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TANNER CRAB, KING CRAB, AND BOTTOMFISH TRAWL SURVEY OF NORTHERN SHELIKOF STRAIT, CHIGNIK AREA, AND PAVLOF BAY, ALASKA, JULY AND AUGUST 1983

By:
James E. Blackburn

August 1984

ALASKA DEPARTMENT OF FISH AND GAME
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Don W. Collinsworth
Commissioner

ADF&G TECHNICAL DATA REPORTS

This series of reports is designed to facilitate prompt reporting of data from studies conducted by the Alaska Department of Fish and Game, especially studies which may be of direct and immediate interest to scientists of other agencies.

The primary purpose of these reports is presentation of data. Description of programs and data collection methods is included only to the extent required for interpretation of the data. Analysis is generally limited to that necessary for clarification of data collection methods and interpretation of the basic data. No attempt is made in these reports to present analysis of the data relative to its ultimate or intended use.

Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revisions will be made via errata sheets. Major revisions will be made in the form of revised reports.

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ABSTRACT

During July and August of 1983 an otter trawl survey of groundfish and crab was conducted in three areas, northern Shelikof Strait, Chignik, and Pavlof Bay. The groundfish data collected during that survey is summarized and clearly indicated that a relatively large 1981 year class of sablefish *(Anoplopoma fimbria)* was present. There were relatively strong 1980 and 1981 year class of Pacific cod *(Gadus macrocephalus)* present, which should recruit to the fishery in the next couple years. An unusually low number of medium size to small pollock *(Theragra chalcogramma)* were found, suggesting low recruitment in the next few years. Specific studies of haul repeatability and depth effects are reported. Tables present the fishing log, catch by species, and size frequencies collected. Figures illustrate the areas fished.

KEY WORDS: Trawl survey, Shelikof Strait, king crab, Tanner crab, groundfish, Pacific cod, sablefish, pollock.

INTRODUCTION

This report presents the results of trawl surveys conducted from the chartered vessel ROYAL BARON, skippered by Mickey Serwold, 27 July through 26 August 1983 in the northern Shelikof Strait, Chignik area, and Pavlof Bay, Alaska.

Areas Sampled

Figures 1, 2, and 3 show the distribution of trawl effort in the three areas sampled. Hauls 1 through 41 were in northern Shelikof Strait, hauls 42 through 114 were in the Chignik area, (haul #69 aborted), and hauls 115 through 129 were in Pavlof Bay.

Objectives

The primary objective of the survey was to sample the Tanner crab *(Chionoecetes bairdi)* and king crab *(Paralithodes camtschatica)* populations in the areas sampled. This report addresses the secondary objective of sampling the groundfish catch. For groundfish, the objectives were: (1) to estimate the catch amounts of commercial important species; (2) to sample lengths of cod *(Gadus macrocephalus)*, sablefish *(Anoplopoma fimbria)*, pollock *(Theragra chalcogramma)*, and all flatfish (Pleuronectidae) (except arrowtooth flounder *[Atheresthes stomias]*); (3) to sample length-weight relations for all flatfish (except arrowtooth flounder); and (4) to collect age structures from cod, sablefish, pollock, all rockfish *(Sebastes* sp.*)* and flathead sole *(Hippoglossoides elassodon)*.

Studies of depth distribution and haul repeatability were also planned. In Shelikof Strait several side by side hauls at increasing depths were planned and in the Chignik area six side by side hauls at one depth were planned.

METHODS

Sampling

Total catch weight was determined by weighing the cod end before and after the catch was dumped using a crane scale accurate to the nearest 4.5 kg (10 lb). All large fish, which would be difficult to subsample and all fish of special interest, were removed from the catch. These included all halibut *(Hippoglossus stenolepis)*, skates (Rajidae), sharks (Squalidae), cod, sablefish, rockfish, salmon *(Oncorhynchus* sp.), king crab, Tanner crab, Dungeness crab *(Cancer magister)*, weathervane scallops *(Pecten caurinus)*, and occasionally other easy to identify fish (e.g., starry flounder *[Platichthys stellatus]* and Alaska plaice *[Pleuronectes quadrituberculatus]*). Halibut and big skates *(Raja binoculata)* were measured and returned to the sea; a length-weight relation was used to estimate the weight. The remaining catch was subsampled using baskets and shovels. A three basket sample, about 90 kg, was sorted. Sorting was not complete. On other surveys it has been, but because of a shortage of personnel sorting was abbreviated. Sorted from the subsamples were all pollock and flatfish, leaving all debris and miscellaneous invertebrates such as shrimp, hermit crabs (Paguridae), starfish, and jelly fish together with unimportant fish such as sculpins (Cottidae), eelpouts (Zoarcidae), smolt (Osmeridae), and sea poachers (Agonidae) in a category of miscellaneous. In Chignik Bay a few stations had

