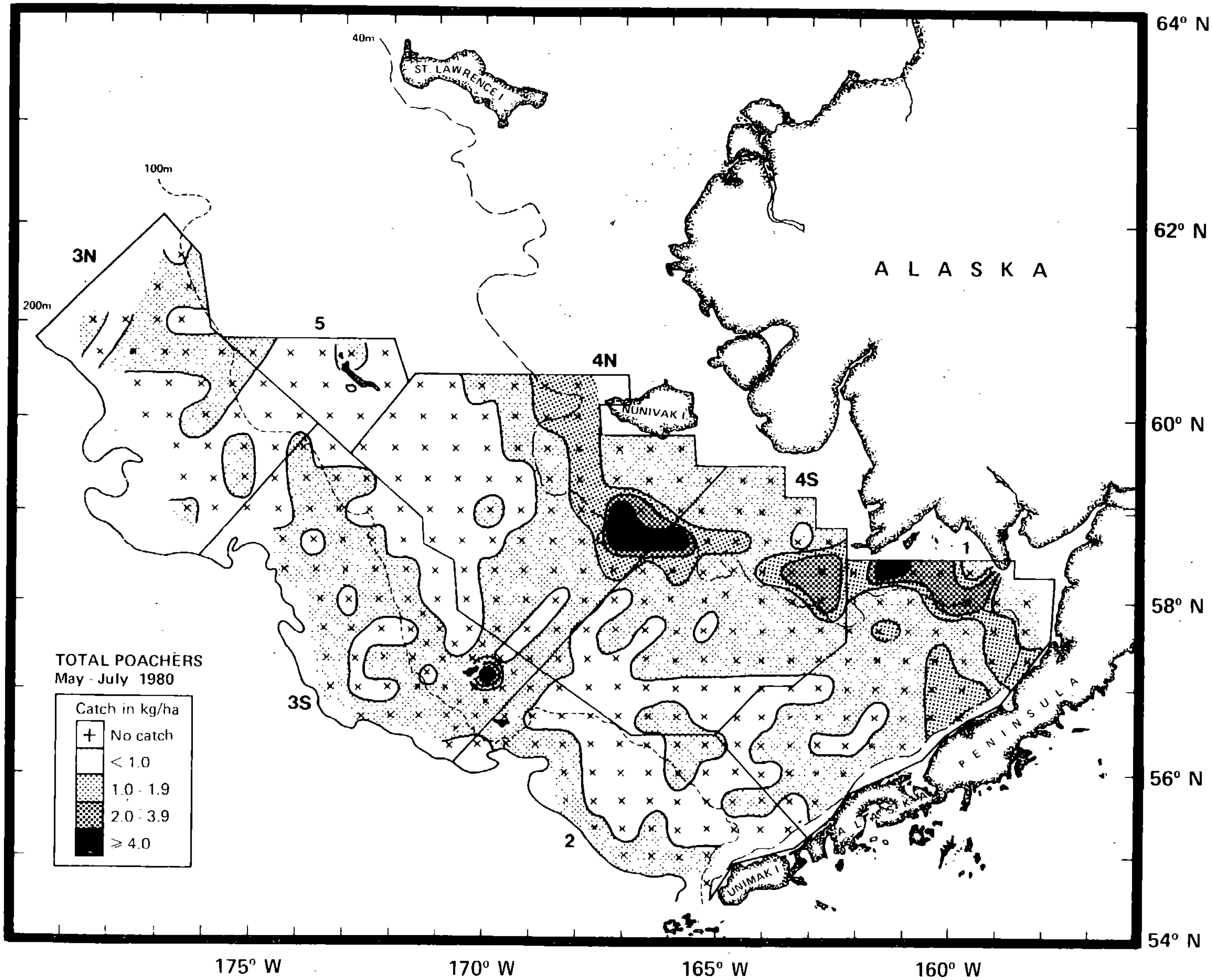

Figure 10.-- Distribution and relative abundance of total poachers during the 1980 survey.

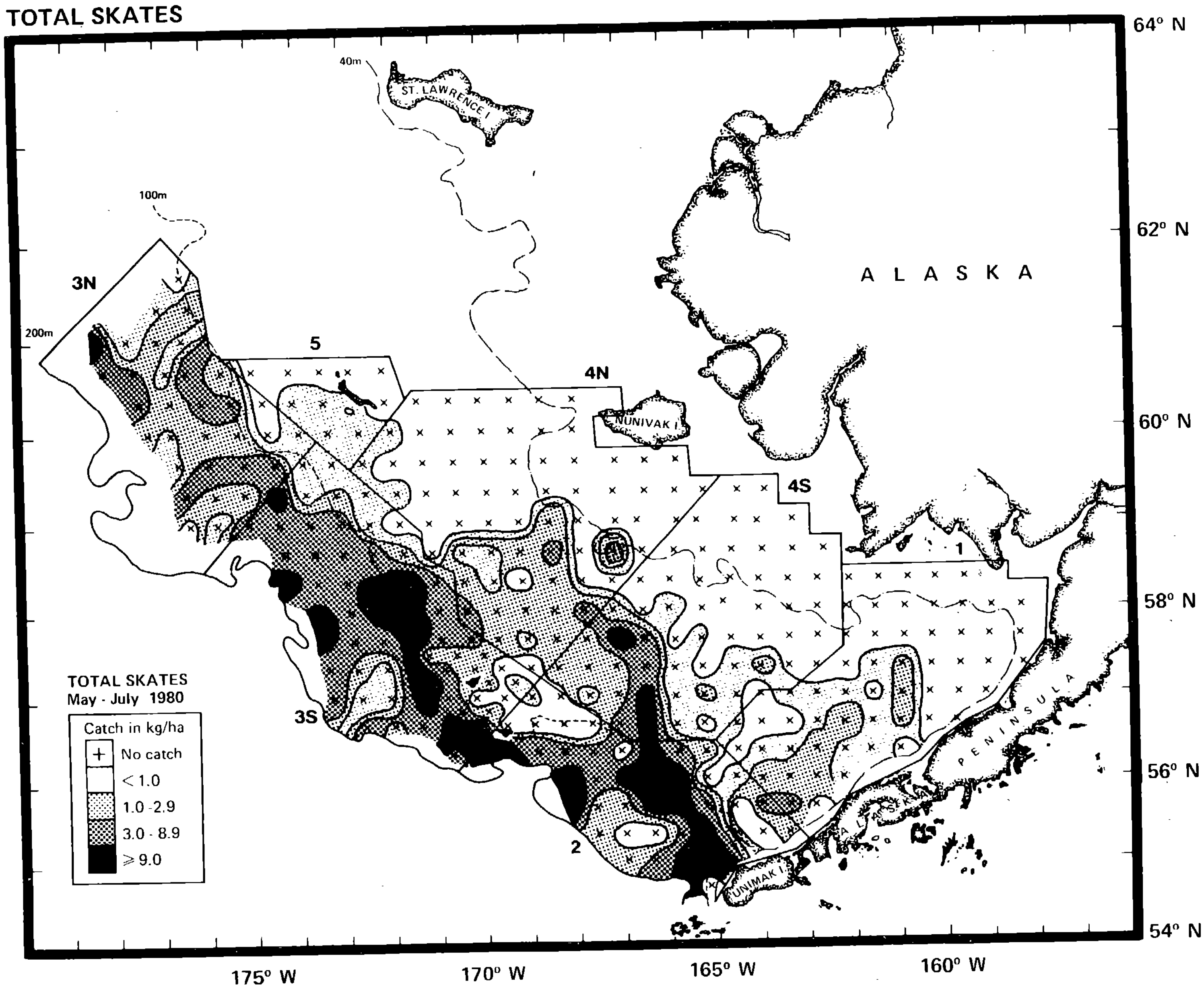

Figure 11.--Distribution and relative abundance of total skates during the 1980 survey.

for the total survey area; fish accounted for 72% (6.25 million t) of the total biomass and invertebrates 28% (2.47 million t).

Based on estimates from subareas 1-4 (commonly fished areas in 1979 and 1980), overall biomass decreased from 9.98 million t in 1979 to 8.56 million t in 1980. Total fish declined from 7.32 million t to 6.16 million t and except for flatfish and skates which increased, all of the major fish groups decreased in abundance between these years. The biomass of invertebrates remained relatively stable, although 1980 estimates were slightly lower (2.39 million t) than those from 1979 (2.66 million t).

The cods showed a major reduction from 3.69 million t in 1979 to 2.41 million t in 1980. The 1980 estimated biomass for pollock (1.51 million t) decreased to half that of 1979 (3.05 million t) and largely accounted for the reduction in total cods. The 1980 estimated biomass for pollock was considered unreliable as will be discussed in the section "Relative Importance of Individual Species of Fish."

Relative Importance of Individual Species of Fish

Mean catch rates in kg/ha of the 20 most abundant fish are ranked in order of relative abundance for the total survey in Table 9 and for individual subareas in Tables 10 - 16. The 20 most abundant fish comprised 70% of the catch in the total area.

As in 1979 (Bakkala et al. 1982) pollock and yellowfin sole were the two most abundant species taken in catches. One of these species ranked highest in all subareas except in subarea 5. Yellowfin sole was the most abundant species in inner shelf subareas (1, 4S, 4N) where CPUE values ranged from 37.4 to 98.6 kg/ha; their abundance in outer shelf subareas (2, 3S, 3N) was relatively low (<0.1-7.8 kg/ha). While pollock ranked highest in outer shelf waters with CPUE

Table 9.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, total area.

Rank	Species	CPUE (kg/ha)a/	Proportion of total CPUEb/	Cumulative proportion
1	Yellowfin sole	40.92	0.219	0.219
2	Walleye pollock	32.27	0.173	0.392
3	Pacific cod	19.41	0.104	0.496
4	Alaska plaice	7.46	0.040	0.536
5	Rock sole	6.05	0.032	0.568
6	Wattled eelpout	4.41	0.024	0.592
7	Greenland turbot	3.68	0.020	0.612
8	Flathead sole	2.75	0.015	0.627
9	Sparse toothed lycod	1.63	0.009	0.636
10	Shortfin eelpout	1.63	0.009	0.645
11	Skate (unidentified)	1.45	0.008	0.653
12	Plain sculpin	1.08	0.006	0.659
13	Longhead dab	1.03	0.006	0.665
14	Arrowtooth flounder	1.02	0.005	0.670
15	Pacific halibut	0.92	0.005	0.675
16	Yellow Irish lord	0.92	0.005	0.680
17	Butterfly sculpin	0.84	0.005	0.685
18	Sculpin (unidentified)	0.73	0.004	0.689
19	*Myoxocephalus* sp.	0.61	0.003	0.692
20	Shorthorn sculpin	0.56	0.003	0.695

a/ Total effort = 1,112.1 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 186.59 kg/ha.

Table 10.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 1.

Rank	Species	CPUE (kg/ha)a/	Proportion of total CPUEb/	Cumulative proportion
1	Yellowfin sole	98.56	0.408	0.408
2	Walleye pollock	31.21	0.129	0.537
3	Pacific cod	22.03	0.091	0.628
4	Rock sole	21.29	0.088	0.716
5	Alaska plaice	4.28	0.018	0.734
6	Longhead dab	3.43	0.014	0.748
7	Pacific halibut	1.98	0.008	0.756
8	Flathead sole	1.82	0.008	0.764
9	Plain sculpin	1.77	0.007	0.771
10	Threaded sculpin	0.66	0.003	0.774
11	Starry flounder	0.49	0.002	0.776
12	Sturgeon poacher	0.45	0.002	0.778
13	Rainbow smelt	0.26	0.001	0.779
14	Arrowtooth flounder	0.20	0.001	0.780
15	Great sculpin	0.19	0.001	0.781
16	Capelin	0.17	0.001	0.782
17	Eelpout (unidentified)	0.12	<0.001	0.782
18	Big skate	0.11	<0.001	0.783
19	Pacific sandfish	0.08	<0.001	0.783
20	Starry skate	0.08	<0.001	0.784

a/ Total effort = 200.9 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 241.45 kg/ha.

Table 11.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 2.

Rank	Species	CPUE (kg/ha)a/	Proportion of total CPUEb/	Cumulative proportion
1	Walleye pollock	26.12	0.202	0.202
2	Pacific cod	17.46	0.135	0.337
3	Yellowfin sole	7.76	0.060	0.397
4	Wattled eelpout	6.40	0.050	0.447
5	Flathead sole	6.33	0.049	0.496
6	Rock sole	5.20	0.040	0.536
7	Arrowtooth flounder	5.05	0.039	0.575
8	Sablefish	3.81	0.030	0.605
9	Yellow Irish lord	2.78	0.022	0.627
10	Skate (unidentified)	2.66	0.021	0.648
11	Starry skate	2.37	0.018	0.666
12	Big skate	2.09	0.016	0.682
13	Pacific halibut	1.66	0.013	0.695
14	Bigmouth sculpin	1.08	0.008	0.703
15	Arctic staghorn sculpin	0.75	0.006	0.709
16	Alaska plaice	0.69	0.005	0.714
17	Greenland turbot	0.66	0.005	0.719
18	Armorhead sculpin	0.56	0.004	0.723
19	Eelpout (unidentified)	0.53	0.004	0.727
20	Searcher	0.32	0.002	0.729

a/ Total effort = 133.2 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined. Total CPUE = 129.11 kg/ha.

Table 12.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 3N.

Rank	Species	CPUE (kg/ha)[a]	Proportion of total CPUE[b]	Cumulative proportion
1	Walleye pollock	57.30	0.317	0.317
2	Pacific cod	20.84	0.115	0.432
3	Greenland turbot	20.36	0.113	0.545
4	Shortfin eelpout	13.69	0.076	0.621
5	Wattled eelpout	11.20	0.062	0.683
6	Flathead sole	7.16	0.040	0.723
7	Skate (unidentified)	2.14	0.012	0.735
8	Thorny sculpin	1.06	0.006	0.741
9	Sparse toothed lycod	0.68	0.004	0.745
10	Sculpin (unidentified)	0.30	0.002	0.747
11	Pacific halibut	0.26	0.001	0.748
12	Snailfish (unidentified)	0.16	0.001	0.749
13	Shorthorn sculpin	0.11	0.001	0.750
14	Butterfly sculpin	0.11	0.001	0.751
15	Arctic cod	0.04	<0.001	0.751
16	Yellow Irish lord	0.04	<0.001	0.751
17	Arrowtooth flounder	0.04	<0.001	0.751
18	Alaska plaice	0.04	<0.001	0.752
19	Great sculpin	0.02	<0.001	0.752
20	Rock sole	0.01	<0.001	0.752

a/ Total effort = 109.9 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 180.65 kg/ha.

Table 13.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 3S.

Rank	Species	CPUE (kg/ha)[a]	Proportion of total CPUE[b]	Cumulative proportion
1	Walleye pollock	48.55	0.256	0.256
2	Pacific cod	27.87	0.147	0.403
3	Wattled eelpout	7.59	0.040	0.443
4	Greenland turbot	4.45	0.023	0.466
5	Skate (unidentified)	4.04	0.021	0.487
6	Rock sole	3.90	0.021	0.508
7	Yellowfin sole	2.75	0.014	0.522
8	Flathead sole	2.69	0.014	0.536
9	Yellow Irish lord	1.92	0.010	0.546
10	Arrowtooth flounder	1.75	0.009	0.555
11	Sculpin (unidentified)	1.40	0.007	0.562
12	Starry skate	1.36	0.007	0.569
13	Alaska plaice	1.01	0.005	0.574
14	Eelpout (unidentified)	0.76	0.004	0.578
15	Pacific halibut	0.56	0.003	0.581
16	Arctic staghorn sculpin	0.53	0.003	0.584
17	Bigmouth sculpin	0.45	0.002	0.586
18	Sparse toothed lycod	0.33	0.002	0.588
19	Shorthorn sculpin	0.31	0.002	0.590
20	Searcher	0.26	0.001	0.591

a/ Total effort = 198.9 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 189.77 kg/ha.

Table 14.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 4N.

Rank	Species	CPUE (kg/ha)[a]	Proportion of total CPUE[b]	Cumulative proportion
1	Yellowfin sole	37.36	0.208	0.208
2	Walleye pollock	24.49	0.137	0.345
3	Pacific cod	19.75	0.110	0.455
4	Alaska plaice	19.13	0.107	0.562
5	Sparse toothed lycod	4.68	0.026	0.588
6	Wattled eelpout	3.66	0.020	0.608
7	*Myoxocephalus* sp.	3.03	0.017	0.625
8	Plain sculpin	2.47	0.014	0.639
9	Sculpin (unidentified)	1.89	0.011	0.650
10	Greenland turbot	1.59	0.009	0.659
11	Butterfly sculpin	1.33	0.007	0.666
12	Rock sole	1.26	0.007	0.673
13	Sturgeon poacher	0.99	0.006	0.679
14	Yellow Irish lord	0.74	0.004	0.683
15	Capelin	0.72	0.004	0.687
16	Longhead dab	0.68	0.004	0.691
17	Shorthorn sculpin	0.65	0.004	0.695
18	Pacific halibut	0.62	0.003	0.698
19	Flathead sole	0.61	0.003	0.701
20	Skate (unidentified)	0.41	0.002	0.703

a / Total effort = 243.6 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined. Total CPUE = 179.17 kg/ha.

Table 15.--Rank order of abundance of the 20 most abundant species of fish taken during the 1980 demersal trawl survey, Subarea 4S.

Rank	Species	CPUE (kg/ha)[a/]	Proportion of total CPUE[b/]	Cumulative proportion
1	Yellowfin sole	83.10	0.421	0.421
2	Walleye pollock	19.57	0.099	0.520
3	Alaska plaice	14.69	0.074	0.594
4	Pacific cod	11.41	0.058	0.652
5	Rock sole	3.87	0.020	0.672
6	Longhead dab	1.66	0.008	0.680
7	Plain sculpin	1.34	0.007	0.687
8	Wattled eelpout	1.31	0.007	0.694
9	Flathead sole	0.80	0.004	0.698
10	Great sculpin	0.79	0.004	0.702
11	Big skate	0.66	0.003	0.705
12	Pacific halibut	0.60	0.003	0.708
13	Skate (unidentified)	0.46	0.002	0.710
14	Yellow Irish lord	0.39	0.002	0.712
15	Sculpin (unidentified)	0.32	0.002	0.714
16	Starry flounder	0.31	0.002	0.716
17	Sturgeon poacher	0.25	0.001	0.717
18	Capelin	0.24	0.001	0.718
19	Sparse toothed lycod	0.23	0.001	0.719
20	Rainbow smelt	0.18	0.001	0.720

a/ Total effort = 192.4 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 197.43 kg/ha.

Table 16.--Rank order of abundance of the 20 most abundant species of. fish taken during the 1980 demersal trawl survey, Subarea 5.

Rank	Species	CPUE (kg/ha)a/	Proportion of total CPUEb/	Cumulative proportion
1	Butterfly sculpin	16.48	0.151	0.151
2	Sparse toothed lycod	16.24	0.149	0.300
3	Shorthorn sculpin	10.27	0.094	0.394
4	Pacific cod	4.82	0.044	0.438
5	Alaska plaice	3.41	0.031	0.469
6	Walleye pollock	2.42	0.022	0.491
7	Greenland turbot	2.35	0.022	0.513
8	Yellowfin sole	1.13	0.010	0.523
9	Flathead sole	1.06	0.010	0.533
10	Plain sculpin	0.71	0.007	0.540
11	Snailfish (unidentified)	0.45	0.004	0.544
12	Polar eelpout	0.34	0.003	0.547
13	Wattled eelpout	0.16	0.001	0.548
14	Arctic cod	0.10	0.001	0.549
15	Capelin	0.08	0.001	0.550
16	Pacific halibut	0.03	<0.001	0.550
17	Skate (unidentified)	0.02	<0.001	0.550
18	Eelpout (unidentified)	0.02	<0.001	0.551
19	*Gymnocanthus* sp.	0.01	<0.001	0.551
20	Prickleback (unidentified)	0.01	<0.001	0.551

a/ Total effort = 33.3 ha.
b/ Proportion of total CPUE, all fish and invertebrates combined.
Total CPUE = 108.98 kg/ha.

values ranging from 26.1 to 57.3 kg/ha, their abundance in inner shelf waters was also relatively high at 19.6-31.2 kg/ha.

Although pollock was one of the highest ranking species, their abundance was believed to be underestimated by the 1980 survey. As indicated in the previous section, the pollock biomass estimate in 1980 was approximately half that in 1979. Evidence from other sources of data, such as from the commercial fishery, demonstrated no change in the relative abundance of pollock between 1979 and 1980 (Bakkala et al. 1983). These authors concluded that the 1980 survey data provided unreliable estimates of-abundance of pollock.

Reasons for the low biomass estimate of pollock in 1980 are unknown, but may be related to their semidemersal distribution. A high proportion (approximately 70%) of the pollock population was found to occupy midwater depths during the 1979 survey (Traynor and Nelson 1983), and this proportion may vary between years. A higher proportion of the population may have occupied the water column above that sampled by the demersal trawls in 1980 compared to other years.

Abundance, Distribution, and Size and Age Composition of Principal Species of Fish

Tables 17-34 and Figures 12-39 show findings from the 1980 summer survey for each of the principal commercially important species of demersal fish. The tables and figures will illustrate for the overall survey area and for individual subareas the abundance in terms of CPUE, biomass and population numbers, and geographical distribution. They also show length distribution and mean size of each species. Where available , the age distribution of the populations will also be shown.

Additional biological data are presented in the appendices.

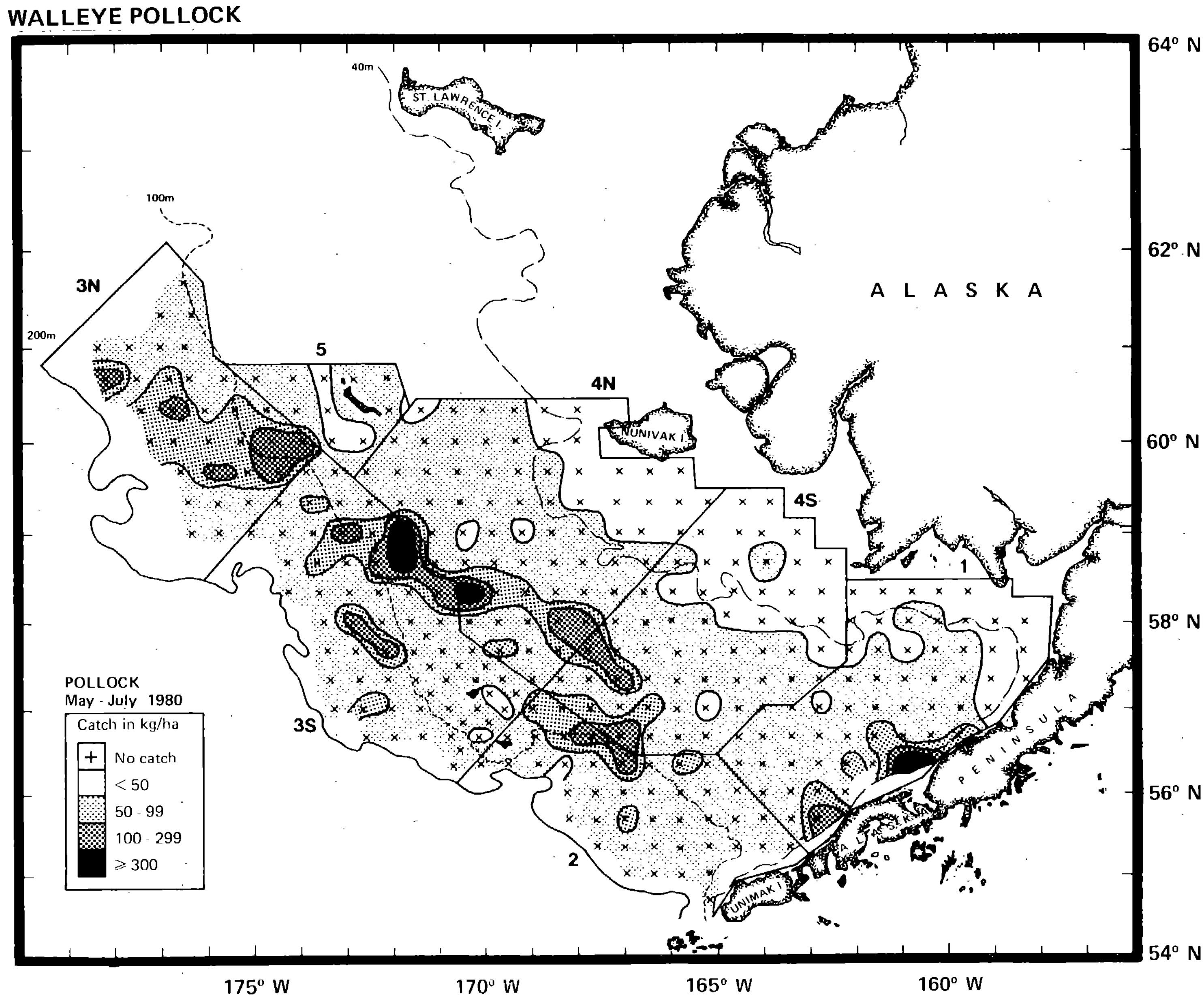

Figure 12.--Distribution and relative abundance of walleye pollock during the 1980 survey.

Table 17.--Abundance estimates and mean size of walleye pollock by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^6)	Proportion of total estimated population	Mean size per individual Weight (kg)	Mean size per individual Length (cm)
1	31.21	260,180	0.172	636	0.107	0.409	38.36
2	26.12	159,222	0.106	540	0.091	0.295	33.14
3N	57.30	318,738	0.211	1,237	0.207	0.258	27.75
3S	48.55	382,223	0.253	1,917	0.321	0.199	26.08
4N	24.49	225,045	0.149	1,130	0.189	0.199	22.50
4S	19.57	159,523	0.106	458	0.077	0.348	34.72
5	2.42	3,718	0.002	48	0.008	0.077	15.66
All subareas combined[b]	32.27	1,508,650		5,966		0.253	28.27
95% confidence interval		1,084,854-1,932,445					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

WALLEYE POLLOCK

Table 18.--Estimated population size of walleye pollock age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
0	1980	0.40	-	2.35	0.02	29.46	3.40	3.24	38.86	0.0065
1	1979	5.67	0.61	436.24	799.74	737.15	23.43	41.21	2,044.04	0.3426
2	1978	27.28	260.67	259.12	472.05	48.51	163.30	0.41	1,231.35	0.2064
3	1977	333.26	147.61	285.26	367.02	133.23	114.11	0.46	1,380.95	0.2314
4	1976	140.54	34.67	85.16	87.79	32.41	40.46	0.17	421.20	0.0706
5	1975	77.89	45.03	75.85	80.65	47.20	43.83	0.69	371.14	0.0622
6	1974	30.44	25.01	40.07	44.23	34.85	27.40	0.67	202.66	0.0340
7	1973	8.15	9.96	16.64	19.29	17.68	11.96	0.33	84.02	0.0141
8	1972	5.28	7.94	14.74	19.42	20.86	12.71	0.54	81.48	0.0137
9	1971	2.78	3.39	8.71	11.39	11.19	6.54	0.25	44.24	0.0074
10	1970	2.36	3.09	6.81	8.36	9.43	5.59	0.20	35.85	0.0060
11	1969	1.10	0.99	3.26	3.69	4.39	2.50	0.11	16.06	0.0027
12	1968	0.69	0.80	2.14	2.51	3.02	1.83	0.06	11.06	0.0019
13	1967	0.11	0.13	0.27	0.37	0.60	0.29	0.02	1.79	0.0003
14	1966	0.08	0.09	0.32	0.36	0.41	0.22	0.01	1.48	0.0002
15	1965	0.05	0.01	0.09	0.04	0.06	0.23	<0.01	0.48	<0.0001
All ages combined[a]		636.10	540.02	1,237.02	1,916.91	1,130.45	457.79	48.36	5,966.65	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

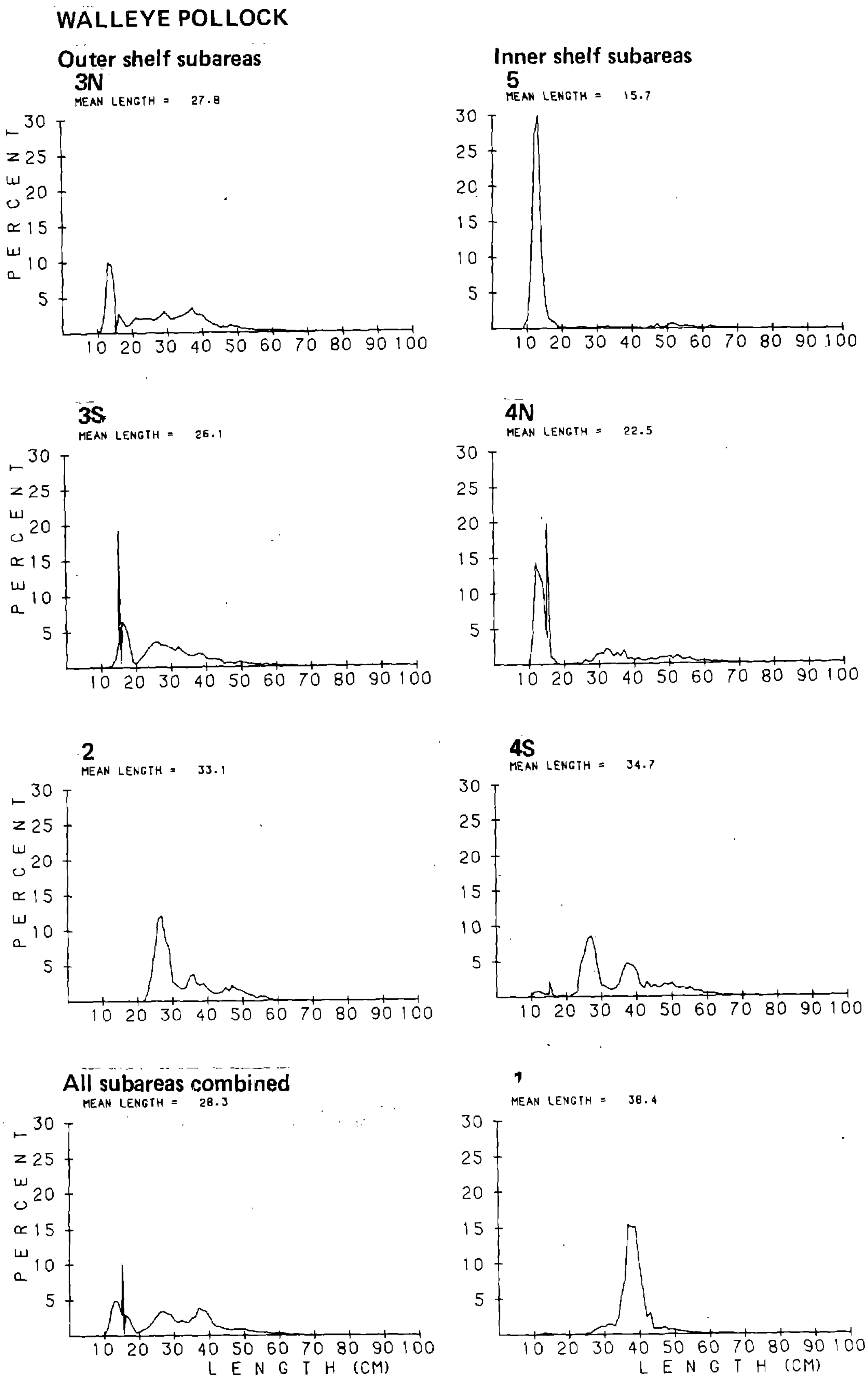

Figure 13.--Size composition of walleye pollock (sexes combined) taken during the 1980 survey by subarea and subareas combined.

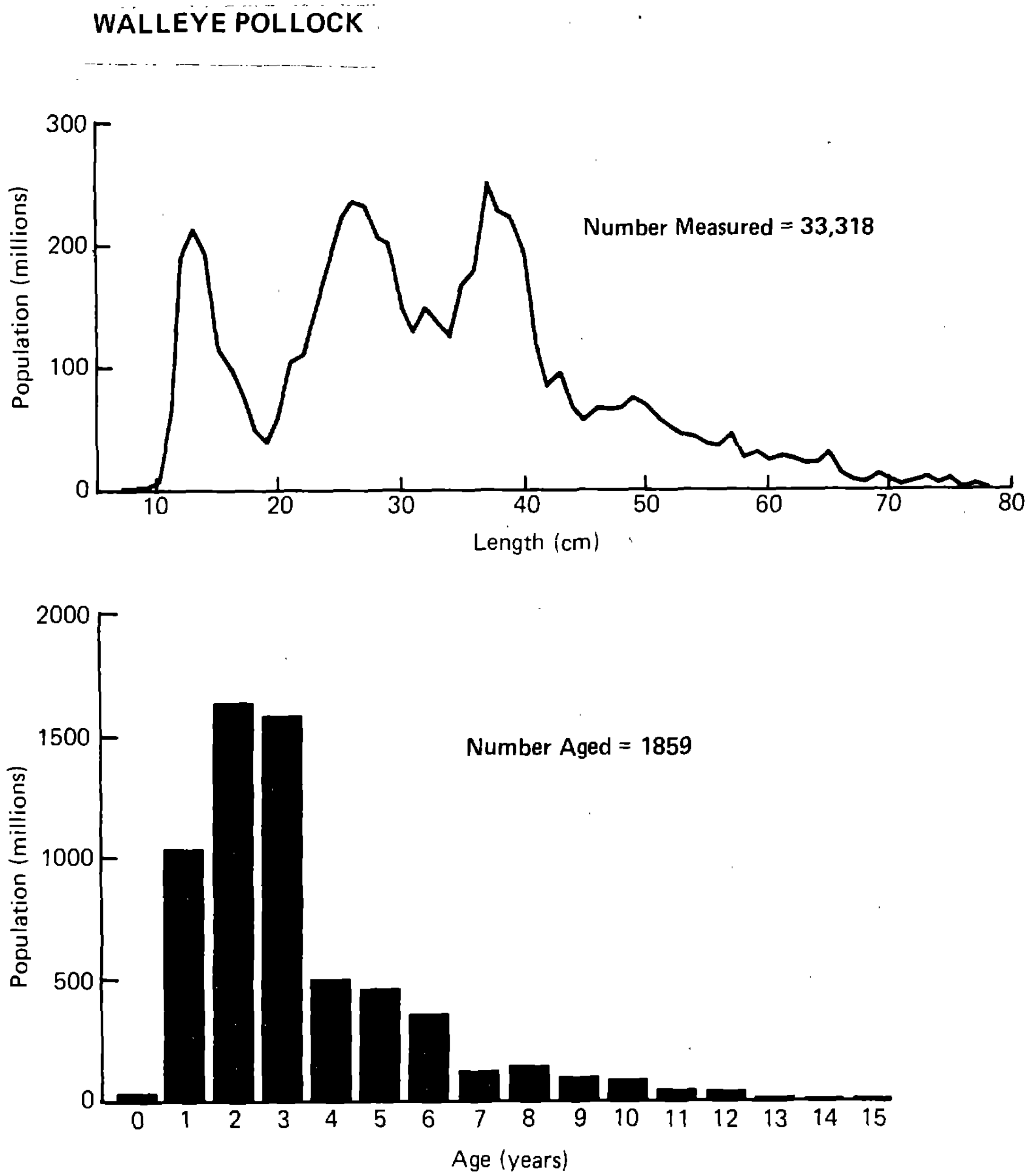

Figure 14.--Length and age composition of walleye pollock (sexes combined) from the overall survey area in 1980.

PACIFIC COD

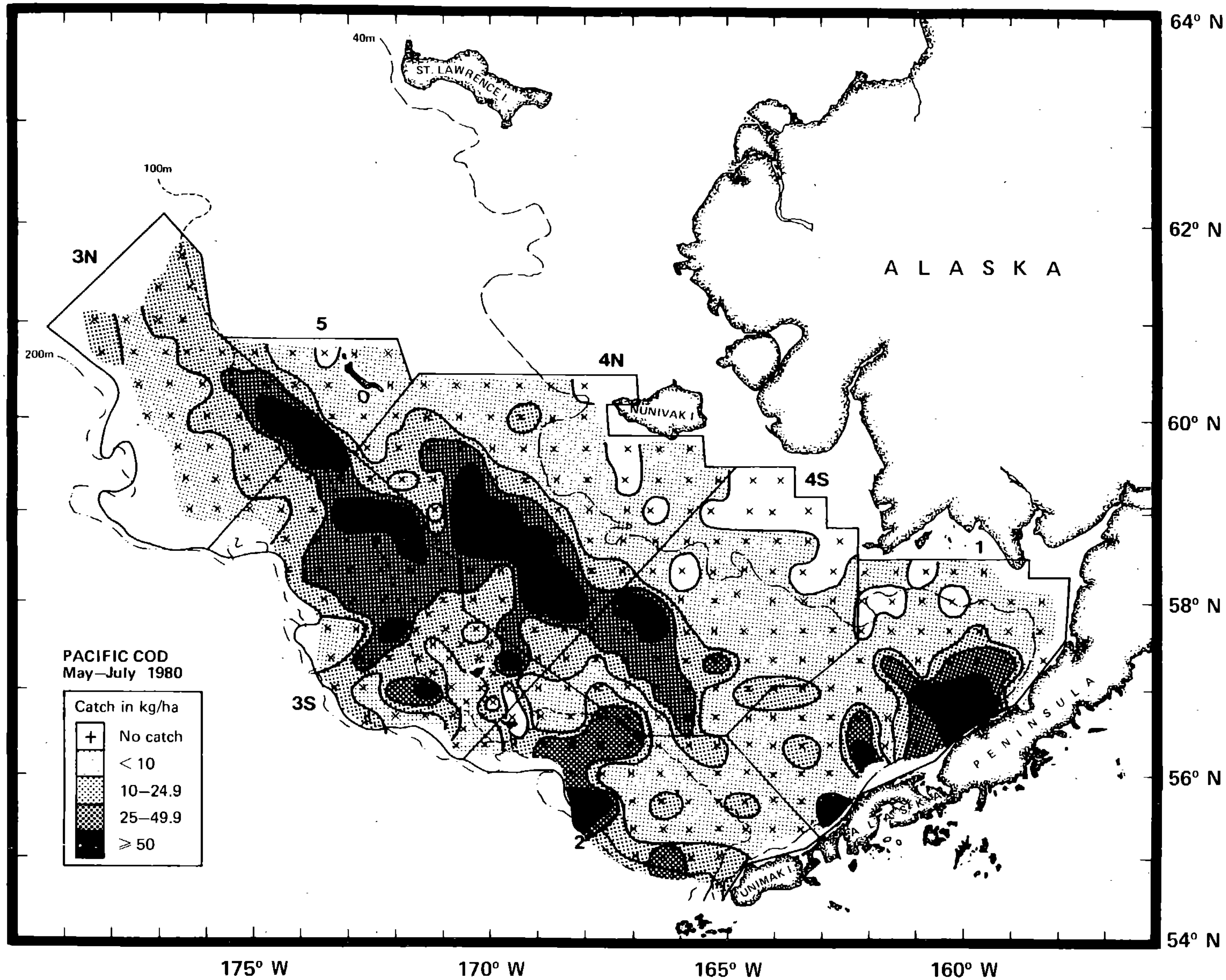

Figure 15.--Distribution and relative abundance of Pacific cod during the 1980 survey.

PACIFIC COD

Table 19.--Abundance estimates and mean size of Pacific cod by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^6)	Proportion of total estimated population	Mean size per individual Weight (kg)	Length (cm)
1	22.03	183,623	0.202	286	0.260	0.643	39.58
2	17.46	106,440	0.117	59	0.054	1.812	52.53
3N	20.84	115,912	0.128	131	0.119	0.883	41.70
3S	27.87	219,422	0.242	194	0.176	1.132	44.85
4N	19.75	181,498	0.200	288	0.262	0.630	38.13
4S	11.41	93,027	0.103	124	0.113	0.752	41.11
5	4.82	7,400	0.008	19	0.017	0.381	32.73
All subareas combined[b]	19.41	907,323		1,101		0.824	41.12
95% confidence interval		728,560-1,086,087					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas arid totals due to rounding.

PACIFIC COD

Table 20.--Estimated population size and mean length of Pacific cod age groups for all subareas combined (millions of fish).

Age	Year class	Population number	Proportion of total	Mean length at age (cm)
1	1979	42.61	0.0387	18.9
2	1978	441.23	0.4008	36.0
3	1977	476.17	0.4326	43.9
4	1976	93.32	0.0848	51.4
5	1975	30.87	0.0280	57.3
6	1974	6.49	0.0059	62.5
7	1973	2.07	0.0019	65.6
8	1972	3.26	0.0030	69.8
9	1971	3.43	0.0031	74.5
≥10	-	1.37	0.0012	81.2
All ages combined		1,100.82		41.1

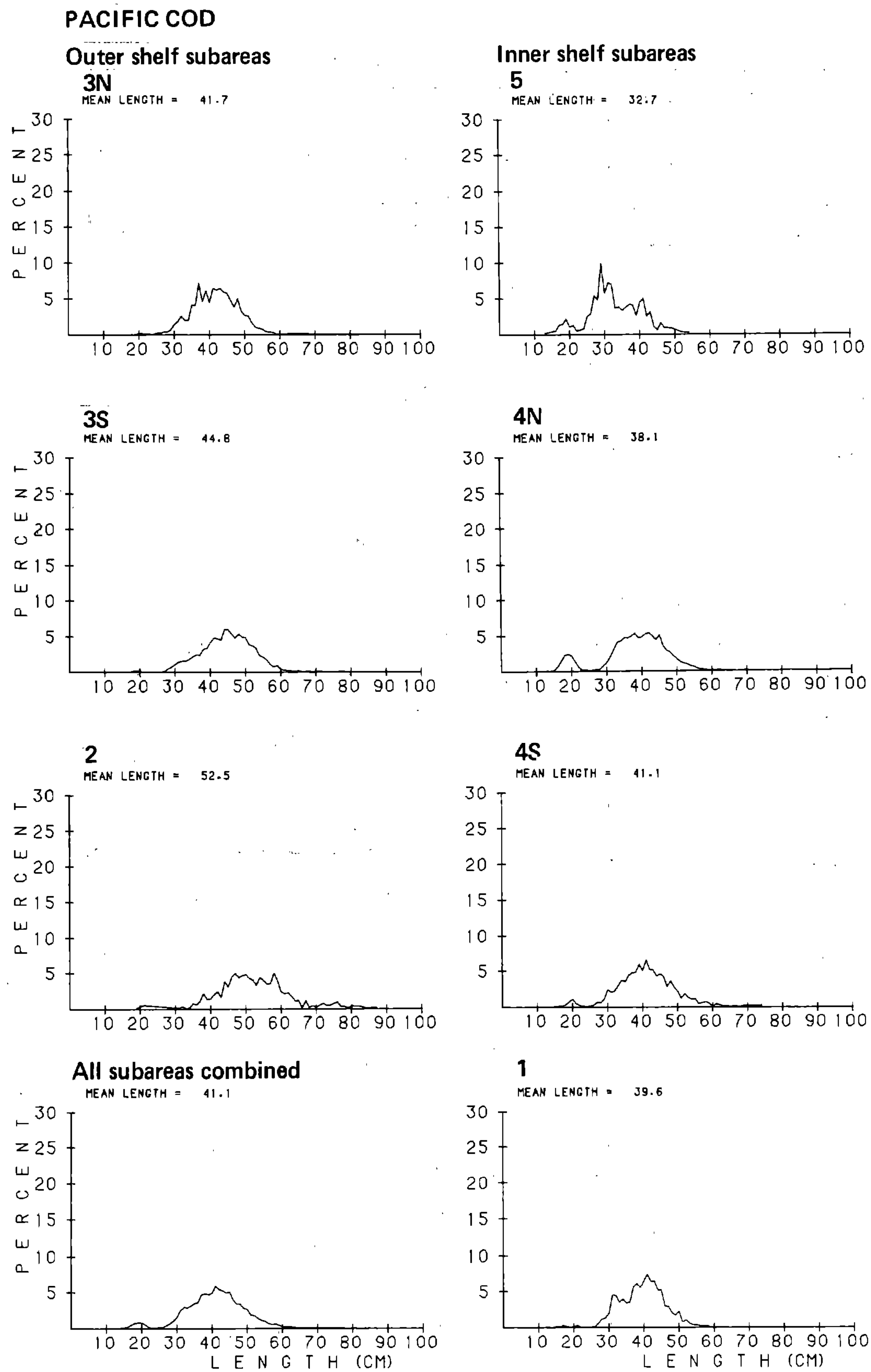

Figure 16.--Size composition of Pacific cod (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

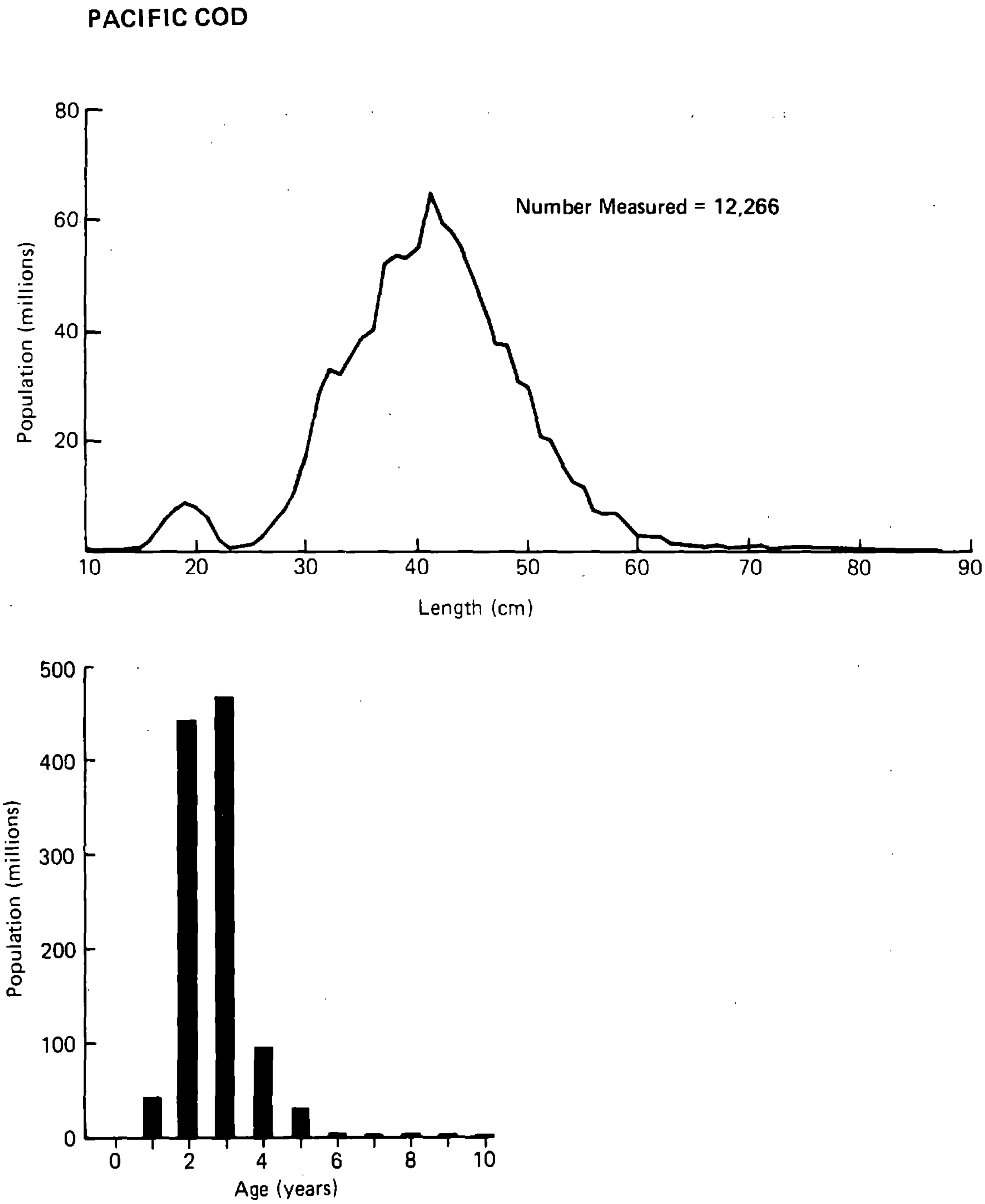

Figure 17.--Length and age composition of Pacific cod (sexes combined) from the overall survey area in 1980.

SABLEFISH

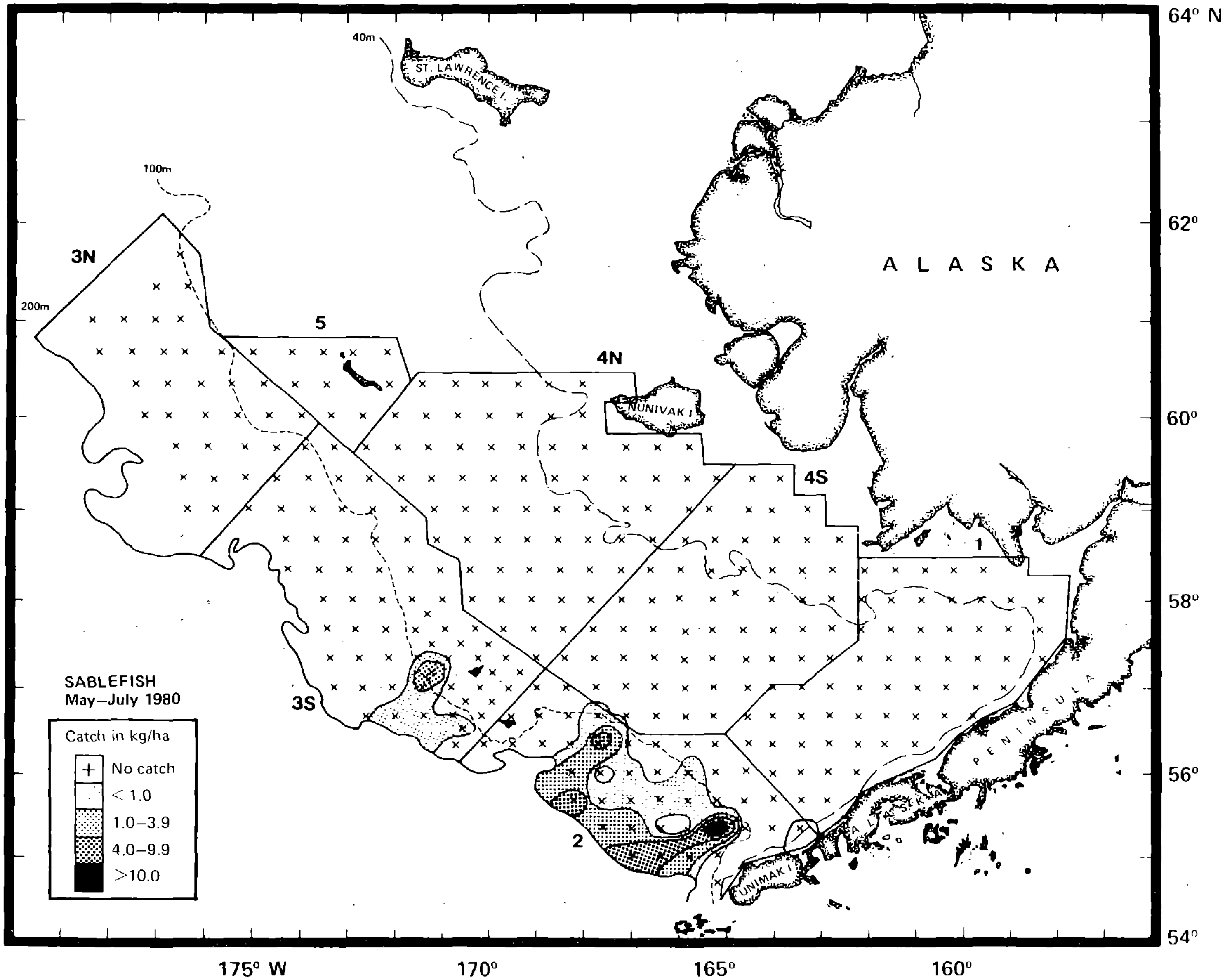

Figure 18.--Distribution and relative abundance of sablefish during the 1980 survey.