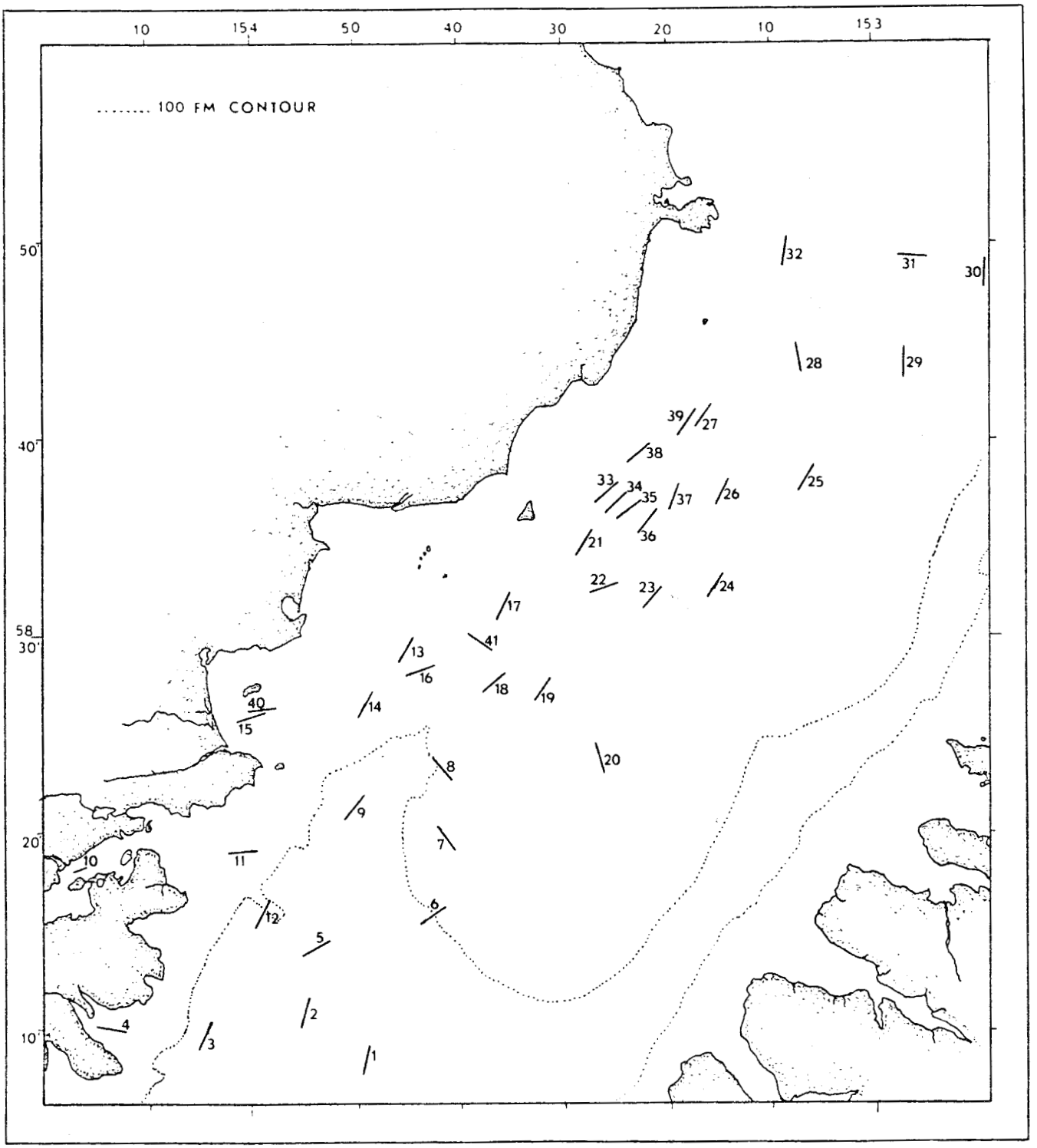

Figure 1. Haul numbers and location of trawl hauls completed in Shelikof Strait in July and August 1983.

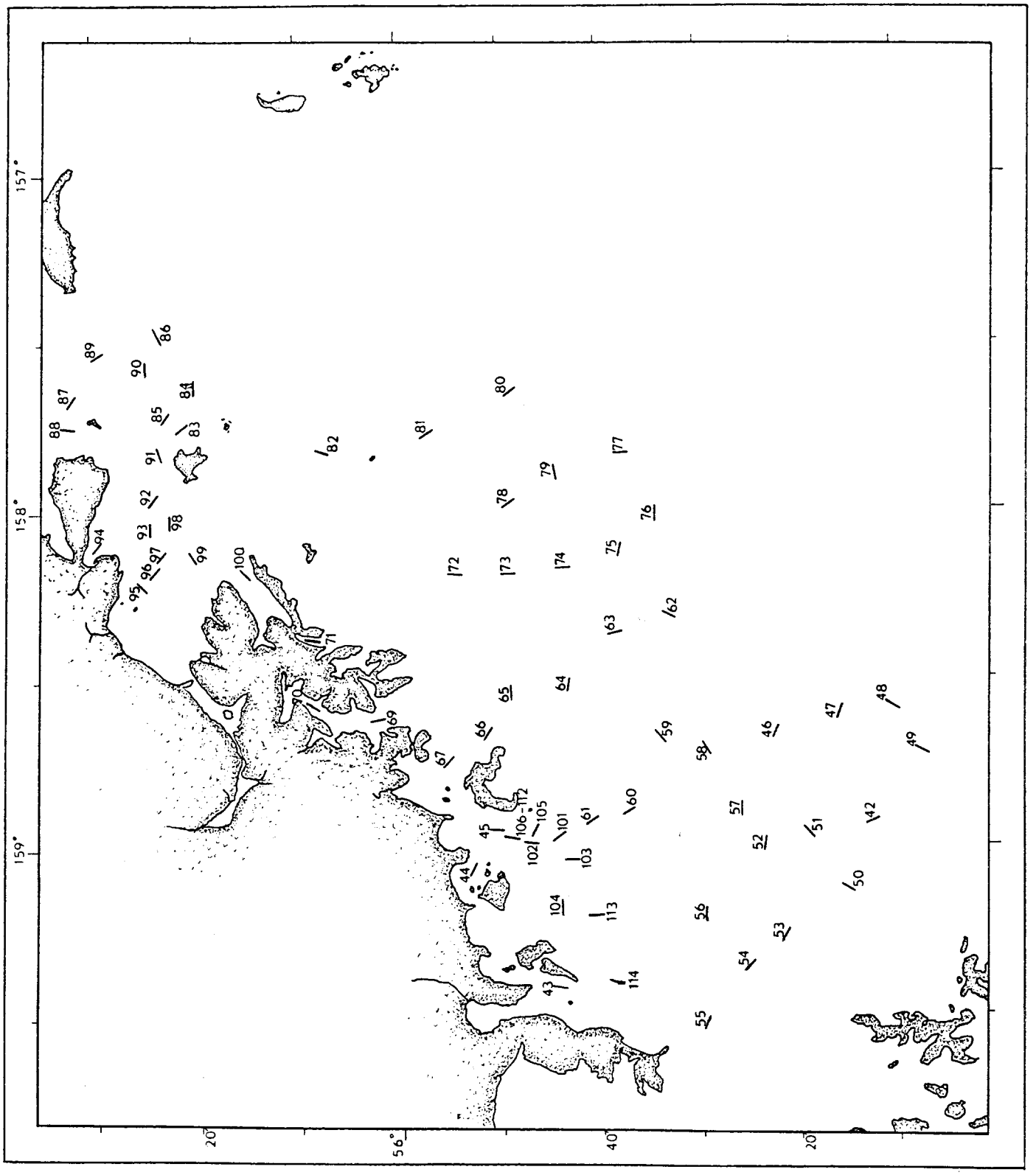

Figure 2. Haul numbers and location of trawl hauls completed in the Chignik area in August 1983.