SABLEFISH

Table 21.--Abundance estimates and mean size of sablefish by subarea and subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual Weight (kg)	Mean size per individual Length (cm)
1	0	0	0	0	0	-	-
2	3.81	23,239	0.987	19,473	0.984	1.193	50.36
3N	0	0	0	0	0	-	-
3S	0.03	268	0.011	271	0.014	0.992	56.00
4N	0	0	0	0	0	-	-
4S	<0.01	30	0.001	43	0.002	0.680	53.00
5	0	0	0	0	0	-	-
All subareas combined[b]	0.50	23,538		19,788		1.190	50.41
95% confidence interval		0-62,772					

a/ CPUE = catch per unit effort.
b/ Minor discrepancies between sums over subareas and totals due to rounding.

SABLEFISH

Table 22.--Estimated population size of sablefish age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
≤2	-	-	0.28	-	-	-	-	-	0.28	0.0142
3	1977	-	15.26	-	0.05	-	0.02	-	15.34	0.7799
4	1976	-	3.42	-	0.10	-	0.02		3.54	0.1800
≥5	-	-	0.52	-	-				0.52	0.0264
All ages combined[a]			19.47		0.15	-	0.04	-	19.67[b]	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

b/ Total population number differs from that given in Table 21 because of the absence of length-frequency data in subarea 3S with which to calculate population numbers by age.

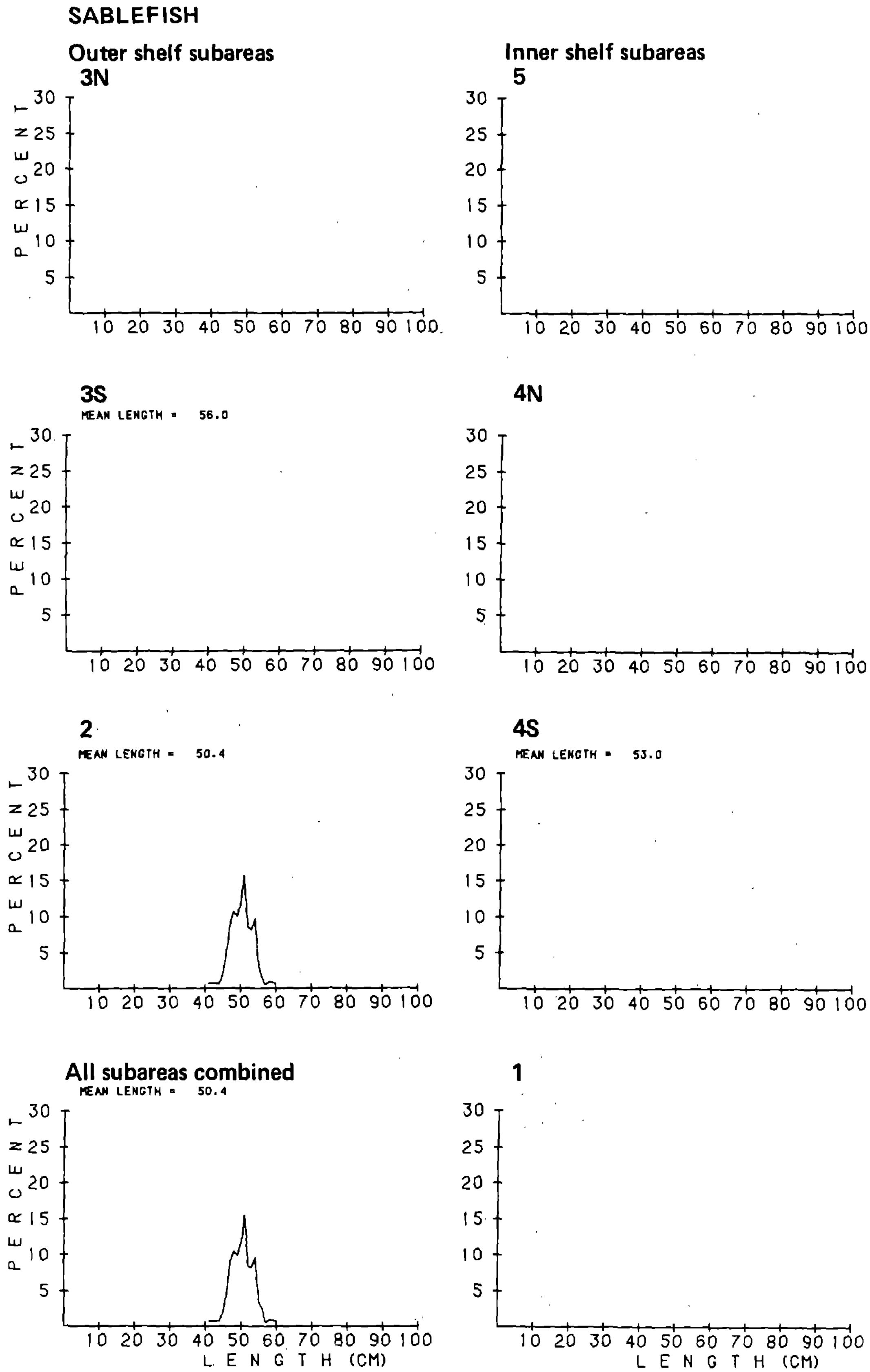

Figure 19.--Size composition of sablefish (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

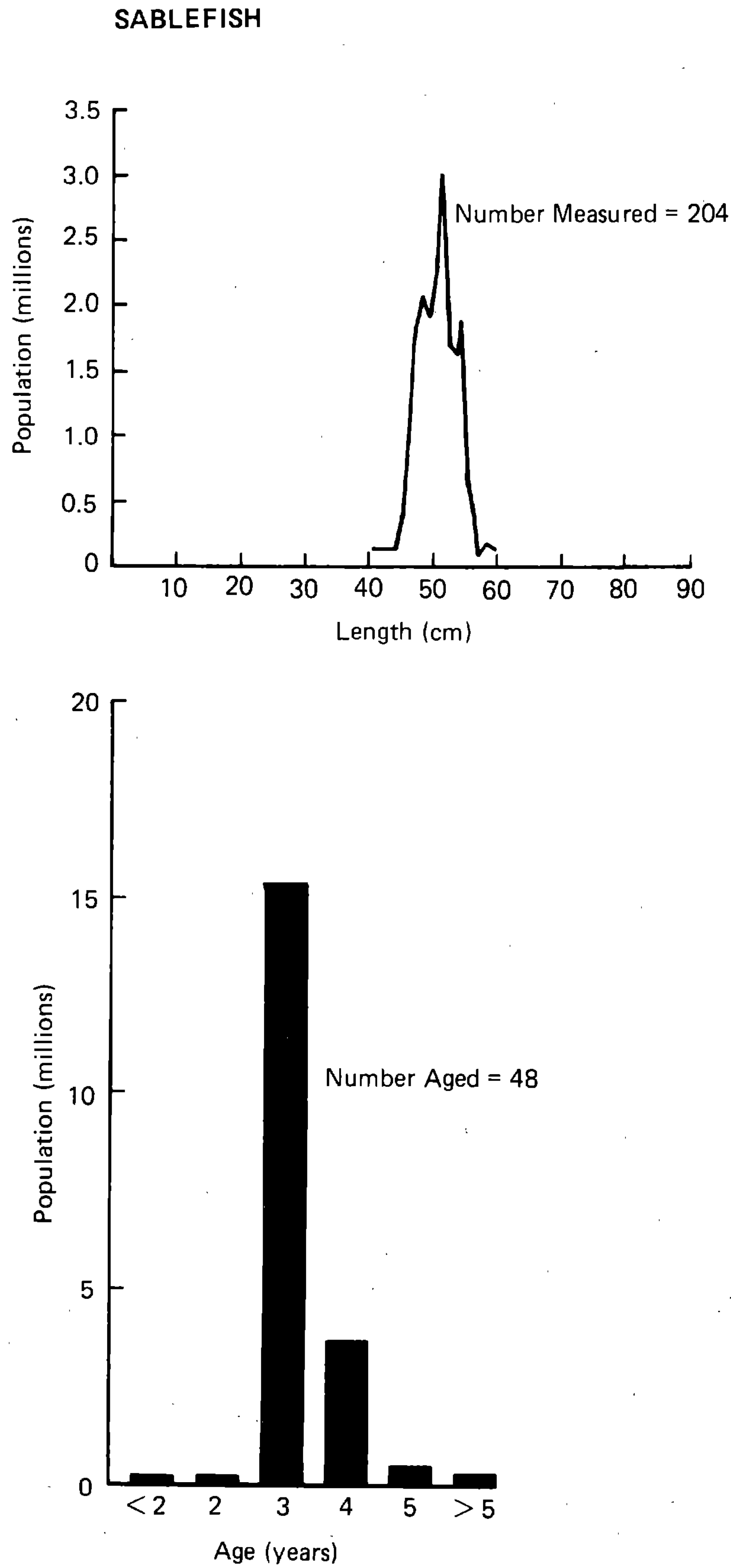

Figure 20.--Length and age composition of sablefish (sexes combined) from the overall survey area in 1980.

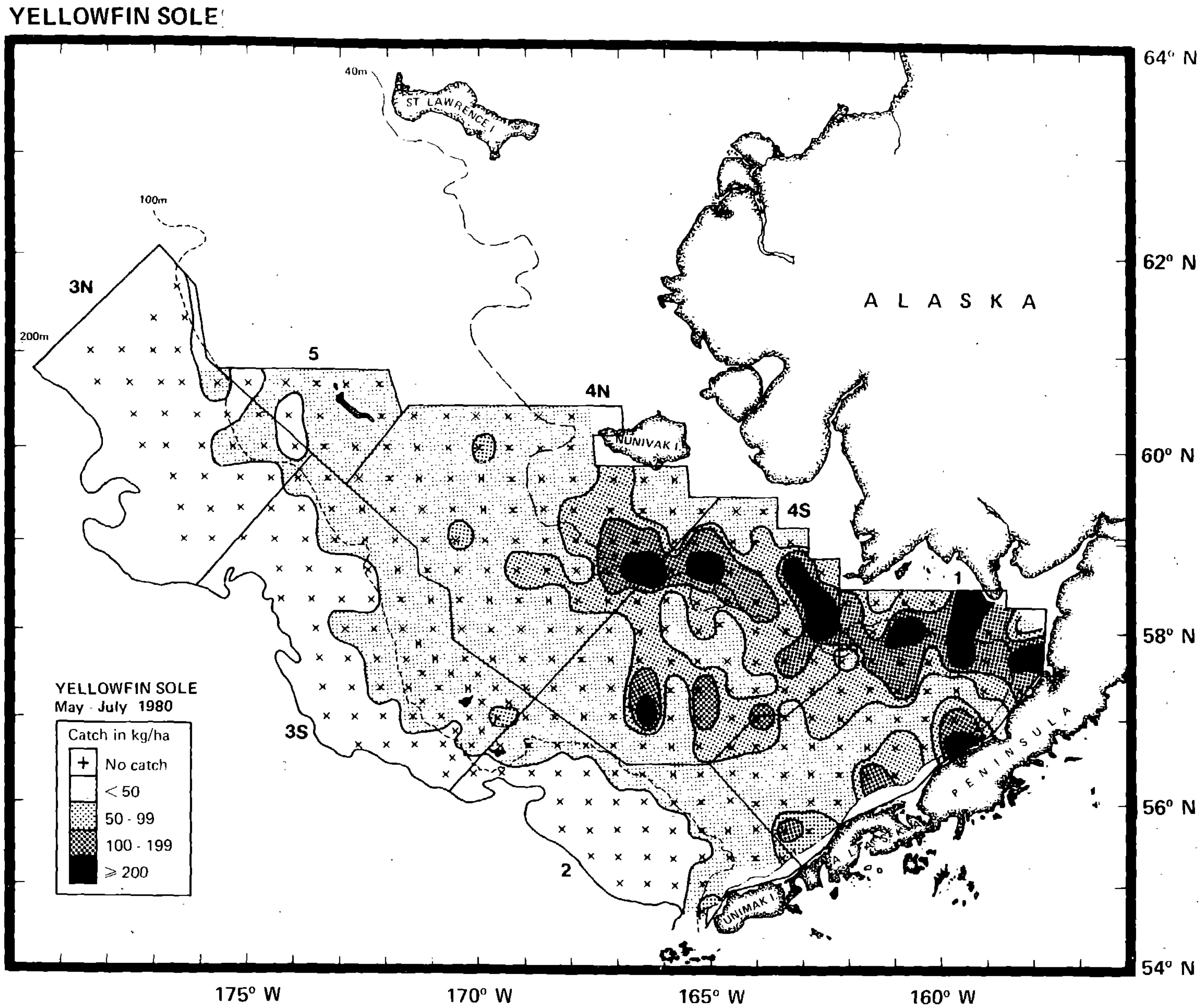

Figure 21 .--Distribution and relative abundance of yellowfin sole during the 1980 survey.

YELLOWFIN SOLE

Table 23.--Abundance estimates of yellowfin sole by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (x 10^6)	Proportion of total estimated population	Mean size per individual Weight (kg)	Length (cm)
1	98.56	821,490	0.429	5,879	0.457	0.140	23.35
2	7.76	47,321	0.025	241	0.019	0.197	25.98
3N	<0.01	24	<0.001	<1	<0.001	0.107	30.06
3S	2.75	21,649	0.011	86	0.007	0.251	27.09
4N	37.36	343,291	0.179	2,332	0.181	0.147	22.13
4S	83.10	677,458	0.354	4,314	0.335	0.157	23.03
5	1.13	1,742	0.001	8	0.001	0.225	26.32
All subareas combined[b]	40.92	1,912,976		12,860		0.149	23.09
95% confidence interval		1,593,360-2,232,593					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

YELLOWFIN SOLE

Table 24.--Estimated population. size of yellowfin sole age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
≤2	-	9.64	-	-	-	4.31	10.34	-	24.30	0.0019
3	1977	36.71	-	-	-	53.11	93.12	-	182.94	0.0142
4	1976	157.98	0.15	-	<0.01	202.47	303.67	-	664.27	0.0517
5	1975	450.42	5.25	-	0.34	270.45	379.60	0.02	1,106.08	0.0860
6	1974	793.37	17.84	-	2.34	341.01	499.51	0.27	1,654.34	0.1286
7	1973	1,142.35	34.51	0.02	7.40	414.56	672.06	0.89	2,271.80	0.1767
8	1972	457.39	16.03	0.01	4.71	132.64	262.77	0.61	874.15	0.0680
9	1971	574.67	24.34	0.02	9.46	165.23	361.58	0.95	1,136.25	0.0884
10	1970	740.48	36.71	0.04	15.65	218.81	507.97	1.43	1,521.10	0.1183
11	1969	583.63	34.20	0.03	14.81	180.17	423.46	1.26	1,237.56	0.0962
12	1968	512.15	36.33	0.02	16.96	172.74	413.19	1.23	1,152.63	0.0896
13	1967	270.43	21.76	0.02	9.64	105.31	240.24	0.69	648.09	0.0504
14	1966	99.25	8.18	<0.01	3.08	40.42	84.83	0.24	236.01	0.0184
15	1965	24.96	2.71	0.01	1.03	14.72	29.48	0.07	72.98	0.0057
16	1964	11.98	1.36	0.01	0.48	7.65	14.67	0.03	36.18	0.0028
17	1963	8.44	0.75	0.01	0.34	3.88	9.59	0.02	23.04	0.0018
18	1962	3.00	0.40	0.01	0.08	2.84	5.36	<0.01	11.70	0.0009
19	1961	0.59	0.08	0.01	0.02	1.05	1.50	<0.01	3.25	0.0003
21	1959	0.07	-	-	<0.01	0.29	0.54	-	0.90	0.0001
24	1958	1.27	-	-	-	0.03	0.68	-	1.98	0.0002
All ages combined[a]		5,878.77	240.61	0.22	86.34	2,331.69	4,314.18	7.73	12,859.55	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

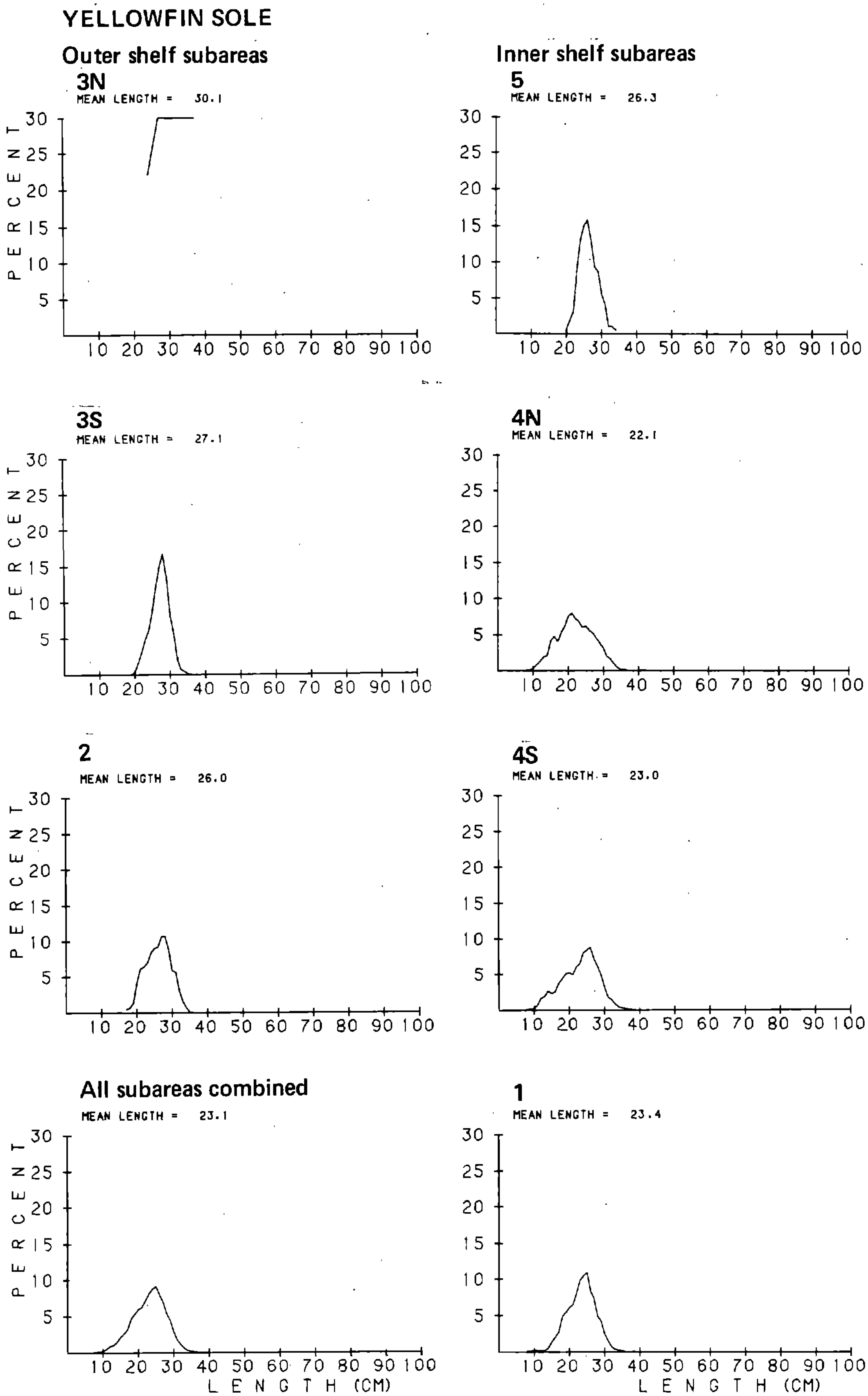

Figure 22. --Size composition of yellow-fin sole (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

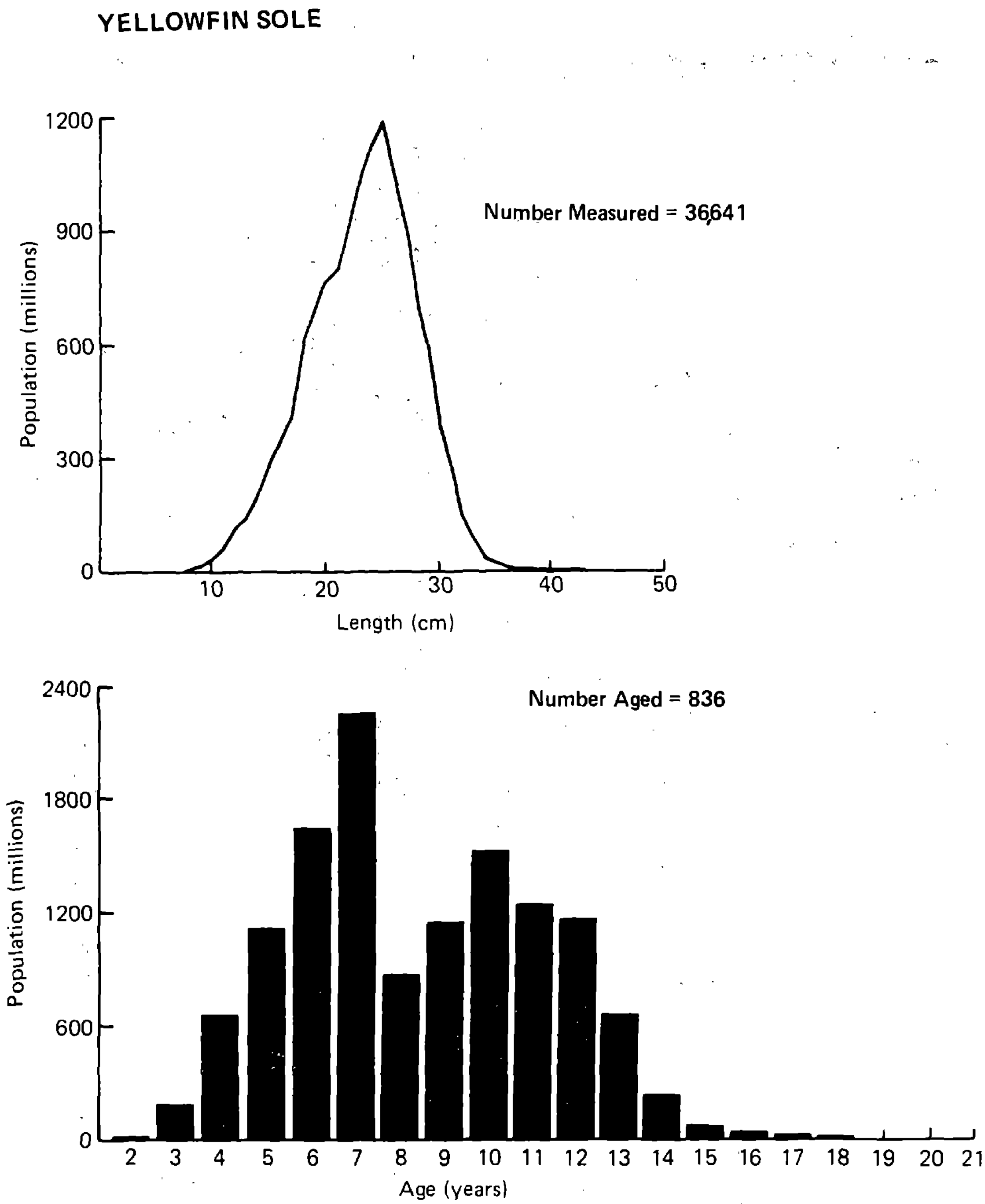

Figure 23.--Length and age composition of yellowfin sole (sexes combined) from the overall survey area in 1980.

ROCK SOLE

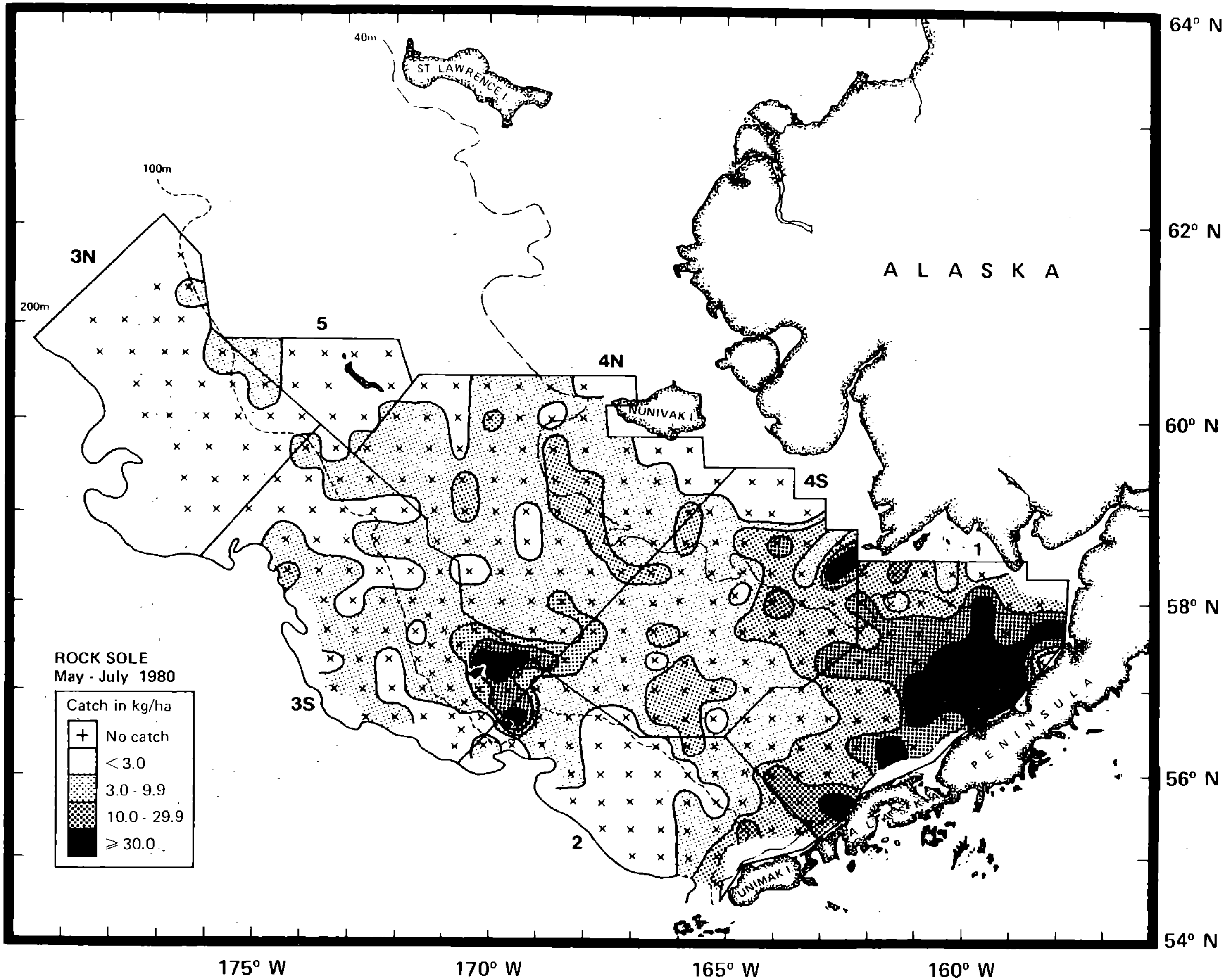

Figure 24.--Distribution and relative abundance of rock sole during the 1980 survey.

ROCK SOLE

Table 25.--Abundance estimates of rock sole by subarea and subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^6)	Proportion of total estimated population	Mean size per individual Weight (kg)	Length (cm)
1	21.29	177,450	0.627	1,153	0.797	0.154	22.31
2	5.20	31,676	0.112	92	0.064	0.345	29.62
3N	0.01	83	<0.001	<1	<0.001	0.354	-
3S	3.90	30,680	0.108	71	0.049	0.432	31.92
4N	1.26	11,593	0.041	27	0.019	0.432	36.11
4S	3.87	31,526	0.111	104	0.072	0.302	28.63
5	<0.01	6	<0.001	<1	<0.001	0.136	-
All subareas combined[b]	6.05	283,014		1,447		0.196	23.87
95% confidence interval		187,880-378,148					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

ROCK SOLE

Table 26.--Estimated population size of rock sole age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
≤2	-	53.12	0.12	-	0.01	-	0.06	-	53.30	0.0368
3	1977	203.82	1.87	-	0.22	-	4.52	-	210.43	0.1454
4	1976	123.65	1.18	-	0.04	-	2.49	-	127.36	0.0880
5	1975	266.28	9.01	-	2.19	0.06	19.02	-	296.56	0.2049
6	1974	134.43	5.66	-	1.55	-	10.78	-	152.43	0.1053
7	1973	87.86	8.87	-	6.39	0.33	10.81	-	114.26	0.0790
8	1972	49.18	6.53	-	5.47	0.57	6.51	-	68.26	0.0472
9	1971	44.17	7.80	-	5.20	0.90	5.46	-	63.54	0.0439
10	1970	84.12	21.12	-	19.57	6.98	15.39	-	147.19	0.1017
11	1969	48.10	13.94	-	12.60	5.36	9.44	-	89.44	0.0618
12	1968	22.94	7.96	-	7.68	3.03	5.70	-	47.31	0.0327
13	1967	11.73	2.87	-	3.74	3.40	5.28	-	27.02	0.0187
14	1966	14.11	3.31	-	4.15	4.35	5.27	-	31.20	0.0216
15	1965	6.88	1.19	-	1.73	1.40	2.58	-	13.78	0.0095
≥16	-	2.35	0.50	-	0.60	0.43	1.18	-	5.06	0.0035
All ages combined[a]		1,152.75	91.94	-	71.13	26.82	104.50	-	1,447.14	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

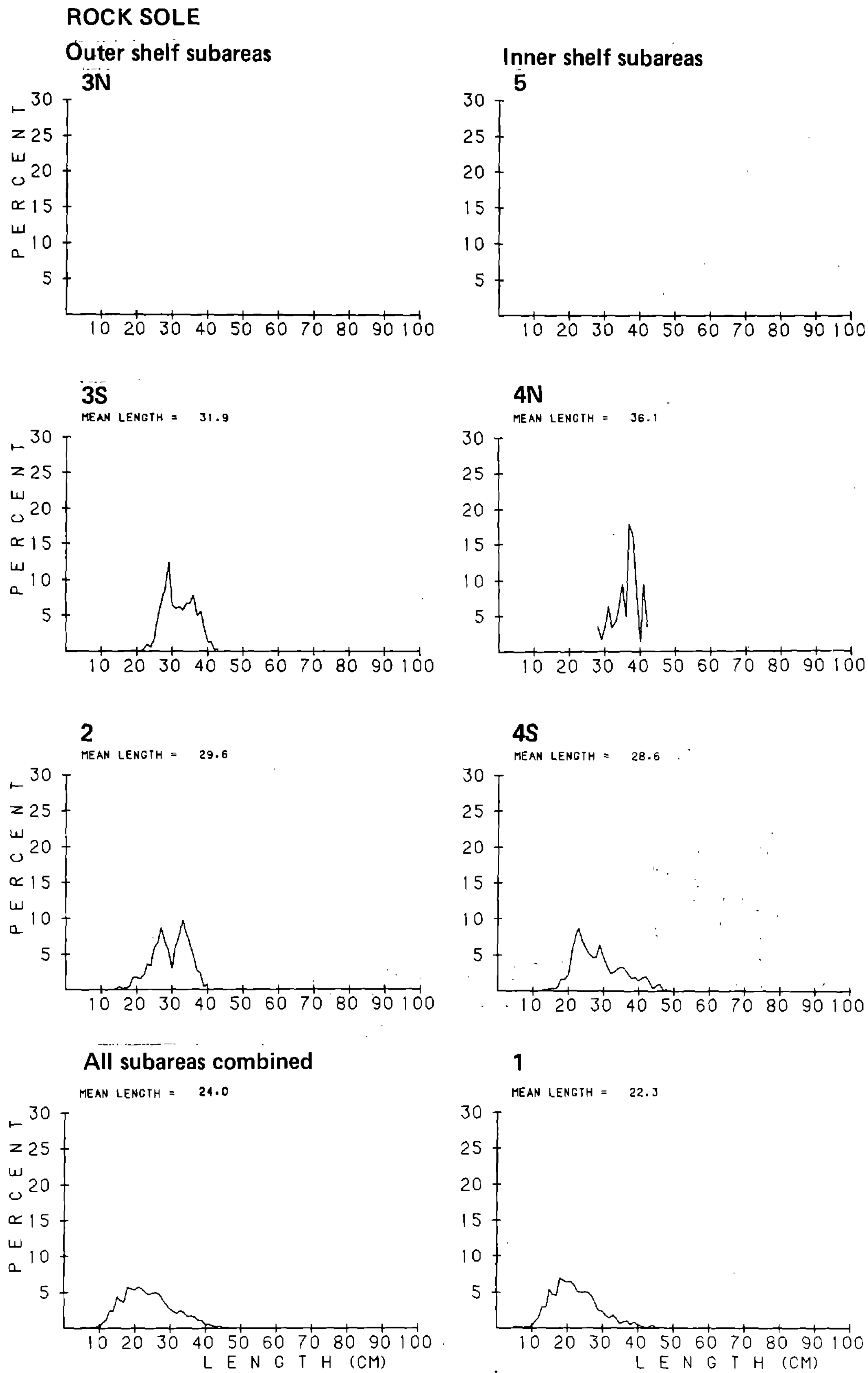

Figure 25.--Size composition of rock sole (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

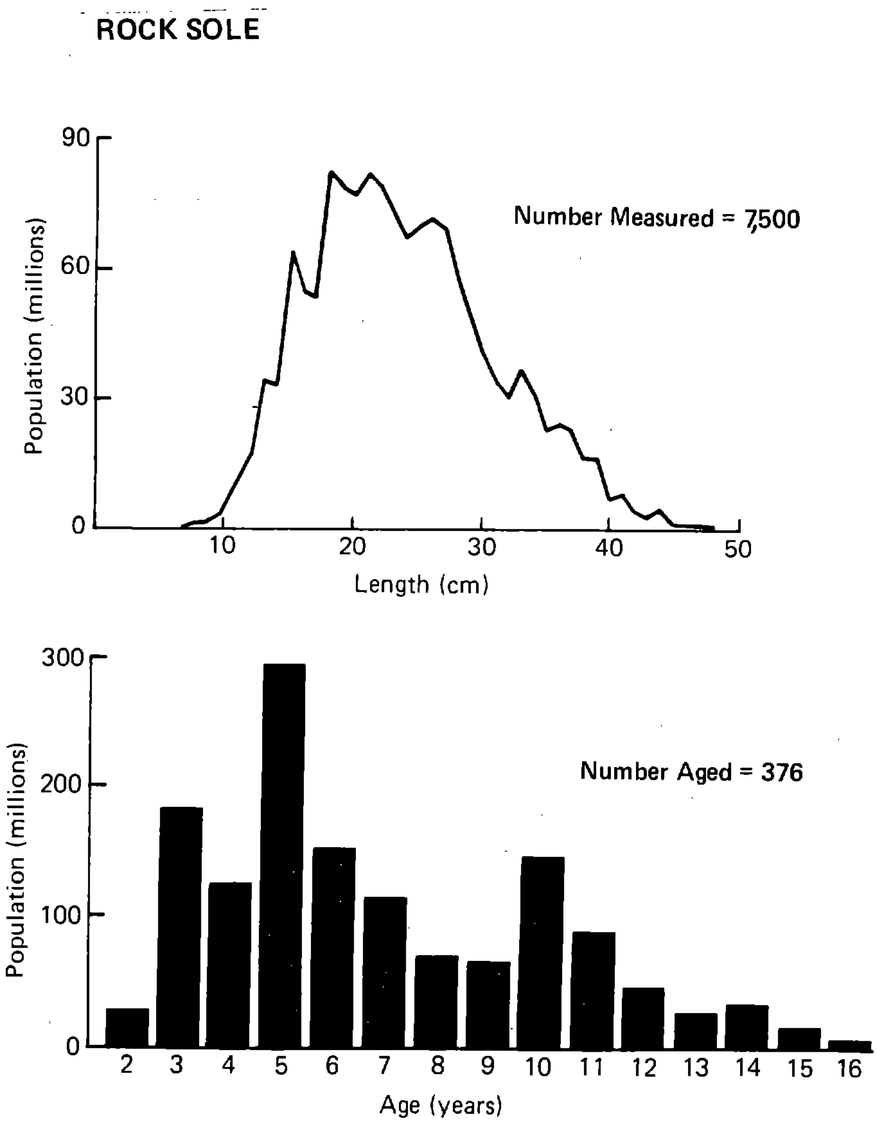

Figure 26.--Length and age composition of rock sole (sexes combined) from the overall survey area in 1980.

FLATHEAD SOLE

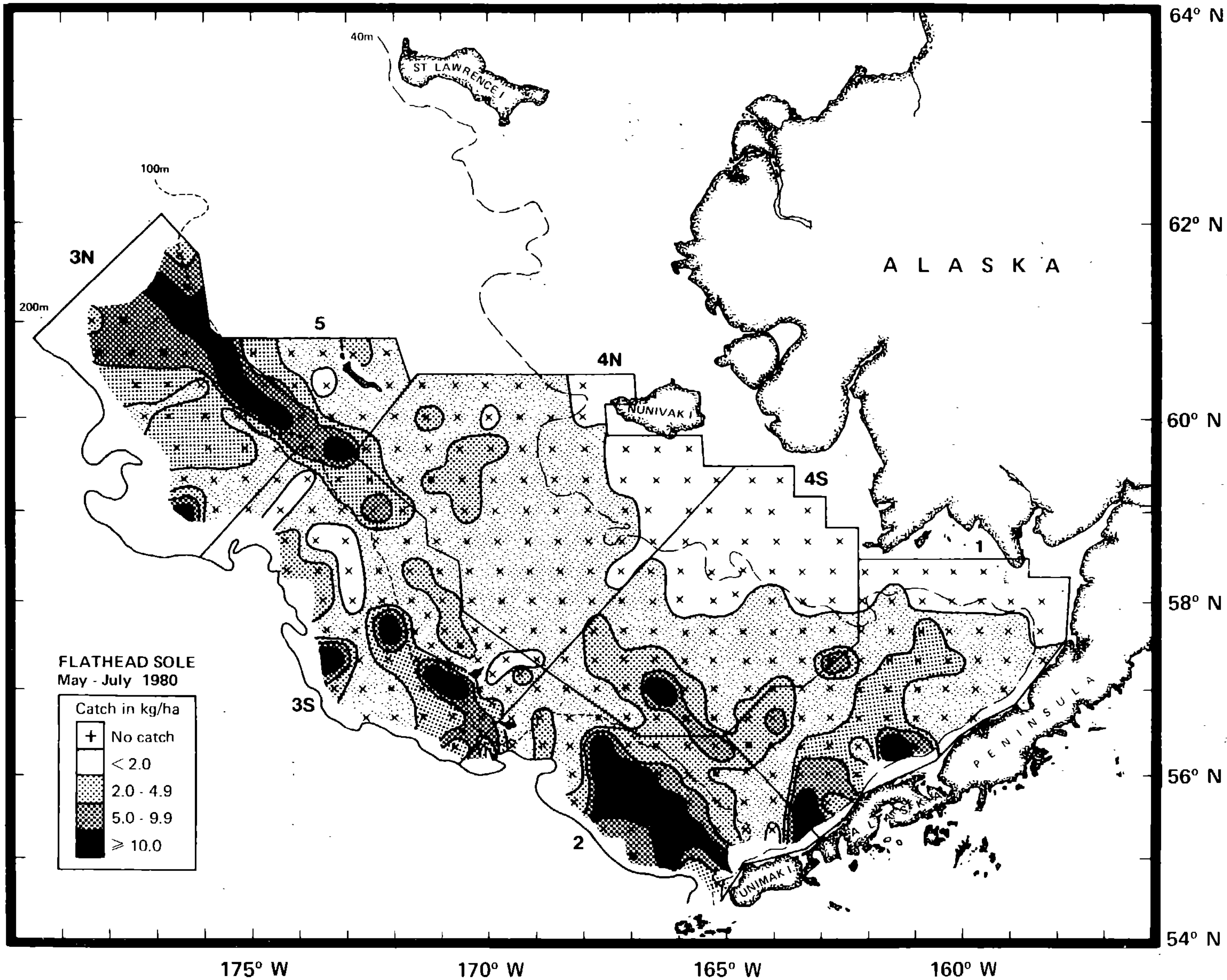

Figure 27.--Distribution and relative abundance of flathead sole during the 1980 survey.

FLATHEAD SOLE

Table 27.--Abundance estimates of flathead sole by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a/] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual: Weight (kg)	Mean size per individual: Length (cm)
1	1.82	15,135	0.118	90,959	0.120	0.166	26.26
2	6.33	38,611	0.301	264,888	0.350	0.146	24.26
3N	7.16	39,805	0.310	210,103	0.278	0.189	26.06
3S	2.69	21,146	0.165	127,004	0.168	0.166	25.70
4N	0.61	5,585	0.043	27,001	0.036	0.207	28.25
4S	0.80	6,496	0.051	27,418	0.036	0.237	27.92
5	1.06	1,625	0.013	9,148	0.012	0.178	24.08
All subareas combined[b/]	2.75	128,403		756,521		0.170	25.53
95% confidence interval		103,891-152,914					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

FLATHEAD SOLE

Table 28.--Estimated population size of flathead sole age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
≤2	-	0.28	20.76	3.15	10.88	0.13	0.17	0.35	35.72	0.0472
3	1977	5.07	59.13	21.36	21.24	1.82	2.53	1.89	113.04	0.1494
4	1976	18.01	36.09	30.61	13.27	3.55	4.27	1.78	107.58	0.1422
5	1975	13.48	21.06	21.92	8.45	2.28	2.77	0.96	70.92	0.0937
6	1974	9.29	13.01	20.52	7.43	1.84	1.61	0.54	54.24	0.0717
7	1973	5.43	11.52	16.95	6.56	1.66	1.15	0.42	43.68	0.0577
8	1972	7.56	13.97	19.26	7.60	2.18	1.67	0.58	52.81	0.0698
9	1971	12.62	29.04	31.33	14.74	3.73	3.60	1.04	96.10	0.1270
10	1970	2.48	11.32	8.12	5.57	1.59	1.29	0.30	30.68	0.0406
11	1969	3.44	12.71	7.58	8.13	2.08	1.77	0.23	35.94	0.0475
12	1968	5.53	14.67	12.34	8.47	2.29	2.20	0.48	45.99	0.0608
13	1967	4.48	9.24	9.53	5.98	1.68	1.52	0.28	32.71	0.0432
14	1966	0.98	5.37	3.11	3.12	0.76	0.72	0.09	14.15	0.0187
15	1965	1.36	3.49	3.42	2.38	0.53	0.81	0.11	12.10	0.0160
16	1964	0.20	1.17	0.29	1.20	0.29	0.37	0.04	3.56	0.0047
17	1963	0.13	0.75	0.10	0.58	0.21	0.30	0.03	2.10	0.0028
18	1962	0.52	1.35	0.48	1.15	0.34	0.38	0.01	4.24	0.0056
19	1961	-	0.12	0.01	0.17	0.05	0.10	0.02	0.47	0.0006
≥20	-	0.09	0.13	-	0.06	-	0.21	-	0.49	0.0006
All ages combined[a]		90.96	264.89	210.10	127.00	27.00	27.42	9.15	756.52	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

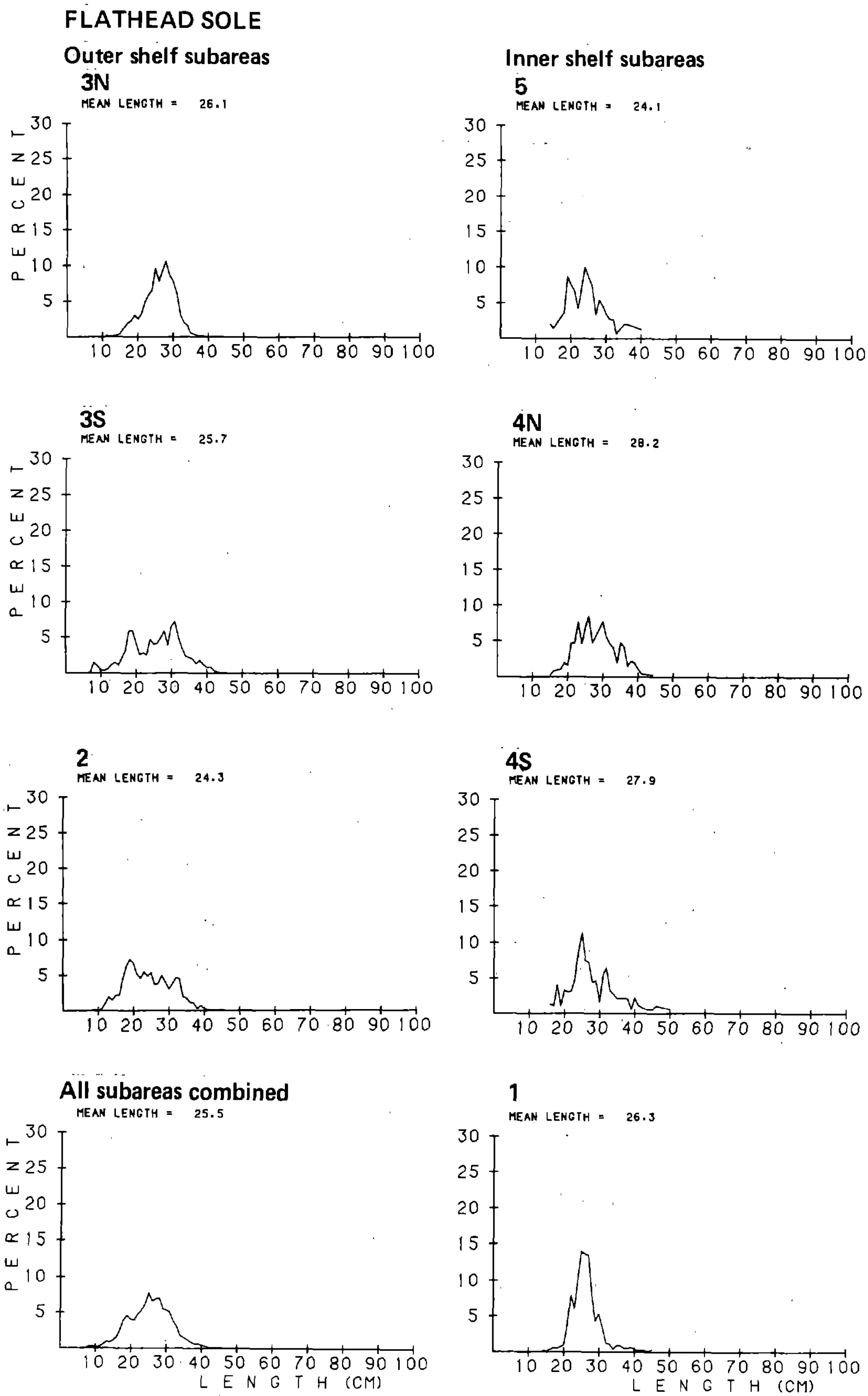

Figure 28.--Size composition of flathead sole (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

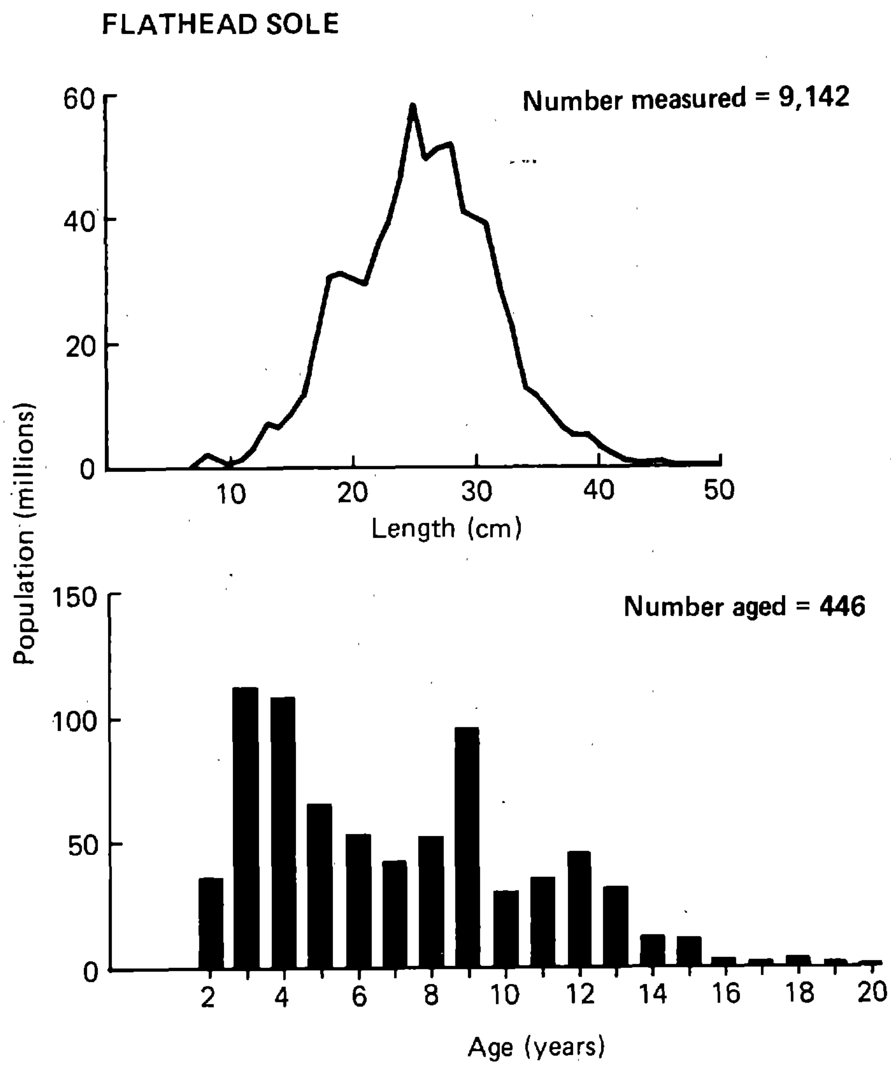

Figure 29.--Length and age composition of flathead sole (sexes combined) from the overall survey area in 1980.

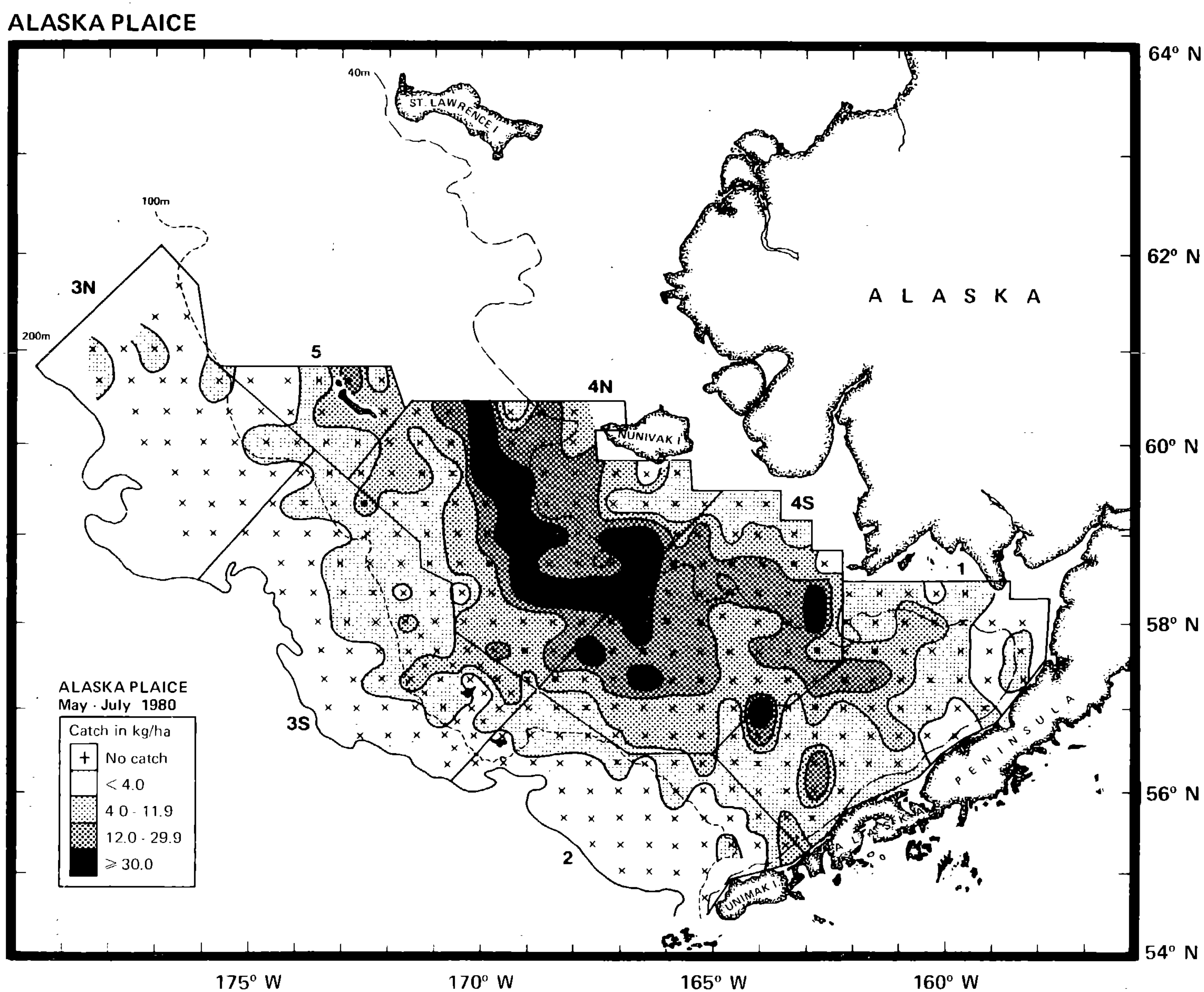

Figure 30.--Distribution and relative abundance of Alaska plaice during the 1980 survey.