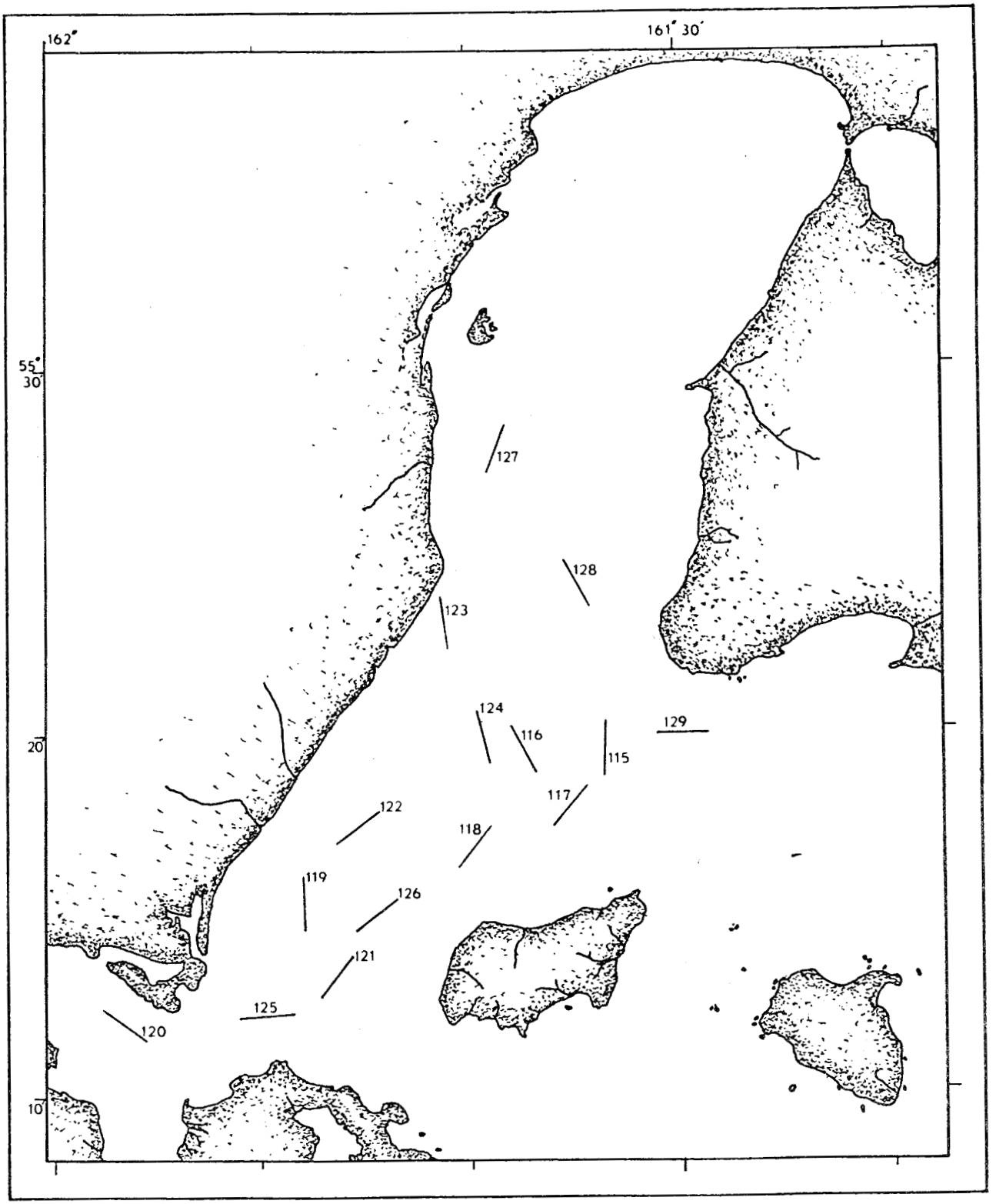

Figure 3. Haul numbers and location of trawl hauls completed in Pavlof Bay in August 1983.

relatively high catches of shrimp and shrimp were sorted from these. In Pavlof Bay, all species were sorted since this area has never been sampled previously by the ADF&G groundfish staff.

Lengths were taken from every cod caught and separate size stratified samples of otoliths were taken from the Shelikof Strait area and from the Chignik area. Every sablefish was measured with the exception of about three hauls (one of which had over 400 fish), and otoliths were taken from a small sample. Lengths were taken from every rockfish, and otoliths were collected from all but a few. The samples of pollock and flatfish (except arrowtooth) were measured from every haul and separate size stratified samples of age structures were collected from the Shelikof and Chignik samples.

Trawl Description

The F/V ROYAL BARON towed a 400 mesh eastern otter trawl net. The net had a 21 m (70 ft) long headrope with 18 floats 20 cm (8 in) in diameter. The footrope was 29 m (95 ft) long without roller gear or ticklers. The two dandylines were 46 m (25 fm) long and consisted of an 18 m (10 fm) section of 16 mm (5/8 in) cable and a pair of 27 m (15 fm) sections of 13 mm (1/2 in) cable, one attached to the top and the other to the bottom of each net wing. The doors were of Astoria "V" type weighing 340 kg (750 lb) each and measured 1.5 m x 2.1 m (5 ft x 7 ft). The net was constructed with 102 mm (4 in) mesh at the mouth, 89 mm (3-1/2 in) mesh in the body, and the cod end had a 32 mm (1-1/4 in) mesh liner. The net was designed to sweep a 12 m (40 ft) path.

RESULTS AND DISCUSSION

The haul data is presented in Table 1 and the catch of each species in Table 2. Size frequencies obtained are presented in Table 3.

Several features are readily apparent in the data. Large numbers of sablefish were caught in the size range from about 40 to 50 cm (16 to 20 in). These were clearly age two fish and indicated a large 1981 year class. Primarily in the Shelikof area but to a lesser extent in the Chignik area. These fish were caught in abundance as 1 year olds in 1982.

A comparison of Pacific cod catch at each size with previous surveys indicated that there were relatively strong 1980 and 1981 age classes present. These fish will be recruiting to the fishery for the next 2 years.

Very few medium size and small pollock were caught in the Shelikof and Chignik areas. These sizes have not been well represented in past surveys, but the observations suggested low recruitment for a couple years. In Pavlof Bay, few large pollock were caught; and very large numbers of small pollock, 16 to 22 cm (6 to 9 in) were caught.

The results of the studies of depth distribution and haul repeatability are summarized in Tables 4, 5, 6, and 7. Two sets of data were compared. Six hauls from the Shelikof area representing increasing depths were compared to six representative hauls from an area west of Mitrofania Island, all of similar depths.

The catch of pollock within both of these sets of samples was highly correlated with total catch indicating that pollock contributed much of the variation in total catch. Pollock size was not related to depth (within the areas sampled). The coefficient of variation (cv) of pollock catch, which is the standard deviation divided by the mean catch, was 0.61 and 0.68 in the two areas. Since the cv was about the same in the two areas, it suggests that depth contributed little to variability of pollock catches; and since it was somewhat less than 1, it indicates that pollock are more uniformly distributed than random. A cv of about 1 indicates random distribution, and a cv of significantly greater than 1 indicates a clumped distribution, that is some areas have none of the species. For every species the cv for all of Shelikof is higher than for only the small area, indicating greater variability in a larger area.

For cod, the cv was low in both samples, lower than for pollock, indicating little effect of depth on catch amount (within these areas) and relatively even distribution. The cod size tended to increase with increasing depth, however.

Both arrowtooth flounder and flathead sole catches were much more uniform in the uniform depth series than in the increasing depth series, indicating that depth is very important to these species.

Average weight of both arrowtooth flounder and sablefish significantly increased with increasing depth (Table 6).

The cv of halibut catch was smaller when numbers of fish were used than when weight caught was used. This highlights one feature of the cv as an index and a feature of halibut distribution. The distribution of halibut may be relatively more uniform than random (statistically random, not geographically random) but an occasional large fish increases variability in catch weights. If the trawl hauls were much larger, then perhaps the coefficient of variation would be smaller. The cv is related to the relative size of a sample. For a species that is evenly distributed in low abundance, occurrence among trawl hauls would appear random.

The coefficient of variation of average weight was smaller in the six hauls at uniform depth (Table 7) than in the six hauls at varied depth (Table 6) in four of the six prominent species caught in both. And, those four were the most abundant and ubiquitous of the six. Depth appears to be related to variation in average size for several species.

In summary of the study of depth distribution and haul repeatability, arrowtooth flounder, flathead sole, Pacific cod, and to a lesser extent pollock, displayed surprisingly low haul to haul variation in catch amounts. Arrowtooth founder and flathead sole showed much greater variation when depth was varied. The size was positively correlated with depth ($p < 0.05$) for sablefish ($r = 0.77$) and arrowtooth flounder ($r = 0.75$) and for cod ($r = 0.66$) the relationship was suggestive but not statistically significant. Depth appeared to be related to variation in average size for several species.

Table 1. Haul data.

Explanation of symbols:

Consecutive Haul Number is at the top.

Latitude and Longitude are in degrees, minutes and tenths of minutes.

Gear depth is in fathoms.

Temperature is degrees C at the bottom, taken after the completion of the haul.

Performance: 0 = successful
1 = unsuccessful

Catch amounts are kilograms taken in that haul.

FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	1	2	3	4	5	6	7	8	9	10	11
MONTH/DAY/YEAR	7/27/83	7/27/83	7/27/83	7/28/83	7/28/83	7/28/83	7/28/83	7/28/83	7/28/83	7/29/83	7/29/83
LATITUDE START	58 7.2	58 11.0	58 8.9	58 10.3	58 13.5	58 15.0	58 18.9	58 21.8	58 21.8	58 18.0	58 18.1
LONGITUDE START	153 47.4	153 55.0	154 4.9	154 14.6	153 55.2	153 44.4	153 40.7	153 40.9	153 49.1	154 17.3	154 3.3
GEAR DEPTH	107	110	159	47	112	100	97	95	120	52	50
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.20	0.50
TEMPERATURE	5.2	5.3	5.2	8.4	5.2	5.2	5.3	5.2	5.1	6.8	
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	100.6	58.4	6.4	241.0	49.6	101.7	113.5	195.0	180.8	41.0	349.2
PACIFIC COD	27.9	17.9	23.0	135.7	57.4	96.0	13.9	9.0	86.3	16.4	42.5
PACIFIC OCEAN PERCH	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	7.4	6.3	0.0	0.0	5.1	0.0	0.0	0.0	8.6	0.0	1.9
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
SABLEFISH	28.7	51.1	62.9	0.9	102.8	117.4	158.6	13.1	414.5	0.0	0.8
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	5.5
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
ARROWTOOTH FLOUNDER	0.0	333.8	2.2	110.0	6.6	51.6	344.6	117.5	99.2	0.0	189.7
FLATHEAD SOLE	57.7	104.8	17.3	1413.1	43.0	203.5	191.9	145.4	44.5	50.9	635.7
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
DOVER SOLE	0.0	0.0	0.0	23.4	2.6	0.0	15.4	9.5	0.0	0.0	34.0
PACIFIC HALIBUT	0.0	12.5	8.7	85.0	47.5	58.7	21.8	5.4	3.3	103.2	47.5
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6
OTHER FLATFISH	234.4	0.0	149.4	0.0	445.8	571.3	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	292.1	451.1	177.6	1631.5	545.5	885.1	573.7	277.8	147.5	154.4	960.5
SKATES	0.0	0.3	9.1	114.3	0.5	2.2	0.0	1.7	3.5	0.0	27.9
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	3.2	4.9	17.2	194.6	20.5	21.5	13.0	9.4	80.7	52.8	126.6
KING CRAB	0.0	0.0	0.0	244.8	0.0	0.0	0.0	0.0	0.0	0.0	11.1
DUNGENESS CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	1.1
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	3.2	4.9	17.2	439.8	20.5	21.5	13.0	9.4	80.7	52.8	137.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	1.1
TOTAL CATCH	460.6	590.0	296.2	2568.6	781.4	1223.9	872.7	506.0	922.2	288.9	1527.1