ALASKA PLAICE

Table 29.--Abundance estimates for Alaska plaice by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual: Weight (kg)	Mean size per individual: Length (cm)
1	4.28	35,654	0.102	84,371	0.110	0.423	31.84
2	0.69	4,204	0.012	7,026	0.009	0.598	-
3N	0.04	197	0.001	387	0.001	0.509	-
3S	1.01	7,948	0.023	11,634	0.015	0.683	33.59
4N	19.13	175,821	0.504	390,872	0.512	0.450	31.99
4S	14.69	119,755	0.343	262,021	0.343	0.457	31.03
5	3.41	5,241	0.015	7,385	0.010	0.710	35.65
All subareas combined[b]	7.46	348,821		763,697		0.457	31.69
95% confidence interval		286,349-411,293					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

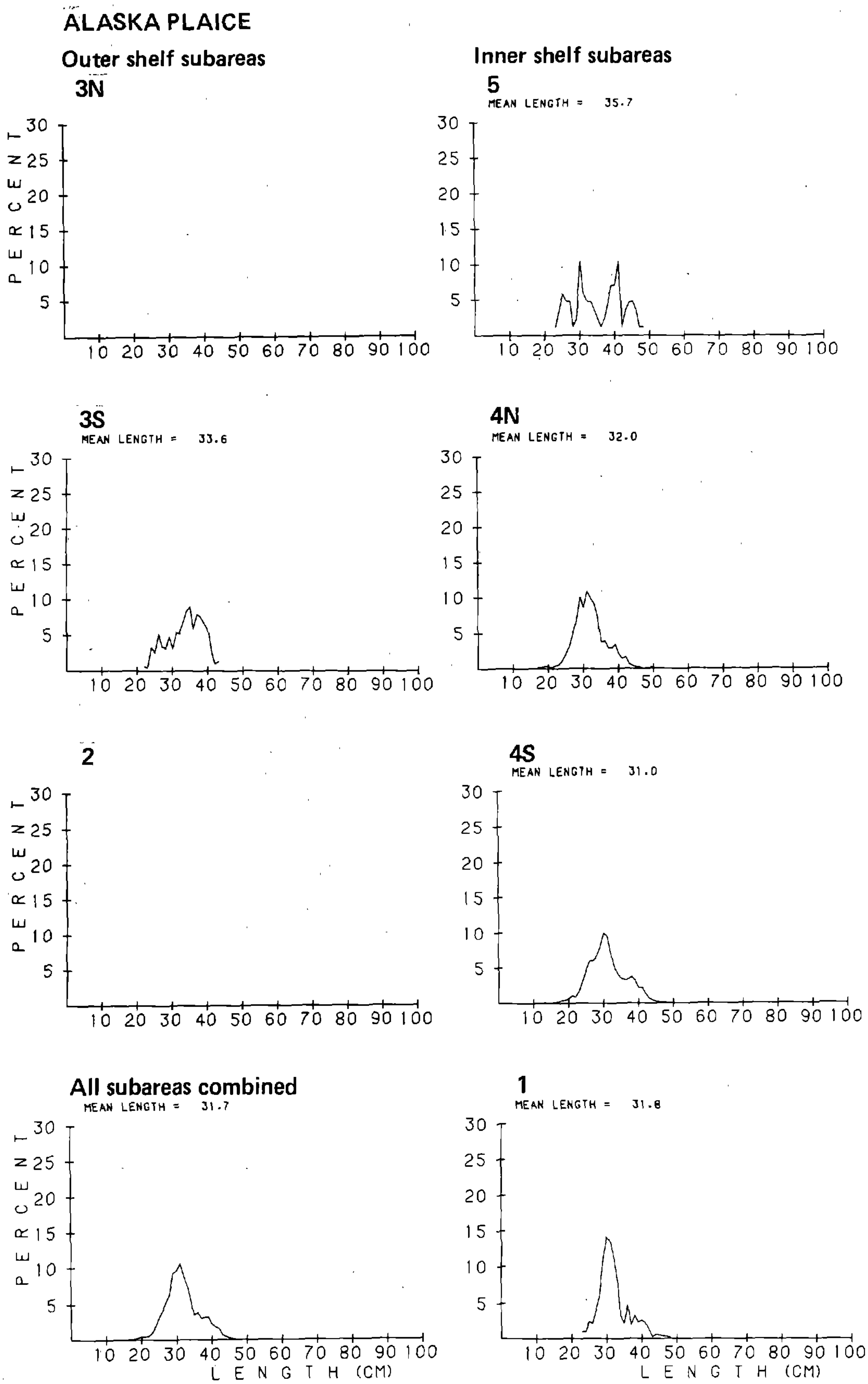

Figure 31.--Size composition of Alaska plaice (sexes combined) taken during the 1980 survey by subarea and, for subareas combined.

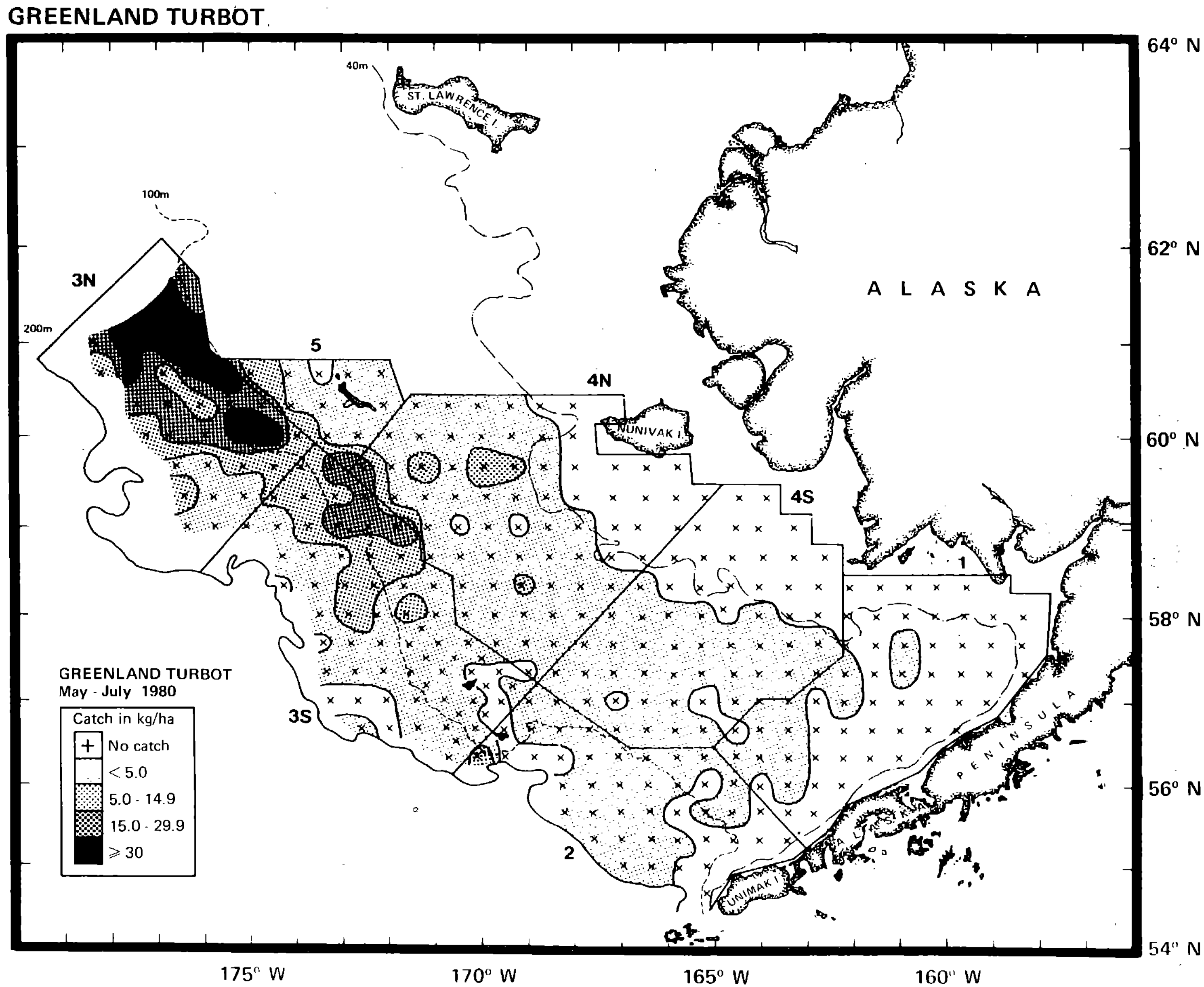

Figure 32.--Distribution and relative abundance of Greenland turbot during the 1980 survey.

GREENLAND TURBOT

Table 30.--Estimated abundance and mean size of Greenland turbot by subarea and subareas combined, 1980 demersal trawl surveys.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual Weight (kg)	Mean size per individual Length (cm)
1	0.03	276	0.002	1,336	0.001	0.206	-
2	0.66	4,041	0.023	3,553	0.004	1.137	51.46
3N	20.36	113,258	0.658	604,147	0.672	0.187	27.47
3S	4.45	35,006	0.203	170,856	0.190	0.204	29.08
4N	1.59	14,577	0.085	82,892	0.092	0.176	27.13
4S	0.17	1,422	0.008	6,828	0.008	0.208	37.17
5	2.35	3,614	0.021	30,085	0.033	0.120	23.08
All subareas combined[b]	3.68	172,193		899,697		0.191	27.75
95% confidence interval		133,930-210,455					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

GREENLAND TURBOT

Table 31.--Estimated population size of Greenland turbot age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a]	Proportion of total
≤1	-	-	-	31.77	9.12	11.27	-	5.69	57.86	0.0644
2	1978	-	0.75	307.38	72.67	35.48	0.26	17.79	434.33	0.4835
3	1977	-	0.27	213.67	63.81	26.19	3.64	5.74	313.32	0.3488
4	1976	-	-	40.60	18.97	8.90	2.22	0.87	71.57	0.0797
5	1975	-	0.37	8.18	4.30	0.85	0.60	-	14.30	0.0159
6	1974	-	0.93	2.28	1.44	0.20	0.10	-	4.94	0.0055
7	1973	-	0.19	0.26	0.44	-	-	-	0.89	0.0010
≥18	-	-	1.03	-	0.12	-	-	-	1.15	0.0013
All ages combined[a]			3.55	604.15	170.86	82.89	6.83	30.08	898.36[b]	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.

b/ Total population number differs from that given in Table 30 because of the absence of length-frequency data in subarea 1 with which to calculate population numbers by age.

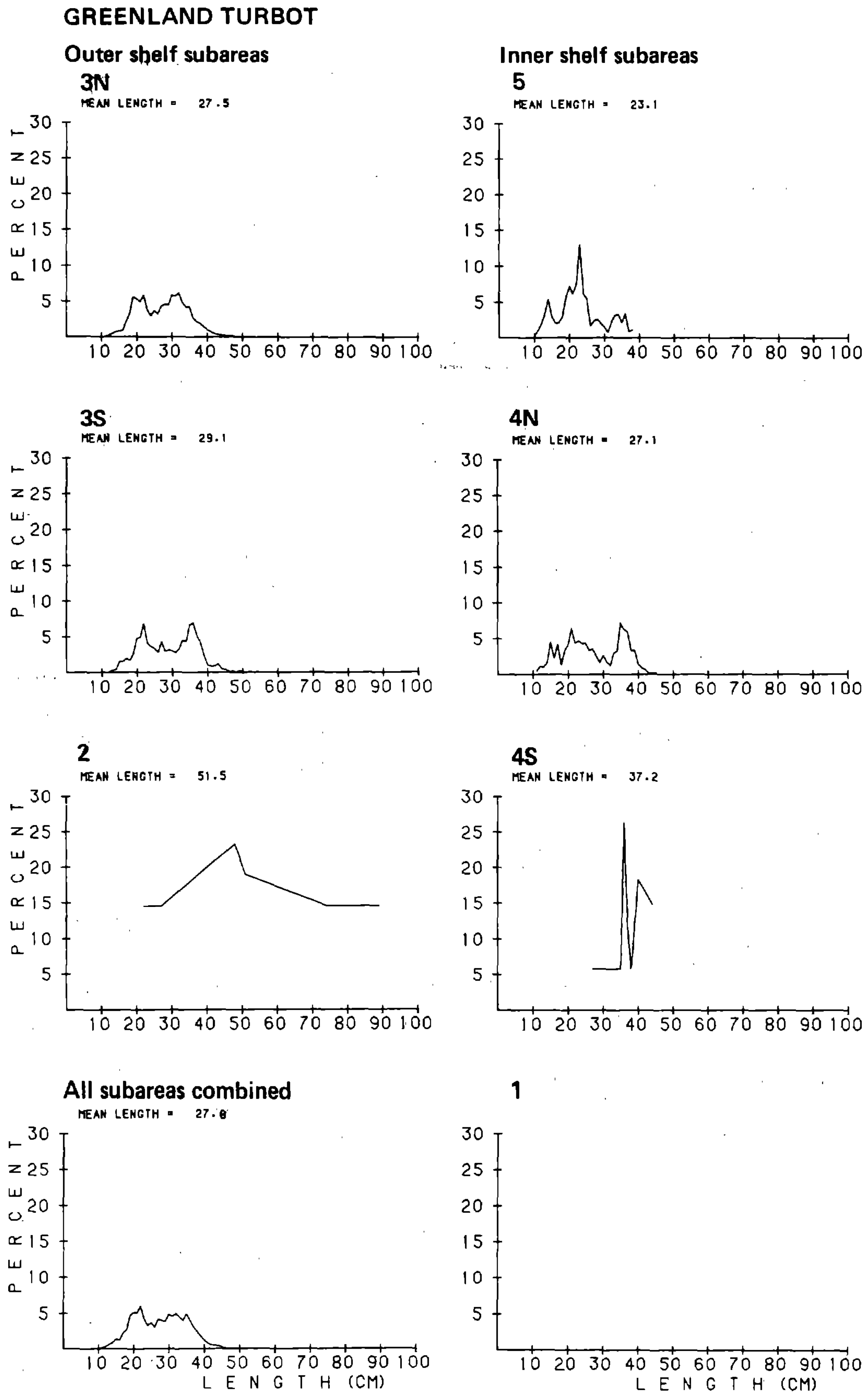

Figure 33.--Size composition of Greenland turbot (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

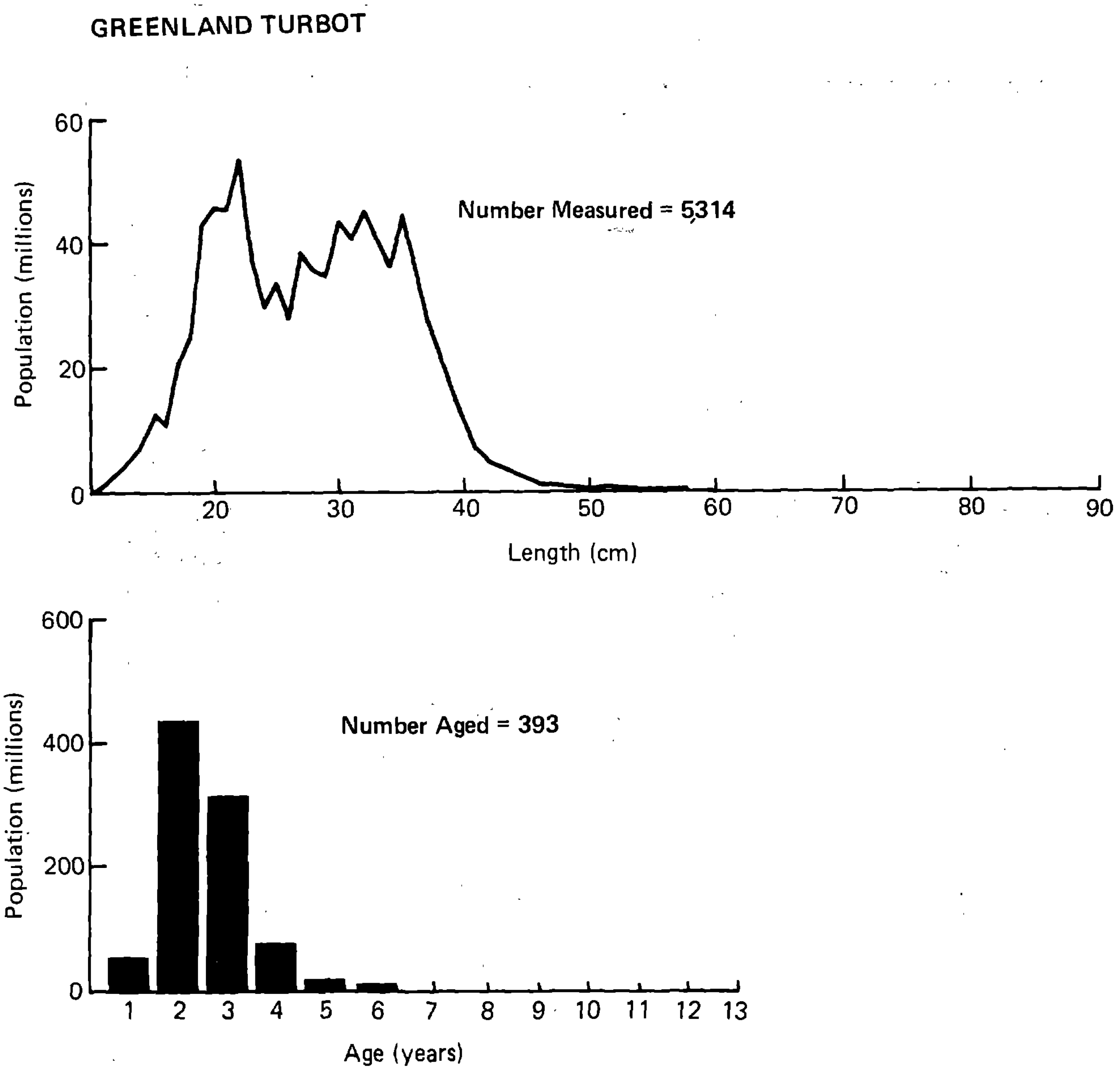

Figure 34. --Length and age composition of Greenland turbot (sexes combined) from the overall survey area in 1980.

ARROWTOOTH FLOUNDER

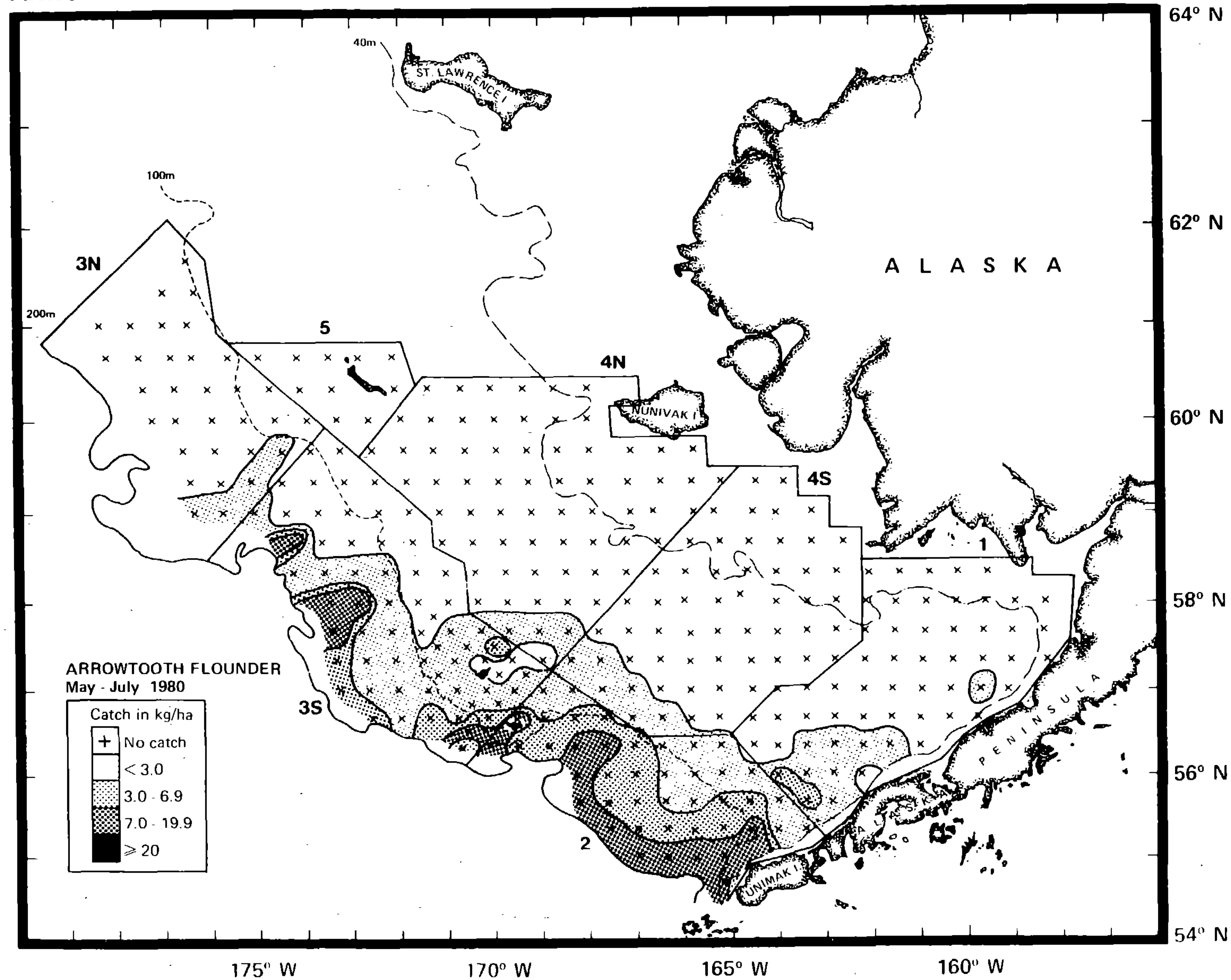

Figure 35.--Distribution and relative abundance of arrowtooth flounder during the 1980 survey.

ARROWTOOTH FLOUNDER

Table 32.--Estimated abundance and mean size of arrowtooth flounder by subarea and subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a/] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual Weight (kg)	Mean size per individual Length (cm)
1	0.20	1,656	0.035	13,824	0.074	0.120	-
2	5.05	30,804	0.644	109,124	0.582	0.282	30.44
3N	0.04	232	0.005	762	0.004	0.304	-
3S	1.75	13,768	0.288	57,707	0.308	0.239	29.38
4N	0.01	124	0.003	452	0.002	0.274	-
4S	0.15	1,234	0.026	5,750	0.031	0.215	-
5	0	0	0	0	0	-	-
All subareas combined[b/]	1.02	47,817		187,619		0.255	30.07
95% confidence interval		36,271-59,362					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

ARROWTOOTH FLOUNDER

Table 33.--Estimated population size of arrowtooth flounder age groups by subarea and for all subareas combined (millions of fish).

Age	Year class	Subarea 1	2	3N	3S	4N	4S	5	All subareas combined[a/]	Proportion of total
≤1	-	-	1.04	-	1.40	-	-	-	2.43	0.0146
2	1978	-	7.26	-	3.58	-	-	-	10.84	0.0650
3	1977	-	57.66	-	33.72	-	-	-	91.38	0.5477
4	1976	-	26.24	-	12.28	-	-	-	38.52	0.2309
5	1975	-	9.93	-	4.87	-	-	-	14.80	0.0887
6	1974	-	3.37	-	1.31	-	-	-	4.68	0.0281
7	1973	-	1.38	-	0.34	-	-	-	1.72	0.0103
8	1972	-	1.72	-	0.18	-	-	-	1.90	0.0114
9	1971	-	0.31	-	0.02	-	-	-	0.33	0.0020
≥10	-	-	0.22	-	-	-	-	-	0.22	0.0013
All ages combined[a/]		-	109.12	-	57.71	-	-	-	166.83[b/]	

a/ Minor discrepancies between sums by subareas and age groups and totals due to rounding.
b/ Total population number differs from that given in Table 31 because of the absence of length-frequency data in subareas 1, 3N, 4N, 4S, and 5 with which to calculate population numbers by age.

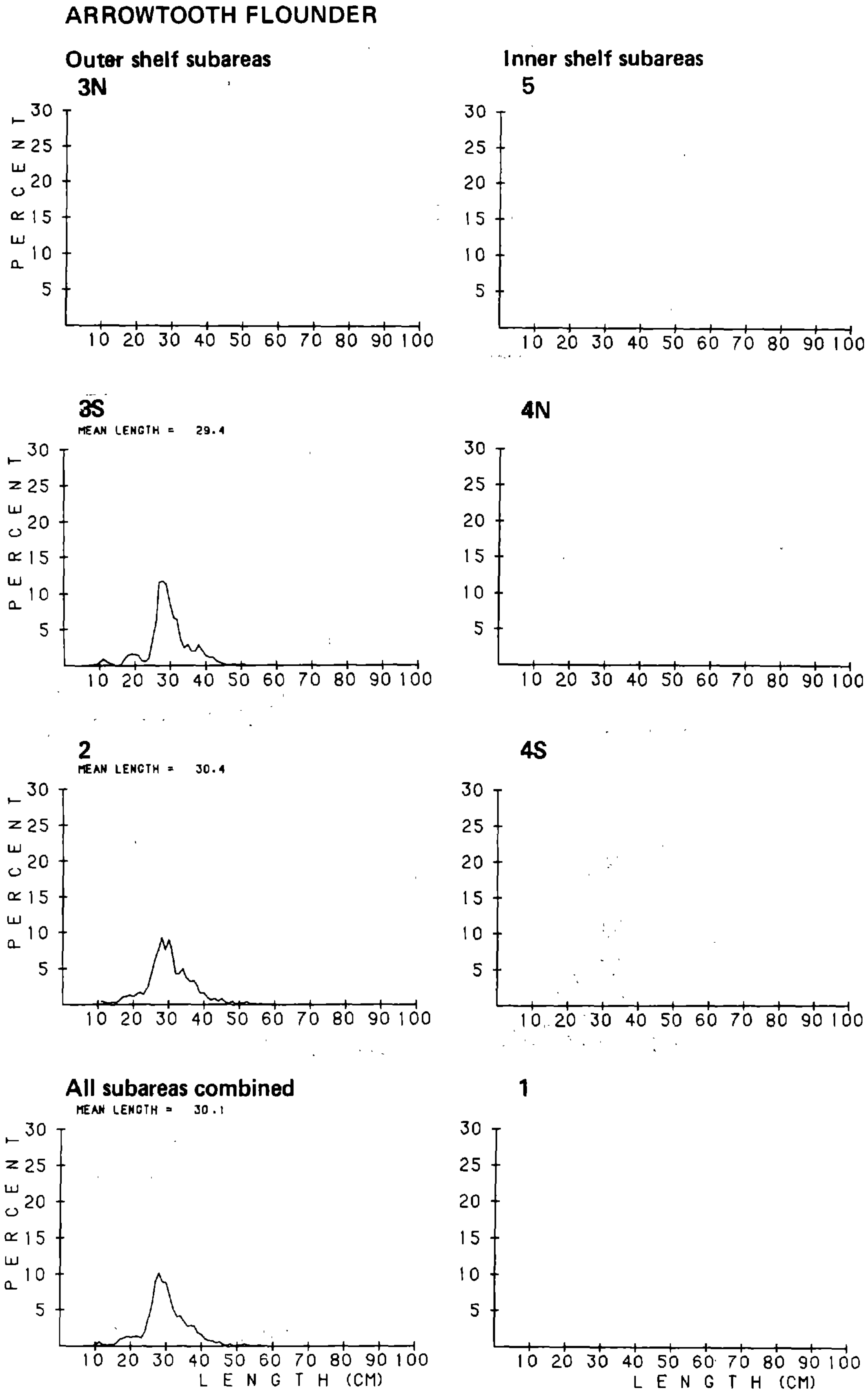

Figure 36.--Size composition of arrowtooth flounder (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

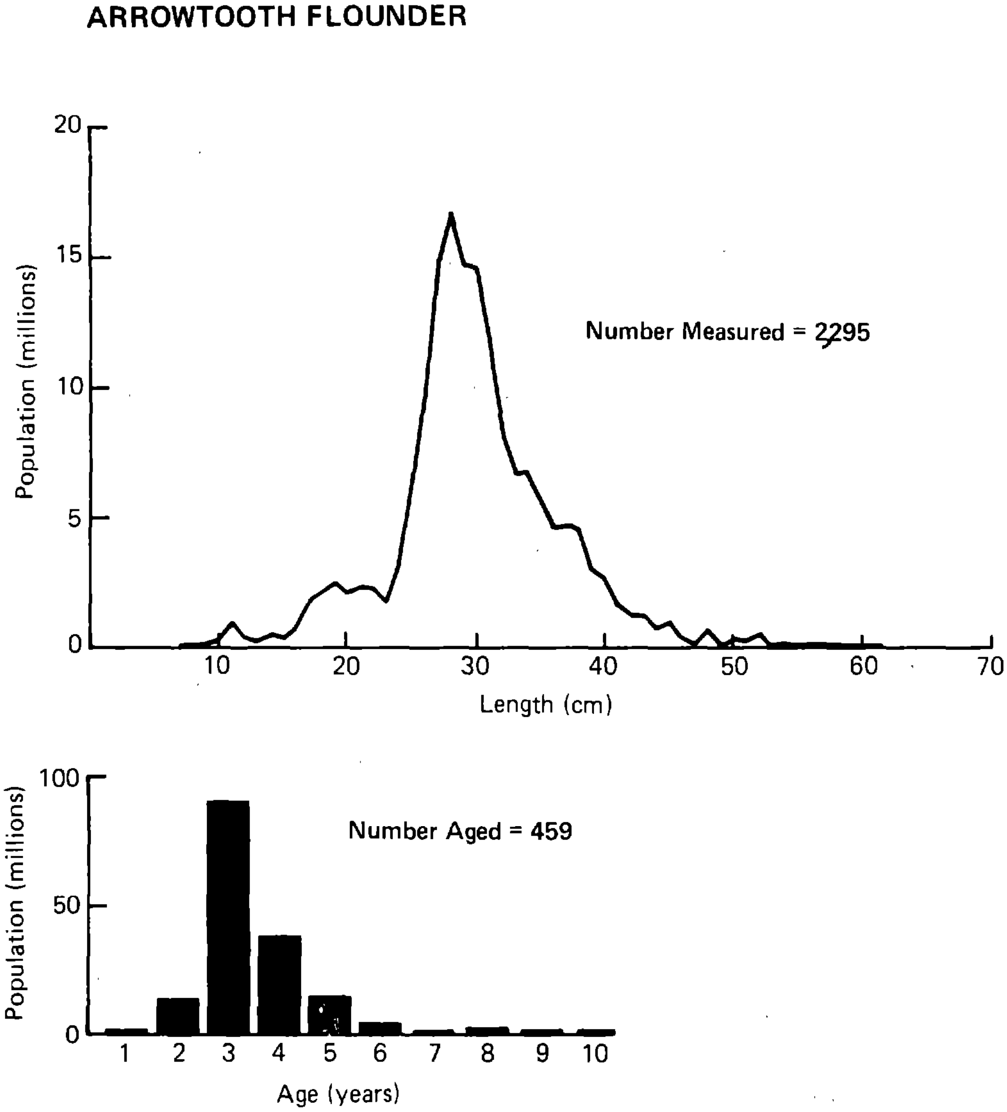

Figure 37.--Length and age composition of arrowtooth flounder (sexes combined) from the overall survey area in 1980.

PACIFIC HALIBUT

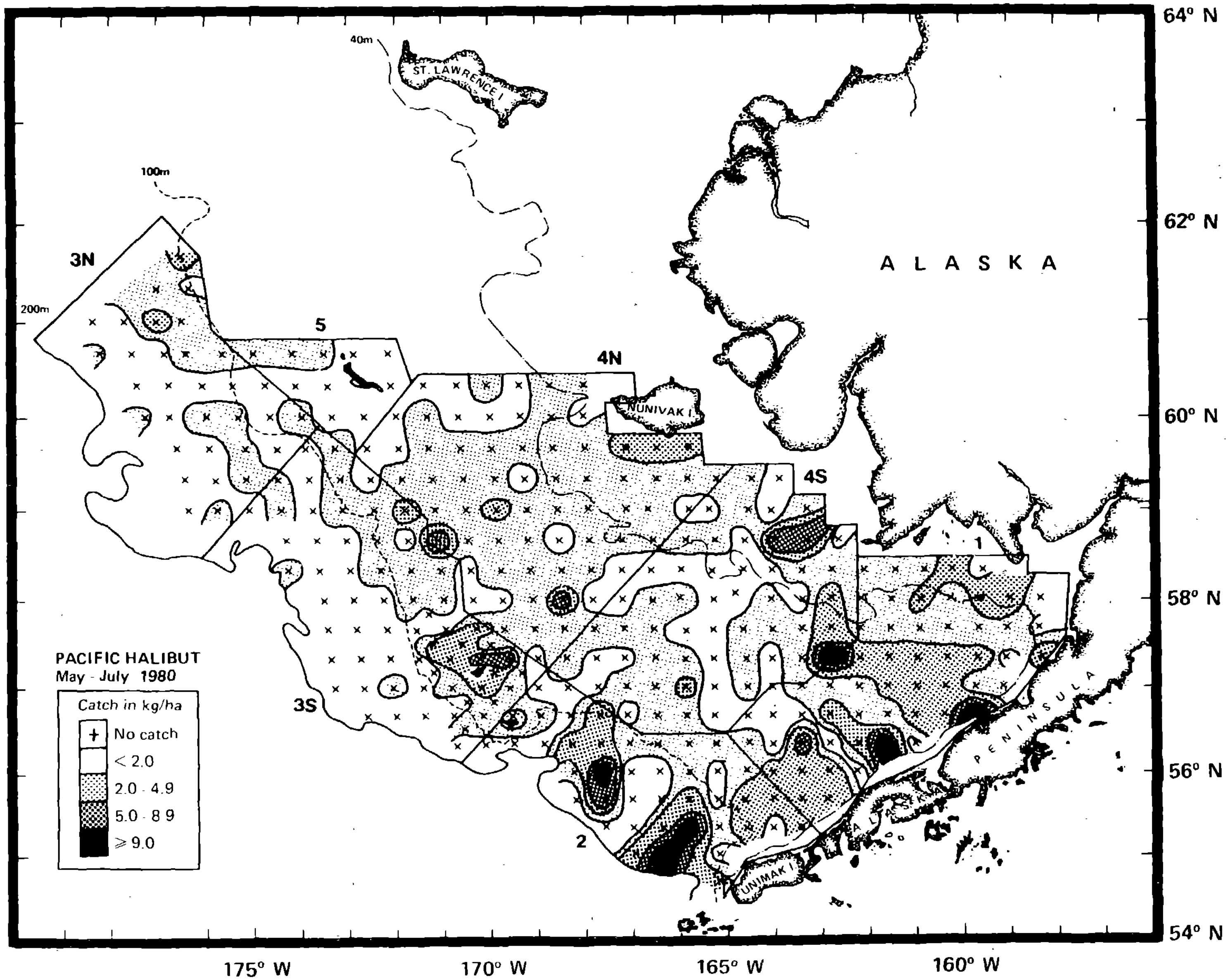

Figure 38.--Distribution and relative abundance of Pacific halibut during the 1980 survey.

PACIFIC HALIBUT

Table 34.--Abundance estimates and mean size of Pacific halibut by subarea and for subareas combined, 1980 demersal trawl survey.

Subarea	Mean CPUE[a] (kg/ha)	Estimated apparent biomass (t)	Proportion of total estimated biomass	Estimated apparent population (10^3)	Proportion of total estimated population	Mean size per individual Weight (kg)	Length (cm)
1	1.98	16,468	0.381	17,493	0.405	0.941	38.79
2	1.66	10,141	0.235	3,486	0.081	2.909	56.70
3N	0.26	1,442	0.033	1,186	0.027	1.216	43.16
3S	0.56	4,408	0.102	9,003	0.209	1.490	32.49
4N	0.62	5,744	0.133	6,344	0.147	0.905	39.25
4S	0.60	4,925	0.114	5,535	0.128	0.890	38.66
5	0.03	52	0.001	130	0.003	0.396	34.72
All subareas combined[b]	0.92	43,179		43,177		1.000	39.08
95% confidence interval		33,884-52,474					

a/ CPUE = catch per unit effort
b/ Minor discrepancies between sums over subareas and totals due to rounding.

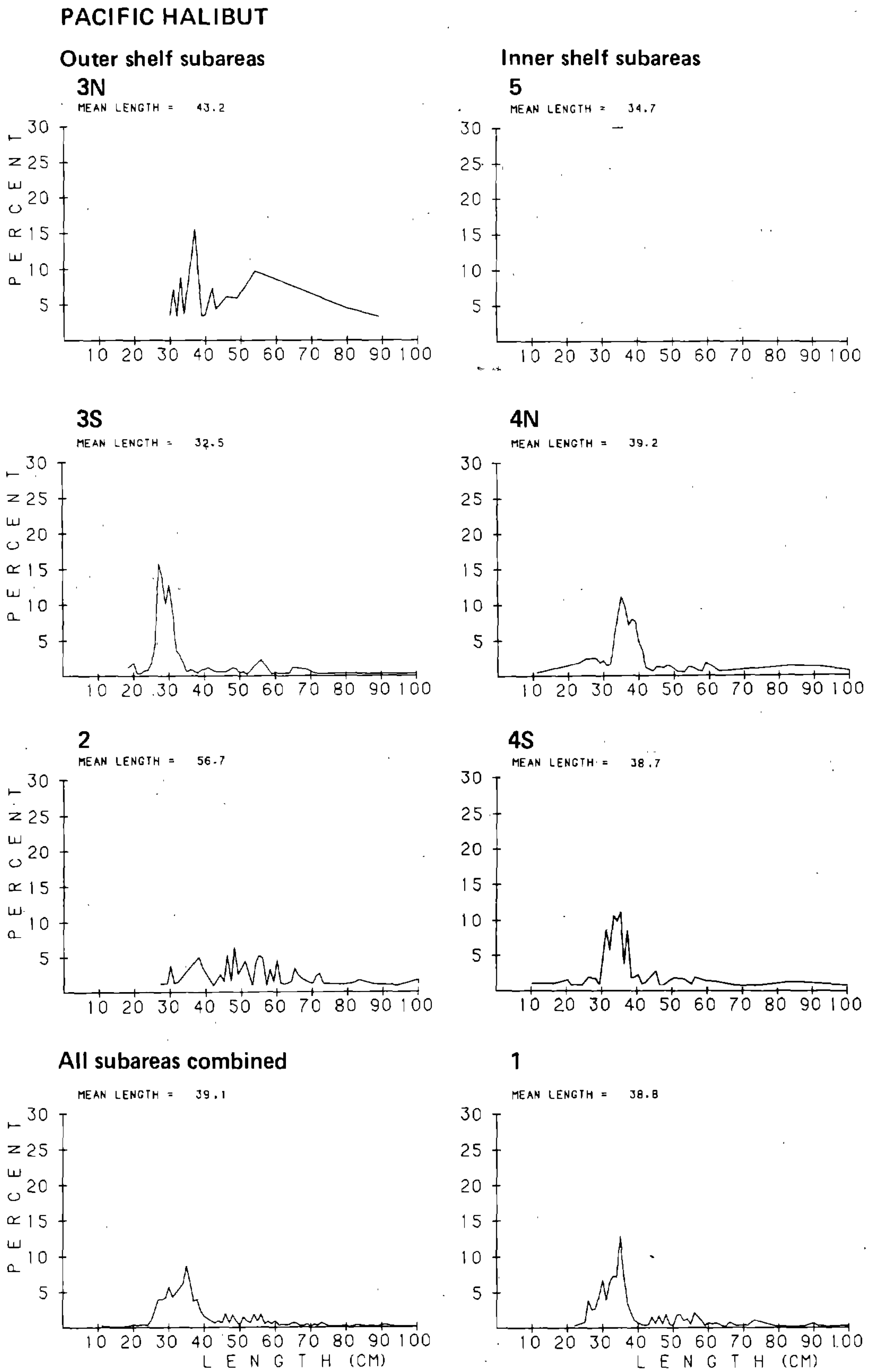

Figure 39.--Size composition of Pacific halibut (sexes combined) taken during the 1980 survey by subarea and for subareas combined.

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Appendix A

Station and Catch Data, 1980 U.S. Bering Sea Trawl Survey

Appendix A contains computer listings of station and catch data for all successfully completed stations used in the analysis of 1980 Bering Sea survey data. Missing haul numbers indicate unsatisfactory tows.

Latitudes and longitudes are in degrees, minutes, and tenths of minutes. Gear depths are in meters. Duration of tow is in tenths of hours. Distance fished in tenths of kilometers. A performance code of 0 indicates a satisfactory tow. Gear code 20 represents the 400 Eastern trawl. Catch weights are in kilograms.

List of Tables

Table A-1.--Station and catch data for the NOAA ship Oregon.

HAUL #	1	2	3	4	5	6	7	8	9	10	11
MONTH/DAY/YEAR	5/22/80	5/22/80	5/22/80	5/22/80	5/23/80	5/23/80	5/23/80	5/23/80	5/24/80	5/24/80	5/24/80
LATITUDE START	55 0.0	55 20.1	55 40.6	56 0.2	56 19.7	56 40.0	57 0.4	57 20.3	57 39.7	57 59.4	58 20.1
LONGITUDE START	166 20.1	166 20.2	166 22.2	166 24.2	166 26.6	166 26.0	166 28.4	166 28.5	166 29.9	166 30.7	166 33.2
LATITUDE END	55 0.0	55 20.1	55 40.5	55 59.9	56 20.2	56 41.3	56 59.4	57 19.1	57 40.9	58 0.6	58 21.3
LONGITUDE END	166 20.1	166 20.2	166 24.5	166 26.7	166 24.8	166 26.7	166 28.4	166 28.1	166 29.8	166 31.0	166 34.3
LORAN START	34739.70	34703.10	34660.40	34610.80	34551.30	34464.50	34368.30	34247.60	34114.90	33959.90	33785.00
LORAN START	48476.50	48516.40	48563.30	48605.50	48643.30	48652.20	48668.00	48653.80	48634.40	48598.00	48557.90
LORAN END			34666.80	34619.30	34543.80	34460.70	34373.80	34254.40	34105.60	33950.90	33776.20
LORAN END			48577.00	48621.10	48631.90	48656.90	48668.20	48652.50	48631.70	48597.10	48560.50
GEAR DEPTH	139	128	123	119	101	82	71	68	64	59	46
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.04	1.85	2.37	2.72	2.09	2.44	1.87	2.33	2.22	2.20	2.56
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	17.2	9.5	29.5	1.4	7.7	35.2	210.8	6.4	9.1	6.8	8.2
PAC COD	113.4	12.2	29.9	12.7	2.7	11.1	68.0	87.5	155.1	150.1	17.2
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	9.1	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
SCULPINS	13.1	0.2	0.7	2.1	4.1	0.9	10.0	0.7	1.6	37.2	22.6
EELPOUTS	52.7	16.9	98.0	31.8	18.6	6.9	26.8	39.5	10.4	9.1	20.5
OTHER RNDFISH	0.3	1.1	1.8	2.3	0.5	0.2	2.0	0.6	0.1	3.8	1.2
TOT ROUNDFISH	205.8	39.9	169.8	50.1	33.6	54.5	317.6	134.6	176.3	207.1	69.8
YELLOW SOLE	0.0	0.0	0.0	0.0	4.5	34.5	465.8	450.0	222.3	210.9	261.3
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	12.7	20.0	0.0	9.1	3.2	22.7
FLATHEAD SOLE	25.9	21.8	42.6	19.1	8.2	5.4	34.9	8.6	1.4	0.1	0.1
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	11.3	13.6	101.6	73.5	223.2	81.2
GREENLAND TBT	7.7	3.2	0.5	1.4	0.9	0.2	1.8	1.8	0.2	2.3	0.9
ARROWTOOTH FL	18.6	6.4	4.5	5.4	2.7	1.8	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	24.0	4.1	0.0	0.0	1.0	2.0	2.2	3.3	0.9	2.0	0.0
OTHER FLTFISH	1.9	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3
TOT FLATFISH	78.1	35.5	47.7	25.9	17.4	67.9	538.4	565.3	307.3	441.7	390.4
SKATES	6.8	0.0	47.2	111.6	64.0	42.2	30.4	8.6	13.6	0.0	0.0
TOT ELASMOBRH	6.8	0.0	47.2	111.6	64.0	42.2	30.4	8.6	13.6	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	1.4
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	147.4	27.7	16.8	4.1	1.8	1.0	0.2	2.3	2.3	0.9	0.0
TANNER, OPILIO	3.4	4.8	14.5	3.6	41.3	18.8	11.4	13.6	31.3	82.1	155.1
TANNER, HYBRID	0.5	0.0	0.2	0.0	1.4	0.0	0.0	0.5	0.0	3.6	1.4
OTHER CRAB	0.0	0.0	0.0	0.0	13.6	27.4	8.6	25.9	29.3	20.4	27.5
SNAILS	0.0	0.0	0.5	0.0	34.2	112.9	23.4	42.2	27.0	36.7	17.5
SHRIMP	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1
STARFISH	0.0	0.0	0.1	0.2	0.2	59.0	109.3	34.5	34.9	12.2	52.2
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	22.2	0.0	27.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	1.8	0.9	0.5	1.1	0.2	0.0	15.9	20.5	0.1	0.6	0.5
TOTAL INVERTS	175.4	33.4	60.0	9.2	92.9	221.6	168.8	139.4	124.8	156.6	255.6
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
TOTAL CATCH	466.1	108.8	315.7	196.8	207.8	386.2	1055.3	847.8	622.0	805.4	715.8

Table A-1.--Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	12	13	14	15	16	17	18	19	20	21	23
MONTH/DAY/YEAR	5/25/80	5/26/80	5/26/80	5/26/80	5/26/80	5/27/80	5/27/80	5/27/80	5/27/80	5/27/80	5/28/80
LATITUDE START	58 19.4	58 0.1	57 39.6	57 19.8	57 0.0	56 40.0	56 20.1	56 0.5	55 40.3	55 40.0	55 41.3
LONGITUDE START	165 16.2	165 14.1	165 15.0	165 14.4	165 13.4	165 13.5	165 12.1	165 11.2	165 9.6	164 35.9	163 59.6
LATITUDE END	58 19.6	58 0.9	57 40.6	57 21.0	57 1.4	56 41.0	56 19.1	55 59.2	55 41.4	55 40.2	55 40.2
LONGITUDE END	165 18.3	165 16.1	165 16.6	165 15.3	165 12.7	165 12.0	165 11.7	165 11.9	165 8.1	164 33.1	163 59.7
LORAN START	33575.80	33730.10	33885.00	34016.50	34131.40	34326.30	34322.90	34396.70	34459.90	34367.60	34263.80
LORAN START	48087.40	48105.00	48141.70	48159.60	48164.80	48168.60	48155.10	48137.10	48108.80	47893.70	47661.20
LORAN END	33580.10	33729.10	33882.40	34011.80	34121.90	34226.90	34325.40	34403.30	34452.00	34359.20	34267.90
LORAN END	48094.70	48116.50	48151.00	48164.50	48160.20	48159.00	48151.60	48140.60	48100.10	47876.10	47661.20
GEAR DEPTH	42	48	60	64	68	73	84	93	106	93	91
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.19	2.56	2.52	2.33	2.59	2.41	1.80	2.48	2.69	2.94	2.06
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.1	0.4	2.7	2.3	0.1	2.4	84.4	34.5	89.8	78.0	7.3
PAC COD	0.1	0.4	10.6	83.9	18.1	0.7	38.6	26.3	33.6	47.2	2.3
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	12.2	3.8	0.9	0.0	0.0	0.0	0.1	0.0	1.4	0.3	0.0
EELPOUTS	1.0	2.4	0.3	4.5	2.3	5.6	9.6	8.2	48.1	4.1	0.1
OTHER RNDFISH	0.9	1.1	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.2	0.4
TOT ROUNDFISH	17.0	3.0	14.6	90.8	20.6	8.7	132.8	69.0	172.8	129.8	10.0
YELLOW SOLE	171.5	165.1	121.5	382.8	552.5	174.2	106.1	18.4	1.4	5.9	24.9
ROCK SOLE	1.8	9.1	5.5	0.9	15.4	0.0	4.5	0.3	0.0	2.7	23.6
FLATHEAD SOLE	0.1	0.0	0.1	0.7	2.0	3.3	10.4	3.4	5.4	2.3	1.8
ALASKA PLAICE	70.3	85.3	37.6	43.1	16.3	14.5	20.4	0.0	0.0	0.0	0.5
GREENLAND TBT	0.0	0.2	0.4	0.1	0.0	0.4	0.5	0.0	0.6	0.5	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	8.6	10.4	1.4
PAC HALIBUT	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	8.1	2.4
OTHER FLTFISH	0.9	10.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1
TOT FLATFISH	244.6	269.7	165.1	427.6	586.2	192.4	142.8	23.1	16.2	30.1	54.7
SKATES	0.0	0.0	0.5	0.0	4.5	0.0	3.6	0.0	9.1	0.0	13.6
TOT ELASMOBRH	0.0	0.0	0.5	0.0	4.5	0.0	3.6	0.0	9.1	0.0	13.6
RED KING CRAB	6.4	0.0	6.4	0.0	21.8	215.0	2.9	0.0	0.0	7.0	3.2
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.0	1.8	2.7	10.0	0.7	3.4	0.5	2.7	13.6	51.3	5.9
TANNER, OPILIO	120.7	32.0	33.1	68.6	6.4	15.0	18.1	10.9	7.3	18.6	5.0
TANNER, HYBRID	0.9	0.2	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	20.0	3.6	19.1	3.3	0.8	22.3	19.3	14.6	0.9	56.2	9.5
SNAILS	18.1	51.0	12.0	15.4	1.9	45.9	256.7	40.4	2.4	13.2	2.7
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
STARFISH	51.3	0.0	39.0	0.0	31.8	42.6	26.3	0.0	0.0	0.0	0.0
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0	0.5
OTHER INVERTS	0.0	86.2	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.1	2.4
TOTAL INVERTS	217.3	174.8	112.2	101.8	63.2	344.6	324.7	68.6	24.3	146.4	29.1
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	478.9	452.5	292.4	620.3	674.6	545.7	603.9	160.7	222.5	306.3	107.4

Table A-l.--Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	24	25	25	27	28	29	30	31	32	33	34
MONTH/DAY/YEAR	5/28/80	5/28/80	5/28/80	5/28/80	5/29/80	5/29/80	5/29/80	5/29/80	5/30/80	5/30/80	5/30/80
LATITUDE START	55 59.4	56 20.0	56 40.1	57 0.0	57 19.7	57 39.3	58 0.1	58 20.1	58 20.3	58 0.6	57 40.6
LONGITUDE START	163 59.7	164 0.6	164 0.1	164 0.0	164 0.4	163 59.4	164 0.8	164 0.2	162 43.5	162 44.8	162 44.9
LATITUDE END	56 0.5	56 21.1	56 41.4	57 1.0	57 21.0	57 40.5	58 1.0	58 21.4	58 20.5	57 59.6	57 39.2
LONGITUDE END	163 59.6	164 1.5	164 0.5	164 0.0	164 0.4	163 59.4	164 0.3	164 0.9	162 41.4	162 44.6	162 44.6
LORAN START	34197.60	34114.40	34018.50	33912.80	33798.60	33668.90	33526.60	33372.10	33181.30	33326.40	33461.20
LORAN START	47670.20	47681.50	47678.50	47672.50	47665.00	47644.00	47629.20	47598.30	47107.00	47132.60	47147.30
LORAN END	34192.80	34112.00	34013.00	33904.60	33790.30	33659.40	33518.30	33364.10	33174.50	33332.90	33469.50
LORAN END	47670.20	47687.50	47681.20	47672.10	47664.00	47647.80	47624.70	47601.30	47093.80	47132.20	47146.80
GEAR DEPTH	88	82	73	66	60	49	44	38	29	38	42
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.19	2.32	2.54	1.85	2.48	2.22	1.81	2.44	2.04	1.85	2.54
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	15.9	24.9	11.3	12.7	1.8	1.4	0.1	0.1	0.0	0.1	0.1
PAC COD	10.0	24.0	21.8	36.7	27.2	4.5	5.4	2.5	0.0	1.4	2.5
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.0	0.0	1.0	0.2	0.0	6.0	9.7	4.0	23.1	6.9	0.9
EELPOUTS	1.0	3.6	3.6	1.4	0.0	0.0	0.0	0.0	1.4	0.0	0.0
OTHER RNDFISH	0.0	0.1	0.1	0.0	0.1	0.8	2.1	4.6	26.0	4.8	1.3
TOT ROUNDFISH	26.9	52.7	37.9	51.0	29.1	12.7	17.4	11.3	50.4	13.3	4.8
YELLOW SOLE	39.0	48.5	176.4	263.5	107.5	262.6	214.1	448.5	1031.9	899.5	258.1
ROCK SOLE	42.6	3.2	3.2	0.9	0.1	18.1	22.7	11.6	160.6	15.4	24.0
FLATHEAD SOLE	1.4	2.3	18.6	5.9	1.4	0.5	0.1	0.0	0.0	0.0	3.2
ALASKA PLAICE	0.5	4.5	62.1	68.0	24.0	61.7	17.2	51.3	89.4	75.7	28.1
GREENLAND TBT	0.0	1.4	0.9	0.9	0.2	0.2	0.3	0.0	0.0	0.0	0.1
ARROWTOOTH FL	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	4.2	0.0	0.0	0.0	0.0	0.4	0.4	0.0	2.0	4.9	6.4
OTHER FLTFISH	0.3	0.0	0.1	0.0	0.0	5.9	6.4	0.5	21.3	31.3	41.7
TOT FLATFISH	97.0	59.9	261.4	339.3	133.2	349.4	261.1	511.9	1305.2	1026.8	361.7
SKATES	5.4	0.2	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	5.4	0.2	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	0.7	13.2	121.6	176.2	63.5	10.4	15.0	0.0	2.3	21.3	38.1
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	31.3	3.6	9.1	6.8	3.6	5.4	1.4	0.1	0.0	0.0	4.1
TANNER, OPILIO	11.8	10.0	26.8	8.2	3.2	21.3	15.4	0.3	0.0	0.0	0.2
TANNER, HYBRID	0.0	1.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
OTHER CRAB	60.9	4.5	11.0	55.2	39.5	27.9	24.1	3.6	2.0	2.9	3.2
SNAILS	31.1	9.3	29.1	41.0	23.1	25.1	42.4	4.3	0.0	1.0	11.1
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	0.0	0.0	0.5	0.0	0.0	117.0	111.1	38.8	258.1	381.9	53.5
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
TOTAL INVERTS	136.7	46.7	197.9	287.4	132.9	207.2	209.6	47.1	262.4	407.2	111.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	266.0	159.5	497.2	677.8	297.0	569.3	488.1	570.3	1618.0	1447.3	477.7

Table A-1. --Station and catch data for the NOAA ship <u>Oregon</u> (cont'd).

HAUL #	35	36	37	38	39	40	41	42	43	44	45
MONTH/DAY/YEAR	5/30/80	5/30/80	5/31/80	5/31/80	5/31/80	5/31/80	5/31/80	6/ 1/80	6/ 5/80	6/ 5/80	6/ 6/80
LATITUDE START	57 20.1	57 0.5	56 40.2	56 20.5	56 0.5	55 39.9	55 40.4	55 20.1	55 40.2	55 60.0	56 20.0
LONGITUDE START	162 46.4	162 47.2	162 47.3	162 47.9	162 49.2	162 50.5	163 23.8	163 25.2	168 10.9	168 13.4	168 15.7
LATITUDE END	57 18.6	56 59.2	56 41.5	58 19.5	55 59.3	55 40.7	55 40.9	55 21.2	55 40.9	56 1.2	56 20.1
LONGITUDE END	162 46.6	162 47.2	162 47.4	162 47.7	162 49.5	162 51.8	163 25.5	163 26.2	168 9.4	168 12.5	168 13.6
LORAN START	33593.50	33707.90	33815.30	33910.80	34001.00	34084.60	34170.90	34243.10	34941.90	34919.50	34885.70
LORAN START	47169.90	47184.00	47190.90	47198.30	47207.30	47214.00	47430.00	47429.80	49197.90	49269.90	49335.30
LORAN END	33602.60	33715.30	33808.80	33914.80	34006.70	34085.10	34173.40	34241.80	34937.40	34915.20	34879.10
LORAN END	47172.20	47184.80	47191.20	47197.00	47209.10	47222.20	47440.80	47437.50	49192.00	49268.50	49322.60
GEAR DEPTH	46	57	70	77	77	49	77	51	132	144	150
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.65	2.46	2.50	1.87	2.26	1.91	1.98	2.30	2.17	2.46	2.22
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	2.3	0.0	6.4	10.9	209.6	584.2	94.3	20.0	7.0	5.4	0.0
PAC COD	7.7	15.4	4.5	13.2	12.7	128.8	13.2	14.1	172.1	91.9	69.9
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.9	1.8	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	1.5	0.0	0.0	1.4	0.2	3.9	0.9	1.1	4.4	0.9	4.5
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	10.7	5.4
OTHER RNDFISH	0.7	0.0	0.3	0.0	0.4	0.8	0.1	0.2	0.2	1.6	2.6
TOT ROUNDFISH	12.1	15.4	11.2	25.4	222.9	717.7	108.5	35.5	195.8	112.2	82.4
YELLOW SOLE	234.1	243.6	151.5	95.3	100.2	124.3	255.8	184.6	0.0	0.0	0.0
ROCK SOLE	93.2	15.0	2.7	7.3	18.1	105.7	44.5	24.0	0.0	1.1	1.3
FLATHEAD SOLE	17.0	2.7	4.5	5.9	22.7	9.1	24.9	49.0	10.4	1.8	0.5
ALASKA PLAICE	68.9	13.6	10.4	26.3	61.2	6.8	10.4	30.8	0.0	0.0	0.0
GREENLAND TBT	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.9	0.0
ARROWTOOTH FL	0.0	0.0	0.0	1.1	5.9	0.1	7.7	0.9	17.9	43.8	20.1
PAC HALIBUT	47.3	1.5	9.3	0.0	7.8	4.0	7.3	4.2	0.0	0.5	4.3
OTHER FLTFISH	47.6	0.0	0.0	0.0	0.1	34.9	0.1	3.3	0.7	0.5	0.0
TOT FLATFISH	508.3	276.4	178.5	135.9	216.1	284.9	350.8	296.9	36.1	48.6	26.2
SKATES	0.0	0.2	0.5	1.1	3.2	0.0	6.4	1.8	30.8	56.7	18.5
TOT ELASMOBRH	0.0	0.2	0.5	1.1	3.2	0.0	6.4	1.8	30.8	56.7	18.5
RED KING CRAB	340.6	62.6	12.0	4.8	24.5	120.7	16.8	26.3	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	9.8	11.8	11.8	20.0	37.2	9.1	158.8	150.1	34.7	25.9	239.5
TANNER, OPILIO	0.3	0.2	4.1	2.3	5.0	0.7	0.2	0.1	0.1	0.0	60.3
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	2.3	2.0	4.4	0.8	3.7	1.8	24.1	2.1	0.3	2.1	0.2
SNAILS	29.9	3.6	2.4	0.2	0.7	0.3	20.7	0.2	2.1	0.2	1.9
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0
STARFISH	30.4	0.0	1.8	0.0	0.2	13.2	7.3	0.0	293.8	2.7	0.3
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0
OTHER INVERTS	0.5	0.1	78.5	0.0	0.1	0.0	0.0	0.1	13.8	28.6	0.0
TOTAL INVERTS	413.7	80.4	114.9	28.0	71.3	145.7	227.9	179.0	345.0	66.5	302.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	934.1	372.4	305.1	190.4	513.6	1148.2	693.6	513.1	607.7	284.0	429.3

Table A-1.--Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	46	49	50	51	52	54	55	56	57	59	60
MONTH/DAY/YEAR	6/ 6/80	6/ 8/80	6/ 8/80	6/ 9/80	6/10/80	6/10/80	6/10/80	6/11/80	6/11/80	6/11/80	6/13/80
LATITUDE START	56 20.3	57 10.2	57 20.0	56 59.2	56 39.4	56 49.9	57 10.1	57 29.3	57 40.1	57 40.4	57 19.9
LONGITUDE START	168 50.1	169 18.8	169 36.4	169 33.5	169 30.0	169 54.7	169 53.7	169 59.2	169 39.8	170 16.1	170 11.8
LATITUDE END	56 21.4	57 11.3	57 20.9	57 0.1	56 38.4	56 50.2	57 9.5	57 30.3	57 40.9	57 40.5	57 20.2
LONGITUDE END	168 48.8	169 20.3	169 37.5	169 33.5	169 28.1	169 57.1	169 51.9	169 58.8	169 38.0	170 13.4	170 13.6
LORAN START	34982.30	34914.70	34905.30	35024.60	35058.60	35107.40	35048.90	18704.00	18697.50	18615.80	18713.60
LORAN START	49539.00	49803.40	49896.00	49899.40	49826.10	49995.90	50037.00	34870.40	34704.90	34754.80	35003.30
LORAN END	34976.90	34913.60	34900.90	35021.70	35055.10	35112.30	35045.90	18701.20	18697.20	18623.70	18707.50
LORAN END	49535.20	49812.20	49899.80	49900.80	49812.30	50009.40	50025.70	34858.70	34691.70	34751.30	35001.80
GEAR DEPTH	139	70	60	77	75	71	46	66	68	70	53
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.54	2.48	2.07	1.54	2.76	2.56	2.17	1.78	2.28	2.74	1.85
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	2.3	26.8	7.7	0.0	23.8	22.5	0.0	23.6	203.2	138.8	1.4
PAC COD	148.1	18.1	131.8	51.3	130.5	0.0	33.1	44.9	88.9	15.0	22.7
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.1
SCULPINS	6.4	45.4	143.8	181.7	502.3	43.1	10.9	48.5	16.6	19.1	2.8
EELPOUTS	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.9	1.4	0.0
OTHER RNDFISH	0.1	0.8	0.0	0.2	3.2	0.1	24.9	0.4	0.3	0.1	0.8
TOT ROUNDFISH	156.8	91.3	283.3	233.1	663.2	65.7	68.9	117.4	311.9	174.3	27.7
YELLOW SOLE	0.0	66.9	34.2	146.1	47.9	25.6	86.0	47.4	30.4	33.1	5.4
ROCK SOLE	1.4	12.9	350.6	34.2	512.6	37.6	222.3	29.3	4.8	14.1	132.9
FLATHEAD SOLE	8.2	4.8	0.0	1.6	1.1	10.9	0.0	1.1	3.6	4.5	0.7
ALASKA PLAICE	0.0	12.5	18.1	0.7	0.0	0.7	0.0	14.5	46.5	26.8	0.0
GREENLAND TBT	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.5	7.5	6.4	0.0
ARROWTOOTH FL	17.0	2.0	0.0	0.5	39.9	6.4	0.0	6.6	0.7	1.4	0.0
PAC HALIBUT	0.0	1.5	18.2	2.6	10.8	3.8	10.2	0.5	0.9	13.4	12.2
OTHER FLTFISH	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	26.6	100.8	421.2	185.7	612.3	85.1	318.4	101.9	94.3	99.6	151.2
SKATES	9.3	0.9	0.0	0.0	0.0	3.9	1.8	3.6	2.3	14.5	3.4
TOT ELASMOBRH	9.3	0.9	0.0	0.0	0.0	3.9	1.8	3.6	2.3	14.5	3.4
RED KING CRAB	0.0	4.8	2.3	1.4	0.0	0.0	58.3	0.0	0.0	0.0	10.2
BLUE KING CRAB	0.0	15.9	33.3	3008.9	0.0	7.0	95.5	215.7	14.5	49.9	19.3
TANNER, BAIRDI	21.1	6.0	0.1	5.0	0.0	72.3	62.8	0.5	1.1	0.5	4.8
TANNER, OPILIO	34.2	40.8	349.3	103.9	0.0	72.8	24.3	107.3	13.6	15.2	0.5
TANNER, HYBRID	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
OTHER CRAB	0.3	0.0	5.0	55.6	0.7	5.4	67.1	37.2	1.0	3.5	32.7
SNAILS	0.1	0.0	0.0	0.0	0.5	7.0	0.0	0.0	3.0	4.2	0.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	1.3	1.4	75.1	431.8	7.9	2.3	106.9	15.6	241.5	138.6	46.9
SQUID	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.1	122.5	0.0	197.8	376.2	0.7	2.9	169.4	2.0	1.8	12.7
TOTAL INVERTS	57.3	191.5	465.0	3804.3	402.6	167.6	417.9	545.7	276.9	213.6	127.1
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	250.0	384.5	1169.5	4223.1	1678.2	322.2	807.0	768.6	685.4	502.0	305.5

Table A-1.--Station and catch data for the NOAA ship <u>Oregon</u> (cont'd).

HAUL #	61	62	63	64	65	67	68	69	70	71	72
MONTH/DAY/YEAR	6/13/80	6/13/80	6/13/80	6/14/80	6/14/80	6/15/80	6/16/80	6/16/80	6/16/80	6/16/80	6/17/80
LATITUDE START	57 29.9	57 40.0	57 50.1	57 39.3	57 29.6	56 59.5	57 19.8	57 20.2	57 10.3	56 60.0	56 50.0
LONGITUDE START	170 34.5	170 54.5	171 16.1	171 32.2	171 11.0	170 10.2	170 50.1	171 29.3	171 10.6	170 47.0	170 28.6
LATITUDE END	57 29.6	57 39.6	57 50.1	57 40.6	57 30.7	57 0.0	57 20.2	57 20.2	57 10.2	56 59.9	56 50.6
LONGITUDE END	170 36.8	170 52.7	171 14.0	171 33.1	171 12.0	170 12.6	170 51.8	171 26.8	171 8.4	170 45.0	170 30.6
LORAN START	18585.30	18457.10	18320.80	18252.60	18388.00	18686.30	18524.30	18278.10	18387.50	18507.90	18544.50
LORAN START	34380.10	34744.20	34605.70	34690.70	34824.90	35132.50	34960.80	34863.50	34979.90	35091.70	35135.70
LORAN END	18575.30	18467.20	18331.80	18245.90	18380.90	18684.60	18513.40	18293.80	18401.80	18519.60	18539.70
LORAN END	34880.90	34750.90	34609.10	34676.30	34812.30	35135.40	34952.70	34869.50	34986.60	35096.60	35134.10
GEAR DEPTH	75	82	90	97	91	68	80	99	97	91	99
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.33	1.94	2.11	2.61	2.30	2.59	1.93	2.48	2.26	2.02	2.22
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	23.6	26.3	23.8	3.3	12.2	1.1	19.1	15.9	21.8	20.9	41.0
PAC COD	46.9	46.5	29.9	32.0	11.3	10.4	20.9	31.3	37.9	6.8	11.3
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	36.5	22.5	15.9	3.2	13.5	60.8	39.6	10.2	2.5	1.6	4.6
EELPOUTS	1.8	5.2	29.5	6.6	1.8	0.0	2.3	2.7	1.8	1.1	0.5
OTHER RNDFISH	0.1	0.1	0.2	0.0	0.2	0.3	0.2	0.1	0.0	3.1	1.0
TOT ROUNDFISH	109.0	100.6	99.3	45.0	39.1	72.6	81.9	60.2	65.8	33.5	58.4
YELLOW SOLE	23.6	5.7	1.1	6.8	1.8	36.5	9.1	0.1	1.6	1.1	0.0
ROCK SOLE	20.9	0.2	0.2	0.0	0.5	16.3	3.4	1.4	0.1	0.2	0.5
FLATHEAD SOLE	8.2	4.3	3.2	3.6	2.0	4.1	2.3	11.3	35.6	61.2	22.5
ALASKA PLAICE	19.5	3.2	3.4	10.2	20.5	0.0	1.6	12.0	0.2	1.8	0.0
GREENLAND TBT	4.5	4.3	1.6	0.7	2.5	0.7	2.7	2.9	5.0	2.3	2.7
ARROWTOOTH FL	0.2	0.9	0.0	0.0	0.9	1.4	0.1	1.4	2.0	2.3	4.8
PAC HALIBUT	5.1	0.0	0.0	0.0	5.9	5.6	8.1	0.0	0.0	3.0	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
TOT FLATFISH	82.0	18.6	9.5	21.3	34.1	64.5	27.3	29.1	44.6	71.9	30.5
SKATES	2.5	6.6	26.8	50.6	3.6	0.0	8.6	34.0	34.5	14.1	16.3
TOT ELASMOBRH	2.5	6.6	26.8	50.6	3.6	0.0	8.6	34.0	34.5	14.1	16.3
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	8.4	5.4	3.6	0.0	0.0	40.4	0.0	3.2	0.0	0.0	0.0
TANNER, BAIRDI	0.7	0.1	0.1	3.2	0.2	176.7	5.0	3.4	10.7	22.7	44.2
TANNER, OPILIO	383.3	512.3	313.9	19.3	923.3	152.4	1102.2	195.5	84.8	36.7	10.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	4.5	0.2	1.4	2.4	0.0	55.3	0.0	0.0	0.0	0.0	0.0
SNAILS	0.0	102.3	73.8	49.9	94.6	8.6	15.4	22.7	10.0	11.3	10.0
SHRIMP	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1
STARFISH	61.2	235.4	221.6	17.9	9.6	133.6	3.2	2.3	0.0	2.9	0.7
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
OTHER INVERTS	33.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1
TOTAL INVERTS	491.2	855.8	614.4	92.6	1027.7	571.3	1125.8	227.0	105.4	74.2	65.3
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	684.7	931.5	750.0	209.5	1104.5	708.5	1243.6	350.4	250.2	193.7	170.5

Table A-1.--Station and catch data for the NOAA ship <u>Oregon</u> (cont'd).

HAUL #	73	74	75	76	77	78	79	80	82	83	84
MONTH/DAY/YEAR	6/17/80	6/17/80	6/18/80	6/18/80	6/18/80	6/21/80	6/21/80	6/21/80	6/22/80	6/22/80	6/22/80
LATITUDE START	57 0.1	56 40.2	56 40.5	56 30.9	56 39.9	56 19.1	56 20.0	56 20.2	55 20.5	55 20.2	55 20.1
LONGITUDE START	171 23.0	171 21.3	170 44.5	170 32.1	170 7.7	170 41.1	170 4.8	169 28.5	165 9.8	164 34.5	164 0.7
LATITUDE END	57 0.7	56 41.4	56 39.5	56 32.8	56 40.9	56 19.1	56 20.2	56 20.6	55 20.3	55 20.5	55 19.8
LONGITUDE END	171 24.8	171 21.6	170 45.0	170 32.8	170 7.0	170 39.2	170 2.8	169 26.4	165 7.6	164 32.1	163 58.7
LORAN START	18278.20	18195.00	18399.40	18385.20	18541.20	18259.30	18398.10	18484.80	18428.30	18447.70	18464.60
LORAN START	35002.00	35069.80	35126.90	35137.60	50006.70	50007.90	49901.00	49743.60	48087.60	47867.40	47655.00
LORAN END	18269.00	18200.50	18390.60	18396.10	18550.90	18267.30	18404.90	18491.00	18428.70	18450.10	18464.70
LORAN END	34995.10	35066.60	35127.10	35173.30	50008.80	50003.10	49894.10	49734.70	48073.30	47852.90	47642.40
GEAR DEPTH	106	115	110	112	95	117	106	143	106	101	75
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.02	2.30	1.80	3.61	1.93	1.96	2.07	2.28	2.44	2.57	2.13
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	28.6	2.7	8.4	69.9	163.5	13.4	65.3	27.7	57.6	11.6	10.4
PAC COD	245.8	23.1	27.2	39.9	9.5	22.0	11.1	34.5	2.7	20.4	0.2
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9	0.0	0.0	0.0
SABLEFISH	2.7	0.9	0.0	0.7	0.0	0.0	0.0	0.0	390.1	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0
SCULPINS	4.6	4.2	5.3	20.9	6.1	3.9	21.3	41.3	0.5	1.0	0.2
EELPOUTS	0.7	1.8	6.4	10.0	0.9	0.5	3.6	0.0	14.7	3.2	0.0
OTHER RNDFISH	7.1	0.1	1.8	2.5	6.1	0.1	2.7	16.8	0.0	0.0	0.0
TOT ROUNDFISH	289.6	32.9	49.1	143.8	186.2	39.8	105.4	142.3	465.6	36.2	10.8
YELLOW SOLE	0.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	76.7	21.5
ROCK SOLE	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	42.4	12.2
FLATHEAD SOLE	9.5	4.3	3.6	24.9	17.0	10.4	29.0	0.5	7.3	2.7	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
GREENLAND TBT	7.5	0.1	0.2	1.8	0.7	5.4	12.7	0.0	0.0	0.0	0.0
ARROWTOOTH FL	5.2	6.8	2.7	33.6	11.8	12.2	21.8	8.4	11.8	31.3	0.1
PAC HALIBUT	0.0	0.0	0.0	2.3	1.2	0.0	0.0	0.0	1.2	5.9	0.0
OTHER FLTFISH	0.1	0.5	0.0	0.1	0.0	1.8	0.9	0.0	1.4	5.2	0.0
TOT FLATFISH	22.7	11.7	6.5	62.7	31.1	29.9	64.9	8.8	22.0	165.4	33.9
SKATES	22.7	17.5	22.0	46.3	25.9	8.5	29.9	107.8	39.7	0.0	0.0
TOT ELASMOBRH	22.7	17.5	22.0	46.3	25.9	8.5	29.9	107.8	39.7	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	58.5	5.7
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	37.4	83.7	38.7	62.4	61.2	241.1	32.7	3.2	7.9	31.1	0.5
TANNER, OPILIO	65.3	9.5	5.9	1.6	16.3	0.1	0.1	0.0	9.3	10.9	0.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	0.4	0.4	0.1	0.3	0.0	0.2	0.0	0.1	0.0	0.4	2.0
SNAILS	5.4	13.0	0.5	0.5	1.1	3.8	0.0	0.3	0.3	0.4	0.0
SHRIMP	0.1	0.1	0.4	0.2	0.0	0.1	0.4	0.1	0.1	0.0	0.0
STARFISH	0.0	1.4	14.1	21.1	1.5	178.7	20.9	1.0	0.4	0.0	0.0
SQUID	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	64.0	12.0	28.1	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.1	0.0	0.0	2.7
TOTAL INVERTS	108.8	108.1	60.0	86.0	80.6	488.4	66.0	33.0	19.2	101.3	10.9
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	443.7	170.1	137.6	338.7	323.7	566.7	266.2	291.9	546.5	302.9	55.6

Table A-1.--Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	86	87	88	90	91	92	93	94	95	97	98
MONTH/DAY/YEAR	6/28/80	6/28/80	6/28/80	6/29/80	6/29/80	6/29/80	6/30/80	6/30/80	6/30/80	6/30/80	6/30/80
LATITUDE START	56 59.8	57 20.2	57 40.4	58 0.1	58 20.1	58 40.3	58 60.0	59 19.6	59 39.5	59 40.0	59 20.5
LONGITUDE START	173 15.2	173 20.1	173 24.4	173 28.5	173 34.5	174 16.3	174 22.1	174 27.1	174 26.9	175 6.5	175 6.1
LATITUDE END	57 1.0	57 19.1	57 39.5	58 0.1	58 21.3	58 39.9	59 0.5	59 20.7	59 40.7	59 40.0	59 19.4
LONGITUDE END	173 15.2	173 20.1	173 24.0	173 31.1	173 35.3	174 14.5	174 23.8	174 27.0	174 26.8	175 4.4	175 6.3
LORAN START	17548.20	17568.70	17573.20	17562.40	17530.30	17301.40	17269.10	17238.90	17230.00	17046.50	17048.60
LORAN START	34729.50	34600.00	34449.50	34284.60	34099.50	33856.10	33666.60	33474.40	33278.10	33246.40	33430.50
LORAN END	17551.30	17566.40	17574.50	17547.30	17525.90	17310.70	17260.70	17238.60	17229.50	17056.60	17047.20
LORAN END	34723.30	34607.20	34456.90	34279.60	34087.20	33861.90	33659.80	33463.00	33266.00	33248.10	33440.00
GEAR DEPTH	137	117	143	112	110	152	124	117	112	121	128
DURATION IN HOURS	0.50	0.50	0.50	0.60	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.15	2.09	1.69	2.54	2.39	1.83	1.85	2.19	2.26	2.04	1.96
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	6.1	10.0	29.1	58.4	119.6	76.4	45.0	98.9	415.9	241.3	40.8
PAC COD	37.4	22.8	16.8	55.5	74.2	53.1	17.1	32.0	56.2	39.7	34.7
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	12.6	17.8	6.5	28.6	11.4	1.9	4.7	6.1	11.3	5.4	4.4
EELPOUTS	4.5	44.0	0.5	4.8	18.6	28.3	12.2	55.8	12.7	147.0	38.3
OTHER RNDFISH	1.1	0.3	0.3	0.2	0.8	2.7	0.5	0.0	0.0	0.6	0.3
TOT ROUNDFISH	61.7	94.8	53.2	147.4	224.5	162.7	79.5	192.8	496.1	433.9	118.5
YELLOW SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROCK SOLE	2.5	0.0	0.5	0.1	2.0	1.4	0.0	0.0	0.0	0.0	0.0
FLATHEAD SOLE	7.7	24.9	1.4	4.8	7.0	7.6	0.0	0.6	0.5	4.8	0.3
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GREENLAND TBT	0.0	0.9	0.0	0.1	4.1	0.7	0.5	18.7	13.6	20.0	2.3
ARROWTOOTH FL	16.3	10.0	31.5	31.5	2.0	30.7	0.0	0.0	0.1	0.0	2.5
PAC HALIBUT	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.7	0.0	1.3	1.6
OTHER FLTFISH	0.1	0.1	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	26.6	35.9	33.4	37.0	15.3	40.3	3.6	21.0	14.2	26.0	6.7
SKATES	12.2	7.2	37.9	34.0	7.6	12.0	12.9	64.4	10.6	15.9	1.8
TOT ELASMOBRH	12.2	7.2	37.9	34.0	7.6	12.0	12.9	64.4	10.6	15.9	1.8
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
TANNER, BAIRDI	95.7	135.2	179.2	100.7	138.8	168.7	6.4	0.4	0.1	0.0	1.6
TANNER, OPILIO	0.0	0.9	0.2	8.8	8.2	4.3	29.9	43.1	3.4	23.5	10.4
TANNER, HYBRID	0.0	0.1	0.0	0.5	0.0	0.5	0.9	0.0	0.0	0.0	0.1
OTHER CRAB	7.4	4.5	2.5	6.8	8.2	1.6	8.6	1.0	31.9	0.1	0.2
SNAILS	0.4	3.6	1.2	8.2	11.5	1.8	41.3	61.2	13.3	48.9	55.6
SHRIMP	0.1	0.1	0.0	0.1	0.1	0.0	1.7	3.0	3.2	6.1	1.4
STARFISH	0.0	0.6	0.2	0.1	1.1	0.0	1.5	4.1	8.8	24.9	4.3
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	23.8	6.8	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.7	0.3
OTHER INVERTS	0.0	0.1	0.2	0.0	0.2	0.3	1.5	1.3	0.6	1.0	0.4
TOTAL INVERTS	127.4	152.0	183.5	125.2	168.1	177.2	92.1	115.0	61.2	105.2	74.3
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	228.0	289.9	308.0	343.6	415.6	392.2	188.1	393.2	582.0	581.0	201.3

Table A-1.--Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	99	100	101	102	103	104	106	108	109	110	111
MONTH/DAY/YEAR	7/ 1/80	7/ 1/80	7/ 1/80	7/ 1/80	7/ 1/80	7/ 2/80	7/ 2/80	7/ 3/80	7/ 4/80	7/ 4/80	7/ 5/80
LATITUDE START	59 0.3	59 0.1	59 19.3	59 40.3	59 40.4	59 20.1	58 59.9	58 20.2	59 0.3	59 0.0	58 59.4
LONGITUDE START	175 2.6	175 43.2	175 45.1	175 52.4	176 32.6	176 23.3	176 18.9	174 14.2	166 36.2	165 19.2	164 0.8
LATITUDE END	59 0.2	59 0.0	59 20.3	59 39.4	59 39.3	59 19.1	58 58.8	58 19.2	59 1.0	58 59.9	59 0.6
LONGITUDE END	175 4.8	175 45.3	175 46.2	175 53.9	176 32.8	176 22.1	176 17.7	174 14.1	166 37.9	165 17.7	164 0.8
LORAN START	17061.50	16850.30	16854.50	16830.60	16639.80	16665.30	16663.80	17307.80	18657.70	18696.00	18718.90
LORAN START	33617.70	33572.40	33401.20	33209.60	33177.30	33359.30	33531.80	34035.60	33396.00	33219.20	33043.50
LORAN END	17050.20	16839.40	16849.90	16823.10	16637.60	16670.00	16668.90	17307.60	18655.20	18696.70	18717.70
LORAN END	33615.90	33570.20	33492.20	33216.60	33186.30	33368.30	33542.30	34044.90	33393.00	33216.30	33033.50
GEAR DEPTH	126	130	132	134	132	134	132	139	33	26	24
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.09	2.00	2.09	2.19	2.00	2.04	2.37	2.00	2.06	1.52	2.09
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	31.7	60.1	15.1	283.3	97.5	25.8	102.5	26.1	0.1	0.0	0.1
PAC COD	12.9	10.2	2.0	7.7	4.5	0.5	1.6	34.6	0.0	0.0	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.5	1.0	2.8	4.3	0.6	4.8	28.7	2.4	29.4	1.6	9.4
EELPOUTS	49.2	42.3	41.5	82.3	47.6	92.1	2.3	0.0	0.0	0.0	0.0
OTHER RNDFISH	0.1	0.1	0.0	0.2	0.1	0.3	0.6	4.0	7.9	1.0	3.3
TOT ROUNDFISH	94.4	113.7	61.4	377.8	150.3	123.5	135.6	67.1	37.3	2.6	12.8
YELLOW SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	343.6	192.1	134.0
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	3.6	2.7	0.0
FLATHEAD SOLE	2.0	1.1	2.7	4.8	7.3	3.2	29.7	5.7	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	140.5	31.8	10.4
GREENLAND TBT	0.5	0.5	2.0	11.1	6.4	11.9	0.6	0.0	0.0	0.0	0.0
ARRCWTOOTH FL	0.6	0.4	0.0	0.0	0.0	0.0	0.4	2.4	0.0	0.0	0.0
PAC HALIBUT	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.5	7.9
TOT FLATFISH	3.1	3.7	4.6	15.9	13.6	15.1	30.7	28.3	491.1	228.1	152.4
SKATES	6.4	0.1	1.8	13.8	0.1	14.7	0.0	45.8	0.0	0.0	0.0
TOT ELASMOBRH	6.4	0.1	1.8	13.8	0.1	14.7	0.0	45.8	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	14.5	4.5	0.3	0.9	0.0	0.0	0.1	55.3	2.3	0.0	0.0
TANNER, OPILIO	5.7	2.0	0.5	3.6	3.4	0.0	0.2	1.5	0.0	0.0	0.0
TANNER, HYBRID	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
OTHER CRAB	1.4	2.3	0.0	0.0	0.0	0.0	0.0	2.9	1.9	1.7	17.0
SNAILS	8.4	16.3	16.4	11.0	4.0	30.4	6.8	0.5	0.0	0.0	0.0
SHRIMP	0.1	0.7	2.1	3.4	1.6	0.9	0.0	0.0	0.0	0.0	0.0
STARFISH	0.1	1.6	74.8	98.9	28.6	134.0	0.7	0.5	105.7	78.3	106.7
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	1.4	1.4	0.1	7.0	0.3	0.0	0.0	0.0	0.0
OTHER INVERTS	0.3	0.1	0.0	0.4	0.0	0.5	0.4	0.1	0.1	0.0	0.0
TOTAL INVERTS	31.4	27.6	95.5	119.5	37.7	172.8	8.5	61.3	110.0	80.0	123.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	135.3	145.1	163.3	527.0	201.7	326.1	174.9	202.5	638.4	310.7	288.9

Table A-l. --Station and catch data for the NOAA ship Oregon (cont'd).

HAUL #	124	125
MONTH/DAY/YEAR	7/ 9/80	7/ 9/80
LATITUDE START	55 0.5	54 40.3
LONGITUDE START	165 9.0	165 9.3
LATITUDE END	54 59.3	54 38.6
LONGITUDE END	165 9.9	165 9.6
LORAN START	49056.50	
LORAN START	34564.20	
LORAN END	48060.00	
LORAN END	34569.10	
GEAR DEPTH	108	82
DURATION IN HOURS	0.50	0.50
DISTANCE FISHED	2.43	2.41
PERFORMANCE / GEAR	0 / 20	0 / 20
POLLOCK	20.4	24.9
PAC COD	44.7	78.5
PAC OC PERCH	0.0	0.0
OTHER RCKFISH	0.0	0.0
SABLEFISH	0.0	0.0
PAC HERRING	0.0	0.0
ATKA MACKEREL	0.0	0.0
SCULPINS	7.6	15.0
EELPOUTS	14.5	0.0
OTHER RNDFISH	1.4	0.8
TOT ROUNDFISH	88.6	119.2
YELLOW SOLE	2.4	150.0
ROCK SOLE	21.8	10.9
FLATHEAD SOLE	57.6	7.0
ALASKA PLAICE	0.0	0.0
GREENLAND TBT	0.0	0.0
ARROWTOOTH FL	38.6	17.4
PAC HALIBUT	0.0	12.0
OTHER FLTFISH	8.4	7.9
TOT FLATFISH	128.7	205.3
SKATES	64.4	0.0
TOT ELASMOBRH	64.4	0.0
RED KING CRAB	0.0	0.0
BLUE KING CRAB	0.0	0.0
TANNER, BAIRDI	4.1	0.9
TANNER, OPILIO	0.4	0.0
TANNER, HYBRID	0.0	0.0
OTHER CRAB	0.3	5.3
SNAILS	0.9	0.3
SHRIMP	0.0	0.0
STARFISH	1.4	0.0
SQUID	0.0	0.0
OCTOPUS	12.7	5.2
OTHER INVERTS	0.0	0.0
TOTAL INVERTS	19.7	11.7
OTHER	0.0	0.0
TOTAL CATCH	301.5	336.3

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester.

HAUL #	1	2	3	4	5	6	7	8	9	10	11
MONTH/DAY/YEAR	5/12/80	5/12/80	5/12/80	5/12/80	5/13/80	5/13/80	5/13/80	5/14/80	5/14/80	5/14/80	5/14/80
LATITUDE START	54 59.0	55 19.2	55 39.8	55 59.6	56 20.1	56 39.4	56 59.4	57 19.1	57 38.4	58 0.9	58 20.2
LONGITUDE START	165 44.5	165 46.5	165 47.1	165 46.1	165 47.2	165 49.3	165 50.1	165 50.7	165 49.5	165 57.1	165 55.9
LATITUDE END	55 0.7	55 21.2	55 41.3	56 1.3	56 21.3	56 38.0	56 57.9	57 18.5	57 37.5	58 0.4	58 20.6
LONGITUDE END	165 44.7	165 47.0	165 45.7	165 45.5	165 47.1	165 48.9	165 50.9	165 53.6	165 52.4	166 0.4	165 58.8
LORAN START	18314.50	18398.00	18479.50	18551.90	18616.80	18668.10	18709.00	18735.90	18749.00	18748.20	18735.20
LORAN START	34655.60	34616.80	34565.30	34501.20	34428.80	34350.30	34249.70	34133.90	33998.40	33847.80	33679.80
LORAN END	18321.50	18405.60	18485.90	18557.90	18620.30	18664.70	18706.40	18735.50	18748.80	18748.20	18734.30
LORAN END	34652.70	34613.60	34557.20	34493.80	34423.70	34355.90	34260.60	34146.80	34013.60	33862.20	33684.60
GEAR DEPTH	130	121	119	108	93	79	75	70	64	57	42
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.09	3.67	3.11	3.22	2.22	2.69	2.93	3.11	3.32	3.48	2.93
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	47.6	89.6	74.4	37.2	134.7	51.7	123.4	26.3	7.7	5.7	0.2
PAC COD	87.3	34.9	32.9	7.0	62.6	88.5	159.7	42.6	83.0	1.4	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	7.3	0.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	1.4	0.2	19.1	0.2	0.5	0.1	0.5
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.5	11.1	0.1	0.6	0.0	11.3	0.5	4.0	13.8	45.2	26.0
EELPOUTS	0.2	4.8	22.7	18.8	4.5	12.5	10.2	23.1	8.3	4.3	1.4
OTHER RNDFISH	0.2	8.6	0.3	0.8	0.3	0.2	0.1	0.5	1.9	0.9	3.6
TOT ROUNDFISH	143.1	149.0	131.1	64.6	203.6	164.4	312.9	96.7	115.2	57.6	31.6
YELLOW SOLE	0.0	0.0	0.0	0.2	118.4	112.5	45.4	186.0	257.2	120.7	124.3
ROCK SOLE	0.2	0.2	0.2	0.0	12.9	25.4	12.2	15.4	9.1	4.1	0.2
FLATHEAD SOLE	7.3	99.3	34.9	8.2	10.0	17.7	6.4	0.9	0.7	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.5	1.6	30.8	8.2	44.9	22.2	22.7	46.9
GREENLAND TBT	0.0	0.5	0.0	0.9	2.0	1.4	0.7	2.5	0.7	1.4	0.0
ARROWTOOTH FL	64.9	25.4	9.5	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	10.4	36.1	11.3	1.0	1.7	4.1	6.8	0.9	0.0	0.5	0.0
OTHER FLTFISH	2.0	1.8	0.1	0.0	0.0	0.0	0.0	0.2	0.0	2.3	10.4
TOT FLATFISH	84.8	163.3	56.1	14.9	146.7	191.9	79.7	250.8	289.8	151.5	181.9
SKATES	54.3	29.5	51.0	35.4	9.5	0.9	1.4	1.6	0.0	0.5	0.0
TOT ELASMOBRH	94.3	29.5	51.0	35.4	9.5	0.9	1.4	1.6	0.0	0.5	0.0
RED KING CRAB	0.0	0.0	0.0	1.8	8.2	13.6	3.2	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	15.4	12.7	5.0	6.4	5.9	0.9	0.9	4.1	3.6	2.3	0.0
TANNER, OPILIO	0.0	6.4	2.9	22.0	6.4	4.3	1.4	30.2	27.9	81.6	41.3
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	2.7	0.2
OTHER CRAB	0.0	0.0	0.0	0.0	14.4	0.0	0.0	0.0	48.8	47.7	16.6
SNAILS	0.1	0.0	1.1	11.6	79.8	19.5	7.3	9.3	24.0	15.2	4.5
SHRIMP	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
STARFISH	0.0	0.0	0.0	0.0	0.9	9.5	9.1	11.8	26.3	9.5	4.5
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	12.2	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	5.2	0.0
TOTAL INVERTS	28.0	26.8	9.2	41.9	115.8	48.0	21.8	56.2	131.5	164.4	67.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	350.2	368.5	247.3	156.7	475.6	405.2	415.7	405.3	536.5	373.9	280.7

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	12	13	14	15	16	17	18	19	20	21	22
MONTH/DAY/YEAR	5/15/80	5/15/80	5/15/80	5/15/80	5/15/80	5/15/80	5/16/80	5/16/80	5/16/80	5/16/80	5/18/80
LATITUDE START	58 20.8	58 4.7	57 39.7	57 19.4	56 59.7	56 39.4	56 21.0	56 1.4	56 0.2	56 19.9	56 0.2
LONGITUDE START	164 36.5	164 46.6	164 37.0	164 32.8	164 31.7	164 31.5	164 30.3	164 33.3	163 24.4	163 23.5	162 14.1
LATITUDE END	58 19.4	58 4.4	57 37.8	57 17.2	56 59.7	56 39.0	56 19.4	56 2.0	56 1.9	56 18.5	56 1.8
LONGITUDE END	164 36.5	164 49.1	164 37.5	164 35.4	164 28.6	164 28.2	164 29.9	164 31.2	163 24.4	163 21.6	162 13.2
LORAN START	18744.90	18750.50	33771.50	18731.70	18707.10	18671.50	18631.10	34284.50	34097.00	34010.80	33910.20
LORAN START	33460.60	33616.90	47892.00	33894.30	34007.30	34113.50	34195.20	47891.20	47438.70	47434.80	46976.40
LORAN END	18745.60	18750.50	33788.00	18729.60	18707.00	18670.90	18627.20	34276.10	34090.50	34011.90	33901.10
LORAN END	33472.00	33626.40	47895.00	33915.40	33998.20	34105.50	34201.10	47877.40	47439.60	47422.50	46970.50
GEAR DEPTH	44	46	53	66	68	75	86	91	88	88	71
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.59	2.56	3.54	4.80	3.15	3.48	3.06	2.50	3.09	3.20	3.17
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.1	0.1	16.1	6.4	2.5	3.8	37.0	20.5	93.0	29.1	3.6
PAC COD	0.1	0.1	18.6	19.5	37.6	17.8	10.4	5.4	29.0	39.0	1.4
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.5	0.2	1.1	0.0	0.1	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	39.8	1.2	10.0	0.1	0.0	0.1	0.3	0.0	0.5	0.2	0.1
EELPOUTS	0.0	0.0	0.9	2.5	2.3	1.4	24.9	0.9	0.0	0.2	0.0
OTHER RNDFISH	2.0	2.1	1.0	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.2
TOT ROUNDFISH	42.0	3.6	47.0	29.2	43.5	23.1	72.8	26.8	122.6	68.7	5.3
YELLOW SOLE	489.9	5.0	127.7	120.2	213.6	341.8	94.1	33.6	116.6	72.1	12.2
ROCK SOLE	0.5	0.0	24.0	7.7	0.5	1.0	1.6	8.2	32.2	11.8	10.0
FLATHEAD SOLE	0.0	0.0	0.2	0.7	1.1	16.0	13.6	1.8	23.6	5.9	0.7
ALASKA PLAICE	90.3	2.7	27.2	20.9	11.6	2.8	7.7	0.7	2.0	2.3	6.4
GREENLAND TBT	0.0	0.0	1.4	0.5	1.1	0.0	0.9	0.2	0.1	0.5	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.3	0.5	0.0
PAC HALIBUT	0.0	0.0	2.3	2.4	2.4	0.0	2.2	1.7	16.5	25.7	0.0
OTHER FLTFISH	1.8	1.6	6.1	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.2
TOT FLATFISH	582.4	9.3	189.0	152.4	230.3	361.5	120.1	46.8	198.9	118.7	29.5
SKATES	0.0	0.0	0.0	1.8	1.6	0.5	0.0	0.2	4.5	1.8	0.7
TOT ELASMOBRH	0.0	0.0	0.0	1.8	1.6	0.5	0.0	0.2	4.5	1.8	0.7
RED KING CRAB	0.0	0.0	5.4	29.5	116.6	598.7	5.9	5.9	3.6	1.8	103.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.0	0.0	2.7	2.3	2.8	4.5	5.9	5.9	3.6	5.9	3.6
TANNER, OPILIO	64.4	13.6	9.1	10.2	1.8	4.1	34.5	10.9	2.9	7.3	0.9
TANNER, HYBRID	0.0	0.0	0.5	1.0	1.0	0.0	1.4	0.5	0.0	0.0	0.0
OTHER CRAB	14.5	11.8	34.5	35.3	28.3	31.4	11.3	24.0	4.5	15.9	2.3
SNAILS	20.9	29.7	28.1	9.1	6.4	6.6	40.8	13.2	2.3	5.4	0.0
SHRIMP	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
STARFISH	69.9	43.1	0.0	11.3	11.6	3.3	2.7	0.0	0.0	0.0	15.2
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	1.2	6.7	99.2	0.9	0.0	0.0	3.3	0.9	5.4	0.5	2.3
TOTAL INVERTS	171.0	104.9	179.5	99.6	168.5	648.6	105.8	61.2	22.5	36.7	127.3
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	795.5	117.8	415.4	282.9	443.9	1033.7	298.7	135.1	348.5	226.0	162.8

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	23	24	25	26	27	28	29	30	31	32	33
MONTH/DAY/YEAR	5/18/80	5/18/80	5/18/80	5/19/80	5/19/80	5/19/80	5/19/80	5/19/80	5/20/80	5/20/80	5/20/80
LATITUDE START	56 20.0	56 39.7	56 40.1	57 0.2	57 19.9	57 40.0	58 0.1	58 19.8	58 19.6	58 0.4	57 40.0
LONGITUDE START	162 11.8	162 10.9	163 23.1	163 22.9	163 22.6	163 21.7	163 21.3	163 22.2	162 3.1	162 7.0	162 7.8
LATITUDE END	56 21.7	56 41.0	56 41.2	57 1.3	57 21.7	57 41.3	56 0.3	58 19.4	58 18.4	57 59.0	57 38.7
LONGITUDE END	162 12.0	162 9.5	163 24.6	163 24.4	163 21.7	163 20.0	163 18.8	163 19.8	162 4.0	162 8.5	162 5.7
LORAN START	33817.70	33721.30	33913.60	33806.80	33691.80	33561.60	33422.30	33278.70	33091.90	33235.50	33371.60
LORAN START	46956.20	46947.40	47430.90	47423.70	47412.00	47391.80	47371.00	47356.00	46848.00	46885.30	46902.00
LORAN END	33810.70	33711.10	33912.20	33805.00	33678.50	33548.30	33414.20	33276.10	33102.90	33248.60	33374.60
LORAN END	46959.20	46937.40	47440.90	47433.30	47405.20	47379.40	47354.80	47341.30	46854.70	46896.10	46889.00
GEAR DEPTH	79	71	75	66	53	48	42	37	46	37	48
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.06	2.82	2.61	2.50	3.44	2.98	2.44	2.44	2.46	2.98	3.13
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	231.4	55.8	12.2	8.6	1.4	3.7	0.1	0.2	0.1	0.0	0.0
PAC COD	196.4	62.8	15.9	31.8	19.1	7.7	0.9	0.0	0.1	0.0	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.7	0.0	3.6	0.5	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.5	0.1	0.0	0.0	0.6	4.1	13.3	17.0	12.7	8.4	3.4
EELPOUTS	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	0.0	0.1	0.2	0.0	0.4	2.1	1.8	15.2	4.3	6.0	0.9
TOT ROUNDFISH	428.2	118.9	28.5	40.4	21.4	18.3	16.1	36.1	17.7	14.4	4.3
YELLOW SOLE	187.3	78.9	116.1	108.0	246.3	439.1	212.7	180.1	459.9	556.1	173.3
ROCK SOLE	56.7	25.4	2.3	0.7	29.0	28.6	18.1	5.0	7.7	52.6	12.2
FLATHEAD SOLE	2.3	5.9	4.1	1.4	1.8	0.5	0.0	0.0	0.0	0.0	0.7
ALASKA PLAICE	6.8	5.0	3.2	7.7	42.6	102.1	71.0	78.0	7.5	8.6	31.3
GREENLAND TBT	0.0	0.0	0.2	0.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	8.2	2.4	0.0	0.7	1.3	1.9	0.0	0.5	1.8	2.4	4.4
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.1	37.6	44.0	7.7	10.9	26.8	52.6
TOT FLATFISH	261.4	117.7	125.9	118.9	321.4	609.9	345.9	271.2	487.8	646.5	274.6
SKATES	0.7	3.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	0.7	3.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	59.0	44.5	25.4	112.0	256.3	23.6	5.0	1.8	0.0	11.3	20.4
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	99.8	8.6	4.1	0.5	0.9	0.9	1.4	0.0	0.0	0.0	0.0
TANNER, OPILIO	5.0	0.5	5.4	2.3	1.0	7.3	0.7	0.2	0.0	0.0	3.2
TANNER, HYBRID	0.9	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.0
OTHER CRAB	0.9	0.0	5.1	7.3	9.8	11.8	14.7	2.5	3.7	0.2	0.0
SNAILS	1.4	0.0	6.1	2.7	10.9	22.2	14.3	1.4	4.5	0.5	0.1
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
STARFISH	0.0	0.0	0.0	0.0	3.2	10.4	40.8	123.1	138.3	36.7	0.0
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.2	4.8	0.9	0.0	0.5	1.1	0.1	0.0	0.7	0.4	0.0
TOTAL INVERTS	167.1	58.3	47.0	124.7	282.5	77.8	77.1	129.0	147.3	49.2	1.0
											32.4
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	857.5	298.0	201.5	284.9	625.3	706.0	439.0	436.4	652.7	710.0	311.2

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	34	35	36	37	38	39	40	41	42	43	44
MONTH/DAY/YEAR	5/20/80	5/20/80	5/21/80	5/21/80	5/21/80	5/21/80	5/21/80	5/22/80	5/22/80	5/22/80	5/22/80
LATITUDE START	57 20.0	56 59.7	56 39.9	57 0.1	57 20.1	57 40.0	57 59.9	58 19.9	58 19.9	58 0.1	58 0.2
LONGITUDE START	162 9.1	162 10.1	161 35.1	161 33.9	161 32.0	161 29.7	161 28.7	161 23.8	160 46.3	160 50.6	160 12.8
LATITUDE END	57 18.5	56 58.1	56 38.4	57 1.4	57 21.6	57 41.2	58 0.4	58 20.9	58 19.3	57 58.8	58 1.3
LONGITUDE END	162 7.3	162 9.1	161 35.0	161 35.3	161 31.2	161 27.5	161 25.8	161 21.3	160 49.3	160 51.2	160 10.6
LORAN START	33497.20	33614.80	33628.80	33520.80	33404.40	33279.00	33149.20	33002.30	32921.50	33062.30	32979.70
LORAN START	46920.30	46935.60	46707.80	46692.50	46672.00	46649.00	46634.40	46594.80	46352.50	46384.40	46136.20
LORAN END	33501.20	33620.90	33635.80	33517.60	33393.70	33266.20	33139.30	32989.20	32932.10	33071.80	32968.00
LORAN END	46908.70	46929.50	46707.70	46701.30	46666.00	46634.20	46614.90	46578.30	46372.20	46388.80	46121.90
GEAR DEPTH	51	62	91	68	55	53	55	31	20	44	49
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.30	3.13	2.70	2.67	2.89	3.13	3.04	3.17	3.19	2.43	3.00
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.5	5.4	215.5	0.7	4.6	1.9	0.0	0.1	0.0	2.6	1.4
PAC COD	18.1	18.6	29.9	8.2	146.1	14.5	0.0	0.1	0.0	0.1	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	6.4	0.1	0.1	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	6.6	0.3	0.7	0.3	1.5	3.6	0.7	67.9	43.5	4.0	3.6
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	0.8	0.4	0.1	0.4	0.6	3.2	12.9	30.9	11.9	2.1	10.2
TOT ROUNDFISH	25.9	24.8	246.2	9.6	152.7	29.6	13.7	99.1	55.4	8.8	15.2
YELLOW SOLE	327.0	234.7	99.3	54.0	289.4	458.6	218.0	150.1	228.8	1478.5	565.6
ROCK SOLE	62.6	26.8	9.1	23.6	36.7	47.2	1.4	38.6	15.9	10.8	16.6
FLATHEAD SOLE	3.6	10.0	5.4	5.4	8.2	0.7	0.1	0.0	0.0	0.0	0.0
ALASKA PLAICE	77.1	10.9	0.7	11.3	53.5	42.2	3.6	1.8	5.9	29.8	22.2
GREENLAND TBT	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	8.0	2.4	2.4	9.8	11.3	4.4	3.9	1.0	5.0	6.8	1.2
OTHER FLTFISH	7.5	0.5	0.0	0.0	0.2	18.1	0.7	45.8	31.3	30.6	29.9
TOT FLATFISH	485.9	285.3	117.0	104.1	399.8	571.2	227.7	237.4	286.9	1556.5	635.6
SKATES	0.0	0.9	0.2	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	0.0	0.9	0.2	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	90.7	127.0	266.7	87.5	11.3	15.9	0.0	2.3	2.3	15.0	6.8
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	6.8	9.1	296.2	5.0	9.3	4.5	0.0	0.0	0.0	3.6	0.9
TANNER, OPILIO	2.7	0.0	0.9	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0
TANNER, HYBRID	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	0.9	0.5	0.2	0.7	5.4	8.8	0.5	2.4	0.2	1.7	5.9
SNAILS	0.5	0.9	0.0	0.0	2.7	11.6	1.4	0.0	0.0	2.1	4.5
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
STARFISH	2.3	0.0	0.0	0.0	5.9	6.4	54.0	117.3	0.0	89.6	108.9
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	70.5	0.0	26.5	41.8	20.5	24.6	0.6	0.3	0.2	1.8	0.7
TOTAL INVERTS	174.4	137.4	592.8	135.0	55.7	71.8	56.7	122.3	2.7	113.9	127.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	686.3	448.4	956.2	248.8	609.5	672.5	298.0	458.8	345.0	1679.1	778.5

Table A-2. –Station and catch data for the chartered vessel <u>Ocean Harvester</u> (cont'd).