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FISHING LOG FOR CRUISE 83002

RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	12	13	14	15	16	17	18	19	20	21	22
MONTH/DAY/YEAR	7/29/83	7/29/83	7/29/83	7/30/83	7/30/83	7/30/83	7/30/83	7/30/83	7/30/83	7/31/83	7/31/83
LATITUDE START	58 17.2	58 28.5	58 26.4	58 24.9	58 28.4	58 32.0	58 27.2	58 26.3	58 23.6	58 34.6	58 32.2
LONGITUDE START	153 59.5	153 42.1	153 48.7	153 1.4	153 45.2	153 35.0	153 38.9	153 33.3	153 27.0	153 28.7	153 27.8
GEAR DEPTH	98	68	59	42	48	60	75	82	110	62	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
TEMPERATURE	.	6.	7.	8.8	.	.	6.2	5.5	5.8	7.6	7.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	50.7	424.8	415.5	125.1	553.5	220.6	1818.4	587.3	216.6	301.6	723.3
PACIFIC COD	46.9	45.3	16.6	51.7	72.9	12.5	48.1	51.0	10.7	69.1	42.6
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	3.2	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
SABLEFISH	0.0	0.7	0.0	0.0	2.0	2.7	9.4	3.4	37.6	81.6	56.4
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	31.9	42.6	79.3	15.9	31.8	56.8	242.9	226.7	198.7	120.9	194.1
FLATHEAD SOLE	19.8	47.7	97.8	738.4	107.8	64.2	116.4	28.3	140.1	90.9	27.0
ROCK SOLE	0.6	0.0	2.2	9.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
DOVER SOLE	10.8	0.0	3.0	0.0	0.0	1.5	0.0	23.5	2.1	0.0	4.8
PACIFIC HALIBUT	0.0	9.5	0.0	412.5	21.6	66.2	10.8	12.2	18.0	8.9	30.1
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	6.1	0.0	20.9	0.0	0.0	0.0	24.9	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	63.1	99.8	182.3	1192.5	161.2	213.6	370.1	292.7	358.9	245.6	256.0
SKATES	2.6	0.0	0.3	205.5	0.0	0.0	0.0	0.7	2.9	36.0	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	62.7	15.4	27.0	34.4	1.9	4.5	32.1	47.2	6.4	28.8	50.2
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	73.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	1.2	1.8	0.0	4.3	0.8	1.9	0.0	0.6	0.0	9.4
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	62.7	16.6	28.8	34.4	6.2	5.3	34.0	47.2	7.0	28.8	59.6
OTHER	0.0	0.0	0.0	73.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	226.0	587.2	643.5	1682.9	795.8	454.7	2280.0	982.3	637.2	762.7	1137.9

-Continued-

FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	23	24	25	26	27	28	29	30	31	32	33
MONTH/DAY/YEAR	7/31/83	7/31/83	7/31/83	7/31/83	8/ 1/83	8/ 1/83	8/ 1/83	8/ 1/83	8/ 1/83	8/ 1/83	8/ 2/83
LATITUDE START	58 31.0	58 31.2	58 37.5	58 36.8	58 39.0	58 42.2	58 42.3	58 47.2	58 49.1	58 49.0	58 36.7
LONGITUDE START	153 23.3	153 17.5	153 7.2	153 16.9	153 18.9	153 6.7	152 58.0	152 50.2	152 54.3	153 7.8	153 27.4
GEAR DEPTH	84	99	95	91	65	92	81	92	85	103	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
TEMPERATURE	6.5	6.3	6.2	6.2	7.6	6.1	6.	6.2	6.5	6.3	8.2
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	526.2	652.9	181.4	716.5	418.4	509.8	720.4	1149.6	1001.2	173.2	607.7
PACIFIC COD	149.2	96.7	70.7	220.2	36.2	40.9	58.9	153.2	165.7	21.2	25.6
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
DUSKY ROCKFISH	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	3.5	0.7	0.0	4.2	10.4	0.0	12.2	2.0	10.8	3.7	17.2
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	209.8	225.7	154.9	131.5	116.3	89.8	233.1	352.5	640.8	56.4	90.6
FLATHEAD SOLE	12.1	17.8	27.4	8.6	59.8	14.2	31.4	22.6	100.3	9.4	612.2
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	10.2	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	13.9	58.8	20.5	20.3	2.6	25.0	26.9	152.8	79.9	3.4	0.0
PACIFIC HALIBUT	8.4	27.2	7.0	20.8	0.2	0.0	44.9	22.8	83.3	60.7	30.8
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	254.4	329.5	209.8	181.2	178.9	132.4	336.3	550.7	904.3	129.9	752.9
SKATES	47.0	28.5	23.1	0.0	45.6	2.0	3.1	12.6	3.6	21.6	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	18.7	17.9	20.6	4.9	108.8	47.3	2.3	50.0	57.3	25.4	41.2
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	5.7
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	18.7	17.9	20.8	4.9	108.8	47.3	2.3	50.0	57.3	25.4	41.2
OTHER	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	5.7
TOTAL CATCH	1001.5	1126.2	505.8	1127.0	803.9	732.4	1133.2	1918.1	2148.3	375.0	1450.3