HAUL #	45	46	47	48	49	50	51	52	53	54	55
MONTH/DAY/YEAR	5/24/80	5/24/80	5/24/80	5/24/80	5/24/80	5/25/80	5/25/80	5/25/80	5/26/80	5/26/80	5/26/80
LATITUDE START	58 20.0	58 19.9	58 0.1	57 60.0	57 59.7	57 40.1	57 40.0	57 40.0	57 40.0	57 39.8	57 19.9
LONGITUDE START	160 10.8	159 32.7	159 35.6	158 57.9	158 19.1	158 21.3	159 1.2	159 37.9	160 15.9	160 52.5	160 55.8
LATITUDE END	58 19.6	58 20.9	57 58.8	58 0.0	58 0.6	57 41.7	57 38.4	57 39.9	57 40.4	57 38.4	57 20.5
LONGITUDE END	160 7.9	159 32.2	159 37.0	158 54.7	158 15.9	158 21.7	159 1.5	159 34.6	160 18.3	160 52.8	160 53.4
LORAN START	32847.90	32773.30	32903.40	32829.30	32757.00	32873.60	32953.10	33028.80	33110.60	33193.40	33318.50
LORAN START	46123.90	45878.10	45892.70	45645.00	45390.70	45397.90	45662.60	45906.60	46159.00	46402.10	46430.30
LORAN END	32844.60	32765.50	32914.30	32822.90	32745.80	32865.10	32962.70	33022.50	33113.60	33203.10	33309.50
LORAN END	46105.10	45875.10	45901.40	45624.00	45370.40	45400.80	45664.80	45884.90	46175.10	46404.60	46413.70
GEAR DEPTH	15	24	40	40	33	33	48	48	55	57	64
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.93	2.02	2.80	3.17	3.56	3.09	2.91	3.26	2.54	2.76	2.69
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.0	0.0	0.1	0.1	0.1	0.0	0.1	13.4	9.1	0.1	7.3
PAC COD	0.1	0.5	0.1	0.1	0.5	0.5	0.9	48.8	1.8	0.7	3.2
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	30.2	13.5	70.2	10.2	8.3	77.6	21.6	2.4	1.7	2.4	0.9
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	10.6	1.4	10.5	3.3	0.7	2.2	10.8	2.4	1.8	1.5	1.2
TOT ROUNDFISH	41.0	15.4	81.0	13.7	9.5	80.3	33.5	67.1	14.4	5.3	12.5
YELLOW SOLE	190.3	1133.6	965.9	437.9	173.5	1444.3	480.6	1446.0	199.6	439.1	427.7
ROCK SOLE	0.5	0.0	215.3	17.7	13.6	173.1	44.0	153.6	60.3	45.4	28.6
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.4	1.4	6.4	6.8
ALASKA PLAICE	0.0	2.0	0.4	0.0	0.0	0.2	0.0	0.5	10.0	24.9	18.6
GREENLAND TBT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	6.4	0.0	9.4	10.3	1.0	0.0	0.5	3.4	4.5	3.6	6.4
OTHER FLTFISH	8.2	43.4	108.8	11.6	0.2	1.7	5.9	31.7	27.7	4.5	0.9
TOT FLATFISH	205.2	1179.0	1299.8	477.5	188.3	1619.3	531.7	1637.7	303.4	524.0	489.2
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
TOT ELASMOBRH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
RED KING CRAB	0.0	0.0	0.0	0.0	9.1	0.0	1.4	18.1	22.7	34.0	45.4
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	5.4	2.3	22.7
TANNER, OPILIO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	29.9	2.7	0.9	0.0	0.5	0.3	0.4	0.7	1.4	5.2	2.3
SNAILS	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.3	13.6	0.0
SHRIMP	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	3.2	34.7	16.7	18.1	61.5	76.4	143.3	524.3	19.5	28.1	10.0
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.2	0.0	0.0	3.2	0.2	0.0	0.2	0.5	5.2	15.0	36.8
TOTAL INVERTS	33.3	37.5	17.7	21.3	71.4	76.7	145.3	544.3	56.5	98.2	117.1
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	279.5	1231.8	1398.5	512.5	269.2	1776.3	710.4	2249.1	374.3	627.5	620.7

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	56	57	58	59	60	61	62	63	64	65	66
MONTH/DAY/YEAR	5/26/80	5/26/80	5/27/80	5/27/80	5/27/80	5/27/80	5/28/80	5/28/80	5/28/80	5/28/80	5/28/80
LATITUDE START	57 20.0	57 19.9	57 20.0	57 19.8	56 59.7	56 59.7	56 39.9	56 40.2	57 0.0	56 59.7	56 39.8
LONGITUDE START	160 17.7	159 39.5	159 3.4	158 17.8	159 7.5	159 42.6	159 45.8	160 21.9	160 20.5	160 56.6	160 59.0
LATITUDE END	57 20.2	57 20.7	57 20.8	57 18.5	56 58.8	56 58.1	56 41.1	56 41.7	56 59.8	56 58.4	56 38.4
LONGITUDE END	160 15.0	159 36.4	159 0.5	158 19.9	159 10.6	159 42.7	159 46.5	160 23.4	160 23.8	160 58.8	160 57.6
LORAN START	33230.20	33145.90	33069.00	32977.20	33184.30	33261.00	33367.60	33449.60	33344.90	33432.10	33539.80
LORAN START	46175.00	45919.60	45678.40	45373.40	45711.30	45946.60	45976.20	46217.80	46199.70	46442.40	46466.10
LORAN END	33223.20	33135.00	33058.60	32988.00	33195.90	33269.50	33363.20	33445.50	33344.40	33444.30	33543.40
LORAN END	46157.50	45898.90	45659.20	45387.50	45732.60	45948.10	45980.40	46227.20	46222.30	46458.00	46457.40
GEAR DEPTH	59	55	48	20	29	55	35	59	60	64	70
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.65	3.41	3.24	3.13	3.63	2.94	2.41	3.26	3.37	3.30	2.96
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	73.0	31.3	0.0	0.0	0.0	0.3	207.9	17.2	6.8	62.4	16.8
PAC COD	106.6	176.4	72.3	0.0	21.3	318.8	1328.1	334.8	337.2	347.5	106.1
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	2.0	2.1	45.6	29.5	42.7	1.8	9.8	10.2	1.1	0.2	3.1
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	3.3	2.5	6.4	65.6	4.0	3.6	2.1	2.6	3.9	0.2	0.9
TOT ROUNDFISH	184.9	212.4	124.2	96.0	68.1	324.5	1547.9	364.8	348.9	410.3	126.9
YELLOW SOLE	84.8	152.2	276.2	464.9	101.6	555.0	704.3	133.4	196.5	165.5	254.9
ROCK SOLE	96.8	191.0	137.7	4.5	154.2	258.8	588.7	84.8	273.0	157.2	134.7
FLATHEAD SOLE	5.7	1.1	0.9	0.5	0.7	3.4	0.6	0.9	6.0	5.3	5.0
ALASKA PLAICE	4.5	0.7	0.0	6.6	0.7	0.0	0.0	0.0	3.0	3.8	21.3
GREENLAND TBT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	5.3	14.5	0.0	8.5	2.0	2.9	25.5	8.1	8.9	9.3	11.7
OTHER FLTFISH	2.7	41.0	3.9	6.8	49.0	25.4	25.3	4.1	7.6	0.8	4.2
TOT FLATFISH	199.9	400.5	418.6	491.8	308.1	845.9	1344.4	231.3	495.1	341.8	431.8
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	6.8
TOT ELASMOBRH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	6.8
RED KING CRAB	20.9	31.8	13.6	3.2	22.7	6.4	1.4	27.2	276.7	83.9	96.6
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	10.4	7.3	1.4	0.0	0.5	6.8	0.7	10.4	10.9	16.8	21.8
TANNER, OPILIO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	1.6	1.6	4.8	0.3	6.8	0.8	0.0	4.1	2.3	0.0	3.8
SNAILS	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.1
SHRIMP	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
STARFISH	0.7	104.8	653.5	37.6	1134.0	126.7	55.9	42.0	9.1	0.0	0.0
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	61.2	2.7	3.4	0.0	0.0	28.0	0.6	9.3	158.0	454.3	34.0
TOTAL INVERTS	95.1	143.1	676.8	41.1	1163.9	168.9	58.6	93.9	456.9	555.0	156.3
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	479.9	761.0	1219.6	628.9	1540.1	1339.2	2950.9	689.9	1301.0	1310.8	721.9

Table A-2 .--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	67	68	69	70	71	72	73	74	76	77	78
MONTH/DAY/YEAR	5/29/80	5/29/80	5/31/80	5/31/80	5/31/80	6/ 1/80	6/ 1/80	6/ 1/80	6/ 5/80	6/ 6/80	6/ 6/80
LATITUDE START	56 20.0	56 19.9	55 0.5	55 20.1	55 40.3	55 60.0	55 59.8	55 39.4	55 20.6	56 20.7	56 40.2
LONGITUDE START	161 0.0	161 38.0	166 56.1	166 57.9	166 58.8	167 0.5	167 36.6	167 35.1	167 33.5	167 1.8	167 3.8
LATITUDE END	56 19.1	56 18.8	55 2.0	55 21.9	55 42.0	56 0.8	55 58.3	55 38.0	55 22.2	56 22.4	56 41.8
LONGITUDE END	161 2.2	161 40.4	166 57.8	166 58.1	166 57.6	167 3.1	167 35.6	167 33.6	167 35.3	167 1.4	167 3.6
LORAN START	33636.50	33731.30	34823.40	34796.80	34760.20	34717.10	34820.50	34856.30	34881.00	34657.00	34587.00
LORAN START	46480.10	46732.80	48676.90	48734.90	48784.50	48832.60	49053.30	48995.40	48937.00	48872.00	48903.00
LORAN END	33646.20	33742.40	34825.10	34794.40	34753.30	34722.40	34821.00	34855.00	34883.00	34650.00	34579.00
LORAN END	46495.50	46749.20	48691.70	48740.10	48780.80	48850.30	49044.20	48983.30	48951.00	48872.00	48902.30
GEAR DEPTH	53	64	157	141	135	137	134	135	148	113	95
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.89	3.20	3.26	3.17	3.37	3.13	2.87	3.06	3.44	3.19	3.04
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	3738.3	62.2	13.6	127.5	207.3	97.1	154.2	31.8	134.5	1141.6	757.4
PAC COD	140.9	28.2	44.0	29.5	19.5	14.1	18.1	484.9	102.1	108.0	137.2
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	20.4	2.3	1.8	0.5	0.0	0.9	6.8	2.9	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.8	0.0	0.0
SCULPINS	0.7	22.2	2.5	1.2	0.4	0.6	2.6	3.1	1.4	22.1	0.0
EELPOUTS	0.0	0.0	2.3	147.9	80.3	99.3	109.1	59.4	5.0	22.2	7.5
OTHER RNDFISH	0.7	0.1	0.4	5.8	0.3	1.7	9.1	2.8	0.7	4.4	0.0
TOT ROUNDFISH	3880.6	112.7	83.2	314.1	310.1	213.2	293.1	582.9	252.3	1301.3	902.1
YELLOW SOLE	237.1	466.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	8.4
ROCK SOLE	51.5	637.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FLATHEAD SOLE	17.2	60.7	24.5	31.3	39.9	39.5	79.8	89.8	27.7	15.1	2.7
ALASKA PLAICE	0.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	11.7
GREENLAND TBT	0.0	0.0	8.6	4.5	7.7	8.2	7.7	1.8	1.1	2.9	2.4
ARROWTOOTH FL	0.0	0.3	56.2	24.9	10.9	23.1	15.0	19.1	32.7	10.0	4.8
PAC HALIBUT	0.0	54.7	6.2	0.0	0.0	0.0	48.4	21.0	0.0	1.0	0.0
OTHER FLTFISH	6.2	20.7	1.1	2.0	0.1	0.1	0.1	0.1	0.9	1.7	0.0
TOT FLATFISH	312.4	1243.4	96.7	62.8	58.6	70.9	151.1	131.7	62.4	37.1	30.2
SKATES	0.0	1.5	2.7	0.0	9.1	39.5	19.5	4.5	19.1	0.0	17.3
TOT ELASMOBRH	0.0	1.5	2.7	0.0	9.1	39.5	19.5	4.5	19.1	0.0	17.3
RED KING CRAB	33.6	843.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	3.6	19.1	107.5	61.2	11.8	6.8	29.5	38.6	104.3	9.1	3.6
TANNER, OPILIO	0.0	0.0	3.2	4.5	0.0	0.5	0.1	0.0	0.0	4.5	12.3
TANNER, HYBRID	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	2.5	1.0	0.9	0.0	0.0	1.4	0.9	0.5	5.0	18.0	6.1
SNAILS	0.0	0.0	4.1	0.2	0.2	0.2	0.9	0.0	5.0	1.9	5.9
SHRIMP	0.0	0.0	0.7	1.1	0.2	0.7	0.7	0.0	0.0	0.0	0.0
STARFISH	92.8	4.4	0.2	0.0	0.0	0.0	0.0	0.0	1.6	159.2	22.9
SQUID	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	11.3	0.0	0.0	0.1	0.0	0.0	1.2
OTHER INVERTS	5.2	2.7	28.6	2.3	13.6	0.0	2.3	2.4	17.4	0.1	0.0
TOTAL INVERTS	137.7	870.9	145.3	69.6	37.1	9.5	34.3	41.5	133.3	192.8	52.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	4330.6	2228.5	327.8	446.5	414.9	333.0	498.0	760.7	467.0	1531.2	1001.6

Table A-2.-- Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	79	80	81	82	83	84	85	86	87	88	89
MONTH/DAY/YEAR	6/ 6/80	6/ 6/80	6/ 7/80	6/ 7/80	6/ 7/80	6/ 7/80	6/ 7/80	6/ 8/80	6/ 8/80	6/ 8/80	6/ 8/80
LATITUDE START	57 0.7	57 20.4	57 40.1	58 0.1	58 20.0	58 20.0	58 40.0	59 0.3	59 20.0	59 40.0	60 0.5
LONGITUDE START	167 4.7	167 7.2	167 8.1	167 9.8	167 11.0	167 49.9	167 52.0	167 53.0	167 55.0	167 56.8	167 59.2
LATITUDE END	57 2.4	57 22.0	57 41.8	58 1.9	58 21.5	58 21.8	58 41.7	59 1.9	59 21.2	59 42.1	60 2.4
LONGITUDE END	167 4.1	167 6.9	167 8.4	167 9.6	167 13.1	167 49.6	167 50.6	167 52.4	167 56.9	167 57.6	167 59.9
LORAN START	34488.00	34375.80	34234.40	34072.00	33889.30	33995.00	33778.50	33565.20	33345.30	33115.20	32877.80
LORAN START	48911.00	48911.80	48883.30	48842.50	48784.60	49012.70	48937.00	48850.00	48768.60	48684.00	48600.80
LORAN END	34476.80	34364.10	34222.40	34055.00	33880.00	33975.00	33766.20	33546.90	33334.80	33092.50	32856.20
LORAN END	48906.30	48907.70	48881.60	48836.20	48792.40	49003.10	48922.90	48840.20	48771.90	48678.00	48595.10
GEAR DEPTH	73	70	68	62	51	60	46	40	38	33	24
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.09	2.94	3.06	3.46	3.50	3.46	3.35	2.87	2.87	3.85	3.59
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	73.3	395.1	22.5	17.5	9.7	12.4	6.8	4.5	15.9	0.0	0.1
PAC COD	16.6	173.6	143.5	251.1	56.5	41.7	4.7	1.7	2.1	0.2	0.1
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	5.6	20.4	4.8	2.2	132.4	26.5	27.4	23.1	19.1	91.4	58.2
EELPOUTS	5.4	19.7	66.5	15.2	11.4	21.9	35.0	13.8	4.1	4.3	0.0
OTHER RNDFISH	0.0	0.0	0.1	0.1	8.6	2.0	1.3	2.3	15.1	176.5	11.7
TOT ROUNDFISH	101.0	608.9	237.3	286.0	218.6	104.7	75.2	45.6	56.5	272.5	70.1
YELLOW SOLE	157.8	174.6	109.4	120.7	404.3	252.1	174.0	236.0	216.2	170.1	35.1
ROCK SOLE	6.8	3.5	1.6	0.5	29.7	5.9	14.7	12.0	9.1	3.9	3.4
FLATHEAD SOLE	10.4	6.5	1.4	0.1	0.0	0.7	1.2	1.1	1.1	1.2	0.0
ALASKA PLAICE	15.3	82.7	104.3	120.3	244.4	219.8	85.7	53.5	66.0	98.2	21.2
GREENLAND TBT	0.0	2.1	2.9	1.1	4.6	3.4	1.8	0.4	0.0	0.0	0.0
ARRCHTOOTH FL	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	4.2	0.0	0.4	0.0	0.0	0.7	1.7	4.9	1.4	0.4	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	8.6	0.0	12.7	12.2	4.1	3.2	4.5
TOT FLATFISH	195.7	269.5	219.9	242.7	691.6	482.5	291.7	320.1	297.8	277.0	64.2
SKATES	9.5	5.4	36.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	9.5	5.4	36.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1	0.4	0.0	0.0
BLUE KING CRAB	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	1.5	2.7	2.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	28.0	14.4	11.8	11.1	109.8	21.9	176.0	25.2	0.8	0.0	0.0
TANNER, HYBRID	0.0	1.1	1.4	0.0	0.0	0.2	2.2	0.0	0.0	0.0	0.0
OTHER CRAB	2.0	0.0	2.5	0.5	1.8	8.7	19.7	1.1	2.6	0.0	0.0
SNAILS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
STARFISH	80.7	30.7	16.3	14.0	45.1	81.2	61.2	36.7	137.4	130.9	13.9
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	136.6	309.8	101.6	40.0	137.1	325.5	132.5	46.0	41.1	15.6	4.5
TOTAL INVERTS	249.4	358.8	135.9	65.5	293.8	437.7	391.9	113.2	182.3	146.5	20.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	555.6	1242.5	629.2	600.9	1204.1	1024.9	758.9	478.8	536.6	696.0	155.0

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	90	91	92	93	94	95	96	97	98	99	100
MONTH/DAY/YEAR	6/ 8/80	6/ 9/80	6/ 9/80	6/ 9/80	6/ 9/80	6/ 9/80	6/10/80	6/10/80	6/10/80	6/10/80	6/10/80
LATITUDE START	60 20.1	60 20.0	59 59.8	59 40.0	59 40.0	59 40.0	59 40.0	59 39.9	59 19.9	59 20.1	59 20.0
LONGITUDE START	167 58.4	168 41.3	168 38.9	168 37.1	169 16.1	169 55.0	170 34.9	171 15.0	171 11.1	170 31.9	169 52.0
LATITUDE END	60 21.8	60 19.8	59 58.3	59 38.5	59 40.0	59 41.3	59 41.1	59 38.0	59 18.6	59 19.6	59 19.4
LONGITUDE END	168 0.0	168 43.0	168 40.1	168 38.2	169 19.1	169 56.6	170 37.8	171 15.1	171 9.4	170 28.6	169 48.5
LORAN START	32643.00	32701.30	32942.80	33178.00	33231.40	33271.50	33302.00	33321.00	33559.20	33543.00	33513.20
LORAN START	48510.00	48680.20	48768.00	48858.80	49013.90	49151.80	49276.20	49384.00	49487.50	49381.50	49253.70
LORAN END	32625.20		32962.50	33198.10	33227.30	33257.30	33290.50	33344.50	33574.50	33547.10	33113.30
LORAN END	48509.00		48780.30	48871.10	49024.20	49149.80	49278.60	49395.20	49490.80	49374.60	49244.50
GEAR DEPTH	31	35	37	38	46	57	68	73	75	68	60
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.41	2.78	3.00	3.04	2.82	2.76	3.41	3.65	2.93	3.26	3.50
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.0	4.0	22.3	13.3	6.2	8.9	35.0	24.0	49.1	60.6	35.9
PAC COD	0.0	2.0	3.3	6.5	23.0	18.1	104.2	151.5	46.3	305.5	95.9
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.5	0.2	8.3	0.1	0.8	1.5	3.8	1.1	3.9	0.7	0.1
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	59.6	109.8	93.3	101.4	112.6	25.7	13.6	16.9	6.6	23.4	9.1
EELPOUTS	1.4	0.7	3.6	4.1	11.5	224.8	144.2	95.4	55.4	50.4	116.3
OTHER RNDFISH	24.4	14.5	8.2	6.7	2.6	2.5	1.0	2.8	0.9	0.2	C.0
TOT ROUNDFISH	85.9	139.2	139.0	132.1	156.7	281.5	301.8	291.8	162.2	440.8	257.4
YELLOW SOLE	118.2	72.8	60.6	109.1	65.2	148.8	25.4	9.3	13.8	142.8	56.6
ROCK SOLE	0.0	1.5	0.0	11.3	2.5	1.2	0.0	3.9	0.9	22.9	2.8
FLATHEAD SOLE	0.0	2.7	1.6	2.0	4.2	6.0	6.1	4.3	6.5	8.7	2.4
ALASKA PLAICE	21.6	43.5	49.1	74.5	110.4	262.6	11.7	20.0	6.6	45.4	81.0
GREENLAND TBT	0.0	0.0	0.1	1.4	16.3	39.6	9.5	23.0	10.9	15.9	6.1
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.6	1.2	1.2	2.7	0.5	1.0	2.4	1.4	0.5	5.0	1.0
OTHER FLTFISH	1.4	4.1	6.7	6.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	141.8	125.9	119.3	207.2	200.8	459.3	55.1	61.8	39.2	240.8	149.9
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
TOT ELASMOBRH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
RED KING CRAB	3.4	0.2	0.0	0.0	0.0	0.0	C.0	0.0	0.0	0.0	C.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	0.0	0.5	46.7	83.9	151.0	116.6	44.5	45.8	70.8	32.2	156.5
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	4.5	0.0	C.0
OTHER CRAB	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.4
SNAILS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	0.0	C.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	7.0	47.2	116.5	79.4	67.4	33.4	6.2	20.6	15.2	10.2	19.6
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	C.0	0.0	0.0	0.0	C.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
OTHER INVERTS	4.3	67.9	37.6	35.9	148.5	52.5	9.5	12.7	10.3	8.6	54.7
TOTAL INVERTS	14.7	117.1	200.9	199.2	367.0	202.5	62.9	79.1	112.9	52.8	232.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C.0
TOTAL CATCH	242.4	382.2	459.1	538.5	724.4	943.3	419.8	432.7	314.3	734.4	639.5

Table A-2 .--Station and catch data for the OCEAN HARVESTER (cont'd).

HAUL #	101	102	103	104	105	106	107	108	109	110	111
MONTH/DAY/YEAR	6/11/80	6/11/80	6/12/80	6/13/80	6/13/80	6/13/80	6/13/80	6/13/80	6/14/80	6/14/80	6/14/80
LATITUDE START	59 20.0	59 20.1	57 20.2	57 20.1	57 40.2	57 40.0	58 0.0	57 60.0	58 0.1	57 60.0	58 0.1
LONGITUDE START	169 14.0	168 34.1	168 57.9	168 22.0	168 24.2	169 1.8	169 4.0	159 42.0	170 20.2	170 57.9	171 36.2
LATITUDE END	59 20.1	59 19.4	57 20.1	57 20.2	57 41.0	57 41.3	58 0.3	57 59.6	58 0.1	58 0.6	58 1.6
LONGITUDE END	169 10.6	168 31.2	168 55.0	168 18.6	168 26.4	168 59.9	169 7.8	169 45.0	170 23.4	171 0.9	171 37.1
LORAN START	33470.70	33411.10	34765.80	34638.00	34482.70	34603.60	34398.00	34476.00	34514.40	34512.10	34473.00
LORAN START	49113.50	48946.90	49646.00	49409.30	49371.30	49602.90	49519.80	49701.80	49843.90	49938.30	49994.20
LORAN END	33464.80	33414.30	34756.80	34625.40	34482.30	34584.20	34400.80	34485.80	34516.10	34503.70	34455.40
LORAN END	49095.30	48937.30	49627.60	49387.00	49382.10	49585.50	49530.90	49717.50	49853.90	49940.50	49987.20
GEAR DEPTH	49	40	70	73	70	68	68	70	75	86	97
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.26	3.07	2.89	3.35	2.65	3.19	2.96	3.07	3.17	3.11	3.00
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	3.2	2.8	135.9	34.0	286.1	27.8	87.6	28.1	20.3	137.6	63.9
PAC COD	60.6	3.5	79.6	64.2	67.9	45.9	256.6	92.4	42.2	51.3	125.6
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
SCULPINS	27.4	23.9	142.6	34.8	9.6	19.3	8.6	11.6	18.1	49.4	18.6
EELPOUTS	35.5	9.7	0.5	12.8	10.8	15.7	7.8	10.9	13.5	51.5	83.7
OTHER RNDFISH	1.4	0.7	0.7	0.2	0.2	0.0	0.3	0.7	0.1	0.0	0.2
TOT ROUNDFISH	128.1	40.7	359.7	146.0	374.5	108.7	361.0	143.7	94.3	289.9	292.1
YELLOW SOLE	135.3	60.6	51.3	195.3	155.5	146.1	146.0	60.9	26.2	4.8	10.5
ROCK SOLE	3.6	14.4	41.2	17.1	2.7	2.6	8.4	8.9	4.9	1.2	4.5
FLATHEAD SOLE	3.8	0.5	0.0	3.1	3.0	4.7	2.6	1.7	2.0	6.6	2.2
ALASKA PLAICE	282.3	46.5	9.9	33.2	46.6	24.4	19.8	28.5	20.9	7.9	13.7
GREENLAND TBT	0.9	1.5	0.0	1.5	0.9	3.5	2.9	8.2	12.6	13.6	22.7
ARROWTOOTH FL	0.0	0.0	0.0	2.9	0.7	1.7	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.0	2.9	0.0	2.8	1.7	2.3	2.5	0.0	0.0	4.0	4.1
OTHER FLTFISH	2.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	428.3	133.5	102.4	256.0	211.1	185.2	182.2	108.2	66.7	38.1	57.7
SKATES	0.0	0.0	0.0	8.3	3.6	1.7	7.8	2.4	10.3	10.4	92.0
TOT ELASMOBRH	0.0	0.0	0.0	8.3	3.6	1.7	7.8	2.4	10.3	10.4	92.0
RED KING CRAB	0.0	0.0	0.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	127.5	5.0	7.3	12.2	5.4	18.1	9.8	6.4	2.7
TANNER, BAIRDI	0.0	0.0	1.9	6.1	1.4	0.0	0.0	0.1	0.0	0.0	0.1
TANNER, OPILIO	224.1	3.6	18.6	72.3	3.7	2.2	1.6	5.9	1.8	118.4	2.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	0.0	2.0	110.2	6.4	2.0	2.3	4.5	5.4	0.0	0.0	0.0
SNAILS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
STARFISH	54.6	29.4	14.7	37.7	22.6	51.5	12.9	24.3	48.2	77.6	27.4
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
OTHER INVERTS	98.2	44.0	91.1	353.3	390.1	411.5	153.3	116.8	36.9	36.5	28.8
TOTAL INVERTS	376.8	79.1	364.4	480.9	429.6	479.7	177.8	170.6	96.7	239.9	61.4
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	933.2	253.3	826.4	891.1	1019.0	775.4	728.8	424.8	268.0	578.3	503.2

Table A-2.--Station and catch data for the chartered vessel *Ocean Harvester* (cont'd).

HAUL #	112	113	114	115	116	117	118	119	120	121	122
MONTH/DAY/YEAR	6/14/80	6/15/80	6/15/80	6/15/80	6/15/80	6/16/80	6/16/80	6/16/80	6/16/80	6/16/80	6/17/80
LATITUDE START	58 19.8	58 19.8	58 20.0	58 19.9	58 20.0	58 40.0	58 40.0	58 40.0	58 40.0	58 59.8	58 59.8
LONGITUDE START	171 38.8	171 0.9	170 23.0	169 44.0	169 7.1	169 9.1	169 47.0	170 26.0	171 5.0	171 8.2	170 28.8
LATITUDE END	58 19.2	58 19.6	58 21.1	58 19.0	58 21.6	58 40.7	58 39.7	58 39.9	58 40.0	58 60.0	58 59.8
LONGITUDE END	171 35.6	170 57.5	170 21.0	169 41.8	169 8.4	169 11.7	169 49.9	170 29.0	171 7.8	171 4.9	170 25.7
LORAN START	34254.20	34277.40	34272.60	34238.00	34176.80	33944.90	33997.30	34029.00	34036.80	33799.80	33788.30
LORAN START	49890.70	49822.30	49722.80	49585.10	49421.90	49317.80	49472.70	49605.10	49708.80	49597.70	49492.20
LORAN END	34264.50	34280.60	34258.20	34246.50	34160.50	33940.30	34004.30	34032.30	34034.20	33797.50	33786.30
LORAN END	49889.60	49816.00	49709.50	49582.00	49419.10	49324.80	49485.40	49615.00	49712.50	49589.80	49482.50
GEAR DEPTH	95	82	73	70	68	62	66	73	82	77	70
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.39	3.33	2.83	2.80	3.28	2.82	2.85	2.91	2.74	3.15	3.06
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	132.3	659.6	1815.8	182.8	256.3	12.4	124.7	92.9	42.4	10.8	361.0
PAC COD	184.0	141.7	120.7	78.5	459.4	247.1	185.3	245.1	94.4	0.2	328.2
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	11.0	26.8	7.3	6.1	6.4	15.0	22.3	16.9	6.6	7.2	6.2
EELPOUTS	73.1	49.4	2.6	2.3	24.1	143.8	104.5	77.2	42.6	57.9	102.8
OTHER RNDFISH	0.1	0.0	0.0	0.1	0.1	0.4	0.0	0.1	0.0	0.5	0.0
TOT ROUNDFISH	400.5	877.4	1946.4	269.8	746.3	418.6	436.8	432.1	186.0	76.7	798.1
YELLOW SOLE	15.3	14.8	7.3	34.5	198.6	201.4	63.8	26.1	3.8	7.4	201.9
ROCK SOLE	0.0	0.5	0.0	1.6	1.8	0.0	1.2	0.7	0.5	0.2	9.7
FLATHEAD SOLE	9.1	2.9	1.5	0.7	0.1	0.5	1.7	1.3	2.2	2.2	7.7
ALASKA PLAICE	0.0	13.6	0.0	15.4	150.1	163.4	26.9	40.6	4.9	1.3	28.4
GREENLAND TBT	15.0	5.4	3.9	2.3	25.2	2.8	11.1	14.0	4.5	3.2	20.8
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.5	1.0	0.0	0.4	6.3	5.2	3.5	3.0	16.6	1.8	2.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	39.9	38.1	12.6	54.8	382.2	373.4	108.1	85.6	32.5	16.1	270.3
SKATES	37.2	22.0	6.5	0.3	0.0	7.9	0.7	1.1	0.0	0.0	0.0
TOT ELASMOBRH	37.2	22.0	6.5	0.3	0.0	7.9	0.7	1.1	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	7.7	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0
TANNER, BAIRDI	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	0.4	13.4	0.0	3.6	42.0	166.9	167.4	64.9	15.4	111.1	94.3
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	0.0	0.0	0.0	0.0	3.2	2.9	0.0	0.0	0.0	0.9	0.0
SNAILS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
STARFISH	36.3	75.7	0.0	4.4	34.8	36.8	27.4	10.4	9.5	22.7	18.9
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	27.0	48.1	5.9	9.5	79.1	173.3	40.1	26.5	16.7	10.0	15.3
TOTAL INVERTS	64.0	144.9	5.9	17.6	159.1	380.0	234.9	103.0	42.8	144.7	128.5
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	541.6	1082.5	1971.4	342.4	1287.5	1179.9	780.5	621.9	261.3	237.5	1196.9

Table A-2.--Station and catch data for the chartered vessel <u>Ocean Harvester</u> (cont'd).

HAUL #	123	124	125	126	127	128	129	130	131	132	133
MONTH/DAY/YEAR	6/17/80	6/17/80	6/17/80	6/17/80	6/18/80	6/18/80	6/18/80	6/18/80	6/18/80	6/19/80	6/20/80
LATITUDE START	58 60.0	58 60.0	58 59.8	58 39.8	58 19.9	57 59.9	57 59.7	57 39.9	57 19.8	57 0.0	56 59.8
LONGITUDE START	169 49.9	169 10.7	168 32.3	168 30.1	168 27.9	168 25.8	167 48.0	167 45.8	167 43.8	167 42.3	168 20.2
LATITUDE END	59 0.2	59 0.9	58 58.2	58 38.3	58 18.3	57 58.4	57 58.2	57 38.4	57 18.3	57 0.0	56 59.5
LONGITUDE END	169 46.7	169 8.0	168 33.2	168 30.0	168 29.0	168 25.5	167 48.9	167 44.9	167 43.5	167 45.3	168 23.5
LORAN START	33756.40	33707.70	33647.10	33874.20	34092.50	34298.00	34190.10	34359.70	34505.10	34622.20	34757.00
LORAN START	49363.40	49211.10	49043.00	49135.20	49224.00	49304.50	49080.00	49128.00	49156.40	49162.90	49416.20
LORAN END	33750.10	33693.30	33667.50	33891.50	34111.70	34312.30	34206.80	34369.00	34514.70		34770.00
LORAN END	49350.20	49195.20	49055.50	49142.70	49237.20	49309.10	49090.70	49126.00	49156.50	49183.50	49437.90
GEAR DEPTH	62	53	46	53	66	70	68	70	73	77	80
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.15	3.00	3.11	2.83	3.02	2.80	2.91	2.91	2.93	3.04	3.33
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	57.0	0.2	9.7	23.8	83.9	987.7	399.1	740.3	33.1	234.2	263.6
PAC COD	211.9	134.4	65.0	96.5	189.2	253.6	135.1	91.6	31.3	55.7	17.9
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
SCULPINS	18.7	60.2	38.5	26.6	5.8	3.6	4.7	13.5	21.3	7.9	27.0
EELPOUTS	103.4	72.4	22.0	8.0	37.1	13.0	11.2	3.9	8.7	0.5	0.5
OTHER RNDFISH	0.3	3.2	1.1	2.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0
TOT ROUNDFISH	391.3	270.5	136.2	157.1	316.1	1258.1	550.3	849.3	94.4	298.4	309.0
YELLOW SOLE	123.0	109.0	165.2	181.1	162.9	68.7	65.5	103.6	149.5	52.6	142.5
ROCK SOLE	0.4	0.0	13.6	1.8	3.4	11.5	1.2	15.6	2.9	2.0	1.8
FLATHEAD SOLE	2.9	0.8	3.5	0.1	2.5	2.6	4.5	11.9	5.6	1.8	1.5
ALASKA PLAICE	75.3	334.2	140.7	69.3	135.9	38.1	68.8	145.5	22.2	2.5	6.7
GREENLAND TBT	3.6	0.0	0.8	0.1	3.6	4.4	1.3	1.4	2.0	0.5	0.3
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.8	4.9
PAC HALIBUT	11.9	2.0	0.3	0.0	5.4	19.9	0.0	0.3	0.0	0.0	0.0
OTHER FLTFISH	0.0	3.8	9.3	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	217.1	449.7	333.4	256.8	313.7	145.1	141.3	278.4	185.6	62.3	157.7
SKATES	0.0	0.0	2.7	11.7	4.5	3.5	11.2	3.2	8.2	1.4	0.0
TOT ELASMOBRH	0.0	0.0	2.7	11.7	4.5	3.5	11.2	3.2	8.2	1.4	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	20.0
TANNER, OPILIO	122.2	96.6	85.3	302.1	16.8	2.5	4.3	0.9	7.3	141.1	461.2
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	1.1	1.4	0.9	0.9	2.5	0.2	1.8	1.1	5.2	1.6	0.7
SNAILS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	16.1	59.7	103.6	55.7	27.5	7.6	7.9	20.4	18.8	21.9	15.1
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	64.1	182.4	48.0	94.9	64.1	50.4	45.2	141.3	157.4	18.4	5.3
TOTAL INVERTS	203.6	340.1	237.8	453.6	110.9	60.7	59.2	163.7	190.3	182.9	521.4
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	812.0	1060.3	710.1	879.2	745.2	1467.5	762.0	1294.5	478.5	544.9	988.2

Table A-2.--Station and catch data for the chartered vessel <u>Ocean Harvester</u> (cont'd).

HAUL #	134	135	136	137	138	139	140	141	142	143	144
MONTH/DAY/YEAR	6/20/80	6/20/80	6/20/80	6/20/80	6/20/80	6/22/80	6/22/80	6/22/80	6/22/80	6/23/80	6/23/80
LATITUDE START	56 59.8	56 40.0	56 40.1	56 39.9	56 20.0	56 40.0	57 0.0	57 20.3	57 39.9	57 59.9	58 20.0
LONGITUDE START	168 57.2	168 53.8	168 16.8	167 39.8	167 39.3	171 58.0	172 1.9	172 5.7	172 10.0	172 14.0	172 17.9
LATITUDE END	56 59.8	56 40.6	56 40.5	56 40.0	56 19.9	56 41.8	0 0.0	57 21.8	57 41.5	58 1.4	58 21.5
LONGITUDE END	169 0.1	168 50.9	168 14.0	167 37.1	167 42.3	171 58.0	0 0.0	172 4.1	172 10.3	172 12.9	172 18.9
LORAN START	34890.60	34951.00	34830.00	34707.40	34775.60	34993.10	34903.00	34773.50	34609.70	34417.70	34210.30
LORAN START	49662.00	49613.30	49379.60	49139.20	49109.80	50164.30	50181.20	50158.50	50104.80	50027.70	49937.80
LORAN END	34901.40	34940.30	34819.40	34698.40	34785.10	34987.70	34896.70	34766.60	34595.30	34405.70	34193.50
LORAN END	49681.60	49596.80	49362.70	49121.90	49128.60	50166.00	50181.90	50155.30	50099.40	50020.60	49931.40
GEAR DEPTH	80	102	106	93	132	130	124	108	108	104	102
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.00	3.11	2.89	2.70	3.11	3.39	2.96	3.28	2.94	2.89	2.94
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	285.9	173.5	290.7	754.6	117.4	7.3	158.5	30.4	786.6	66.3	49.5
PAC COD	18.1	25.1	21.2	83.2	80.0	24.7	118.5	42.3	299.7	111.1	119.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.7	21.3	1.2	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	37.3	75.4	19.3	0.4	29.2	2.0	0.0	7.3	16.5	7.3	5.6
EELPOUTS	0.0	1.0	2.9	1.2	38.1	3.8	2.0	6.4	21.4	59.1	79.5
OTHER RNDFISH	0.2	0.1	0.0	0.0	6.6	0.1	0.0	8.0	0.0	0.3	0.2
TOT ROUNDFISH	341.7	276.0	334.1	840.1	292.5	39.0	279.0	94.4	1124.2	244.0	253.8
YELLOW SOLE	64.5	45.4	0.7	7.9	0.0	0.0	0.0	0.2	2.5	0.1	0.0
ROCK SOLE	2.8	1.5	0.2	0.0	0.0	0.7	0.0	0.0	3.1	0.2	0.0
FLATHEAD SOLE	1.2	6.4	1.2	0.5	42.6	3.4	4.3	12.9	63.5	0.4	0.3
ALASKA PLAICE	2.9	13.4	3.6	2.9	0.0	0.0	0.0	0.9	0.0	6.9	4.0
GREENLAND TBT	0.7	0.1	1.0	0.5	1.8	0.0	0.0	4.2	11.9	14.3	17.6
ARROWTOOTH FL	1.6	6.4	14.6	9.1	49.8	8.0	4.3	3.8	5.5	0.3	0.1
PAC HALIBUT	0.0	2.9	0.0	6.7	10.1	0.0	3.1	0.0	0.0	0.0	0.7
OTHER FLTFISH	0.1	0.1	0.4	0.1	0.0	0.0	1.0	0.0	0.2	0.0	0.0
TOT FLATFISH	73.8	76.1	21.8	27.7	104.3	12.1	12.7	22.0	86.7	22.2	22.8
SKATES	0.8	0.0	0.0	0.0	17.9	9.8	0.1	1.4	23.0	53.6	43.3
TOT ELASMOBRH	0.8	0.0	0.0	0.0	17.9	9.8	0.1	1.4	23.0	53.6	43.3
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	12.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.9	0.0	12.0	17.5	5.1	87.5	115.9	21.3	11.3	4.3	2.4
TANNER, OPILIO	194.1	197.8	76.2	55.5	4.5	0.0	0.0	19.1	15.9	0.2	0.8
TANNER, HYBRID	0.0	0.0	12.0	0.0	0.0	0.0	7.7	1.6	1.5	0.0	0.0
OTHER CRAB	0.0	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SNAILS	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	0.0	0.0	0.0	0.0	4.7	0.1	0.0	0.1	0.0	0.7	2.1
STARFISH	0.9	6.0	1.3	3.6	0.0	104.4	19.5	12.2	1.8	9.5	5.1
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	15.7	0.0	9.6	29.6	10.0	11.2	13.3	21.9	39.1	61.9	25.8
TOTAL INVERTS	224.0	207.2	112.0	106.2	24.4	203.3	156.4	76.3	69.7	76.6	36.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	640.3	559.4	467.9	974.0	439.1	264.2	448.1	194.1	1303.6	396.5	356.1

Table A-2. Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	145	146	147	148	149	150	151	152	153	154	155
MONTH/DAY/YEAR	6/23/80	6/23/80	6/23/80	6/24/80	6/24/80	6/24/80	6/24/80	6/24/80	6/25/80	6/25/80	6/25/80
LATITUDE START	58 40.0	58 40.0	58 60.0	59 20.0	59 40.0	59 40.0	59 40.0	59 39.9	59 20.2	59 19.9	59 19.9
LONGITUDE START	172 22.0	171 42.5	171 46.7	171 49.9	171 54.1	172 34.0	173 14.0	173 51.8	173 47.8	173 8.8	172 29.9
LATITUDE END	58 41.5	58 41.6	59 1.3	59 21.5	59 41.5	59 40.1	59 40.0	59 38.6	59 20.6	59 19.7	59 19.3
LONGITUDE END	172 20.8	171 42.4	171 45.4	171 49.5	171 54.6	172 37.2	173 16.9	173 50.6	173 44.5	173 5.9	172 27.1
LORAN START	34994.10	34024.00	33792.40	33560.00	33327.00	33323.70	33311.50	33294.50	33499.70	33529.40	33549.40
LORAN START	49841.80	49783.80	49673.60	49573.20	49472.10	49547.70	49610.00	49659.20	49745.50	49701.50	49645.30
LORAN END	34978.30	34005.20	33777.70	33542.50	33309.60	33321.60	33310.00	33309.20	33498.50	33533.80	33557.40
LORAN END	49832.50	49774.30	49668.70	49564.10	49465.10	49552.40	49614.00	49664.10	49740.40	49698.80	49644.00
GEAR DEPTH	102	91	86	80	77	84	95	104	110	101	88
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.00	3.07	2.74	2.83	2.82	2.96	2.78	2.76	3.19	2.87	2.89
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	507.4	1515.6	1222.2	13.7	4.8	12.3	114.4	149.9	241.0	103.9	33.0
PAC COD	159.7	235.6	444.8	26.0	53.9	34.1	175.6	169.8	87.5	113.1	64.4
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	3.9	4.9	33.8	6.1	18.8	17.7	9.5	4.0	4.0	7.1	12.0
EELPOUTS	185.2	54.1	25.1	17.0	8.0	36.0	30.2	69.0	54.9	73.3	7.1
OTHER RNDFISH	0.2	0.0	0.0	0.2	3.1	4.6	0.1	0.1	0.2	0.4	0.5
TOT ROUNDFISH	856.4	1810.2	1726.0	63.0	88.8	104.9	329.8	392.8	387.7	297.8	117.1
YELLOW SOLE	0.0	29.5	10.6	9.1	16.2	2.2	0.1	0.3	0.0	0.5	0.2
ROCK SOLE	0.2	3.2	0.0	0.1	0.1	0.2	0.0	0.5	0.0	2.4	0.2
FLATHEAD SOLE	0.9	4.9	7.0	4.8	3.2	13.2	44.7	17.6	0.0	14.7	14.0
ALASKA PLAICE	0.8	12.0	8.9	8.7	22.5	1.4	0.8	0.0	1.6	1.4	17.6
GREENLAND TBT	25.2	38.8	61.1	10.2	14.7	65.3	69.5	37.8	51.0	46.5	61.7
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	1.0	0.0	8.1	0.5	0.0	0.0	4.2	0.0	0.0	0.6	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	28.0	88.5	95.6	33.3	56.7	82.2	119.4	56.1	52.6	66.0	93.7
SKATES	11.8	3.9	0.0	0.1	0.0	0.1	0.9	0.7	1.6	2.7	0.2
TOT ELASMOBRH	11.8	3.9	0.0	0.1	0.0	0.1	0.9	0.7	1.6	2.7	0.2
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	1.4	0.0	2.3	6.0	10.9	3.4	3.2	0.0
TANNER, BAIRDI	0.1	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	0.0	1.6	46.4	94.3	37.2	27.2	1.0	0.2	5.0	1.8	0.1
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
OTHER CRAB	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SNAILS	0.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
SHRIMP	4.3	0.0	0.0	0.1	0.5	0.1	4.4	1.6	3.5	2.0	0.5
STARFISH	21.5	27.9	105.8	15.2	12.8	17.9	5.8	11.2	5.4	9.1	37.2
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.5	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.1	1.6
OTHER INVERTS	25.7	13.1	44.0	15.6	28.4	13.9	17.0	24.0	21.0	22.9	80.6
TOTAL INVERTS	52.8	42.9	218.2	126.6	78.3	61.5	35.0	48.0	38.6	39.2	120.1
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	949.0	1945.5	2039.8	223.1	224.3	248.7	485.1	497.5	480.5	405.7	331.1

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	156	157	158	159	160	161	162	163	164	165	166
MONTH/DAY/YEAR	6/25/80	6/25/80	6/26/80	6/26/80	6/26/80	6/26/80	6/26/80	6/27/80	6/27/80	6/27/80	6/27/80
LATITUDE START	58 59.9	58 59.8	58 59.8	58 40.1	58 40.0	58 20.0	57 60.0	57 39.9	57 19.8	56 59.5	56 39.7
LONGITUDE START	172 26.0	173 4.9	173 43.0	173 37.8	173 0.3	172 56.1	172 51.8	172 48.1	172 43.0	172 39.3	172 34.4
LATITUDE END	59 0.3	58 59.3	58 58.3	58 40.6	58 38.5	58 18.4	57 59.0	57 38.5	57 18.5	0 0.0	56 38.1
LONGITUDE END	172 29.0	173 7.8	173 42.3	173 35.1	173 1.5	172 56.5	172 49.4	172 46.9	172 41.5	0 0.0	172 34.2
LORAN START	33773.30	33745.40	33709.50	33908.10	33954.80	34158.40	34352.20	34529.50	34688.20	34815.00	34913.60
LORAN START	49744.00	49794.70	49832.70	49913.70	49883.80	49969.70	50047.80	50113.20	50159.20	50179.80	50172.30
LORAN END	33767.70	33748.00	33725.30	33906.70	33968.20	34173.10	34365.40	34543.50	34700.00	34829.20	34919.70
LORAN END	49746.50	49800.30	49838.80	49909.60	49891.70	49976.70	50050.50	50117.10	50161.30	50181.00	50170.60
GEAR DEPTH	99	100	119	126	113	110	110	119	115	117	139
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.89	2.93	2.91	2.83	2.98	2.96	2.98	2.94	2.78	2.96	3.02
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	312.8	448.7	88.8	196.9	144.8	46.7	420.6	10.7	170.3	186.0	84.3
PAC COD	186.2	317.4	82.6	95.5	164.9	99.2	152.4	17.0	145.9	10.6	92.6
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.7
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	5.7	8.8	10.0	5.0	12.5	15.4	15.6	23.0	20.0	0.0	7.8
EELPOUTS	40.3	85.2	33.8	45.9	49.5	52.1	22.9	25.9	24.5	1.1	3.4
OTHER RNDFISH	0.1	0.1	0.4	0.5	0.2	0.3	0.7	2.6	4.5	0.6	7.0
TOT ROUNDFISH	545.3	860.2	215.5	343.8	371.9	213.7	612.1	79.2	365.4	198.2	196.0
YELLOW SOLE	8.4	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	3.0
FLATHEAD SOLE	22.0	0.1	0.1	0.0	0.0	0.0	0.0	2.9	4.1	1.1	0.1
ALASKA PLAICE	0.2	0.0	0.0	0.0	1.4	1.5	0.9	0.0	0.0	0.0	0.0
GREENLAND TBT	54.7	104.6	24.1	10.9	14.9	28.8	29.6	0.6	0.4	0.0	0.7
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.5	34.1	4.5	1.4	3.7	9.5
PAC HALIBUT	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
TOT FLATFISH	85.7	105.2	24.2	10.9	16.3	30.9	64.7	8.2	6.0	5.0	13.7
SKATES	0.1	12.2	15.1	16.3	10.8	17.0	11.9	14.3	7.3	0.5	11.9
TOT ELASMOBRH	0.1	12.2	15.1	16.3	10.8	17.0	11.9	14.3	7.3	0.5	11.9
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.5	1.2	1.1	18.4	5.2	12.7	14.3	101.6	24.9	8.6	1.0
TANNER, OPILIO	4.3	1.4	7.3	3.9	0.8	0.8	42.6	7.7	1.6	0.0	0.0
TANNER, HYBRID	0.0	0.7	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
OTHER CRAB	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
SNAILS	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
SHRIMP	3.9	5.8	4.7	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
STARFISH	18.3	11.7	11.2	3.8	2.6	5.2	13.7	6.2	2.3	0.0	1.3
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
OCTOPUS	1.1	0.5	0.0	0.0	0.0	1.5	0.0	0.0	1.3	0.0	38.1
OTHER INVERTS	19.9	45.8	28.9	34.5	60.4	50.3	39.2	40.1	32.6	2.1	14.5
TOTAL INVERTS	47.9	68.6	53.1	60.5	72.0	71.2	110.5	155.6	62.7	11.0	55.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	679.0	1046.4	307.9	431.5	471.0	332.8	799.3	257.3	441.4	214.6	276.6

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	167	168	169	170	171	172	173	174	175	176	177
MONTH/DAY/YEAR	7/ 4/80	7/ 4/80	7/ 4/80	7/ 4/80	7/ 4/80	7/ 5/80	7/ 5/80	7/ 5/80	7/ 5/80	7/ 7/80	7/ 7/80
LATITUDE START	60 0.5	59 60.0	59 59.9	59 59.9	60 0.1	60 20.0	60 20.1	60 20.1	60 20.2	60 19.9	60 40.1
LONGITUDE START	171 57.6	171 17.7	170 37.5	169 57.5	169 18.8	169 20.2	170 2.2	170 40.0	171 22.1	172 4.3	172 7.2
LATITUDE END	60 2.1	60 0.8	60 0.1	59 59.1	60 0.3	60 19.2	60 19.5	60 20.4	60 21.4	60 18.5	60 40.6
LONGITUDE END	171 56.9	171 15.1	170 34.0	169 54.4	169 15.9	169 22.9	170 5.1	170 43.2	171 23.4	172 5.2	172 9.9
LORAN START	33088.40	33082.90	33061.50	33031.00	32987.90	32747.60	32788.60	32818.80	32843.40	32864.60	32632.10
LORAN START	49369.70	49280.90	49173.70	49051.90	48917.70	48822.40	48961.20	49073.70	49184.20	49282.90	49187.10
LORAN END	33070.10	33071.70	33057.50	33037.40	32982.70	32760.20	32798.40	32817.70	32829.60	32880.50	32626.60
LORAN END	49359.90	49269.80	49162.90	49046.00	48906.40	48835.70	48973.30	49081.10	49181.10	49291.70	49190.00
GEAR DEPTH	66	70	64	55	44	42	51	60	66	59	62
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.98	2.91	3.26	3.15	2.70	2.87	2.89	2.94	2.57	2.63	2.69
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.5	2.6	1.5	4.6	17.7	89.8	0.7	1.9	0.1	0.1	0.8
PAC COD	28.6	39.9	24.9	31.1	37.2	22.7	33.8	15.4	3.6	25.4	0.5
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	115.3	23.4	15.9	116.2	105.6	88.0	25.5	17.2	50.3	223.5	8.0
EELPOUTS	21.3	15.1	43.2	24.7	1.0	1.1	42.9	100.8	29.9	21.5	343.1
OTHER RNDFISH	0.8	2.0	1.5	0.4	0.6	4.9	2.4	2.6	0.3	2.8	0.7
TOT ROUNDFISH	166.5	83.1	87.0	177.0	162.1	206.5	105.2	137.9	84.4	273.3	353.1
YELLOW SOLE	8.6	1.8	23.1	321.4	57.6	49.4	74.8	22.7	4.5	1.1	0.1
ROCK SOLE	0.2	0.2	0.0	11.9	0.1	0.7	1.1	0.0	0.0	0.0	0.0
FLATHEAD SOLE	2.0	6.8	4.5	0.0	1.6	0.5	1.8	2.5	0.7	1.1	2.7
ALASKA PLAICE	24.9	5.4	21.8	421.7	45.6	9.1	107.0	44.5	19.5	18.1	0.7
GREENLAND TBT	2.5	5.9	6.6	0.3	1.8	0.9	4.1	4.1	0.5	0.2	5.2
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.0	2.2	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
OTHER FLTFISH	0.1	0.0	0.0	0.0	0.2	1.5	0.0	0.1	0.0	0.0	0.0
TOT FLATFISH	38.4	22.4	56.0	755.3	106.9	62.1	189.8	73.8	25.2	20.6	6.8
SKATES	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	6.8	3.2	0.0	0.0	0.0	0.0
BLUE KING CRAB	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	40.4	108.6	99.8	117.9	4.1	1.1	113.4	65.8	117.0	209.6	130.6
TANNER, HYBRID	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	31.3	8.2	1.4	159.4	189.5	224.8	26.5	2.5	0.5	62.1	0.1
SNAILS	29.0	19.5	8.2	30.1	80.3	23.4	24.2	6.2	6.1	18.7	0.3
SHRIMP	0.2	0.1	4.8	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.0
STARFISH	1.2	5.9	2.9	14.3	144.2	173.7	38.1	10.0	3.2	4.5	13.2
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.3	0.1	0.0	9.7	25.4	56.4	2.5	0.1	0.2	75.6	0.0
TOTAL INVERTS	103.9	142.4	117.1	331.4	444.2	486.4	207.9	84.5	127.0	388.0	144.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	309.0	247.9	260.1	1263.7	713.3	755.0	503.0	296.3	236.5	681.9	506.0

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	178	179	180	181	182	183	184	185	186	187	188
MONTH/DAY/YEAR	7/ 7/80	7/ 7/80	7/ 7/80	7/ 7/80	7/ 8/80	7/ 8/80	7/ 8/80	7/ 8/80	7/ 8/80	7/ 9/80	7/ 9/80
LATITUDE START	60 39.3	60 39.8	60 40.0	60 39.9	60 39.9	60 40.0	61 0.2	61 20.3	61 39.8	61 20.0	61 0.0
LONGITUDE START	172 50.5	173 28.3	174 8.1	174 56.3	175 36.2	176 21.9	176 27.3	176 18.2	176 28.2	176 58.4	176 58.8
LATITUDE END	60 40.0	60 39.8	60 39.8	60 39.6	60 40.2	60 41.7	61 1.5	61 21.9	61 38.4	61 18.8	61 0.8
LONGITUDE END	172 53.7	173 30.8	174 11.6	174 59.5	175 39.9	176 22.6	176 29.5	176 18.9	176 28.8	177 0.2	177 2.5
LORAN START	32656.10	32658.20	32670.90	32861.90	32657.50	32648.80	32461.70	32274.30	32095.90	32282.30	32461.20
LORAN START	49277.70	49341.70	49412.00	49466.20	49511.20	49555.50	49480.10	49390.00	49322.60	49432.00	49509.70
LORAN END	32649.60	32667.50	32669.10	32665.00	32654.30	32632.80	32449.30	32259.50	32109.20	32293.10	32453.90
LORAN END	49280.50	49355.00	49417.40	49471.50	49513.90	49549.30	49476.90	49384.30	49328.90	49438.30	49509.90
GEAR DEPTH	44	64	86	97	108	117	112	106	106	117	119
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.19	2.59	3.20	2.98	3.39	3.26	3.17	3.04	2.69	2.72	3.63
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	3.2	0.2	3.2	42.6	141.5	94.6	113.8	61.5	39.0	30.2	58.7
PAC COD	24.0	0.0	5.4	46.3	79.4	85.7	61.2	38.6	71.9	72.6	66.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5
SCULPINS	117.7	84.5	106.2	26.4	7.3	4.2	2.4	0.9	0.0	1.4	4.3
EELPOUTS	33.2	2.7	16.3	103.6	114.8	76.4	76.0	20.4	41.5	106.5	22.2
OTHER RNDFISH	1.3	0.2	0.9	0.7	0.4	0.7	0.6	0.3	0.1	0.6	1.1
TOT ROUNDFISH	179.4	87.6	132.1	219.6	343.3	261.6	254.0	121.6	152.6	211.2	152.8
YELLOW SOLE	36.7	1.6	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
ROCK SOLE	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.0
FLATHEAD SOLE	9.5	0.7	2.0	12.9	153.3	29.9	96.2	22.7	14.3	105.7	36.1
ALASKA PLAICE	80.3	1.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.9
GREENLAND TBT	0.5	0.0	11.8	51.7	155.1	190.1	180.3	54.9	83.0	204.1	275.8
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.0	0.5	0.4	0.3	1.3	0.4	1.3	0.0	7.0	0.4	8.7
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	127.0	4.1	14.7	65.1	310.5	220.4	277.7	78.0	104.3	310.2	321.4
SKATES	0.0	0.0	0.0	0.0	4.1	18.1	0.5	4.5	0.0	0.7	6.8
TOT ELASMOBRH	0.0	0.0	0.0	0.0	4.1	18.1	0.5	4.5	0.0	0.7	6.8
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	12.7	5.4	4.1	0.0	0.0	0.0	0.0	0.9	0.2	0.9	1.4
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	6.8	21.3	34.5	5.9	1.1	256.3	8.2	76.2	85.3	2.5	72.1
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	16.3	10.8	0.3	0.5	0.0	1.8	0.0	0.1	0.3	0.0	0.5
SNAILS	11.3	2.7	0.0	0.3	12.3	28.5	11.5	0.5	0.0	5.2	9.2
SHRIMP	0.2	0.0	0.2	0.5	4.2	4.2	1.3	0.0	0.1	1.7	3.1
STARFISH	6.6	0.2	2.7	0.7	4.3	13.8	0.4	4.5	0.3	2.8	7.8
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	10.0	2.7	0.5	0.7	0.0	2.9	0.5
OTHER INVERTS	0.2	0.7	0.0	4.3	0.7	0.3	0.7	0.1	0.1	0.1	0.3
TOTAL INVERTS	54.1	41.1	41.8	12.1	33.1	307.6	22.4	83.1	86.4	16.2	94.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	360.6	132.8	188.6	296.8	691.0	807.7	554.6	287.2	343.2	538.3	575.8

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	189	190	191	192	193	194	195	198	199	200	201
MONTH/DAY/YEAR	7/ 9/80	7/ 9/80	7/10/80	7/10/80	7/10/80	7/10/80	7/10/80	7/11/80	7/11/80	7/11/80	7/12/80
LATITUDE START	60 60.0	60 59.6	60 39.9	60 40.0	60 39.9	60 20.1	60 19.9	59 59.9	60 0.0	60 0.2	60 20.0
LONGITUDE START	177 38.8	178 18.9	178 9.9	177 29.2	176 48.2	176 43.5	177 23.3	177 12.5	176 42.4	175 56.0	176 1.8
LATITUDE END	61 1.0	60 58.1	60 40.1	60 40.1	60 38.5	60 20.7	60 20.1	59 59.8	59 59.7	60 2.0	60 20.1
LONGITUDE END	177 41.0	178 17.6	178 6.4	177 26.1	176 49.8	176 46.6	177 26.5	177 9.6	176 39.1	175 55.2	175 58.5
LORAN START	32457.20	32453.70	32619.20	32630.90	32643.60	32822.10	32805.40	32982.10	33000.00	33025.50	32839.90
LORAN START	49542.70	49572.80	49636.50	49609.10	49578.40	49650.30	49678.10	49743.10	49724.60	49691.00	49617.40
LORAN END	32447.60	32466.30	32618.40	32631.10	32655.30	32815.30	32802.90	32984.60	33004.80	33010.00	32840.60
LORAN END	49540.40	49577.20	49633.50	49606.60	49584.90	49650.30	49679.70	49741.70	49723.60	49683.60	49614.30
GEAR DEPTH	135	157	163	144	130	137	150	139	143	130	123
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.83	3.02	3.22	2.82	2.91	3.11	2.94	2.72	3.17	3.28	3.04
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	59.9	73.6	430.5	142.4	257.7	661.0	193.5	305.8	209.8	204.9	42.2
PAC COD	28.1	54.4	79.8	22.7	20.3	22.7	24.0	14.1	18.6	56.7	21.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	4.9	5.4	9.8	6.2	2.2	4.5	10.8	12.7	6.8	7.3	0.8
EELPOUTS	114.5	84.4	225.3	157.4	88.9	125.6	266.0	217.5	144.9	140.8	32.4
OTHER RNDFISH	2.4	6.4	2.9	3.3	1.6	0.1	1.5	0.2	0.1	0.7	0.4
TOT ROUNDFISH	209.8	224.2	748.3	332.3	370.6	813.9	495.8	550.2	380.3	410.3	96.8
YELLOW SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FLATHEAD SOLE	27.2	10.9	32.2	19.5	32.2	8.8	9.1	4.8	8.6	7.7	4.9
ALASKA PLAICE	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GREENLAND TBT	117.9	60.1	40.8	108.0	48.1	63.5	59.4	32.4	75.3	70.3	19.5
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.8	0.0	1.1	0.0
OTHER FLTFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT FLATFISH	145.1	71.7	75.2	127.4	80.3	72.3	68.5	38.0	83.9	79.2	24.3
SKATES	0.5	33.1	28.6	15.4	0.2	5.4	12.2	1.8	1.6	6.1	13.0
TOT ELASMOBRH	0.5	33.1	28.6	15.4	0.2	5.4	12.2	1.8	1.6	6.1	13.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	2.7	1.4	0.7	0.9	0.0	0.0	0.0	1.4	0.0	0.0	1.6
TANNER, BAIRDI	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	10.9	29.0	21.3	53.5	66.2	10.0	0.9	1.4	0.0	205.9	1938.9
TANNER, HYBRID	0.0	0.5	0.5	0.9	0.0	0.0	0.0	0.5	0.0	0.0	0.0
OTHER CRAB	0.0	20.7	17.2	0.0	0.0	0.0	4.5	0.0	0.5	0.0	0.2
SNAILS	13.2	47.4	20.3	10.6	26.5	15.4	18.7	11.3	10.5	26.0	37.5
SHRIMP	5.0	8.0	18.4	5.4	2.2	4.5	9.8	9.0	15.5	9.3	0.3
STARFISH	29.0	20.9	35.8	66.0	43.1	71.9	142.4	135.2	37.6	37.9	6.5
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.2	0.2	1.8	1.6	2.3	0.9	5.0	0.2	5.4	13.0
OTHER INVERTS	0.1	1.5	0.5	0.3	0.4	0.6	0.6	0.0	0.6	0.5	13.5
TOTAL INVERTS	60.9	129.5	115.0	139.5	139.9	104.6	177.9	163.6	64.9	285.1	2011.4
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	416.3	458.5	967.1	614.6	591.1	996.4	754.5	753.7	530.6	780.7	2145.5

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	202	203	204	205	206	207	208	209	211	212	213
MONTH/DAY/YEAR	7/12/80	7/12/80	7/12/80	7/12/80	7/13/80	7/13/80	7/13/80	7/13/80	7/13/80	7/14/80	7/14/80
LATITUDE START	60 20.0	59 60.0	60 0.1	60 20.1	60 19.7	59 59.9	60 0.1	60 19.8	59 59.8	59 0.1	58 39.9
LONGITUDE START	175 23.0	175 15.9	174 36.0	174 42.5	174 4.2	173 56.2	173 18.2	173 23.7	172 38.0	167 5.1	167 10.0
LATITUDE END	60 18.2	59 59.7	60 1.8	60 20.6	60 18.4	59 60.0	60 1.1	60 19.6	59 59.3	58 58.5	58 39.5
LONGITUDE END	175 22.6	175 12.3	174 36.6	174 39.6	174 3.8	173 52.4	173 16.4	173 21.1	172 35.3	167 5.1	167 7.8
LORAN START	32853.40	33049.60	33067.00	32863.70	32874.60	33084.20	33091.60	32877.00	33098.40	33464.70	33687.90
LORAN START	49531.20	49658.20	49617.70	49536.90	49490.20	49571.60	49517.30	49430.30	49451.90	48601.20	48707.00
LORAN END	32870.60	33054.50	33050.20	32859.00	32888.80	33084.60	33082.00	32879.60	33101.40	33481.70	33687.00
LORAN END	49588.20	49656.20	49611.10	49531.10	49495.80	49566.30	49510.00	49427.30	49449.30	48607.70	48696.20
GEAR DEPTH	113	117	108	102	91	97	75	60	60	37	42
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.30	3.41	3.11	2.87	2.54	3.54	2.43	2.43	2.65	2.94	2.30
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	333.5	448.8	477.8	164.1	27.7	625.3	1.6	0.5	2.7	0.4	0.7
PAC COD	132.7	62.6	705.7	170.3	44.5	409.1	3.2	4.1	9.5	10.9	19.3
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	2.6	7.3	3.6	2.7	20.5	5.0	70.5	93.6	158.8	98.2	116.1
EELPOUTS	77.3	81.2	32.0	6.8	14.6	29.0	9.5	7.8	10.7	0.2	0.0
OTHER RNDFISH	0.2	0.1	0.3	3.9	4.0	0.5	7.9	2.3	0.0	46.1	36.8
TOT ROUNDFISH	546.4	620.0	1219.5	348.0	111.2	1068.9	92.8	108.2	181.7	155.8	172.9
YELLOW SOLE	0.0	0.2	0.1	0.1	0.0	0.0	0.5	0.2	2.0	550.7	506.4
ROCK SOLE	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	3.4	4.5
FLATHEAD SOLE	46.3	5.7	51.5	29.0	5.9	37.0	2.0	0.0	0.1	0.2	0.2
ALASKA PLAICE	0.0	0.0	0.8	0.0	0.0	1.4	0.5	18.1	2.7	197.3	73.0
GREENLAND TBT	117.9	171.5	117.9	82.1	7.3	53.1	5.0	1.1	0.2	0.0	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	0.0	0.8	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.6	1.0
OTHER FLTFISH	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	16.8
TOT FLATFISH	164.3	178.1	170.3	112.4	13.2	92.9	7.9	19.5	5.1	762.7	602.0
SKATES	11.3	9.1	0.0	0.0	0.1	0.5	0.2	0.3	0.1	0.0	16.3
TOT ELASMOBRH	11.3	9.1	0.0	0.0	0.1	0.5	0.2	0.3	0.1	0.0	16.3
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	6.8	16.8	0.9	3.2	7.3	1.8	112.9	5.0	0.0	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	50.3	46.7	1.8	0.2	276.2	6.8	121.1	156.0	30.8	0.9	2.3
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	0.0	0.0	0.0	0.0	0.0	0.1	35.4	7.9	7.8	5.4	50.6
SNAILS	28.1	22.9	10.2	0.6	0.0	0.3	12.7	22.4	3.5	11.4	54.4
SHRIMP	1.8	3.5	5.2	24.0	0.3	2.3	0.1	1.1	0.0	0.1	0.0
STARFISH	12.7	32.7	1.5	4.5	0.0	0.0	0.5	38.1	3.6	249.7	36.1
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	2.5	3.2	0.8	0.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0
OTHER INVERTS	1.0	1.5	12.2	1.0	0.0	0.0	0.9	11.0	0.2	0.1	1.6
TOTAL INVERTS	96.4	117.2	48.6	32.0	279.7	16.8	172.9	349.6	51.0	267.7	144.9
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	818.5	924.3	1438.4	492.4	404.2	1179.0	273.8	477.6	237.9	1186.2	936.1

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	214	215	216	217	218	219	220	222	223	224	225
MONTH/DAY/YEAR	7/14/80	7/15/80	7/15/80	7/15/80	7/15/80	7/15/80	7/15/80	7/16/80	7/16/80	7/16/80	7/16/80
LATITUDE START	58 40.0	58 60.0	58 40.0	58 40.0	58 39.9	58 40.0	58 40.0	58 40.1	59 0.1	59 20.0	59 19.8
LONGITUDE START	166 30.6	165 45.2	165 49.7	165 11.4	164 34.5	163 54.6	163 15.0	162 35.2	163 15.1	163 50.2	164 25.4
LATITUDE END	58 41.1	58 58.5	58 41.5	58 40.3	58 39.1	58 40.1	58 41.3	58 42.0	59 1.5	59 21.5	59 18.6
LONGITUDE END	166 28.3	165 45.2	165 48.8	165 8.2	164 32.0	163 51.9	163 13.5	162 36.6	163 16.9	163 51.6	164 27.9
LORAN START	33588.00	33280.90	33483.30	33386.20	33294.60	33196.60	33102.90	33011.40	32936.40	32835.10	32910.60
LORAN START	48479.80	48154.70	48237.40	48006.00	47780.10	47533.30	47286.40	47036.90	47261.10	47439.30	47643.50
LORAN END	33571.40	33295.10	33467.40	33375.20	33295.40	33189.20	33088.60	32999.40	32928.70	32824.50	32927.50
LORAN END	48463.00	48158.80	48226.40	47985.90	47766.30	47516.10	47275.00	47043.90	47270.10	47444.80	47660.80
GEAR DEPTH	40	27	35	38	37	31	27	35	18	18	20
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	3.00	2.70	2.85	3.13	2.83	2.67	2.89	3.83	3.06	3.02	3.30
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	3.0	0.1	3.2	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.0
PAC COD	23.4	0.1	0.6	3.6	0.2	0.1	1.6	0.0	0.0	0.0	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.1	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	159.8	13.4	78.7	31.8	10.3	26.5	25.7	0.5	2.9	0.0	2.6
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	118.4	3.7	14.2	11.4	5.1	4.4	3.6	11.7	8.7	7.4	7.1
TOT ROUNDFISH	304.5	17.5	96.8	46.8	15.7	31.3	31.1	13.4	11.6	7.5	9.7
YELLOW SOLE	1175.1	164.4	551.4	1219.3	445.2	234.3	865.4	275.6	110.4	13.4	43.5
ROCK SOLE	2.1	15.9	11.2	0.9	13.5	34.9	10.8	1.4	0.0	0.0	0.0
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	136.1	25.2	68.1	76.2	64.6	61.5	21.9	0.0	2.3	1.8	1.7
GREENLAND TBT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	1.3	0.0	1.2	4.9	0.0	18.8	25.5	0.0	0.6	0.0	0.1
OTHER FLTFISH	19.9	15.0	35.1	0.9	3.2	3.2	5.4	22.2	7.3	0.6	6.6
TOT FLATFISH	1334.4	220.4	667.0	1302.2	526.5	352.7	929.0	299.1	120.6	15.8	52.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	17.9	8.5	12.3	5.7	21.8	15.0	9.1	1.6	2.4	3.6	1.6
SNAILS	3.8	2.0	2.4	0.0	0.9	0.4	0.0	0.0	0.1	0.0	0.0
SHRIMP	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0
STARFISH	196.3	273.1	303.4	297.6	382.9	321.1	228.3	10.7	53.8	66.7	57.5
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.1	0.2	1.1	2.5	0.5	0.1	0.4	0.2	0.0	0.1
TOTAL INVERTS	218.9	283.8	318.5	304.3	410.3	336.9	237.7	12.7	56.5	70.5	59.2
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	1857.9	521.7	1082.3	1653.3	952.5	720.9	1197.7	325.2	188.6	93.8	120.8

Table A-2.--Station and catch data for the chartered vessel Ocean Harvester (cont'd).

HAUL #	226	227	228	229	230	231	232	233
MONTH/DAY/YEAR	7/16/80	7/17/80	7/17/80	7/17/80	7/17/80	7/17/80	7/17/80	7/17/80
LATITUDE START	59 0.0	59 20.0	59 20.0	59 20.0	59 20.0	59 39.9	59 39.9	59 40.2
LONGITUDE START	164 30.1	165 10.3	165 47.3	166 26.6	167 7.8	167 4.5	166 24.8	165 44.5
LATITUDE END	59 0.5	59 20.3	59 20.1	59 20.8	59 21.4	59 39.1	59 38.4	59 41.1
LONGITUDE END	164 32.1	165 13.2	165 50.6	166 29.4	167 9.7	167 2.0	166 24.9	165 46.2
LORAN START	33014.70	33005.10	33084.80	33167.70	33253.00	33024.30	32950.50	32868.70
LORAN START	47713.70	47899.60	48106.40	48319.60	48535.20	48438.10	48240.10	48029.10
LORAN END	33105.20	33008.00	33090.60	33165.80	33241.50	33028.80	32966.80	32862.20
LORAN END	47726.30	47915.50	48124.20	48332.10	48539.30	48429.10	48245.90	48035.30
GEAR DEPTH	26	18	22	26	29	29	27	22
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	2.78	2.91	3.13	3.02	3.15	2.80	2.74	2.37
PERFORMANCE / GEAR	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20	0 / 20
POLLOCK	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1
PAC COD	0.0	0.5	0.5	1.1	0.0	0.0	0.3	0.1
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HERRING	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	1.9	3.9	10.9	15.6	8.9	31.3	0.5	2.2
EELPOUTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER RNDFISH	32.7	10.1	28.1	11.5	0.9	1.4	9.7	7.2
TOT ROUNDFISH	34.8	14.4	39.6	28.8	9.9	32.8	10.5	9.7
YELLOW SOLE	43.5	93.0	159.4	122.2	226.8	234.5	10.9	19.1
ROCK SOLE	0.0	0.0	0.0	0.9	0.9	0.7	0.0	0.0
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.9	2.3	6.6	5.0	13.2	20.2	0.0	0.9
GREENLAND TBT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC HALIBUT	1.1	1.7	0.4	2.1	0.5	5.5	7.8	7.3
OTHER FLTFISH	0.3	2.4	6.4	11.3	11.2	6.9	4.1	6.6
TOT FLATFISH	45.9	99.3	172.7	141.6	252.7	267.8	22.8	33.8
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOT ELASMOBRH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLUE KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
TANNER, BAIRDI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, OPILIO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER, HYBRID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER CRAB	17.2	1.8	2.6	8.2	3.3	2.7	1.0	0.9
SNAILS	0.0	0.0	1.5	2.5	0.8	0.7	0.0	0.7
SHRIMP	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1
STARFISH	69.2	3.4	107.0	118.9	203.9	144.0	39.2	96.9
SQUID	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCTOPUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.9	1.9	0.4	0.1	0.1	0.0	0.2	0.0
TOTAL INVERTS	87.3	7.1	111.5	129.7	208.1	147.5	42.5	98.6
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	168.0	120.9	323.8	300.1	470.7	448.0	75.8	142.1

Appendix B

Rank Order of Relative Abundance for Fish and Invertebrates

Appendix B contains a computer listing of all fish and invertebrates caught during the 1980 demersal trawl survey ranked in order of relative abundance (kg/ha).

List of Tables

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha)

TOTAL TRAWLS 329 TOTAL SPECIES 255 TOTAL EFFORT 1112.1 HA

SPECIES RANKED BY MEAN CPUE (KG/HA)

RANK	SPECIES	MEAN CPUE (KG/HA)	90 PERCENT ----CONFIDENCE LIMITS----		PROPORTION	CUMULATIVE PROPORTION	NAME
1	10210	40.92381	35.19855	46.64908	0.21933050	0.21933050	YELLOWFIN SOLE
2	21740	32.27415	24.68265	39.86566	0.17297279	0.39230329	WALLEYE POLLOCK
3	21720	19.41014	16.20793	22.61234	0.10402629	0.49633158	PACIFIC COD
4	68580	12.67626	8.86822	16.48430	0.06793819	0.56426978	TANNER CRAB (OPILIO)
5	80000	8.82022	6.59764	11.04280	0.04727181	0.61154159	STARFISH UNIDENT
6	10285	7.46224	6.34319	8.58130	0.03999376	0.65153535	ALASKA PLAICE
7	10260	6.05445	4.35032	7.75857	0.03244870	0.68398405	ROCK SOLE
8	69322	4.55879	2.98760	6.12998	0.02443275	0.70841680	RED KING CRAB
9	68560	4.54420	3.39609	5.69230	0.02435454	0.73277134	TANNER CRAB (BAIRDI)
10	24185	4.40933	3.66743	5.15123	0.02363172	0.75640306	WATTLED EELPOUT
11	99990	4.23007	3.24047	5.21967	0.02267098	0.77907404	INVERTEBRATE UNIDENT
12	10115	3.68367	3.01149	4.35585	0.01974257	0.79881661	GREENLAND TURBOT
13	69323	3.59296	0.00000	8.21684	0.01925641	0.81807303	BLUE KING CRAB
14	10130	2.74686	2.31046	3.18331	0.01472187	0.83279490	FLATHEAD SOLE
15	81742	2.57859	1.52433	3.63284	0.01381989	0.84661478	PURPLE-ORANGE SEASTAR
16	69010	1.74762	1.21787	2.27737	0.00936636	0.85598114	HERMIT CRAB UNIDENT
17	24184	1.63111	0.94962	2.31260	0.00874190	0.86472305	SPARSE TOOTHED LYCOD
18	24191	1.62941	0.95488	2.30395	0.00873281	0.87345586	SHORTFIN EELPOUT
19	00400	1.45270	1.13882	1.76658	0.00778574	0.88124160	SKATE UNIDENT
20	21371	1.08346	0.69232	1.47461	0.00580680	0.88704840	PLAIN SCULPIN
21	10211	1.03475	0.76198	1.30751	0.00554570	0.89259410	LONGHEAD DAB
22	10110	1.02293	0.81740	1.22846	0.00548238	0.89807648	ARROWTOOTH FLOUNDER
23	10120	0.92371	0.75722	1.09021	0.00495063	0.90302711	PACIFIC HALIBUT

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	93 PERCENT ----CONFIDENCE LIMITS----		PROPORTION	CUMULATIVE PROPORTION	NAME
24	83010	0.92273	0.28244	1.56302	0.00494537	0.90797248	BASKETSTARFISH UNIDENT
25	21347	0.91504	0.30743	1.52266	0.00490416	0.91287664	YELLOW IRISH LORD
26	80200	0.90102	0.33260	1.46944	0.00482901	0.91770566	LETHASTERIAS NANIMENSIS
27	21348	0.84447	0.53814	1.15080	0.00452593	0.92223159	BUTTERFLY SCULPIN
28	71820	0.79082	0.51229	1.06934	0.00423838	0.92646997	NEPTUNEA PRIBILOFFENSIS
29	71884	0.78005	0.52099	1.03911	0.00418066	0.93065063	NEPTUNEA HEROS
30	21300	0.73266	0.51913	0.94618	0.00392666	0.93457729	SCULPIN UNIDENT
31	71500	0.65769	0.44508	0.87029	0.00352487	0.93810216	SNAIL UNIDENT
32	82730	0.61328	0.06693	1.13963	0.00328687	0.94138903	SAND DOLLAR UNIDENT
33	21375	0.61323	0.35230	0.87416	0.00328658	0.94467561	MYOXOCEPHALUS SP
34	21372	0.56002	0.28299	0.83705	0.00300142	0.94767703	SHORTHORN SCULPIN
35	00450	0.55804	0.30678	0.80931	0.00299081	0.95066784	STARRY SKATE
36	98205	0.53022	0.13458	0.92586	0.00284170	0.95350954	HALOCYNTHIA (TETHYUM) AURANTIUM
37	91000	0.52041	0.03308	1.00775	0.00278915	0.95629869	SPONGE UNIDENT
38	20510	0.50353	0.00000	1.19208	0.00269867	0.95899736	SABLEFISH
39	71870	0.44107	0.06904	0.81309	0.00236388	0.96136124	NEPTUNEA LYRATA
40	00420	0.40779	0.15418	0.66140	0.00218555	0.96354679	BIG SKATE
41	81779	0.40208	0.11601	0.68815	0.00215494	0.96570173	CTENODISCUS SP
42	69400	0.37907	0.18037	0.57777	0.00203163	0.96773335	KOREAN HORSEHAIR CRAB
43	78010	0.37179	0.22855	0.51504	0.00199262	0.96972597	OCTOPUS UNIDENT
44	20040	0.33902	0.16339	0.51464	0.00181695	0.97154292	STURGEON POACHER
45	21370	0.27581	0.16492	0.38670	0.00147819	0.97302111	GREAT SCULPIN
46	83020	0.25127	0.00000	0.50463	0.00134666	0.97436777	GORGONOCEPHALUS CARYI
47	24100	0.24126	0.09927	0.38324	0.00129302	0.97566079	EELPOUT UNIDENT
46	71882	0.22231	0.12382	0.32081	0.00119148	0.97685227	NEPTUNEA VENTRICOSA
49	23041	0.21774	0.03405	0.40142	0.00116695	0.97801922	CAPELIN
50	98200	0.21738	0.03991	0.39484	0.00116502	0.97918424	SEA POTATO UNIDENT
51	21420	0.21652	0.12053	0.31252	0.00116046	0.98034470	BIGMOUTH SCULPIN

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	90 PERCENT *---CONFIDENCE LIMITS---*		PROPORTION	CUMULATIVE PROPORTION	NAME
52	21315	0.21417	0.01642	0.41192	0.00114785	0.98149255	ARCTIC STAGHORN SCULPIN
53	66031	0.20060	0.14604	0.25516	0.00107512	0.98256766	PINK SHRIMP
54	10220	0.18291	0.10015	0.26567	0.00098032	0.98354798	STARRY FLOUNDER
55	43000	0.18024	0.05056	0.30991	0.00096598	0.98451396	SEA ANEMONE UNIDENT
56	68578	0.15759	0.09054	0.22463	0.00084458	0.98535854	HYAS CRAB (SHARP SPINED)
57	21438	0.14658	0.10840	0.18477	0.00078561	0.98614415	THORNY SCULPIN
58	88781	0.13852	0.07235	0.20470	0.00074242	0.98688657	TELMESSUS CRAB
59	98000	0.13393	0.00000	0.28201	0.00071778	0.98760435	TUNICATE UNIDENT
60	21314	0.13312	0.05834	0.20789	0.00071344	0.98831779	THREADED SCULPIN
61	85000	0.11979	0.05428	0.18530	0.00064200	0.98895979	SEA CUCUMBER UNIDENT
62	80010	0.11021	0.00000	0.24141	0.00059068	0.98955047	EVASTERIAS SP
63	21316	0.09828	0.00000	0.22533	0.00052671	0.99007718	ARMORHEAD SCULPIN
64	98100	0.09459	0.00000	0.21289	0.00050694	0.99058412	SEA ONION UNIDENT
65	23055	0.09002	0.00559	0.17445	0.00048246	0.99106658	RAINBOW SMELT
66	20720	0.08688	0.04817	0.12559	0.00046562	0.99153220	SEARCHER
67	80590	0.08373	0.05072	0.11673	0.00044873	0.99198093	LEPTASTERIAS POLARIS
68	21313	0.07651	0.03972	0.11330	0.00041004	0.99239097	GYMNOCANTHUS SP
69	40500	0.06553	0.03707	0.09400	0.00035123	0.99274221	JELLYFISH UNIDENT
70	68590	0.06502	0.03907	0.09097	0.00034848	0.99309069	TANNER CRAB (HYBRID)
71	21110	0.06115	0.02710	0.09521	0.00032776	0.99341845	PACIFIC HERRING
72	72500	0.05952	0.01903	0.10001	0.00031901	0.99373746	FUSITRITON OREGONENSIS
73	85200	0.05849	0.00000	0.15483	0.00031345	0.99405091	CUCUMARIA SP
74	21932	0.05655	0.03417	0.07893	0.00030307	0.99435398	WHITESPOTTED GREENLING
75	80310	0.05647	0.00000	0.14990	0.00030263	0.99465661	PISASTER SP
76	21735	0.05626	0.03177	0.08075	0.00030152	0.99495814	SAFFRON COD
77	72743	0.05551	0.03551	0.07551	0.00029749	0.99525563	BUCCINUM ANGULOSSUM
78	69520	0.05547	0.00235	0.10859	0.00029729	0.99555292	HYAS SP
79	21390	0.04679	0.02358	0.07000	0.00025077	0.99580369	SPINYHEAD SCULPIN

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	90 PERCENT CONFIDENCE LIMITS		PROPORTION	CUMULATIVE PROPORTION	NAME
80	71764	0.04104	0.02004	0.06205	0.00021997	0.99602366	VOLUTOPSIUS MIDDENDORFFII
81	22201	0.03832	0.02154	0.05509	0.00020536	0.99622902	LIPARIS SP
82	10200	0.03765	0.01976	0.05553	0.00020180	0.99643082	REX SOLE
83	24189	0.03547	0.01270	0.05825	0.00019011	0.99662092	POLAR EELPOUT
84	00472	0.03296	0.00286	0.06306	0.00017663	0.99679756	ALEUTIAN SKATE
85	21380	0.03114	0.00000	0.06245	0.00016690	0.99696445	PACIFIC STAGHORN SCULPIN
86	82000	0.03109	0.00000	0.07957	0.00016663	0.99713109	BRISINGELLA PUSILLA
87	82510	0.02902	0.00000	0.07682	0.00015555	0.99728663	GREEN SEA URCHIN
88	30420	0.02557	0.00000	0.06692	0.00013703	0.99742367	NORTHERN ROCKFISH
89	68577	0.02506	0.00000	0.05024	0.00013430	0.99755796	HYAS CRAB (ROUNDED SPINED)
90	72751	0.02483	0.01505	0.03460	0.00013306	0.99769102	LYRE WHELK
91	23010	0.02438	0.01105	0.03770	0.00013065	0.99782167	EULACHON
92	22200	0.01827	0.01048	0.02606	0.00009794	0.99791962	SNAILFISH UNIDENT
93	83000	0.01814	0.00362	0.03267	0.00009724	0.99801686	BRITTLESTARFISH UNIDENT
94	82500	0.01743	0.00066	0.03421	0.00009343	0.99811029	SEA URCHIN UNIDENT
95	71753	0.01699	0.00000	0.04133	0.00009104	0.99820133	PYRULOFUSUS DEFORMIS
96	21592	0.01556	0.00402	0.02710	0.00008339	0.99828472	PACIFIC SANDFISH
97	71001	0.01496	0.00000	0.03471	0.00008016	0.99836489	SNAIL (GASTROPOD) EGGS
98	20322	0.01366	0.00000	0.03287	0.00007334	0.99843822	BERING WOLFFISH
99	85010	0.01303	0.00000	0.03463	0.00006983	0.99850805	CUCUMARIA JAPONICA
100	66000	0.01282	0.00126	0.02437	0.00006869	0.99857674	SHRIMP UNIDENT
101	21725	0.01259	0.00536	0.01981	0.00006746	0.99864420	ARCTIC COD
102	22204	0.01209	0.00193	0.02224	0.00006477	0.99870897	MARBLED SNAILFISH
103	72752	0.01163	0.00700	0.01626	0.00006231	0.99877128	SILKY WHELK
104	98310	0.01119	0.00504	0.01734	0.00005999	0.99883127	APLIDIUM SP
105	71772	0.00963	0.00554	0.01371	0.00005159	0.99888286	BERINGIUS BERINGII
106	21345	0.00935	0.00000	0.02485	0.00005012	0.99893298	LONGFIN IRISH LORD
107	20061	0.00831	0.00520	0.01142	0.00004455	0.99897753	BERING POACHER

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	95 PERCENT CONFIDENCE LIMITS		PROPORTION	CUMULATIVE PROPORTION	NAME
108	21921	0.00759	0.00177	0.01341	0.00004069	0.99901822	ATKA MACKEREL
109	20000	0.00711	0.00075	0.01346	0.00003810	0.99905632	POACHER UNIDENT
110	21355	0.00710	0.00442	0.00979	0.00003807	0.99909438	RIBBED SCULPIN
111	71961	0.00682	0.00373	0.00992	0.00003657	0.99913096	CLINOPEGMA (ANCISTROLEPIS) MAGNA
112	70100	0.00651	0.00000	0.01731	0.00003490	0.99916586	CHITON UNIDENT
113	41201	0.00644	0.00128	0.01160	0.00003449	0.99920035	EUNEPHTHYA (GERSEMIA) SP
114	10270	0.00643	0.00000	0.01702	0.00003445	0.99923481	BUTTER SOLE
115	71756	0.00617	0.00042	0.01193	0.00003309	0.99926789	VOLUTOPSIUS FRAGILIS
116	71030	0.00597	0.00000	0.01548	0.00003202	0.99929992	DIOMEDES' TRITON
117	75110	0.00585	0.00164	0.01006	0.00003135	0.99933126	SPISULA SP
118	20006	0.00574	0.00276	0.00872	0.00003075	0.99936201	SAWBACK POACHER
119	71012	0.00569	0.00172	0.00967	0.00003052	0.99939253	ORANGEPEEL NUDIBRANCH
120	00471	0.00559	0.00000	0.01486	0.00002997	0.99942250	ALASKA SKATE
121	71891	0.00533	0.00055	0.01010	0.00002854	0.99945104	PLICIFUSUS KROYERI
122	71759	0.00480	0.00000	0.01103	0.00002573	0.99947677	VOLUTOPSIUS FILOSUS
123	20050	0.00402	0.00063	0.00741	0.00002155	0.99949832	ALEUTIAN ALLIGATORFISH
124	20060	0.00363	0.00128	0.00597	0.00001944	0.99951776	WARTY POACHER
125	66204	0.00352	0.00000	0.00935	0.00001885	0.99953661	LEBBEUS POLARIS
126	21340	0.00325	0.00000	0.00758	0.00001744	0.99955406	BLACKFIN SCULPIN
127	71025	0.00305	0.00000	0.00674	0.00001636	0.99957042	TRITONIA SP
128	42000	0.00305	0.00000	0.00733	0.00001634	0.99958676	SEA PEN UNIDENT
129	71835	0.00298	0.00179	0.00418	0.00001599	0.99960275	NEPTUNEA BOREALIS
130	74000	0.00298	0.00088	0.00509	0.00001599	0.99961874	CLAM UNIDENT
131	66502	0.00287	0.00028	0.00546	0.00001538	0.99963412	CRANGON SP
132	21350	0.00281	0.00123	0.00439	0.00001507	0.99964919	TRIGLOPS SP
133	72755	0.00277	0.00047	0.00506	0.00001482	0.99966401	BUCCINUM POLARE
134	21935	0.00263	0.00000	0.00690	0.00001409	0.99967810	KELP GREENLING
135	81360	0.00248	0.00000	0.00539	0.00001329	0.99969139	DIPLOPTERASTER MULTIPES

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	90 PERCENT CONFIDENCE LIMITS		PROPORTION	CUMULATIVE PROPORTION	NAME
136	20005	0.00244	0.00004	0.00483	0.00001306	0.99970446	LONGNOSE POACHER
137	75285	0.00240	0.00000	0.00487	0.00001287	0.99971733	GREENLAND COCKLE
138	71010	0.00228	0.00000	0.00520	0.00001221	0.99972954	NUDIBRANCH UNIDENT
139	65000	0.00209	0.00000	0.00543	0.00001119	0.99974074	BARNACLE UNIDENT
140	21930	0.00195	0.00000	0.00398	0.00001047	0.99975121	HEXAGRAMMOS SP
141	98080	0.00189	0.00000	0.00502	0.00001013	0.99976133	STYELA SP
142	42005	0.00189	0.00000	0.00502	0.00001013	0.99977146	ROUGHSTEM SEAWHIP
143	71800	0.00181	0.00000	0.00376	0.00000969	0.99978115	NEPTUNEA SP
144	69060	0.00179	0.00000	0.00392	0.00000962	0.99979077	PAGURUS ALEUTICUS
145	72756	0.00179	0.00042	0.00315	0.00000957	0.99980034	BUCCINUM SOLENUM
146	66570	0.00167	0.00094	0.00241	0.00000897	0.99980932	ARGIS SP
147	66045	0.00157	0.00082	0.00232	0.00000841	0.99981773	HUMPY SHRIMP
148	82740	0.00150	0.00000	0.00399	0.00000805	0.99982578	PARMA SAND DOLLAR
149	69121	0.00148	0.00000	0.00326	0.00000791	0.99983369	ELASSOCHIRUS CAVIMANUS
150	69120	0.00141	0.00000	0.00351	0.00000758	0.99984127	PAGURUS CAPILLATUS
151	72063	0.00140	0.00081	0.00199	0.00000750	0.99984876	AFORIA (LEUCOSYRINX) CIRCINATA
152	69086	0.00130	0.00002	0.00259	0.00000698	0.99985574	PAGURUS TRIGONOCHEIRUS
153	22236	0.00128	0.00017	0.00239	0.00000686	0.99986260	PINK SNAILFISH
154	23800	0.00126	0.00090	0.00162	0.00000677	0.99986937	PRICKLEBACK UNIDENT
155	75111	0.00120	0.00000	0.00253	0.00000644	0.99987580	ALASKA SURF CLAM
156	81780	0.00117	0.00000	0.00276	0.00000626	0.99988207	COMMON MUD STAR
157	74050	0.00109	0.00000	0.00247	0.00000582	0.99988789	MUSSEL UNIDENT
158	69070	0.00083	0.00016	0.00150	0.00000446	0.99989234	PAGURUS CONFRAGOSUS
159	50160	0.00075	0.00015	0.00135	0.00000403	0.99989638	SEA MOUSE UNIDENT
160	75286	0.00075	0.00000	0.00198	0.00000400	0.99990038	SERRIPES LAPEROUSII
161	21934	0.00074	0.00014	0.00134	0.00000395	0.99990433	ROCK GREENLING
162	75266	0.00071	0.00035	0.00107	0.00000381	0.99990814	PACIFIC RAZOR CLAM
163	71774	0.00069	0.00000	0.00149	0.00000371	0.99991185	BERINGIUS STIMPSONI

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	95 PERCENT CONFIDENCE LIMITS		PROPORTION	CUMULATIVE PROPORTION	NAME
164	23805	0.00066	0.00030	0.00102	0.00000354	0.99991539	DAUBED SHANNY
165	23808	0.00061	0.00027	0.00094	0.00000326	0.99991865	SNAKE PRICKLEBACK
166	71731	0.00060	0.00034	0.00087	0.00000324	0.99992189	COLUS HALLI
167	21379	0.00052	0.00000	0.00138	0.00000279	0.99992469	WARTY SCULPIN
168	72758	0.00052	0.00013	0.00091	0.00000279	0.99992748	BUCCINUM GLACIALE
169	71900	0.00050	0.00017	0.00084	0.00000270	0.99993017	PLICIFUSUS GRISEUS
170	75284	0.00050	0.00007	0.00093	0.00000267	0.99993284	SERRIPES SP
171	71530	0.00044	0.00021	0.00066	0.00000235	0.99993520	NATICA CLAUSA
172	72740	0.00042	0.00000	0.00089	0.00000225	0.99993745	BUCCINUM SP
173	71760	0.00041	0.00006	0.00077	0.00000222	0.99993967	VOLUTOPSIUS CASTANEUS
174	20202	0.00041	0.00020	0.00062	0.00000218	0.99994184	PACIFIC SAND LANCE
175	21446	0.00036	0.00000	0.00097	0.00000195	0.99994379	ICELUS SP
176	68020	0.00036	0.00000	0.00096	0.00000193	0.99994572	DUNGENESS CRAB
177	21455	0.00034	0.00000	0.00091	0.00000183	0.99994755	SMOOTH LUMPSUCKER
178	69095	0.00033	0.00000	0.00084	0.00000178	0.99994933	PAGURUS RATHBUNI
179	68000	0.00032	0.00000	0.00084	0.00000170	0.99995103	CRAB UNIDENT
180	66611	0.00031	0.00004	0.00058	0.00000169	0.99995271	ARGIS LAR
181	74981	0.00031	0.00009	0.00053	0.00000166	0.99995437	COCKLE UNIDENT
182	21346	0.00029	0.00000	0.00064	0.00000154	0.99995592	RED IRISH LORD
183	21344	0.00027	0.00000	0.00065	0.00000147	0.99995739	BROWN IRISH LORD
184	71721	0.00027	0.00000	0.00059	0.00000146	0.99995885	COLUS HERENDEENII
185	20001	0.00026	0.00010	0.00043	0.00000141	0.99996026	TUBENOSE POACHER
186	21441	0.00026	0.00011	0.00041	0.00000139	0.99996165	SPATULATE SCULPIN
187	66169	0.00024	0.00000	0.00048	0.00000127	0.99996291	HIPPOLYTID SHRIMP UNIDENT
188	66170	0.00023	0.00003	0.00043	0.00000125	0.99996417	EUALUS SP
189	79020	0.00022	0.00006	0.00039	0.00000120	0.99996537	ROSSIA PACIFICA
190	10250	0.00022	0.00000	0.00045	0.00000120	0.99996657	SAND SOLE
191	72422	0.00022	0.00007	0.00037	0.00000117	0.99996774	TROPHONOPSIS (BOREOTROPHON) DALLI

Table B-1. --Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	90 PERCENT CONFIDENCE LIMITS		PROPORTION	CUMULATIVE PROPORTION	NAME
192	23836	0.00021	0.00005	0.00038	0.00000114	0.99996888	LONGSNOUT PRICKLEBACK
193	30060	0.00021	0.00000	0.00055	0.00000111	0.99997000	PACIFIC OCEAN PERCH
194	85210	0.00020	0.00000	0.00042	0.00000108	0.99997108	PSOLUS SP
195	80650	0.00019	0.00000	0.00051	0.00000104	0.99997212	HIPPASTERIA SPINOSA
196	75281	0.00019	0.00004	0.00034	0.00000101	0.99997312	CLINOCARDIUM SP
197	66580	0.00018	0.00000	0.00038	0.00000094	0.99997407	ARGIS DENTATA
198	71580	0.00017	0.00004	0.00031	0.00000093	0.99997500	POLINICES PALLIDA
199	23809	0.00017	0.00000	0.00038	0.00000093	0.99997593	PIGHEAD PRICKLEBACK
200	30170	0.00017	0.00000	0.00046	0.00000092	0.99997685	DARKBLOTCHED ROCKFISH
201	21463	0.00016	0.00000	0.00032	0.00000085	0.99997769	PACIFIC SPINY LUMPSUCKER
202	66500	0.00016	0.00000	0.00036	0.00000084	0.99997853	CRANGONID SHRIMP UNIDENT
203	72305	0.00015	0.00000	0.00040	0.00000081	0.99997935	TRICHOTROPIS BICARINATA
204	80729	0.00015	0.00000	0.00039	0.00000078	0.99998012	RED BAT STAR
205	71726	0.00014	0.00001	0.00028	0.00000078	0.99998090	COLUS SPITZBERGENSIS
206	21320	0.00014	0.00001	0.00027	0.00000075	0.99998165	SLIM SCULPIN
207	66600	0.00014	0.00000	0.00037	0.00000075	0.99998240	SCLEROCRANGON SP
208	72501	0.00012	0.00000	0.00032	0.00000065	0.99998305	FUSITRITON SP
209	20010	0.00012	0.00000	0.00032	0.00000065	0.99998370	BLACKFIN POACHER
210	74120	0.00012	0.00000	0.00032	0.00000065	0.99998435	WEATHERVANE SCALLOP
211	24001	0.00012	0.00000	0.00031	0.00000063	0.99998496	PROWFISH
212	79000	0.00011	0.00000	0.00029	0.00000058	0.99998556	SQUID UNIDENT
213	20036	0.00011	0.00000	0.00023	0.00000058	0.99998614	SPINYCHEEK STARSNOUT
214	30050	0.00010	0.00000	0.00028	0.00000056	0.99998670	ROUGHEYE ROCKFISH
215	81080	0.00010	0.00000	0.00022	0.00000054	0.99998724	SOLASTER PAXILLATUS
216	71754	0.00010	0.00000	0.00022	0.00000054	0.99998778	PYRULOFUSUS SP
217	80660	0.00010	0.00000	0.00022	0.00000054	0.99998831	PSEUDARCHASTER PARELII
218	80230	0.00010	0.00000	0.00026	0.00000053	0.99998884	PEDICELLASTER MAGISTER
219	68510	0.00009	0.00000	0.00019	0.00000048	0.99998932	DECORATOR CRAB

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	95 PERCENT ----CONFIDENCE LIMITS----		PROPORTION	CUMULATIVE PROPORTION	NAME
220	41100	0.00009	0.00000	0.00023	0.00000046	0.99998978	SOFT CORAL UNIDENT
221	21397	0.00009	0.00000	0.00023	0.00000046	0.99999023	CRESTED SCULPIN
222	23000	0.00008	0.00000	0.00022	0.00000044	0.99999068	SMELT UNIDENT
223	71710	0.00008	0.00000	0.00018	0.00000044	0.99999112	COLUS SP
224	20051	0.00008	0.00000	0.00018	0.00000044	0.99999155	ARCTIC ALLIGATORFISH
225	74100	0.00008	0.00000	0.00017	0.00000043	0.99999199	SCALLOP UNIDENT
226	22220	0.00008	0.00000	0.00021	0.00000042	0.99999240	BLACKTAIL SNAILFISH
227	22208	0.00008	0.00000	0.00017	0.00000041	0.99999281	SHOWY SNAILFISH
228	82526	0.00008	0.00000	0.00016	0.00000040	0.99999322	WHITE SEA URCHIN
229	95000	0.00007	0.00000	0.00016	0.00000040	0.99999361	BRYOZOAN UNIDENT
230	00003	0.00006	0.00000	0.00016	0.00000033	0.99999394	FISH UNIDENT
231	20055	0.00006	0.00000	0.00016	0.00000031	0.99999425	SMOOTH ALLIGATORFISH
232	10150	0.00006	0.00000	0.00015	0.00000031	0.99999456	SLENDER SOLE
233	92500	0.00006	0.00000	0.00015	0.00000031	0.99999487	NEMERTEAN WORM UNIDENT
234	00401	0.00005	0.00000	0.00014	0.00000029	0.99999516	SKATE EGG CASE UNIDENT
235	81060	0.00005	0.00000	0.00014	0.00000029	0.99999544	SOLASTER SP
236	21331	0.00005	0.00000	0.00013	0.00000027	0.99999571	ARTEDIELLUS SP
237	20002	0.00005	0.00000	0.00013	0.00000026	0.99999598	DRAGON POACHER
238	66120	0.00005	0.00000	0.00013	0.00000026	0.99999624	SIDESTRIPE SHRIMP
239	21352	0.00005	0.00000	0.00013	0.00000026	0.99999650	SCISSORTAIL SCULPIN
240	69061	0.00005	0.00000	0.00013	0.00000026	0.99999676	LABIDLOCHIRUS (PAGURUS) SPLENDESCEN:
241	81090	0.00005	0.00000	0.00013	0.00000025	0.99999701	CROSSASTER SP
242	80540	0.00005	0.00000	0.00012	0.00000025	0.99999726	HENRICIA SP
243	66530	0.00005	0.00000	0.00012	0.00000025	0.99999751	CRANGON DALLI
244	21736	0.00005	0.00000	0.00012	0.00000025	0.99999776	SAFFRON COD JUVENILE (LT 10 CM)
245	68040	0.00005	0.00000	0.00012	0.00000025	0.99999800	CANCER OREGONENSIS
246	74104	0.00004	0.00000	0.00011	0.00000023	0.99999823	CHLAMYS SP
247	71769	0.00004	0.00000	0.00011	0.00000023	0.99999846	BERINGIUS SP

Table B-1.--Rank order of fish and invertebrate taxa by relative abundance (kg/ha) (cont'd).