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FISHING LOG FOR CRUISE 83002

RUN DATE 11/ 9/83

PROGRAM 6F22

HAUL NO.	34	35	36	37	38	39	40	41	42	43	44
MONTH/DAY/YEAR	8/ 2/83	8/ 2/83	8/ 2/83	8/ 2/83	8/ 2/83	8/ 2/83	8/ 3/83	8/ 3/83	8/ 7/83	8/ 7/83	8/ 8/83
LATITUDE START	58 34.8	58 36.0	58 34.4	58 35.0	58 37.5	58 41.0	58 25.7	58 31.0	55 10.2	55 42.6	55 52.3
LONGITUDE START	153 29.0	153 25.4	153 26.0	153 23.1	153 24.8	153 17.0	154 0.0	153 38.5	158 55.0	159 25.9	159 2.3
GEAR DEPTH	54	59	73	78	38	38	50	74	111	56	56
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
TEMPERATURE	8.2	8.1	7.2	7.1	8.3	8.2	8.	7.	5.	7.6	7.4
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	482.6	591.7	289.9	60.4	179.5	583.7	73.4	298.8	16.1	1001.3	426.5
PACIFIC COD	54.5	52.5	39.4	47.1	33.0	49.0	45.6	219.3	33.0	63.4	57.4
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	2.6
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0
SABLEFISH	31.5	73.0	24.2	4.0	15.3	21.9	0.0	10.6	83.3	1.5	0.7
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	0.0	0.0	0.0	0.0	0.0	0.0	62.6	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.7	9.4
ARROWTOOTH FLOUNDER	219.3	235.3	204.8	82.3	118.8	124.2	1.5	115.8	256.3	137.3	140.1
FLATHEAD SOLE	145.5	109.2	79.0	23.3	141.5	158.9	1434.1	68.2	107.2	549.3	426.5
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.8	18.8
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0
DOVER SOLE	0.0	0.0	3.0	2.5	0.0	0.0	0.0	20.5	0.0	0.0	0.0
PACIFIC HALIBUT	95.2	15.3	10.4	5.3	55.2	13.9	235.3	10.7	14.8	6.9	105.6
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	99.4	8.9	0.0	2.7	24.8	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	559.4	368.7	297.2	116.1	340.3	297.0	1670.9	218.3	378.3	806.0	700.4
SKATES	126.8	127.3	25.8	47.3	55.8	177.2	489.2	0.5	37.2	42.5	12.7
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	38.4	36.9	90.4	46.5	24.1	89.7	27.9	22.0	16.1	18.3	1.1
KING CRAB	0.0	11.7	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0
DUNGENESS CRAB	6.3	0.3	0.0	0.0	34.6	9.3	1.7	0.0	0.0	0.0	1.2
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.1	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.5	0.0	0.0	0.0
TOTAL INVERTS	38.4	48.7	90.9	48.9	24.1	89.7	36.5	25.5	16.1	18.3	1.1
OTHER	6.3	0.3	0.0	0.0	34.6	9.3	1.7	0.0	0.0	0.0	1.2
TOTAL CATCH	1299.5	1262.2	767.4	323.8	682.6	1227.8	2317.4	773.1	626.6	1942.4	1202.6