RANK	SPECIES	MEAN CPUE (KG/HA)	9) PERCENT *---CONFIDENCE LIMITS---*		PROPORTION	CUMULATIVE PROPORTION	NAME
248	75610	0.00004	0.00000	0.00011	0.00000023	0.99999869	ROCK JINGLES UNIDENT
249	71890	0.00004	0.00000	0.00011	0.00000022	0.99999891	PLICIFUSUS SP
250	21335	0.00004	0.00000	0.00010	0.00000021	0.99999912	ARCTIC HOOKEAR SCULPIN
251	21384	0.00004	0.00000	0.00010	0.00000021	0.99999933	ENOPHRYS SP
252	23841	0.00004	0.00000	0.00010	0.00000020	0.99999953	DECORATED WARBONNET
253	74561	0.00004	0.00000	0.00010	0.00000020	0.99999973	MUSCULUS NIGER
254	21360	0.00003	0.00000	0.00009	0.00000017	0.99999990	BRIGHTBELLY SCULPIN
255	66171	0.00002	0.00000	0.00005	0.00000010	1.00000000	EUALUS BARBATUS
	TOTAL	186.56515					

END OF RANK

Appendix C

Population and Biomass Estimates for Principal Species of Fish

Appendix C presents estimates of population size in terms of number of individuals and biomass estimates in metric tons for the principal species of commercially important demersal fish. Estimates are given by subarea and for subareas combined. Estimates are given by stratum code. Strata codes corresponding to subareas illustrated in Figure 1 are as follows:

Subarea Number	Stratum Code (s)
1	1
2	2
3N	3
3S	7, 12
4N	4
4S	6
5	10

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Table C-l.--Population and biomass estimates for walleye pollock,

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	47	47	46	0.03805	.519665E-03	93.02817	.327629E+04
2	17,774.	.500031165E+07	41	40	40	40	0.03184	.813244E-04	107.99707	.328427E+04
3	18,219.	.456290887E+07	32	32	32	32	0.06985	.105616E-03	271.10337	.311335E+04
4	26,798.	.753876383E+07	67	62	62	57	0.02985	.123991E-03	149.95164	.350695E+04
6	23,773.	.668800334E+07	57	51	51	44	0.02385	.685302E-04	68.44877	.785892E+03
7	17,030.	.479086583E+07	39	39	39	39	0.07482	.310617E-03	382.84033	.732915E+04
10	4,481.	.126072603E+07	10	10	10	9	0.00295	.267147E-05	36.35612	.128819E+03
12	5,927.	.166743635E+07	25	23	23	22	0.01425	.139988E-04	49.64384	.154530E+03
TOTAL	136,308.	.383467681E+08	329	304	304	289				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000409	.636103583E+09	.153182571E+18	1	.260180432E+06	.242968833E+11
2	0.000295	.540016992E+09	.821170471E+17	1	.159222214E+06	.203336234E+10
3	0.000258	.123701999E+10	.648203837E+17	1	.318737780E+06	.219893381E+10
4	0.000199	.113045303E+10	.199311523E+18	1	.225045264E+06	.704681056E+10
6	0.000348	.457785583E+09	.351524882E+17	1	.159522922E+06	.306531371E+10
7	0.000195	.183413666E+10	.168221576E+18	1	.358458717E+06	.712940212E+10
10	0.000077	.483565629E+08	.204748363E+15	1	.371762093E+04	.424611671E+07
12	0.000287	.827779498E+08	.429646268E+15	1	.237646777E+05	.389216032E+08
TOTAL		.596665236E+10	.703439985E+18		.150864963E+07	.458138736E+11
EFFECTIVE D. F. =		216.64130			176.73419	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	TOTAL BIOMASS MT UPPER	TOTAL POPULATION LOWER	TOTAL POPULATION UPPER
80.000 PERCENT	.123275237E+07	.178454688E+07	.488556819E+10	.704773652E+10
90.000 PERCENT	.115377317E+07	.186352609E+07	.457605778E+10	.735720693E+10
95.000 PERCENT	.108485429E+07	.193244496E+07	.430604936E+10	.762725535E+10

Table C-2.--Population and biomass estimates for yellowfin sole.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	58	58	58	0.12014	.288538E-03	859.75241	.174832E+05
2	17,774.	.500031165E+07	41	19	19	17	0.00946	.936552E-05	48.11900	.406475E+03
3	16,219.	.456290887E+07	32	4	4	4	0.00001	.652092E-11	0.04936	.634826E-03
4	26,798.	.753878333E+07	67	67	66	66	0.04554	.549718E-04	0.00000	0.
6	23,773.	.668800334E+07	57	57	57	57	0.10129	.204739E-03	645.06307	.690935E+04
7	17,030.	.479086583E+07	39	15	15	7	0.00078	.979373E-07	2.79434	.117577E+01
10	4,481.	.126072603E+07	10	8	8	8	0.00138	.127947E-05	6.13499	.232037E+02
12	5,927.	.166743635E+07	25	21	21	16	0.01075	.166997E-04	43.74942	.258440E+03
TOTAL	136,308.	.383467881E+08	329	249	248	233				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000140	.587877391E+10	.817426058E+18	1	.821490405E+06	.134905612E+11
2	0.000197	.240609993E+09	.101631320E+17	1	.473213436E+05	.234167273E+09
3	0.000107	.225247724E+06	.132171726E+11	1	.240596802E+02	.135766498E+03
4	0.000147	.233168939E+10	0.	3	.343291420E+06	.312422828E+10
6	0.000157	.431418396E+10	.309050916E+18	1	.677458062E+06	.915785760E+10
7	0.000278	.133873293E+08	.269866597E+14	1	.372269287E+04	.224789467E+07
10	0.000225	.773453557E+07	.366806852E+14	1	.174243756E+04	.203363224E+07
12	0.000246	.729493775E+08	.718551800E+15	1	.179260324E+05	.464308546E+08
TOTAL		.128595537E+11	.113742254E+19		.191297645E+07	.260575269E+11
EFFECTIVE D. F. =		97.70100			138.81867	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	UPPER	TOTAL POPULATION LOWER	UPPER
80.000 PERCENT	.170490226E+07	.212105064E+07	.114819733E+11	.142371342E+11
90.000 PERCENT	.164533755E+07	.218061536E+07	.110859818E+11	.146331257E+11
95.000 PERCENT	.159335982E+07	.223259308E+07	.107397070E+11	.149794005E+11

Table C-3.--Population and biomass estimates for rock sole.

STANDARD TRAWL WIDTH = 12.1920000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	56	57	57	31	0.02595	.326170E-04	168.58661	.145862E+04
2	17,774.	.500031165E+07	41	23	23	9	0.00633	.204610E-04	18.38709	.106284E+03
3	16,219.	.456290867E+07	32	3	3	0	0.00002	.170653E-09	0.05157	.928399E-03
4	26,798.	.753878383E+07	67	54	54	4	0.00154	.682983E-07	3.55752	.521686E+00
6	23,773.	.668800334E+07	57	47	46	14	0.00471	.198738E-05	0.00000	0.
7	17,030.	.479086583E+07	39	21	21	2	0.00047	.556874E-07	0.97740	.143164E+00
10	4,481.	.126072603E+07	10	1	1	0	0.00000	.208275E-10	0.03354	.112478E-02
12	5,927.	.166743635E+07	25	20	20	12	0.01704	.635816E-04	39.84841	.287690E+03
TOTAL	136,308.	.383467881E+08	329	226	225	72				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000154	.115275345E+10	.681973713E+17	1	.177449588E+06	.152500176E+10
2	0.000345	.919411699E+08	.265742946E+16	1	.316758545E+05	.511589910E+09
3	0.000354	.235312166E+06	.193294005E+11	1	.833477001E+02	.355301424E+04
4	0.000432	.268193627E+08	.296491439E+14	1	.115929670E+05	.501828014E+07
6	0.000302	.104502682E+09	0.	3	.315262171E+05	.888943395E+08
7	0.000485	.468257119E+07	.328595267E+13	1	.227159878E+04	.127815907E+07
10	0.000136	.422618384E+05	.178775386E+10	1	.575359653E+01	.331038731E+02
12	0.000428	.664446857E+08	.799876998E+15	1	.284086480E+05	.176778728E+09
TOTAL		.144742152E+10	.716876340E+17		.283013975E+06	.230856477E+10
EFFECTIVE D. F. =		66.42347			124.37501	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	TOTAL BIOMASS MT UPPER	TOTAL POPULATION LOWER	TOTAL POPULATION UPPER
80.000 PERCENT	.221080755E+06	.344947195E+06	.110061081E+10	.179423222E+10
90.000 PERCENT	.203351253E+06	.362676697E+06	.100036691E+10	.189447612E+10
95.000 PERCENT	.187879991E+06	.378147959E+06	.912466077E+09	.198237695E+10

Table C-4.--Population and biomass estimates for Greenland turbot.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	13	13	0	0.00004	.235455E-09	0.19541	.396223E-02
2	17,774.	.500031165E+07	41	27	27	3	0.00081	.428775E-07	0.71048	.164927E-01
3	16,219.	.456290887E+07	32	32	32	23	0.02482	.143714E-04	132.40397	.477616E+03
4	26,798.	.753878383E+07	67	48	48	17	0.00193	.183722E-06	10.99541	.465721E+01
6	23,773.	.668800334E+07	57	34	34	3	0.00021	.153827E-08	1.02092	.315438E-01
7	17,030.	.479086583E+07	39	33	32	14	0.00690	.190915E-05	0.00000	0.
10	4,481.	.126072603E+07	10	9	9	3	0.00287	.276192E-05	23.86320	.190800E+03
12	5,927.	.166743635E+07	25	20	19	14	0.00117	.593123E-07	0.00000	0.
TOTAL	136,308.	.383467881E+08	329	216	214	77				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000206	.133619798E+07	.185253449E+12	1	.275526154E+03	.110086806E+05
2	0.001137	.355261839E+07	.412368608E+12	1	.404051768E+04	.107207222E+07
3	0.000187	.604147267E+09	.994402940E+16	1	.113257578E+06	.299214604E+09
4	0.000176	.828919944E+08	.264684466E+15	1	.145766854E+05	.104415104E+08
6	0.000208	.682791832E+07	.141093412E+13	1	.142210033E+04	.688058858E+05
7	0.000207	.159294011E+09	0.	3	.330527667E+05	.438196605E+08
10	0.000120	.300849517E+08	.303262875E+15	1	.361375545E+04	.438968283E+07
12	0.000169	.115624353E+08	0.	3	.195358534E+04	.164908475E+06
TOTAL		.899697394E+09	.105139853E+17		.172192515E+06	.359182453E+09

EFFECTIVE D. F. = 37.00756 42.67326

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	TOTAL BIOMASS MT UPPER	TOTAL POPULATION LOWER	TOTAL POPULATION UPPER
80.000 PERCENT	.147511182E+06	.196873847E+06	.765875408E+09	.103351938E+10
90.000 PERCENT	.140301800E+06	.204083229E+06	.726623966E+09	.107277082E+10
95.000 PERCENT	.133930101E+06	.210454928E+06	.691822662E+09	.110757213E+10

Table C-5.--Population and biomass estimates for Alaska plaice.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	50	50	4	0.00521	.113265E-05	12.33903	.475065E+01
2	17,774.	.500031165E+07	41	11	11	0	0.00084	.185517E-06	1.40512	.676318E+00
3	16,219.	.456290887E+07	32	6	6	0	0.00004	.303095E-09	0.08486	.114176E-02
4	26,798.	.753878383E+07	67	65	64	19	0.02332	.119053E-04	0.00000	0.
6	23,773.	.668800334E+07	57	56	56	25	0.01791	.555702E-05	39.17784	.206935E+02
7	17,030.	.479086583E+07	39	16	15	0	0.00074	.592928E-07	0.00000	0.
10	4,481.	.126072603E+07	10	7	7	1	0.00416	.630391E-05	5.85810	.136446E+02
12	5,927.	.166743635E+07	25	16	16	8	0.00264	.485420E-06	4.16648	.145559E+01
TOTAL	136,308.	.383467881E+08	329	227	225	57				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000423	.843712526E+08	.222116013E+15	1	.356543703E+05	.529569491E+08
2	0.000598	.702605845E+07	.169100587E+14	1	.420399417E+04	.463851452E+07
3	0.000509	.387190230E+06	.237715422E+11	1	.197120994E+03	.631047162E+04
4	0.000450	.390872033E+09	0.	3	.175821499E+06	.676614588E+09
6	0.000457	.262021499E+09	.925608830E+15	1	.119755087E+06	.248561885E+09
7	0.000756	.468654804E+07	0.	3	.354093431E+04	.136091249E+07
10	0.000710	.738545358E+07	.216871783E+14	1	.524138107E+04	.100196166E+08
12	0.000634	.694733807E+07	.404705233E+13	1	.440682209E+04	.134963463E+07
TOTAL		.763697373E+09	.119039290E+16		.348821209E+06	.995508410E+09
EFFECTIVE D. F. =		94.71837			136.61224	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	UPPER	TOTAL POPULATION LOWER	UPPER
80.000 PERCENT	.308151203E+06	.389491214E+06	.719119547E+09	.808275199E+09
90.000 PERCENT	.296508727E+06	.401133690E+06	.706298578E+09	.821096168E+09
95.000 PERCENT	.286349195E+06	.411293223E+06	.695084255E+09	.832310492E+09

Table C-6.--Population and biomass estimates for flathead sole.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.663775219E+07	58	46	46	8	0.00221	.205280E-06	13.30253	.747147E+01
2	17,774.	.500031165E+07	41	40	40	25	0.00772	.171533E-05	52.97423	.774167E+02
3	16,219.	.456290887E+07	32	32	32	15	0.00872	.361834E-05	46.04577	.983577E+02
4	26,798.	.753878383E+07	67	52	52	22	0.00074	.104789E-07	3.58164	.244168E+00
6	23,773.	.668800334E+07	57	35	35	6	0.00097	.127236E-06	4.07964	.128610E+01
7	17,030.	.479086583E+07	39	33	33	20	0.00285	.533991E-06	17.56989	.168404E+02
10	4,481.	.126072603E+07	10	9	9	3	0.00129	.210348E-06	7.25614	.602918E+01
12	5,927.	.166743635E+07	25	23	23	16	0.00450	.169572E-05	25.68546	.390924E+02
TOTAL	136,308.	.383467881E+08	329	270	270	115				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000166	.909593981E+08	.349327364E+15	1	.151348438E+05	.959782072E+07
2	0.000146	.264887673E+09	.193565863E+16	1	.386110270E+05	.428885550E+08
3	0.000189	.210102731E+09	.204782053E+16	1	.398048867E+05	.753342337E+08
4	0.000207	.270011988E+08	.138768513E+14	1	.558486335E+04	.595548101E+06
6	0.000237	.274184370E+08	.575266875E+14	1	.649643122E+04	.569117838E+07
7	0.000162	.841749743E+08	.432433007E+15	1	.136393939E+05	.122563825E+08
10	0.000178	.914800114E+07	.958296215E+13	1	.162466382E+04	.334334173E+06
12	0.000175	.428286739E+08	.108690287E+15	1	.750642986E+04	.471469065E+07
TOTAL		.756521287E+09	.495491632E+16		.128402540E+06	.151412743E+09

EFFECTIVE D. F. = 94.39600 84.02958

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	TOTAL BIOMASS MT UPPER	TOTAL POPULATION LOWER	TOTAL POPULATION UPPER
80.000 PERCENT	.112469729E+06	.144315351E+06	.665573554E+09	.847469021E+09
90.000 PERCENT	.107904890E+06	.148900190E+06	.639416196E+09	.873626378E+09
95.000 PERCENT	.103891003E+06	.152914077E+06	.616536721E+09	.896505854E+09

Table C-7 .--Population and biomass estimates for Pacific cod.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	52	50	19	0.02685	.991722E-04	0.00000	0.
2	17,774.	.500031155E+07	41	41	41	21	0.02129	.195210E-04	11.74696	.576128E+01
3	16,219.	.456290837E+07	32	32	32	18	0.02540	.569214E-04	28.76899	.764829E+02
4	26,798.	.753678383E+07	67	63	62	39	0.02408	.145214E-04	0.00000	0.
6	23,773.	.668800334E+07	57	47	46	17	0.01391	.741655E-05	0.00000	0.
7	17,030.	.479086583E+07	39	39	39	37	0.03924	.265190E-04	34.57443	.305831E+02
10	4,481.	.126072603E+07	10	9	9	4	0.00587	.415341E-05	15.41582	.287349E+02
12	5,927.	.166743635E+07	25	24	24	24	0.01884	.249078E-04	16.90615	.253978E+02
TOTAL	136,308.	.383467881E+08	329	307	303	179				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000643	.285742128E+09	0.	3	.183622632E+06	.463678128E+10
2	0.001812	.587384367E+08	.144049900E+15	1	.106440313E+06	.488086418E+09
3	0.000883	.131270278E+09	.159238465E+16	1	.115912234E+06	.118511201E+10
4	0.000630	.288022244E+09	0.	3	.131498439E+06	.825297044E+09
6	0.000752	.123782456E+09	0.	3	.930274203E+05	.331737902E+09
7	0.001135	.165641457E+09	.701956436E+15	1	.188005848E+06	.608674053E+09
10	0.000381	.194351311E+08	.456721256E+14	1	.740021372E+04	.660155322E+07
12	0.001114	.281899362E+08	.706146145E+14	1	.314162214E+05	.692523519E+08
TOTAL		.110082207E+10	.255467772E+16		.907323323E+06	.815154261E+10

EFFECTIVE D. F. = 67.73344 162.59732

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	UPPER	TOTAL POPULATION LOWER	UPPER
80.000 PERCENT	.790945619E+06	.102370103E+07	.103535855E+10	.116628558E+10
90.000 PERCENT	.757630821E+06	.105701582E+07	.101644000E+10	.118520413E+10
95.000 PERCENT	.728559576E+06	.108608707E+07	.999852362E+09	.120179177E+10

Table C-8.--Population and biomass estimates for Pacific halibut.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	47	47	47	0.00241	.210616E-06	2.55831	.123716E+00
2	17,774.	.500031155E+07	41	25	25	25	0.00203	.309220E-06	0.69716	.269100E-01
3	16,219.	.456290887E+07	32	14	14	14	0.00032	.121694E-07	0.25992	.415380E-02
4	26,798.	.753878333E+07	67	48	48	48	0.00076	.251399E-07	0.84149	.114409E-01
6	23,773.	.668800334E+07	57	32	32	32	0.00074	.430527E-07	0.82753	.270087E-01
7	17,030.	.479086583E+07	39	14	14	14	0.00031	.102945E-07	0.22525	.366125E-02
10	4,481.	.126072603E+07	10	3	3	3	0.00004	.460705E-09	0.10332	.279888E-02
12	5,927.	.166743635E+07	25	16	16	16	0.00177	.220617E-06	4.75217	.397255E+01
TOTAL	136,308.	.383467881E+08	329	199	199	199				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000941	.174931029E+08	.578433515E+13	1	.164679151E+05	.984731155E+07
2	0.002909	.348603083E+07	.672834424E+12	1	.101406919E+05	.773147168E+07
3	0.001216	.118599159E+07	.864827275E+11	1	.144162903E+04	.253368958E+06
4	0.000905	.634383399E+07	.650220825E+12	1	.574424550E+04	.142878316E+07
6	0.000890	.553452103E+07	.120808430E+13	1	.492519940E+04	.192572310E+07
7	0.001355	.107916114E+07	.840345137E+11	1	.146247391E+04	.236283344E+06
10	0.000396	.130254947E+06	.444862951E+10	1	.515440213E+02	.732258824E+03
12	0.000372	.792394536E+07	.110450667E+14	1	.294513228E+04	.613392386E+06
TOTAL		.431768418E+08	.195355073E+14		.431788311E+05	.220370664E+08
EFFECTIVE D. F. =		42.40880			140.92496	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	UPPER	TOTAL POPULATION LOWER	UPPER
80.000 PERCENT	.371278142E+05	.492298479E+05	.374208073E+08	.489328762E+08
90.000 PERCENT	.353956106E+05	.509620515E+05	.357394777E+08	.506142058E+08
95.000 PERCENT	.338840451E+05	.524736170E+05	.342535076E+08	.521001759E+08

Table C-9.--Population and biomass estimates for arrowtooth flounder.

STANDARD TRAWL WIDTH = 12.19200000 METERS

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	58	10	10	0	0.00024	.126160E-07	2.02173	.841501E+00
2	17,774.	.500031165E+07	41	41	40	18	0.00616	.772837E-06	0.00000	0.
3	16,219.	.456290887E+07	32	4	4	0	0.00005	.160196E-08	0.16695	.104404E-01
4	26,798.	.753878383E+07	67	3	3	0	0.00002	.958489E-10	0.05999	.118504E-02
6	23,773.	.668800334E+07	57	8	8	0	0.00018	.557738E-08	0.85976	.130780E+00
7	17,030.	.479066553E+07	39	21	21	8	0.00232	.555559E-06	9.40593	.914564E+01
10	4,481.	.126072603E+07	10	0	0	0	0.00000	0.	0.00000	0.
12	5,927.	.166743635E+07	25	19	19	12	0.00158	.225745E-06	7.58309	.422515E+01
TOTAL	136,308.	.383467881E+08	329	106	105	38				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000120	.138240762E+08	.396247730E+14	1	.165599697E+04	.589859498E+06
2	0.000282	.109124136E+09	0.	3	.308037190E+05	.193233230E+08
3	0.000304	.761798928E+06	.217370888E+12	1	.231764459E+03	.333530406E+05
4	0.000274	.452257965E+06	.673495498E+11	1	.123723784E+03	.544740761E+04
6	0.000215	.575006950E+07	.584969379E+13	1	.123374356E+04	.249472688E+06
7	0.000247	.450625613E+08	.209914305E+15	1	.111261428E+05	.127514160E+08
10	0.000000	0.	0.	1	0.	0.
12	0.000209	.126443227E+08	.117473624E+14	1	.264165769E+04	.627649011E+06
TOTAL		.187619222E+09	.267420855E+15		.478167483E+05	.335805206E+08
EFFECTIVE D. F. =		56.62903			83.85941	

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	TOTAL BIOMASS MT UPPER	TOTAL POPULATION LOWER	TOTAL POPULATION UPPER
80.000 PERCENT	.403221461E+05	.553113505E+05	.166402830E+09	.208835614E+09
90.000 PERCENT	.381623980E+05	.574710967E+05	.160250829E+09	.214987616E+09
95.000 PERCENT	.362714353E+05	.593620614E+05	.154844525E+09	.220393920E+09

Table C-10.--Population and biomass estimates for sablefish.

STRATUM	AREA SQ. MI.	SAMPLES	TOTAL HAULS	HAULS WITH CATCH	HAULS WITH NUMS.	HAULS WITH L-F	CPUE MT/KM	VARIANCE CPUE MT/KM	CPUE NO/KM	VARIANCE CPUE NO/KM
1	24,306.	.683775219E+07	56	0	0	0	0.00000	0.	0.00000	0.
2	17,774.	.500031155E+07	41	17	17	4	0.00465	.150730E-04	3.89442	.102047E+02
3	16,219.	.456290887E+07	32	0	0	0	0.00000	0.	0.00000	0.
4	26,798.	.753878363E+07	67	0	0	0	0.00000	0.	0.00000	0.
6	23,773.	.668800334E+07	57	1	1	1	0.00000	.194883E-10	0.00649	.420981E-04
7	17,030.	.479086583E+07	39	3	3	1	0.00002	.192714E-09	0.03272	.359248E-03
10	4,481.	.126072613E+07	10	0	0	0	0.00000	0.	0.00000	0.
12	5,927.	.166743635E+07	25	3	3	0	0.00009	.379828E-08	0.06841	.189523E-02
TOTAL	136,308.	.383467861E+08	329	24	24	6				

STRATUM	MEAN WT MT	POPULATION	VARIANCE POPULATION	METHOD USED	BIOMASS MT.	VARIANCE BIOMASS
1	0.000000	0.	0.	1	0.	0.
2	0.001193	.194733138E+08	.255149220E+15	1	.232393992E+05	.376872172E+09
3	0.000000	0.	0.	1	0.	0.
4	0.000000	0.	0.	1	0.	0.
6	0.000680	.433938105E+05	.188302279E+10	1	.295245532E+02	.871699241E+03
7	0.000718	.156737267E+06	.824560321E+10	1	.112546012E+03	.442324612E+04
10	0.000000	0.	0.	1	0.	0.
12	0.001366	.114068313E+06	.526940155E+10	1	.156045016E+03	.105605322E+05
TOTAL		.197875132E+08	.255164618E+15		.235375148E+05	.376888028E+09

EFFECTIVE D. F. = 40.00585 40.00480

CONFIDENCE LIMITS

	TOTAL BIOMASS MT LOWER	UPPER	TOTAL POPULATION LOWER	UPPER
80.000 PERCENT	0.	.488334411E+05	0.	.406014597E+08
90.000 PERCENT	0.	.562300243E+05	0.	.466875153E+08
95.000 PERCENT	0.	.627724089E+05	0.	.520707104E+08

Appendix D

Population Estimates by Sex and Size Groups for Principal Species of Fish

Appendix D presents estimates of the numbers of individuals within the overall survey area by sex and centimeter-size group for principal species of fish.

List of Tables

Table D-l .--Population estimates by sex and size group for walleye pollock.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
70.0	0.	0.	.547659032E+05	.547659032E+05	0.00001	0.00001
90.0	0.	0.	.283124817E+06	.283124817E+06	0.00005	0.00006
100.0	0.	0.	.260320180E+07	.260320180E+07	0.00044	0.00049
110.0	.394271680E+05	0.	.628221438E+08	.628615710E+08	0.01054	0.01103
120.0	0.	.809386888E+05	.218876624E+09	.218957563E+09	0.03670	0.04773
130.0	.261629370E+06	.130814685E+06	.292611612E+09	.293004056E+09	0.04911	0.09683
140.0	.951691507E+05	.316518376E+06	.273478242E+09	.273869930E+09	0.04590	0.14274
150.0	.378462615E+05	.208616256E+06	.172505261E+09	.172751723E+09	0.02895	0.17169
151.0	0.	0.	.602069327E+09	.602069327E+09	0.10091	0.27259
156.0	0.	0.	.118700076E+08	.118700076E+08	0.00199	0.27458
160.0	.133839543E+07	.101065621E+07	.169287345E+09	.171636397E+09	0.02877	0.30335
170.0	.102541586E+07	.141376004E+07	.141871537E+09	.144310733E+09	0.02419	0.32754
180.0	.263869870E+07	.143077274E+07	.757762685E+08	.798457399E+08	0.01338	0.34092
190.0	.526052470E+07	.625176874E+07	.192654592E+08	.307977527E+08	0.00516	0.34608
200.0	.150146962E+08	.114860428E+08	.553879810E+07	.320395371E+08	0.00537	0.35145
210.0	.290889966E+08	.230560821E+08	.271288455E+05	.521722076E+08	0.00874	0.36019
220.0	.310794845E+08	.290881668E+08	.161958837E+07	.617872397E+08	0.01036	0.37055
230.0	.428159075E+08	.438535319E+08	.288513119E+05	.866982908E+08	0.01453	0.38508
240.0	.628688885E+08	.635234946E+08	.101715298E+06	.126494098E+09	0.02120	0.40628
250.0	.721398264E+08	.932000902E+08	.379691521E+05	.165377886E+09	0.02772	0.43400
260.0	.991101420E+08	.101027203E+09	0.	.200137345E+09	0.03354	0.46754
270.0	.993460395E+08	.998752825E+08	0.	.199221382E+09	0.03339	0.50093
280.0	.850642811E+08	.953455336E+08	0.	.180409815E+09	0.03024	0.53116
290.0	.861720202E+08	.875989242E+08	0.	.173770944E+09	0.02912	0.56029
300.0	.592513994E+08	.701463876E+08	0.	.129397767E+09	0.02169	0.58197
310.0	.601354726E+08	.497372278E+08	0.	.109872700E+09	0.01841	0.60039
320.0	.710023316E+08	.587147023E+08	0.	.129717034E+09	0.02174	0.62213
330.0	.599667854E+08	.535287922E+08	0.	.113495578E+09	0.01902	0.64115
340.0	.556468744E+08	.537970831E+08	0.	.109443958E+09	0.01834	0.65949
350.0	.799550811E+08	.669161278E+08	0.	.146871209E+09	0.02462	0.68411
360.0	.885187964E+08	.754130330E+08	0.	.163931829E+09	0.02747	0.71158
370.0	.124761423E+09	.106325433E+09	0.	.231086856E+09	0.03873	0.75031
380.0	.996853560E+08	.108741817E+09	0.	.208427173E+09	0.03493	0.78525
390.0	.974462423E+08	.104728705E+09	0.	.202174947E+09	0.03388	0.81913
400.0	.664071304E+08	.811347633E+08	0.	.147541894E+09	0.02473	0.84386
410.0	.500973620E+08	.542071129E+08	0.	.104300733E+09	0.01748	0.86134
420.0	.320965589E+08	.392571676E+08	0.	.713537264E+08	0.01196	0.87330
430.0	.350803511E+08	.388670261E+08	0.	.739473772E+08	0.01239	0.88569
440.0	.261701817E+08	.300316888E+08	0.	.562018705E+08	0.00942	0.89511
450.0	.250190696E+08	.242982439E+08	0.	.493173135E+08	0.00827	0.90338
460.0	.224493137E+08	.246205517E+08	0.	.470698655E+08	0.00789	0.91126
470.0	.268266255E+08	.261277502E+08	0.	.529543757E+08	0.00888	0.92014
480.0	.220191497E+08	.309478095E+08	0.	.529669592E+08	0.00888	0.92902

Table D-1.--Population estimates by sex and size group for walleye pollock (cont'd).

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
490.0	.251451540E+08	.276316290E+08	0.	.527767830E+08	0.00885	0.93786
500.0	.237740655E+08	.302799416E+08	0.	.540540071E+08	0.00906	0.94692
510.0	.155871474E+08	.254734881E+08	0.	.410606354E+08	0.00688	0.95380
520.0	.155430728E+08	.250111511E+08	0.	.405542239E+08	0.00680	0.96060
530.0	.117607446E+08	.226679933E+08	0.	.344287379E+08	0.00577	0.96637
540.0	.999253341E+07	.152485909E+08	0.	.252411243E+08	0.00423	0.97060
550.0	.963322578E+07	.171645869E+08	0.	.269978127E+08	0.00452	0.97512
560.0	.936751245E+07	.147967736E+08	0.	.241642860E+08	0.00405	0.97917
570.0	.521941989E+07	.161862241E+08	0.	.214056440E+08	0.00359	0.98276
580.0	.401385357E+07	.988679946E+07	0.	.139006530E+08	0.00233	0.98509
590.0	.465465148E+07	.109622024E+08	0.	.156168539E+08	0.00262	0.98771
600.0	.432157142E+07	.771790937E+07	0.	.120394808E+08	0.00202	0.98973
610.0	.307382141E+07	.932041037E+07	0.	.123942318E+08	0.00206	0.99180
620.0	.430919216E+07	.718137229E+07	0.	.114905644E+08	0.00193	0.99373
630.0	.197475690E+07	.596463651E+07	0.	.793939341E+07	0.00133	0.99506
640.0	.994802536E+06	.538360655E+07	0.	.637840909E+07	0.00107	0.99613
650.0	.127348516E+07	.436185560E+07	0.	.563534076E+07	0.00094	0.99707
660.0	.558971377E+06	.265469250E+07	0.	.321366388E+07	0.00054	0.99761
670.0	.298980412E+06	.211113288E+07	0.	.241011329E+07	0.00040	0.99802
680.0	.126241546E+06	.255845010E+07	0.	.268469165E+07	0.00045	0.99847
690.0	.413634269E+06	.148513676E+07	0.	.189877105E+07	0.00032	0.99879
700.0	.229645386E+06	.202866938E+07	0.	.225831477E+07	0.00038	0.99916
710.0	.883306036E+05	.638484345E+06	0.	.726814949E+06	0.00012	0.99929
720.0	.110646633E+06	.154480166E+07	0.	.165544829E+07	0.00028	0.99956
730.0	0.	.520622856E+06	0.	.520622856E+06	0.00009	0.99965
740.0	0.	.178911239E+06	0.	.178911239E+06	0.00003	0.99968
750.0	.636357274E+06	.337427323E+06	0.	.973784597E+06	0.00016	0.99984
760.0	0.	.109890079E+06	0.	.109890079E+06	0.00002	0.99985
770.0	0.	.476736997E+06	0.	.476736997E+06	0.00008	0.99994
780.0	0.	.246776239E+06	0.	.246776239E+06	0.00004	0.99998
800.0	0.	.323440925E+05	0.	.323440925E+05	0.00001	0.99999
830.0	0.	.694662896E+05	0.	.694662896E+05	0.00001	1.00000
TOTAL	.188923103E+10	.202667235E+10	.205074897E+10	.596665236E+10		

Table D-2.--Population estimates by sex and size group for yellowfin sole.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
70.0	.650340154E+06	0.	0.	.650340154E+06	0.00005	0.00005
80.0	.120582868E+08	.205348001E+07	0.	.141117668E+08	0.00110	0.00115
90.0	.108305989E+08	.506339585E+07	0.	.158939947E+08	0.00124	0.00238
100.0	.124884761E+08	.173157137E+08	0.	.298041898E+08	0.00232	0.00470
110.0	.336470842E+08	.276647914E+08	0.	.613118756E+08	0.00477	0.00947
120.0	.545720241E+08	.618309741E+06	0.	.116402998E+09	0.00905	0.01852
130.0	.779258712E+08	.574333030E+08	0.	.135359174E+09	0.01053	0.02905
140.0	.905290777E+08	.104176573E+09	0.	.194705650E+09	0.01514	0.04419
150.0	.142597854E+09	.132209623E+09	0.	.274807477E+09	0.02137	0.06556
160.0	.170057116E+09	.167693208E+09	0.	.337760324E+09	0.02627	0.09182
170.0	.198337522E+09	.209616051E+09	0.	.407953572E+09	0.03172	0.12355
180.0	.291457937E+09	.307596799E+09	0.	.599054736E+09	0.04658	0.17013
190.0	.345970793E+09	.340356993E+09	0.	.686327786E+09	0.05337	0.22350
200.0	.419018026E+09	.348416258E+09	0.	.767434284E+09	0.05968	0.28318
210.0	.428110631E+09	.373121951E+09	0.	.801232582E+09	0.06231	0.34549
220.0	.558874604E+09	.366888714E+09	0.	.925763317E+09	0.07199	0.41748
230.0	.612090722E+09	.433680003E+09	0.	.104577072E+10	0.08132	0.49880
240.0	.686437283E+09	.445915053E+09	0.	.113235234E+10	0.08806	0.58686
250.0	.674148538E+09	.511714837E+09	0.	.118586338E+10	0.09222	0.67907
260.0	.554601445E+09	.477768761E+09	0.	.103237021E+10	0.08028	0.75935
270.0	.406449021E+09	.492885535E+09	0.	.899334555E+09	0.06994	0.82929
280.0	.272402483E+09	.422244179E+09	0.	.694646662E+09	0.05402	0.88331
290.0	.185260776E+09	.393257273E+09	0.	.578518049E+09	0.04499	0.92829
300.0	.831675602E+08	.296548717E+09	0.	.379716277E+09	0.02953	0.95782
310.0	.450483490E+08	.182254025E+09	0.	.227302374E+09	0.01768	0.97550
320.0	.218969000E+08	.124213528E+09	0.	.146110428E+09	0.01136	0.98686
330.0	.112651650E+08	.698533886E+08	0.	.811185536E+08	0.00631	0.99317
340.0	.384930423E+07	.336096052E+08	0.	.374589094E+08	0.00291	0.99608
350.0	.927265485E+06	.242030820E+08	0.	.251303475E+08	0.00195	0.99803
360.0	.193867490E+07	.977467809E+07	0.	.117133530E+08	0.00091	0.99894
370.0	.196816524E+06	.482240198E+07	0.	.501921851E+07	0.00039	0.99933
380.0	.127200460E+06	.561277326E+07	0.	.593997372E+07	0.00046	0.99980
390.0	0.	.455500551E+06	0.	.455500551E+06	0.00004	0.99983
400.0	0.	.981097307E+06	0.	.981097307E+06	0.00008	0.99991
410.0	0.	.107852725E+07	0.	.107852725E+07	0.00008	0.99999
430.0	0.	.992068441E+05	0.	.992068441E+05	0.00001	1.00000
TOTAL	.640694375E+10	.645261000E+10	0.	.128595537E+11		

Table D-3 .--Population estimates by sex and size group for rock sole.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
50.0	0.	.186134092E+07	0.	.186134092E+07	0.00129	0.00129
70.0	.317483710E+06	.349337830E+06	0.	.666821540E+06	0.00046	0.00175
80.0	.317483710E+06	.952451129E+06	0.	.126993484E+07	0.00086	0.00262
90.0	.317483710E+06	.118125119E+07	0.	.149873490E+07	0.00104	0.00366
100.0	.268900277E+07	.896970792E+06	0.	.358597357E+07	0.00248	0.00614
110.0	.620316201E+07	.480237801E+07	0.	.110055400E+08	0.00760	0.01374
120.0	.122306301E+08	.416467670E+07	0.	.163953068E+08	0.01133	0.02507
130.0	.192967189E+08	.143398975E+08	0.	.336366164E+08	0.02324	0.04831
140.0	.228452650E+08	.100589490E+08	0.	.329042140E+08	0.02273	0.07104
150.0	.372734902E+08	.255037957E+08	0.	.627772858E+08	0.04337	0.11441
160.0	.307980085E+08	.243099376E+08	0.	.551079461E+08	0.03807	0.15248
170.0	.289145778E+08	.261079775E+08	0.	.550225553E+08	0.03801	0.19050
180.0	.457382115E+08	.367745074E+08	0.	.825127189E+08	0.05701	0.24751
190.0	.473982564E+08	.322975319E+08	0.	.796957883E+08	0.05506	0.30257
200.0	.423249451E+08	.351606726E+08	0.	.774856177E+08	0.05353	0.35610
210.0	.448977275E+08	.376093369E+08	0.	.825070644E+08	0.05700	0.41310
220.0	.440457179E+08	.361270266E+08	0.	.801727445E+08	0.05539	0.46849
230.0	.386885503E+08	.337338646E+08	0.	.724224149E+08	0.05004	0.51853
240.0	.332365752E+08	.344583607E+08	0.	.676949359E+08	0.04677	0.56530
250.0	.448230459E+08	.258924496E+08	0.	.707154955E+08	0.04886	0.61415
260.0	.449830593E+08	.266972278E+08	0.	.716802871E+08	0.04952	0.66368
270.0	.501411770E+08	.190347378E+08	0.	.691759148E+08	0.04779	0.71147
280.0	.409626111E+08	.173221101E+08	0.	.582847211E+08	0.04027	0.75174
290.0	.262838357E+08	.229356250E+08	0.	.492194607E+08	0.03400	0.78574
300.0	.185426359E+08	.215853475E+08	0.	.401279833E+08	0.02772	0.81347
310.0	.117261549E+08	.227255512E+08	0.	.344517061E+08	0.02380	0.83727
320.0	.480533033E+07	.252587784E+08	0.	.300641087E+08	0.02077	0.85804
330.0	.334996982E+07	.335816867E+08	0.	.369316565E+08	0.02552	0.88355
340.0	.427827084E+07	.272058622E+08	0.	.314841331E+08	0.02175	0.90531
350.0	.915939361E+06	.228415231E+08	0.	.237574624E+08	0.01641	0.92172
360.0	.691034894E+05	.248533638E+08	0.	.249224673E+08	0.01722	0.93894
370.0	.139419471E+06	.237039781E+08	0.	.238433975E+08	0.01647	0.95541
380.0	.474651024E+05	.166052738E+08	0.	.166527389E+08	0.01151	0.96692
390.0	.182859894E+06	.162492134E+08	0.	.164320732E+08	0.01135	0.97827
400.0	0.	.711900566E+07	0.	.711900566E+07	0.00492	0.98319
410.0	.474651024E+05	.798868555E+07	0.	.803615065E+07	0.00555	0.98874
420.0	0.	.435257526E+07	0.	.435257526E+07	0.00301	0.99175
430.0	0.	.300096575E+07	0.	.300096575E+07	0.00207	0.99382
440.0	.138445950E+06	.462469960E+07	0.	.476314555E+07	0.00329	0.99711
450.0	0.	.121512555E+07	0.	.121512555E+07	0.00084	0.99795
460.0	0.	.140706445E+07	0.	.140706445E+07	0.00097	0.99892
470.0	0.	.798333322E+06	0.	.798333322E+06	0.00055	0.99947
480.0	0.	.484393853E+06	0.	.484393853E+06	0.00033	0.99981
TOTAL	.708970079E+09	.738173842E+09	0.	.144714392E+10		

Table D-4 .--Population estimates by sex and size group for Greenland turbot.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
100.0	.905584890E+05	0.	0.	.905584890E+05	0.00010	0.00010
110.0	.661158649E+06	.586669339E+06	0.	.124782799E+07	0.00139	0.00149
120.0	.171918000E+07	.976353535E+06	.360708916E+06	.305624245E+07	0.00340	0.00488
130.0	.215621085E+07	.297099563E+07	.180354458E+06	.530756094E+07	0.00590	0.01078
140.0	.429367828E+07	.298968456E+07	.721417831E+06	.800478067E+07	0.00890	0.01968
150.0	.979844868E+07	.238956084E+07	.180354458E+06	.123683640E+08	0.01375	0.03343
160.0	.637885273E+07	.390717399E+07	.360708916E+06	.106467356E+08	0.01183	0.04526
170.0	.135867834E+08	.671555953E+07	.360708916E+06	.206630519E+08	0.02297	0.06823
180.0	.100157755E+08	.110409639E+08	.144283566E+07	.224995751E+08	0.02501	0.09324
190.0	.238549313E+08	.174512662E+08	.162319012E+07	.429293876E+08	0.04772	0.14095
200.0	.224026403E+08	.215368013E+08	.180354458E+07	.457429862E+08	0.05084	0.19179
210.0	.247879614E+08	.193444152E+08	.162319012E+07	.457555668E+08	0.05086	0.24265
220.0	.284710438E+08	.246111153E+08	.901772289E+06	.539839314E+08	0.06000	0.30265
230.0	.166365783E+08	.208030620E+08	.541063374E+06	.379807037E+08	0.04221	0.34487
240.0	.166522649E+08	.122469505E+08	.541063374E+06	.294402788E+08	0.03272	0.37759
250.0	.175034656E+08	.153958183E+08	.541063374E+06	.334403473E+08	0.03717	0.41476
260.0	.157408803E+08	.111520174E+08	.541063374E+06	.274339610E+08	0.03049	0.44525
270.0	.218671881E+08	.157451411E+08	.721417831E+06	.383337470E+08	0.04261	0.48786
280.0	.189511721E+08	.162009807E+08	.541063374E+06	.356932161E+08	0.03967	0.52753
290.0	.187589537E+08	.155643472E+08	0.	.343233009E+08	0.03815	0.56568
300.0	.209886277E+08	.210292705E+08	.108212675E+07	.431000249E+08	0.04791	0.61359
310.0	.222657679E+08	.181981566E+08	.180354458E+06	.406442790E+08	0.04518	0.65876
320.0	.229784252E+08	.211450312E+08	.901772289E+06	.450252287E+08	0.05004	0.70881
330.0	.215819592E+08	.184963637E+08	.541063374E+06	.406193863E+08	0.04515	0.75395
340.0	.165261517E+08	.187632367E+08	.901772289E+06	.361911607E+08	0.04023	0.79418
350.0	.228088224E+08	.205741618E+06	.901772289E+06	.442847565E+08	0.04922	0.84340
360.0	.171109049E+08	.163972862E+08	.541063374E+06	.360492544E+08	0.04007	0.88347
370.0	.140528609E+08	.131917678E+08	.360708916E+06	.276053376E+08	0.03068	0.91415
380.0	.847668341E+07	.134088332E+08	.180354458E+06	.220658711E+08	0.02453	0.93868
390.0	.652017819E+07	.896249495E+07	0.	.154826731E+08	0.01721	0.95589
400.0	.373065509E+07	.651089136E+07	0.	.102415464E+08	0.01138	0.96727
410.0	.212363013E+07	.431474119E+07	0.	.643837132E+07	0.00716	0.97443
420.0	.124017336E+07	.348326074E+07	0.	.472343410E+07	0.00525	0.97968
430.0	.189625351E+07	.220533469E+07	0.	.410158820E+07	0.00456	0.98424
440.0	.167239470E+07	.197066577E+07	0.	.364306047E+07	0.00405	0.98829
450.0	.403264337E+06	.153651959E+07	0.	.193978393E+07	0.00216	0.99044
460.0	.388057197E+06	.642846443E+06	0.	.103090364E+07	0.00115	0.99159
470.0	.148932683E+06	.109172401E+07	0.	.124065669E+07	0.00138	0.99297
480.0	0.	.115006406E+07	0.	.115006406E+07	0.00128	0.99424
490.0	.800162110E+05	.772100018E+06	0.	.852116229E+06	0.00095	0.99519
500.0	0.	.775465749E+05	0.	.775465749E+05	0.00009	0.99528
510.0	0.	.670096577E+06	0.	.670096577E+06	0.00074	0.99602
520.0	0.	.688697252E+06	0.	.688697252E+06	0.00077	0.99679

Table D-4.--Population estimates by sex and size group for Greenaland turbot (cont'd).

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
530.0	0.	.790097178E+05	0.	.790097178E+05	0.00009	0.99688
540.0	0.	.234084692E+06	0.	.234084692E+06	0.00026	0.99714
550.0	0.	.917348759E+05	0.	.917348759E+05	0.00010	0.99724
710.0	0.	.775465749E+05	0.	.775465749E+05	0.00009	0.99732
740.0	0.	.514538443E+06	0.	.514538443E+06	0.00057	0.99790
820.0	0.	.417818813E+05	0.	.417818813E+05	0.00005	0.99794
890.0	0.	.514538443E+06	0.	.514538443E+06	0.00057	0.99851
TOTAL	.459321465E+09	.420463202E+09	.185765092E+08	.898361196E+09		

Table D-5.--Population estimates by sex and size group for Alaska plaice.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
130.0	.162582108E+06	0.	0.	.162582108E+06	0.00021	0.00021
140.0	.812910538E+05	0.	0.	.812910538E+05	0.00011	0.00032
150.0	0.	.812910538E+05	0.	.812910538E+05	0.00011	0.00043
160.0	.162582108E+06	.187534321E+06	0.	.350116429E+06	0.00046	0.00088
170.0	.673719236E+06	.320270096E+06	0.	.993989332E+06	0.00130	0.00219
180.0	.876944215E+06	.482852204E+06	0.	.135979642E+07	0.00178	0.00397
190.0	.161190450E+07	.658743240E+06	0.	.227064774E+07	0.00297	0.00694
200.0	.206060709E+07	.754946310E+06	0.	.281555340E+07	0.00369	0.01063
210.0	.193685640E+07	.119010149E+07	0.	.312695789E+07	0.00409	0.01472
220.0	.249265048E+07	.142672799E+07	0.	.391937847E+07	0.00513	0.01985
230.0	.457156828E+07	.285059367E+07	0.	.742216196E+07	0.00972	0.02957
240.0	.862516170E+07	.510643076E+07	0.	.137315925E+08	0.01798	0.04755
250.0	.151475978E+08	.824757642E+07	0.	.233951742E+08	0.03063	0.07819
260.0	.227747854E+08	.822377375E+07	0.	.309985591E+08	0.04059	0.11878
270.0	.298288080E+08	.102127368E+08	0.	.400415449E+08	0.05243	0.17121
280.0	.340304172E+08	.138221196E+08	0.	.478525369E+08	0.06266	0.23387
290.0	.560607221E+08	.143129451E+08	0.	.703736671E+08	0.09215	0.32602
300.0	.568512713E+08	.158350747E+08	0.	.726863460E+08	0.09518	0.42119
310.0	.688951846E+08	.108330617E+08	0.	.797282463E+08	0.10440	0.52559
320.0	.574934503E+08	.102029816E+08	0.	.676964319E+08	0.08864	0.61423
330.0	.452959769E+08	.121920190E+08	0.	.574879959E+08	0.07528	0.68951
340.0	.259853686E+08	.171740070E+08	0.	.431593757E+08	0.05651	0.74602
350.0	.946647213E+07	.166860766E+08	0.	.261525487E+08	0.03424	0.78027
360.0	.770642016E+07	.213676574E+08	0.	.290740776E+08	0.03807	0.81834
370.0	.326489845E+07	.193241992E+08	0.	.225890977E+08	0.02958	0.84792
380.0	.888691786E+06	.232757369E+08	0.	.241644287E+08	0.03164	0.87956
390.0	.831843836E+06	.237362982E+08	0.	.245681421E+08	0.03217	0.91173
400.0	.158274997E+06	.169378126E+08	0.	.170960876E+08	0.02239	0.93411
410.0	0.	.142154326E+08	0.	.142154326E+08	0.01861	0.95273
420.0	.342656492E+06	.111643238E+08	0.	.115069803E+08	0.01507	0.96779
430.0	0.	.494452707E+07	0.	.494452707E+07	0.00647	0.97427
440.0	0.	.329302369E+07	0.	.329302369E+07	0.00431	0.97858
450.0	0.	.166402398E+07	0.	.166402398E+07	0.00218	0.98076
460.0	0.	.114334736E+07	0.	.114334736E+07	0.00150	0.98226
470.0	0.	.287746514E+06	0.	.287746514E+06	0.00038	0.98263
480.0	0.	.338959022E+06	0.	.338959022E+06	0.00044	0.98308
490.0	0.	.177528322E+06	0.	.177528322E+06	0.00023	0.98331
500.0	0.	.646388953E+06	0.	.646388953E+06	0.00085	0.98416
TOTAL	.458278707E+09	.293318869E+09	0.	.751597576E+09		

Table D-6.--Population estimates by sex and size group for flathead sole.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
60.0	0.	0.	.393171214E+05	.393171214E+05	0.00005	0.00005
70.0	0.	0.	.237678462E+06	.237678462E+06	0.00031	0.00037
80.0	0.	0.	.204004293E+07	.204004293E+07	0.00270	0.00306
90.0	.408454034E+06	0.	.120149186E+07	.160994589E+07	0.00213	0.00519
100.0	.204916187E+06	.920691725E+05	.495185614E+06	.792190973E+06	0.00105	0.00624
110.0	.674861116E+06	.496294403E+06	.441862106E+06	.161301763E+07	0.00213	0.00837
120.0	.154572193E+07	.153024126E+07	.675230159E+06	.375119334E+07	0.00496	0.01333
130.0	.340229161E+07	.267559624E+07	.784842441E+06	.686273030E+07	0.00907	0.02240
140.0	.343038802E+07	.249184397E+07	.496553460E+06	.641878545E+07	0.00848	0.03088
150.0	.465546723E+07	.363608449E+07	0.	.829155172E+07	0.01096	0.04184
160.0	.623746258E+07	.558141138E+07	.491105659E+05	.118680045E+08	0.01569	0.05753
170.0	.967262698E+07	.114070243E+08	0.	.210796513E+08	0.02786	0.08540
180.0	.141184590E+08	.168851154E+08	0.	.310035744E+08	0.04098	0.12638
190.0	.171663451E+08	.180708400E+08	0.	.352371851E+08	0.04658	0.17296
200.0	.150839099E+08	.160157146E+08	0.	.310996244E+08	0.04111	0.21406
210.0	.157655552E+08	.139798078E+08	0.	.297453630E+08	0.03932	0.25338
220.0	.213050491E+08	.144091572E+08	0.	.357142063E+08	0.04721	0.30059
230.0	.188638081E+08	.208369168E+08	0.	.397007249E+08	0.05248	0.35307
240.0	.211737340E+08	.256298253E+08	0.	.468035593E+08	0.06187	0.41494
250.0	.265274752E+08	.315728980E+08	0.	.581003731E+08	0.07680	0.49174
260.0	.198223494E+08	.290845240E+08	0.	.489068734E+08	0.06465	0.55638
270.0	.186449005E+08	.330471671E+08	0.	.516920676E+08	0.06833	0.62471
280.0	.167400823E+08	.361744665E+08	0.	.529145488E+08	0.06994	0.69466
290.0	.107936911E+08	.304397651E+08	0.	.412334562E+08	0.05450	0.74916
300.0	.113364567E+08	.290388686E+08	0.	.404253253E+08	0.05344	0.80260
310.0	.130905255E+08	.254757155E+08	0.	.385662411E+08	0.05098	0.85357
320.0	.123458940E+08	.169006493E+08	0.	.292465434E+08	0.03866	0.89223
330.0	.912855671E+07	.142354804E+08	0.	.233640371E+08	0.03088	0.92312
340.0	.441886010E+07	.825919213E+07	0.	.126780722E+08	0.01676	0.93988
350.0	.313050111E+07	.841478800E+07	0.	.115452891E+08	0.01526	0.95514
360.0	.145664158E+07	.746452217E+07	0.	.892116375E+07	0.01179	0.96693
370.0	.556025597E+06	.591537038E+07	0.	.647139598E+07	0.00855	0.97548
380.0	.415140649E+06	.462989366E+07	0.	.504503431E+07	0.00667	0.98215
390.0	.839642434E+05	.478479218E+07	0.	.486875642E+07	0.00644	0.98859
400.0	0.	.281816760E+07	0.	.281816760E+07	0.00373	0.99231
410.0	.997731804E+05	.213160309E+07	0.	.223137627E+07	0.00295	0.99526
420.0	.715335536E+05	.942404201E+06	0.	.101393775E+07	0.00134	0.99660
430.0	0.	.712493621E+06	0.	.712493621E+06	0.00094	0.99754
440.0	0.	.327550062E+06	0.	.327550062E+06	0.00043	0.99798
450.0	0.	.993083107E+06	0.	.993083107E+06	0.00131	0.99929
460.0	0.	.381805031E+06	0.	.381805031E+06	0.00050	0.99979
500.0	0.	.155349154E+06	0.	.155349154E+06	0.00021	1.00000
TOTAL	.302421462E+09	.447638511E+09	.646131473E+07	.756521287E+09		

Table D-7.--Population estimates by sex and size group for Pacific cod.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
110.0	.435267488E+05	0.	0.	.435267488E+05	0.00004	0.00004
120.0	.156784461E+06	0.	0.	.156784461E+06	0.00014	0.00018
130.0	.462917051E+05	.145325821E+06	0.	.191617527E+06	0.00017	0.00036
140.0	.346517453E+06	0.	0.	.346517453E+06	0.00031	0.00067
150.0	.571068427E+06	.399629049E+06	0.	.970697475E+06	0.00088	0.00155
160.0	.132630017E+07	.890437426E+06	0.	.221673760E+07	0.00201	0.00357
170.0	.379990052E+07	.177790868E+07	0.	.557780921E+07	0.00507	0.00863
180.0	.337893979E+07	.438144128E+07	0.	.776038107E+07	0.00705	0.01568
190.0	.503649985E+07	.393616772E+07	0.	.897266757E+07	0.00815	0.02383
200.0	.490678760E+07	.336924962E+07	0.	.827603721E+07	0.00752	0.03135
210.0	.406542542E+07	.194485123E+07	0.	.601027666E+07	0.00546	0.03681
220.0	.107536114E+07	.101349843E+07	0.	.208885957E+07	0.00190	0.03871
230.0	.457688518E+06	.187591753E+06	0.	.645280271E+06	0.00059	0.03930
240.0	.542408853E+06	.512734717E+06	0.	.105514357E+07	0.00096	0.04025
250.0	.566492262E+06	.625310893E+06	0.	.119180315E+07	0.00108	0.04134
260.0	.681738987E+06	.142838044E+07	0.	.211011943E+07	0.00192	0.04325
270.0	.322065709E+07	.183295829E+07	0.	.505361538E+07	0.00459	0.04784
280.0	.373452408E+07	.365562024E+07	0.	.739014433E+07	0.00671	0.05456
290.0	.604066997E+07	.559376319E+07	0.	.116344332E+08	0.01057	0.06513
300.0	.884703882E+07	.790488748E+07	0.	.167519263E+08	0.01522	0.08034
310.0	.175204543E+08	.103460735E+08	0.	.278665278E+08	0.02531	0.10566
320.0	.187930537E+08	.133620633E+08	0.	.321551170E+08	0.02921	0.13487
330.0	.157158785E+08	.159778419E+08	0.	.316937205E+08	0.02879	0.16366
340.0	.184603114E+08	.164022342E+08	0.	.348625456E+08	0.03167	0.19533
350.0	.193777055E+08	.187915385E+08	0.	.381692440E+08	0.03467	0.23000
360.0	.211538487E+08	.168245051E+08	0.	.395783538E+08	0.03632	0.26632
370.0	.270035178E+08	.245990133E+08	0.	.516025312E+08	0.04688	0.31320
380.0	.247333430E+08	.284833534E+08	0.	.532166963E+08	0.04834	0.36154
390.0	.265384166E+08	.258719001E+08	0.	.524103188E+08	0.04761	0.40915
400.0	.269498627E+08	.273117834E+08	0.	.542616461E+08	0.04929	0.45844
410.0	.334901299E+08	.309838260E+08	0.	.644739559E+08	0.05857	0.51701
420.0	.305972046E+08	.288955281E+08	0.	.594927327E+08	0.05404	0.57105
430.0	.272905731E+08	.303882949E+08	0.	.576788680E+08	0.05240	0.62345
440.0	.248587720E+08	.295345826E+08	0.	.543933546E+08	0.04941	0.67286
450.0	.258311902E+08	.301979047E+08	0.	.560290949E+08	0.05090	0.72376
460.0	.220480100E+08	.212688615E+08	0.	.433168715E+08	0.03935	0.76311
470.0	.181281580E+08	.189297610E+08	0.	.370579190E+08	0.03366	0.79677
480.0	.177408740E+08	.195601350E+08	0.	.373010090E+08	0.03388	0.83066
490.0	.153833529E+08	.153317107E+08	0.	.307150636E+08	0.02790	0.85856
500.0	.134743186E+08	.160019035E+08	0.	.294762221E+08	0.02678	0.88533
510.0	.800144322E+07	.121364741E+08	0.	.201379173E+08	0.01829	0.90363
520.0	.895325147E+07	.109746490E+08	0.	.199279005E+08	0.01810	0.92173
530.0	.637580686E+07	.897215787E+07	0.	.153479647E+08	0.01394	0.93567

Table D-7.--Population estimates by sex and size group for Pacific cod (cont'd).

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
540.0	.504663565E+07	.732124768E+07	0.	.123678835E+08	0.01124	0.94691
550.0	.518752642E+07	.612574279E+07	0.	.113132692E+08	0.01028	0.95719
560.0	.286998684E+07	.483071592E+07	0.	.770070276E+07	0.00700	0.96418
570.0	.265566099E+07	.375996796E+07	0.	.641582896E+07	0.00583	0.97001
580.0	.239470156E+07	.413506594E+07	0.	.652976750E+07	0.00593	0.97594
590.0	.132649641E+07	.361920670E+07	0.	.494570312E+07	0.00449	0.98043
600.0	.117496244E+07	.143841127E+07	0.	.261337371E+07	0.00237	0.98281
610.0	.933883672E+06	.181685988E+07	0.	.275074355E+07	0.00250	0.98531
620.0	.143193130E+07	.131860655E+07	0.	.275053784E+07	0.00250	0.98781
630.0	.566983037E+06	.113344260E+07	0.	.170042564E+07	0.00154	0.98935
640.0	.627782742E+06	.819168161E+06	0.	.144695090E+07	0.00131	0.99066
650.0	.488263726E+06	.626824215E+06	0.	.111508794E+07	0.00101	0.99168
660.0	.153334332E+06	.239492735E+06	0.	.392827066E+06	0.00036	0.99203
670.0	.207299159E+06	.644581983E+06	0.	.851881143E+06	0.00077	0.99281
680.0	.265456816E+06	.210713822E+06	0.	.476172638E+06	0.00043	0.99324
690.0	.132312769E+06	.622027435E+06	0.	.754340204E+06	0.00069	0.99393
700.0	.274103759E+06	.390343121E+06	0.	.664446879E+06	0.00060	0.99453
710.0	.351818257E+06	.575399041E+06	0.	.927217298E+06	0.00084	0.99537
720.0	.294468405E+06	.317753501E+06	0.	.612221905E+06	0.00056	0.99593
730.0	.327597112E+06	.245199995E+06	0.	.572797107E+06	0.00052	0.99645
740.0	.863313903E+05	.800814714E+06	0.	.887146104E+06	0.00081	0.99725
750.0	.254090516E+06	.347375222E+06	0.	.601465738E+06	0.00055	0.99780
760.0	.226338779E+06	.355297477E+06	0.	.581636256E+06	0.00053	0.99833
770.0	.616117172E+05	.384527419E+06	0.	.446139136E+06	0.00041	0.99873
780.0	.715294052E+05	.138119147E+06	0.	.209648552E+06	0.00019	0.99892
790.0	0.	.190638397E+06	0.	.190638397E+06	0.00017	0.99910
800.0	.863313903E+05	.163451119E+06	0.	.249782510E+06	0.00023	0.99932
820.0	.703134581E+05	.152542507E+06	0.	.222855965E+06	0.00020	0.99953
830.0	.128139066E+06	.108832492E+06	0.	.236971558E+06	0.00022	0.99974
840.0	0.	.517877566E+05	0.	.517877566E+05	0.00005	0.99979
850.0	.500641792E+05	0.	0.	.500641792E+05	0.00005	0.99983
860.0	0.	.954673291E+05	0.	.954673291E+05	0.00009	0.99992
870.0	0.	.863313903E+05	0.	.863313903E+05	0.00008	1.00000
TOTAL	.545010258E+09	.555811808E+09	0.	.110082207E+10		

Table D-8.--Population estimates by sex and size group for Pacific halibut.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
110.0	0.	0.	.889779866E+05	.889779866E+05	0.00206	0.00206
120.0	0.	0.	.372733048E+05	.372733048E+05	0.00086	0.00292
170.0	0.	0.	.532394649E+05	.532394649E+05	0.00123	0.00416
180.0	0.	0.	.923429336E+05	.923429336E+05	0.00214	0.00630
200.0	0.	0.	.174835954E+06	.174835954E+06	0.00405	0.01035
210.0	0.	0.	.112368529E+06	.112368529E+06	0.00260	0.01295
220.0	0.	0.	.137167311E+06	.137167311E+06	0.00318	0.01612
230.0	0.	0.	.187822499E+06	.187822499E+06	0.00435	0.02047
240.0	0.	0.	.118167533E+06	.118167533E+06	0.00274	0.02321
250.0	0.	0.	.484939638E+06	.484939638E+06	0.01123	0.03444
260.0	0.	0.	.109575492E+07	.109575492E+07	0.02538	0.05982
270.0	0.	0.	.201690511E+07	.201690511E+07	0.04671	0.10653
280.0	0.	0.	.197645147E+07	.197645147E+07	0.04578	0.15231
290.0	0.	0.	.197182286E+07	.197182286E+07	0.04567	0.19798
300.0	0.	0.	.268460819E+07	.268460819E+07	0.06218	0.26016
310.0	0.	0.	.196380836E+07	.196380836E+07	0.04548	0.30564
320.0	0.	0.	.213806123E+07	.213806123E+07	0.04952	0.35516
330.0	0.	0.	.234619518E+07	.234619518E+07	0.05434	0.40950
340.0	0.	0.	.260122278E+07	.260122276E+07	0.06025	0.46974
350.0	0.	0.	.358693131E+07	.358693131E+07	0.08308	0.55282
360.0	0.	0.	.263025962E+07	.263025962E+07	0.06092	0.61374
370.0	0.	0.	.153669406E+07	.153669406E+07	0.03559	0.64933
380.0	0.	0.	.169629255E+07	.169629255E+07	0.03929	0.68861
390.0	0.	0.	.100104749E+07	.100104749E+07	0.02318	0.71180
400.0	0.	0.	.671197273E+06	.671197273E+06	0.01555	0.72734
410.0	0.	0.	.533432472E+06	.533432472E+06	0.01235	0.73970
420.0	0.	0.	.380069535E+06	.380069535E+06	0.00880	0.74850
430.0	0.	0.	.247565917E+06	.247565917E+06	0.00573	0.75423
440.0	0.	0.	.407408386E+06	.407408386E+06	0.00944	0.76367
450.0	0.	0.	.230658367E+06	.230658367E+06	0.00534	0.76901
460.0	0.	0.	.856802976E+06	.856802976E+06	0.01984	0.78886
470.0	0.	0.	.248943659E+06	.248943659E+06	0.00577	0.79462
480.0	0.	0.	.798707687E+06	.798707687E+06	0.01850	0.81312
490.0	0.	0.	.413681088E+06	.413681088E+06	0.00958	0.82270
500.0	0.	0.	.807297570E+05	.807297570E+05	0.00187	0.82457
510.0	0.	0.	.672432572E+06	.672432572E+06	0.01557	0.84015
520.0	0.	0.	.371077985E+06	.371077985E+06	0.00859	0.84874
530.0	0.	0.	.246316244E+06	.246316244E+06	0.00570	0.85444
540.0	0.	0.	.798983960E+06	.798983960E+06	0.01850	0.87295
550.0	0.	0.	.336359238E+06	.336359238E+06	0.00779	0.88074
560.0	0.	0.	.810704928E+06	.810704928E+06	0.01878	0.89952
570.0	0.	0.	.177762882E+06	.177762882E+06	0.00412	0.90363
580.0	0.	0.	.338627713E+06	.338627713E+06	0.00784	0.91148

Table D-8.-Population estimates by sex and size group for Pacific halibut (cont'd).

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
590.0	0.	0.	.218888561E+06	.218888561E+06	0.00507	0.91655
600.0	0.	0.	.399643438E+06	.399643438E+06	0.00926	0.92580
610.0	0.	0.	.125506633E+06	.125506633E+06	0.00291	0.92871
620.0	0.	0.	.165661976E+06	.165661976E+06	0.00384	0.93255
630.0	0.	0.	.112434810E+06	.112434810E+06	0.00260	0.93515
640.0	0.	0.	.166983449E+06	.166983449E+06	0.00387	0.93902
650.0	0.	0.	.265764897E+06	.265764397E+06	0.00616	0.94517
660.0	0.	0.	.215590598E+06	.215590598E+06	0.00499	0.95017
670.0	0.	0.	.665176718E+05	.665176718E+05	0.00154	0.95171
680.0	0.	0.	.804888805E+05	.804888805E+05	0.00186	0.95357
690.0	C.	0.	.185716614E+06	.185716614E+06	0.00430	0.95787
700.0	0.	0.	.414166635E+05	.414166635E+05	0.00096	0.95883
710.0	0.	0.	.201541411E+06	.201541411E+06	0.00467	0.96350
720.0	0.	0.	.922932696E+05	.922932696E+05	0.00214	0.96564
730.0	0.	0.	.284937257E+06	.284937257E+06	0.00660	0.97224
750.0	0.	0.	.433938105E+05	.433938105E+05	0.00101	0.97324
780.0	0.	0.	.391979137E+05	.391979137E+05	0.00091	0.97415
790.0	0.	0.	.759937161E+05	.759937161E+05	0.00176	0.97591
800.0	0.	0.	.530985709E+05	.530985709E+05	0.00123	0.97714
810.0	0.	0.	.424854807E+05	.424854807E+05	0.00098	0.97812
830.0	0.	0.	.143069650E+06	.143069650E+06	0.00331	0.98144
850.0	0.	0.	.721993883E+05	.721993883E+05	0.00167	0.98311
870.0	0.	0.	.762284342E+05	.762284342E+05	0.00177	0.98487
890.0	0.	0.	.392821060E+05	.392821060E+05	0.00091	0.98578
900.0	0.	0.	.119586358E+06	.119586358E+06	0.00277	0.98855
910.0	0.	0.	.127623983E+06	.127623983E+06	0.00296	0.99151
940.0	0.	0.	.704849985E+05	.704849985E+05	0.00163	0.99314
1000.0	0.	0.	.243336109E+05	.243336109E+05	0.00056	0.99370
1010.0	0.	0.	.598659046E+05	.598659046E+05	0.00139	0.99509
1020.0	0.	0.	.439965023E+05	.439965023E+05	0.00102	0.99611
1050.0	0.	0.	.410510046E+05	.410510046E+05	0.00095	0.99706
1110.0	0.	0.	.399106031E+05	.399106031E+05	0.00092	0.99797
1330.0	0.	0.	.424854807E+05	.424854807E+05	0.00098	0.99897
1470.0	0.	0.	.445152015E+05	.445152015E+05	0.00103	1.00000
TOTAL	0.	0.	.431768418E+08	.431768418E+08		

Table D-9.--Population estimates by sex and size group for arrow-tooth flounder.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
70.0	0.	0.	.678463366E+05	.678463366E+05	0.00036	0.00036
90.0	0.	0.	.866255791E+05	.866255791E+05	0.00046	0.00082
100.0	.678463366E+05	0.	.202126351E+06	.269972688E+06	0.00144	0.00226
110.0	.316291725E+06	.161897867E+06	.519753475E+06	.997943066E+06	0.00532	0.00758
120.0	.372409032E+05	.372409032E+05	.224504828E+06	.298986634E+06	0.00159	0.00917
130.0	.705330164E+05	0.	.115500772E+06	.186033789E+06	0.00099	0.01017
140.0	.248564464E+06	.161897867E+06	.288751930E+05	.439337524E+06	0.00234	0.01251
150.0	.203225848E+06	.565089079E+05	0.	.259734756E+06	0.00138	0.01389
160.0	.256216526E+06	.360155358E+06	.801288630E+05	.696500747E+06	0.00371	0.01760
170.0	.401624857E+06	.991910967E+06	.293992823E+06	.168752865E+07	0.00899	0.02660
180.0	.837435679E+06	.120148417E+07	0.	.203891985E+07	0.01087	0.03747
190.0	.125071698E+07	.113973081E+07	0.	.239044778E+07	0.01274	0.05021
200.0	.660456557E+06	.122334400E+07	.147975200E+06	.203177576E+07	0.01083	0.06104
210.0	.103410072E+07	.125402590E+07	.801286630E+05	.236825546E+07	0.01262	0.07366
220.0	.130857684E+07	.955965537E+06	0.	.226454238E+07	0.01207	0.08573
230.0	.972868388E+06	.775569684E+06	0.	.174843807E+07	0.00932	0.09505
240.0	.186359630E+07	.124056474E+07	.678463366E+05	.317200738E+07	0.01691	0.11195
250.0	.371065432E+07	.274207774E+07	0.	.645273206E+07	0.03439	0.14635
260.0	.614514577E+07	.367269722E+07	0.	.981784300E+07	0.05233	0.19868
270.0	.903852586E+07	.593954434E+07	0.	.149780702E+08	0.07983	0.27851
280.0	.102757132E+08	.661607066E+07	0.	.168917838E+08	0.09003	0.36854
290.0	.761748931E+07	.716528381E+07	0.	.147827731E+08	0.07879	0.44733
300.0	.745666037E+07	.731365840E+07	0.	.147703188E+08	0.07872	0.52606
310.0	.475453105E+07	.695401539E+07	0.	.117085464E+08	0.06241	0.58846
320.0	.404862364E+07	.426255585E+07	0.	.831117950E+07	0.04430	0.63276
330.0	.300356939E+07	.376343399E+07	0.	.676700338E+07	0.03607	0.66883
340.0	.408534994E+07	.278694823E+07	0.	.687229817E+07	0.03663	0.70546
350.0	.265096830E+07	.307430889E+07	0.	.572527718E+07	0.03052	0.73597
360.0	.229581937E+07	.227784912E+07	0.	.457366849E+07	0.02438	0.76035
370.0	.124984530E+07	.355122312E+07	0.	.480106842E+07	0.02559	0.78594
380.0	.137168113E+07	.317676560E+07	0.	.455044673E+07	0.02425	0.81019
390.0	.793565724E+06	.223205840E+07	0.	.302562412E+07	0.01613	0.82632
400.0	.317362214E+06	.231268572E+07	0.	.263004794E+07	0.01402	0.84034
410.0	.455029182E+06	.124156674E+07	0.	.169659593E+07	0.00904	0.84938
420.0	.323320440E+06	.989296688E+06	0.	.131261713E+07	0.00700	0.85638
430.0	.287830370E+06	.102600738E+07	0.	.131383775E+07	0.00700	0.86338
440.0	.102142287E+06	.645696703E+06	0.	.748036990E+06	0.00399	0.86737
450.0	.250782977E+06	.755501643E+06	0.	.100628462E+07	0.00536	0.87273
460.0	.619424567E+05	.349556040E+06	0.	.411498497E+06	0.00219	0.87492
470.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.87531
480.0	.565089079E+05	.555191147E+06	0.	.611700055E+06	0.00326	0.87857
490.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.87896
500.0	.117841747E+06	.145308620E+06	0.	.263150367E+06	0.00140	0.88036

Table D-9.--Population estimates by sex and size group for arrowtooth flounder (cont'd).

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
510.0	0.	.288080533E+06	0.	.288080533E+06	0.00154	0.88190
520.0	0.	.507272660E+06	0.	.507272660E+06	0.00270	0.88460
530.0	0.	.142172463E+06	0.	.142172463E+06	0.00076	0.88536
540.0	0.	.198681371E+06	0.	.198681371E+06	0.00106	0.88642
550.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.88680
560.0	0.	.145308620E+06	0.	.145308620E+06	0.00077	0.88758
570.0	0.	.862769933E+05	0.	.862769933E+05	0.00046	0.88804
580.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.88843
600.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.88881
610.0	0.	.726543101E+05	0.	.726543101E+05	0.00039	0.88920
TOTAL	.800001984E+08	.849155167E+08	.191530462E+07	.166831020E+09		

Table D-10.--Population estimates by sex and size group for sablefish.

LENGTH(MM)	*** MALES ***	** FEMALES **	** UNSEXED **	*** TOTAL ***	PROPORTION	CUMULATIVE PROPORTION
410.0	0.	0.	.138343309E+06	.138343309E+06	0.00699	0.00699
430.0	0.	0.	.138343309E+06	.138343309E+06	0.00699	0.01398
440.0	0.	0.	.138343309E+06	.138343309E+06	0.00699	0.02097
450.0	0.	0.	.415029926E+06	.415029926E+06	0.02097	0.04195
460.0	0.	0.	.968403160E+06	.968403160E+06	0.04894	0.09089
470.0	0.	0.	.178751180E+07	.178751180E+07	0.09034	0.18122
480.0	0.	0.	.207514963E+07	.207514963E+07	0.10487	0.28610
490.0	0.	0.	.193154226E+07	.193154226E+07	0.09761	0.38371
500.0	0.	0.	.230221243E+07	.230221243E+07	0.11635	0.50006
510.0	0.	0.	.305029772E+07	.305029772E+07	0.15415	0.65421
520.0	0.	0.	.165485564E+07	.165485564E+07	0.08363	0.73784
530.0	0.	0.	.161791504E+07	.161791504E+07	0.08176	0.81961
540.0	0.	0.	.188718251E+07	.188718251E+07	0.09537	0.91498
550.0	0.	0.	.691716543E+06	.691716543E+06	0.03496	0.94993
560.0	0.	0.	.466832421E+06	.466832421E+06	0.02359	0.97353
570.0	0.	0.	.887194960E+05	.887194960E+05	0.00448	0.97801
580.0	0.	0.	.182703057E+06	.182703057E+06	0.00923	0.98724
600.0	0.	0.	.138343309E+06	.138343309E+06	0.00699	0.99424
TOTAL	0.	0.	.196734449E+08	.196734449E+08		

Appendix E

Age-length Keys for Principal Species of Fish

Appendix E presents age-length keys for principal species of fish (sexes combined) for which age data were collected during the 1980 demersal trawl survey.

List of Tables

Table E-1.--Age-length key for walleye pollock.

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
100	0.00	0.00	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0.43	0.53	7	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	1.00	0.00	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	1.00	0.00	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	1.00	0.00	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	1.00	0.00	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 151	1.00	0.00	13.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* 156	1.00	0.00	13.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	1.00	0.00	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	1.00	0.00	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	1.00	0.00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	1.00	0.00	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	1.82	0.39	17	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	1.86	0.48	21	0	4	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	1.96	0.20	26	0	1	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	2.00	0.00	38	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	2.00	0.00	38	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	2.03	0.16	37	0	0	36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	2.08	0.28	37	0	0	34	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	2.18	0.39	38	0	0	31	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280	2.25	0.44	40	0	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
290	2.22	0.42	41	0	0	32	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	2.63	0.49	38	0	0	14	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
310	2.73	0.45	40	0	0	11	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320	2.85	0.36	41	0	0	6	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
330	3.05	0.44	41	0	0	3	33	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	3.07	0.26	41	0	0	0	38	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350	3.10	0.44	40	0	0	1	35	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
360	3.17	0.38	42	0	0	0	35	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370	3.29	0.60	41	0	0	0	32	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380	3.58	0.92	38	0	0	1	22	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	3.58	0.68	40	0	0	0	21	15	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	4.05	1.05	39	0	0	0	14	15	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
410	4.15	1.08	40	0	0	0	13	13	11	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420	4.40	0.78	40	0	0	0	3	21	14	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
430	4.66	0.88	41	0	0	0	4	12	20	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
440	4.92	0.96	39	0	0	0	0	16	13	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION ARE MARKED WITH AN ASTERISK (*).

Table E-1.--Age-length key for walleye pollock (cont'd).

LEN GTH	AVG AGE	STD. DEV.	FREQ- UENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
***	*****	*****	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
450	5.10	0.63	40	0	0	0	0	6	24	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460	5.24	1.14	41	0	0	0	0	9	20	8	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
470	5.23	0.77	44	0	0	0	1	3	28	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480	5.54	1.14	41	0	0	0	0	4	21	10	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
490	6.03	0.97	38	0	0	0	0	0	14	12	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	6.03	1.70	40	0	0	0	0	2	18	12	2	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
510	6.58	1.65	38	0	0	0	0	0	12	13	1	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
520	6.75	1.33	40	0	0	0	0	0	6	15	7	9	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	6.65	1.32	37	0	0	0	0	0	6	14	10	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
540	7.15	1.18	34	0	0	0	0	0	0	13	10	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
550	7.59	1.42	37	0	0	0	0	0	1	8	8	14	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
560	7.79	1.72	39	0	0	0	0	0	3	8	4	14	2	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
570	8.45	1.57	38	0	0	0	0	0	0	3	6	13	9	5	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
580	8.81	1.62	32	0	0	0	0	0	1	1	3	9	8	7	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
590	8.20	1.57	35	0	0	0	0	0	0	6	6	8	9	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
600	9.53	1.81	36	0	0	0	0	0	0	1	3	6	10	6	6	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
610	9.73	1.56	26	0	0	0	0	0	0	1	0	5	6	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
620	8.78	1.12	27	0	0	0	0	0	0	0	1	14	5	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	9.00	1.58	25	0	0	0	0	0	0	1	2	7	8	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
640	9.15	1.41	13	0	0	0	0	0	0	1	0	3	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	9.38	1.50	26	0	0	0	0	0	0	0	3	6	3	8	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
660	11.05	1.61	19	0	0	0	0	0	0	0	1	1	1	1	7	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0
670	10.33	1.71	18	0	0	0	0	0	0	0	0	2	5	4	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0
680	9.50	1.60	8	0	0	0	0	0	0	0	0	2	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
690	11.08	1.98	12	0	0	0	0	0	0	0	0	2	0	2	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0
700	9.75	1.16	8	0	0	0	0	0	0	0	0	2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
710	10.30	1.06	10	0	0	0	0	0	0	0	0	0	3	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
720	10.78	1.48	9	0	0	0	0	0	0	0	0	1	1	1	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
730	10.50	1.00	4	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
740	11.67	1.53	3	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
750	12.67	2.08	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
760	13.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
770	10.00	0.00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 780	11.33	0.00	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6667	0.0	0.0	0.0	.3333	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
800	14.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
830	13.00	0.00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
---	-----	-----	-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	4.91	3.00	1886.0	7.0	126.0	330.0	370.0	149.0	228.0	167.0	93.0	138.0	94.0	78.67	52.0	35.0	11.0	5.333	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION
ARE MARKED WITH AN ASTERISK (*).

Table E-2. --Age-length key for yellowfin sole.

LEN GTH	AVG AGE	STD. DEV.	FREQ-UENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
80	2.00	0.00	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	2.40	0.55	5	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	3.00	0.00	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	3.19	0.51	21	0	0	0	18	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	3.46	0.56	26	0	0	0	15	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	4.04	0.73	25	0	0	0	5	15	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	4.18	0.48	28	0	0	0	0	24	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	4.36	0.64	25	0	0	0	0	16	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	4.68	0.60	31	0	0	0	0	12	17	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	5.38	0.68	29	0	0	0	0	1	18	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	5.84	0.77	32	0	0	0	0	0	12	13	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	6.40	1.38	30	0	0	0	0	1	6	11	9	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	6.60	0.88	35	0	0	0	0	0	3	13	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	7.00	1.40	39	0	0	0	0	0	4	9	19	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	7.34	1.45	35	0	0	0	0	0	2	9	11	5	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	7.70	1.58	37	0	0	0	0	0	0	10	10	6	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	9.08	1.60	38	0	0	0	0	0	0	0	8	8	6	8	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	9.75	2.03	40	0	0	0	0	0	0	0	8	4	6	7	8	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0
260	10.49	1.69	41	0	0	0	0	0	0	0	3	2	5	11	7	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0
270	10.60	1.65	40	0	0	0	0	0	0	0	2	1	6	11	9	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0
280	11.00	1.52	39	0	0	0	0	0	0	0	1	2	3	8	6	14	5	0	0	0	0	0	0	0	0	0	0	0	0	0
290	11.65	1.89	37	0	0	0	0	0	0	0	0	0	5	5	8	9	6	1	1	1	1	0	0	0	0	0	0	0	0	0
300	11.95	1.51	38	0	0	0	0	0	0	0	0	0	2	5	7	10	9	3	2	0	0	0	0	0	0	0	0	0	0	0
310	12.09	1.35	32	0	0	0	0	0	0	0	0	0	0	4	7	10	5	5	1	0	0	0	0	0	0	0	0	0	0	0
320	12.90	1.68	31	0	0	0	0	0	0	0	0	0	0	0	7	6	10	4	1	2	0	1	0	0	0	0	0	0	0	0
330	13.29	2.12	24	0	0	0	0	0	0	0	0	0	0	2	3	4	5	4	2	2	1	1	0	0	0	0	0	0	0	0
340	13.95	1.57	20	0	0	0	0	0	0	0	0	0	0	0	1	0	6	5	5	0	0	0	1	0	0	0	0	0	0	0
350	14.00	2.00	11	0	0	0	0	0	0	0	0	0	0	0	0	3	2	3	1	0	1	1	0	0	0	0	0	0	0	0
360	14.77	2.42	13	0	0	0	0	0	0	0	0	0	0	0	1	0	3	2	4	1	1	0	0	0	1	0	0	0	0	0
370	16.33	2.16	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0
380	18.33	4.93	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0
390	14.50	0.71	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
400	16.50	2.12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
410	17.50	2.12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
430	16.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
440	17.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL	8.60	3.61	836	0	0	6	54	83	76	79	95	33	47	71	72	77	64	32	21	10	6	5	3	0	1	0	0	1	0	0

Table E-3.--Age-length key for rock sole.

LEN GTH	AVG AGE	STD. DEV.	FREQ- UENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
120	2.00	0.00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 130	2.83	0.46	3.0	0.0	0.0	0.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	3.00	0.00	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	2.91	0.54	11	0	0	2	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	3.08	0.29	12	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	4.22	0.44	9	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	4.30	0.67	10	0	0	0	1	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	5.17	0.75	6	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	4.90	0.99	10	0	0	0	1	2	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	5.25	0.97	12	0	0	0	1	0	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	5.00	1.00	13	0	0	0	2	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	5.47	1.36	15	0	0	0	2	0	6	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	5.69	1.49	16	0	0	0	2	1	4	3	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	6.83	1.69	18	0	0	0	0	0	6	2	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	7.23	1.80	22	0	0	0	0	0	5	3	5	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	8.44	1.65	18	0	0	0	0	0	0	2	5	2	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280	8.59	1.62	17	0	0	0	0	0	1	0	3	4	4	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
290	9.16	1.68	19	0	0	0	0	0	0	0	5	3	0	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	10.26	1.73	19	0	0	0	0	0	0	0	1	2	2	7	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
310	10.78	1.66	18	0	0	0	0	0	0	0	0	1	3	7	2	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0
320	10.65	1.57	20	0	0	0	0	0	0	0	0	2	1	6	8	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
330	10.38	1.12	13	0	0	0	0	0	0	0	0	0	3	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	11.29	1.27	14	0	0	0	0	0	0	0	0	0	0	3	8	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
350	11.92	2.06	13	0	0	0	0	0	0	0	0	0	0	5	1	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0
360	11.36	1.03	11	0	0	0	0	0	0	0	0	0	0	3	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
370	11.90	1.66	10	0	0	0	0	0	0	0	0	0	0	3	2	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0
380	11.70	1.77	10	0	0	0	0	0	0	0	0	0	0	3	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
390	12.40	2.17	10	0	0	0	0	0	0	0	0	0	0	2	3	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0
400	12.80	1.48	5	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0
410	13.67	1.03	6	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0
420	13.50	0.71	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
430	14.33	1.15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
440	13.00	2.83	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
450	13.00	0.00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
460	15.00	1.41	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
470	15.00	1.41	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
TOTAL	8.37	3.46	379.0	0.0	0.0	3.5	35.5	18.0	49.0	26.0	31.0	22.0	21.0	62.0	42.0	22.0	16.0	16.0	9.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION ARE MARKED WITH AN ASTERISK (*).

Table E-4.--Age-length key for flathead sole.

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
110	2.00	0.00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	2.00	0.00	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	2.00	0.00	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	2.10	0.32	10	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	2.33	0.49	15	0	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	2.73	0.59	15	0	0	5	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	2.83	0.38	18	0	0	3	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	3.33	0.62	15	0	0	0	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	3.67	1.19	18	0	0	0	12	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	4.17	1.79	18	0	0	0	10	2	4	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	4.53	1.95	19	0	0	0	6	7	3	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	6.16	3.17	19	0	0	0	5	4	2	0	1	1	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	6.53	2.59	15	0	0	0	1	5	1	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	6.05	3.15	19	0	0	0	0	12	1	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	7.65	3.64	17	0	0	0	0	4	4	1	0	0	4	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0
260	5.67	1.71	21	0	0	0	0	6	7	3	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	7.05	2.84	22	0	0	0	0	1	7	6	2	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
280	8.19	2.43	16	0	0	0	0	0	0	5	3	1	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
290	8.79	2.33	14	0	0	0	0	0	0	1	4	4	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
300	8.78	2.44	18	0	0	0	0	0	0	3	3	4	3	1	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
310	9.84	2.06	19	0	0	0	0	0	0	0	2	2	7	2	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0
320	10.44	1.85	18	0	0	0	0	0	0	0	0	1	6	4	3	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0
330	11.41	1.77	17	0	0	0	0	0	0	0	0	0	3	3	3	3	2	3	0	0	0	0	0	0	0	0	0	0	0	0
340	12.53	2.42	15	0	0	0	0	0	0	0	0	0	1	1	4	4	0	2	1	1	0	1	0	0	0	0	0	0	0	0
350	12.36	2.53	14	0	0	0	0	0	0	0	0	0	1	1	5	2	2	1	0	0	1	1	0	0	0	0	0	0	0	0
360	12.00	1.33	10	0	0	0	0	0	0	0	0	0	0	2	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0
370	12.77	2.24	13	0	0	0	0	0	0	0	0	0	0	1	4	2	2	1	2	0	0	1	0	0	0	0	0	0	0	0
380	12.88	2.36	8	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	0	0	0	1	0	0	0	0	0	0	0	0
390	13.50	2.45	8	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	2	1	0	0	0	0	0	0	0	0	0
400	15.83	2.32	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	0	1	0	0	0	0	0	0	0
410	14.88	1.73	8	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	2	0	1	0	0	0	0	0	0	0	0
420	11.67	1.15	3	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
* 430	13.25	4.05	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
440	18.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
450	20.00	3.46	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0
460	16.00	1.41	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
TOTAL	7.56	4.45	452.0	0.0	0.0	43.0	75.0	48.0	31.0	21.0	17.0	22.0	43.0	19.0	34.0	31.0	23.5	13.0	10.0	7.0	4.0	8.5	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION
ARE MARKED WITH AN ASTERISK (*).

Table E-5.--Age-length key for arrowtooth flounder.

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
110	1.00	0.00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	1.00	0.00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	1.00	0.00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	1.00	0.00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	1.67	0.58	3	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	2.00	0.00	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	2.00	0.00	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	2.00	0.00	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	2.11	0.32	19	0	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	2.26	0.45	19	0	0	14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	2.47	0.51	17	0	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	2.60	0.51	15	0	0	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	2.88	0.33	17	0	0	2	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	2.92	0.28	13	0	0	1	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	3.06	0.24	17	0	0	0	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	3.05	0.23	19	0	0	0	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	3.05	0.23	19	0	0	0	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280	3.05	0.23	19	0	0	0	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
290	3.28	0.46	18	0	0	0	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	3.21	0.42	19	0	0	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
310	3.39	0.50	18	0	0	0	11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320	3.33	0.49	18	0	0	0	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
330	3.60	0.51	15	0	0	0	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	4.00	0.32	20	0	0	0	1	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350	4.28	0.57	18	0	0	0	0	14	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
360	4.53	0.52	15	0	0	0	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370	4.60	0.68	20	0	0	0	0	10	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380	4.59	0.51	17	0	0	0	0	7	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	5.00	0.47	10	0	0	0	0	1	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	5.30	0.48	10	0	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
410	5.30	0.48	10	0	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420	5.71	0.95	7	0	0	0	0	0	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
430	6.00	0.67	10	0	0	0	0	0	2	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table E-5.--Age-length key for arrowtooth flounder (cont'd).

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
440	6.25	0.50	4	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
450	7.33	1.15	3	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460	6.00	0.00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
470	8.00	0.00	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480	8.00	0.00	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
490	7.00	0.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 500	7.80	0.97	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
510	8.00	0.82	4	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
520	7.00	0.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	7.00	0.00	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
540	8.00	0.00	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 550	8.33	0.00	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6667	.3333	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* 560	8.67	0.00	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3333	.6667	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
570	9.00	0.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
580	10.00	0.00	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3.63	1.49	463.5	0.0	9.0	79.0	179.0	92.0	58.0	22.0	11.0	9.0	3.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION
ARE MARKED WITH AN ASTERISK (*).

Table E-6.--Age-length key for Greenland turbot.

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
***	*****	*****	*****	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
120	1.00	0.00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	1.00	0.00	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	1.00	0.00	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	1.00	0.00	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	1.08	0.29	12	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	1.40	0.52	10	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	1.75	0.45	12	0	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	2.00	0.00	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	2.00	0.00	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	2.00	0.00	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	2.20	0.42	10	0	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	2.00	0.00	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	2.10	0.32	10	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	2.09	0.30	11	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	2.15	0.38	13	0	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	2.33	0.49	12	0	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280	2.22	0.44	9	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
290	2.22	0.44	9	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	2.46	0.52	13	0	0	7	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
310	2.77	0.44	13	0	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320	3.00	0.00	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
330	3.14	0.36	14	0	0	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	3.15	0.38	13	0	0	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350	3.29	0.47	17	0	0	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
360	3.15	0.38	13	0	0	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370	3.27	0.46	15	0	0	0	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380	3.50	0.53	10	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	3.50	0.53	10	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	3.92	0.49	13	0	0	0	2	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
410	4.67	0.71	9	0	0	0	0	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420	4.71	0.76	7	0	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
430	4.88	0.64	8	0	0	0	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
440	4.70	0.67	10	0	0	0	0	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
450	5.00	0.53	8	0	0	0	0	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460	5.00	0.00	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
470	5.43	0.53	7	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480	5.67	0.58	3	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
490	5.80	0.84	5	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	6.25	0.50	4	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 510	6.14	0.76	3.5	0.0	0.0	0.0	0.0	0.0	0.5	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
520	6.00	1.00	3	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	6.00	0.00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
540	7.00	0.00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 550	6.50	0.00	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
560	6.00	0.00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
710	13.00	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
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TOTAL	2.99	1.49	397.5	0.0	46.0	126.0	113.0	49.0	36.5	20.5	5.5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LENGTH CLASSES WHICH HAVE BEEN GENERATED USING INTERPOLATION ARE MARKED WITH AN ASTERISK (*).

Table E-7.--Age-length key for sablefish.

LENGTH	AVG AGE	STD. DEV.	FREQUENCY	AGE (IN YEARS) 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26+
430	2.00	0.00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
440	3.00	0.00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
450	3.00	0.00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460	3.00	0.00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480	3.00	0.00	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
490	3.00	0.00	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	3.13	0.35	8	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
510	3.50	0.58	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
520	3.22	0.44	9	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	3.50	0.58	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
540	3.40	0.89	5	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
550	3.00	0.00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
560	3.67	0.58	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
570	3.67	0.58	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
580	4.00	0.00	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3.26	0.53	50	0	0	1	36	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix F

Estimated Age Composition for Principal Species of Fish

Appendix F presents estimates of the number of individuals at each age over the entire survey area.

Estimated numbers listed as "below minimum key length" and "above maximum key length" resulted from population data with lengths not covered by the age-length key.

List of Tables

Table F-1.--Population estimates by age for walleye pollock.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	337,891	0.0001	337,891	0.0001	86.76	7.37
0	38,524,100	0.0065	38,861,990	0.0065	109.32	2.51
* 1	2,044,041,933	0.3426	2,082,903,923	0.3491	146.92	17.47
2	1,231,345,430	0.2064	3,314,249,353	0.5555	261.49	28.40
3	1,380,953,789	0.2314	4,695,203,141	0.7869	346.05	37.89
4	421,200,235	0.0706	5,116,403,377	0.8575	396.99	31.95
5	371,135,510	0.0622	5,487,538,887	0.9197	443.71	43.88
6	202,656,440	0.0340	5,690,195,327	0.9537	478.25	53.47
7	84,016,130	0.0141	5,774,211,456	0.9677	507.59	51.69
8	81,481,103	0.0137	5,855,692,560	0.9814	559.70	46.60
9	44,241,664	0.0074	5,899,934,224	0.9888	578.36	48.16
* 10	35,851,238	0.0060	5,935,785,461	0.9948	581.11	62.98
11	16,055,728	0.0027	5,951,841,189	0.9975	618.36	57.95
12	11,057,164	0.0019	5,962,898,354	0.9994	613.78	66.99
13	1,790,511	0.0003	5,964,688,865	0.9997	654.07	60.93
* 14	1,480,664	0.0002	5,966,169,529	0.9999	609.29	58.08
15	482,826	0.0001	5,966,652,355	1.0000	730.34	28.16
T O T A L	5,966,652,355	1.0000	5,966,652,355	1.0000	282.75	126.18

* AGES AFFECTED BY INTERPOLATION

Table F-2.--Population estimates by age for yellowfin sole.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	650,340	0.0001	650,340	0.0001	70.00	0.00
2	23,648,164	0.0018	24,298,504	0.0019	84.03	4.91
3	182,942,235	0.0142	207,240,738	0.0161	114.31	10.37
4	664,267,945	0.0517	871,508,683	0.0678	146.44	14.81
5	1,106,082,527	0.0860	1,977,591,210	0.1538	177.28	20.33
6	1,654,343,159	0.1286	3,631,934,369	0.2824	200.94	21.03
7	2,271,795,801	0.1767	5,903,730,170	0.4591	219.01	23.63
8	874,147,371	0.0680	6,777,877,541	0.5271	235.52	18.64
9	1,136,253,566	0.0884	7,914,131,107	0.6154	247.58	24.06
10	1,521,096,956	0.1183	9,435,228,064	0.7337	255.91	25.20
11	1,237,564,185	0.0962	10,672,792,249	0.8300	266.34	24.68
12	1,152,629,539	0.0896	11,825,421,787	0.9196	275.48	22.72
13	648,086,297	0.0504	12,473,508,084	0.9700	284.74	24.57
14	236,010,097	0.0184	12,709,518,181	0.9883	289.47	31.07
15	72,985,248	0.0057	12,782,503,429	0.9940	316.49	25.54
16	36,178,007	0.0028	12,818,681,436	0.9968	315.98	28.98
17	23,037,703	0.0018	12,841,719,139	0.9986	307.46	26.66
18	11,704,841	0.0009	12,853,423,980	0.9995	335.67	20.15
19	3,248,746	0.0003	12,856,672,726	0.9996	359.34	25.90
21	901,027	0.0001	12,857,573,753	0.9998	360.00	0.00
24	1,979,991	0.0002	12,859,553,744	1.0000	380.00	0.00
TOTAL	12,859,553,744	1.0000	12,859,553,744	1.0000	231.00	46.95

Table F-3.--Population estimates by age for Pacific cod.

Age class	Number	Proportion	Cumulative number	Cumulative proportion	Mean length (mm)	Standard deviation of length
0	--	--	--	--	--	--
1	42,612,822	0.03871	42,612,822	0.03871	188.86	18.75
2	441,231,502	0.40082	483,844,324	0.43953	359.63	43.94
3	476,171,595	0.43256	960,015,919	0.87209	439.05	39.12
4	93,316,687	0.08477	1,053,332,606	0.95686	514.18	27.73
5	30,867,051	0.02804	1,084,199,657	0.98490	572.69	23.54
6	6,494,850	0.00590	1,090,694,507	0.99080	625.06	15.43
7	2,069,545	0.00188	1,092,764,052	0.99268	655.65	19.91
8	3,258,433	0.00296	1,096,022,485	0.99564	698.16	19.49
9	3,434,565	0.00312	1,099,457,051	0.99876	745.01	20.76
$\geq$10	1,365,019	0.00124	1,100,822,069	1.00000	812.01	34.88
Total	1,100,822,069	1.00000	1,100,822,069	1.00000	411.34	--

Table F-4.--Population estimates by age for rock sole.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	19,888,346	0.0137	19,888,346	0.0137	97.82	18.65
* 2	33,415,461	0.0231	53,303,807	0.0368	131.93	13.49
* 3	210,434,433	0.1454	263,738,240	0.1822	164.54	32.14
4	127,361,724	0.0880	391,099,963	0.2703	180.04	16.34
5	296,557,543	0.2049	687,657,506	0.4752	213.14	25.43
6	152,429,770	0.1053	840,087,276	0.5805	219.93	23.50
7	114,257,667	0.0790	954,344,943	0.6595	257.00	22.13
8	68,265,303	0.0472	1,022,610,245	0.7066	270.57	22.58
9	63,537,521	0.0439	1,086,147,767	0.7505	282.26	25.50
10	147,186,965	0.1017	1,233,334,731	0.8523	311.53	36.05
11	89,436,588	0.0618	1,322,771,319	0.9141	330.71	40.23
12	47,314,281	0.0327	1,370,085,601	0.9468	338.57	33.21
13	27,019,353	0.0187	1,397,104,954	0.9654	370.91	40.18
14	31,196,610	0.0216	1,428,301,564	0.9670	363.31	42.91
15	13,784,560	0.0095	1,442,086,124	0.9965	393.28	38.23
16	4,573,403	0.0032	1,446,659,528	0.9997	391.77	44.14
ABOVE MAXIMUM KEY LENGTH	484,394	0.0003	1,447,143,921	1.0000	480.00	0.00
T O T A L	1,447,143,921	1.0000	1,447,143,921	1.0000	239.55	71.85

* AGES AFFECTED BY INTERPOLATION

Table F-5.--Population estimates by age for flathead sole.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	4,719,175	0.0062	4,719,175	0.0062	86.10	8.51
2	31,000,826	0.0410	35,720,001	0.0472	141.54	16.91
3	113,036,351	0.1494	148,756,353	0.1966	188.35	18.72
4	107,585,317	0.1422	256,341,670	0.3388	230.78	23.95
5	70,922,084	0.0937	327,263,753	0.4326	243.04	26.93
6	54,243,966	0.0717	381,507,720	0.5043	270.69	23.16
7	43,682,934	0.0577	425,190,654	0.5620	277.85	29.12
8	52,806,167	0.0698	477,996,821	0.6318	274.00	29.96
9	96,096,691	0.1270	574,093,511	0.7589	275.96	36.51
10	30,683,876	0.0406	604,777,387	0.7994	299.03	43.43
* 11	35,940,709	0.0475	640,718,096	0.8469	322.63	47.25
12	45,993,912	0.0608	686,712,008	0.9077	298.24	47.54
* 13	32,707,828	0.0432	719,419,836	0.9510	305.77	44.46
14	14,148,495	0.0187	733,568,331	0.9697	328.21	33.24
15	12,098,454	0.0160	745,666,785	0.9857	307.74	47.99
16	3,559,627	0.0047	749,226,413	0.9904	383.90	25.41
17	2,093,855	0.0028	751,320,268	0.9931	392.87	32.38
* 18	4,244,948	0.0056	755,565,216	0.9987	384.65	41.10
19	469,695	0.0006	756,034,911	0.9994	400.00	0.00
24	331,028	0.0004	756,365,938	0.9998	450.00	0.00
ABOVE MAXIMUM KEY LENGTH	155,349	0.0002	756,521,287	1.0000	500.00	0.00
TOTAL	756,521,287	1.0000	756,521,287	1.0000	255.15	59.43

* AGES AFFECTED BY INTERPOLATION

Table F-6.--Population estimates by age for arrowtooth flounder.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
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BELOW MINIMUM KEY LENGTH	424,445	0.0025	424,445	0.0025	93.16	10.84
1	2,008,879	0.0120	2,433,324	0.0146	121.63	13.51
2	10,841,324	0.0650	13,274,648	0.0796	190.52	19.65
3	91,380,667	0.5477	104,655,314	0.6273	280.03	26.46
4	38,522,698	0.2309	143,178,012	0.8582	327.10	30.19
5	14,796,263	0.0887	157,974,275	0.9469	381.99	20.83
6	4,682,509	0.0281	162,656,784	0.9750	413.47	30.87
* 7	1,724,190	0.0103	164,380,974	0.9853	473.78	45.19
* 8	1,900,065	0.0114	166,281,039	0.9967	482.51	32.71
* 9	332,018	0.0020	166,613,057	0.9987	541.51	28.36
10	72,654	0.0004	166,685,711	0.9991	580.00	0.00
ABOVE MAXIMUM KEY LENGTH	145,309	0.0009	166,831,020	1.0000	605.00	5.00
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T O T A L	166,831,020	1.0000	166,831,020	1.0000	300.73	65.27

* AGES AFFECTED BY INTERPOLATION

Table F-7 .--Population estimates by age for Greenland turbot.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	1,338,386	0.0015	1,338,386	0.0015	109.32	2.51
1	56,519,181	0.0629	57,857,567	0.0644	154.18	16.66
2	434,333,115	0.4835	492,190,682	0.5479	234.88	37.61
3	313,317,734	0.3488	805,508,415	0.8966	325.69	37.49
4	71,566,337	0.0797	877,074,753	0.9763	372.58	27.19
* 5	14,302,845	0.0159	891,377,597	0.9922	435.13	25.31
* 6	4,944,410	0.0055	896,322,007	0.9977	457.56	37.01
* 7	890,784	0.0010	897,212,791	0.9987	518.48	18.75
13	77,547	0.0001	897,290,337	0.9988	710.00	0.00
ABOVE MAXIMUM KEY LENGTH	1,070,859	0.0012	898,361,196	1.0000	815.20	73.53
TOTAL	898,361,196	1.0000	898,361,196	1.0000	277.68	75.33

* AGES AFFECTED BY INTERPOLATION

Table F-8.--Population estimates by age for sablefish.

AGE CLASS	NUMBER	PROPORTION	CUMULATIVE NUMBER	CUMULATIVE PROPORTION	MEAN LENGTH	STD. DEV. OF LENGTH
BELOW MINIMUM KEY LENGTH	138,343	0.0070	138,343	0.0070	410.00	0.00
2	138,343	0.0070	276,687	0.0141	430.00	0.00
* 3	15,338,279	0.7796	15,614,965	0.7937	499.31	27.92
4	3,542,700	0.1801	19,157,665	0.9738	523.80	21.26
5	377,437	0.0192	19,535,102	0.9930	540.00	0.00
ABOVE MAXIMUM KEY LENGTH	138,343	0.0070	19,673,445	1.0000	600.00	0.00
T O T A L	19,673,445	1.0000	19,673,445	1.0000	504.09	31.10

END OF AGE/LENGTH

* AGES AFFECTED BY INTERPOLATION