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FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	45	46	47	48	49	50	51	52	53	54	55
MONTH/DAY/YEAR	8/ 9/83	8/ 9/83	8/ 9/83	8/ 9/83	8/ 9/83	8/10/83	8/10/83	8/10/83	8/10/83	8/10/83	8/10/83
LATITUDE START	55 50.3	55 23.4	55 17.0	55 12.4	55 9.0	55 14.0	55 17.0	55 21.2	55 20.8	55 24.0	55 29.0
LONGITUDE START	158 57.8	158 40.0	158 38.0	158 36.4	158 43.0	159 8.9	158 58.8	158 59.8	159 73.3	159 18.3	159 29.9
GEAR DEPTH	70	94	107	110	111	111	105	95	90	83	90
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
TEMPERATURE	6.	5.6	.	5.2	5.2	5.3	5.2	5.7	5.8	6.2	5.4
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	565.2	36.7	0.0	10.0	3.4	21.9	15.5	8.6	10.0	91.0	75.1
PACIFIC COD	101.8	12.5	6.8	7.2	13.6	37.3	17.1	60.5	36.9	336.2	2.7
PACIFIC OCEAN PERCH	0.0	0.0	1.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.5	1.0	4.2	17.6	6.4	0.0	0.0	0.4	2.8	0.7	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.0
SABLEFISH	0.0	124.4	45.9	73.6	144.2	40.4	34.7	68.4	32.2	7.2	0.9
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	80.4	86.7	309.1	122.8	51.6	173.7	92.6	278.4	194.3	147.9	236.4
FLATHEAD SOLE	178.4	113.8	70.8	93.5	40.2	139.5	159.3	144.0	131.0	57.8	141.4
ROCK SOLE	3.5	0.0	0.0	0.0	6.7	0.0	0.0	3.2	0.0	0.0	0.0
REX SOLE	0.0	7.7	3.4	0.0	0.0	0.0	0.0	6.4	0.0	0.9	1.0
DOVER SOLE	0.0	0.0	0.0	4.1	53.9	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	0.0	0.0	0.0	21.1	5.9	0.0	0.0	119.4	0.0	25.1	5.2
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	262.3	208.2	383.3	241.5	158.3	313.2	251.9	551.4	325.3	231.7	384.0
SKATES	0.0	0.0	0.0	0.0	46.7	37.1	16.3	0.0	0.0	1.2	1.8
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	19.5	1.2	0.3	6.0	6.8	9.6	2.5	12.0	3.8	0.7	12.0
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	19.5	1.2	0.3	6.0	6.8	9.6	2.5	12.0	3.8	0.7	12.0
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	949.3	384.0	441.5	355.9	380.7	459.5	338.0	701.5	411.8	676.5	476.5

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FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	56	57	58	59	60	61	62	63	64	65	66
MONTH/DAY/YEAR	8/11/83	8/11/83	8/11/83	8/11/83	8/11/83	8/11/83	8/12/83	8/12/83	8/12/83	8/12/83	8/12/83
LATITUDE START	55 29.6	55 26.2	55 28.8	55 33.4	55 37.0	55 41.4	55 35.0	55 37.9	55 42.4	55 48.9	655 11.1
LONGITUDE START	159 12.7	158 51.5	158 46.3	158 41.0	158 53.2	158 58.5	158 21.4	158 24.1	158 28.8	158 28.8	158 37.7
GEAR DEPTH	67	73	75	85	83	81	76	75	72	60	58
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
TEMPERATURE	.	6.5	.	5.8	5.7	.	5.8	.	6.4	.	7.2
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	0.2	0.4	333.8	155.4	335.2	209.1	1650.5	1047.9	0.0	0.0	67.0
PACIFIC COD	18.6	155.2	52.5	9.6	28.4	65.4	64.0	58.1	68.2	4.4	13.7
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	7.2	8.3	20.5	14.4	0.0	0.0	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
SABLEFISH	8.1	8.1	1.9	27.3	11.5	3.2	4.2	0.0	4.6	0.0	2.0
ATKA MACKEREL	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
ARROWTOOTH FLOUNDER	157.6	100.2	172.4	182.6	198.3	231.6	268.0	224.5	275.6	148.4	107.5
FLATHEAD SOLE	44.9	21.1	85.6	62.0	141.9	135.0	126.7	74.4	8.8	19.8	55.0
ROCK SOLE	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	7.0	74.1
REX SOLE	29.1	14.1	2.3	3.8	0.0	1.2	0.0	0.0	4.1	1.5	2.1
DOVER SOLE	0.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	19.9	145.4	0.0	38.6	16.2	28.2	23.5	20.8	11.3	80.7	103.2
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	254.3	281.6	260.3	287.0	356.4	396.0	418.2	319.7	304.2	257.4	343.0
SKATES	0.0	0.0	2.8	0.0	0.0	25.5	0.0	0.0	2.4	0.0	0.9
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	1.6	0.0	1.2	5.2	0.3	3.1	0.1	1.1	0.0	0.8	0.0
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.4
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	1.6	0.0	1.2	5.2	0.3	3.1	0.1	1.1	0.0	0.9	3.4
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	282.8	445.8	652.5	491.7	740.1	722.8	2155.1	1426.8	379.4	262.7	432.7

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FISHING LOG FOR CRUISE 83002

RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	67	68	69	70	71	72	73	74	75	76	77
MONTH/DAY/YEAR	8/12/83	8/13/83	8/13/83	8/13/83	8/13/83	8/14/83	8/14/83	8/14/83	8/14/83	8/14/83	8/14/83
LATITUDE START	55 54.9	56 0.3	56 0.6	56 8.2	56 8.7	55 55.7	55 50.0	55 45.4	55 39.4	55 36.0	55 36.5
LONGITUDE START	158 45.6	158 35.8	158 35.9	158 34.7	158 23.9	158 11.2	158 12.0	158 12.3	158 8.0	158 4.0	157 53.0
GEAR DEPTH	86	95	93	85	44	93	42	65	70	72	74
DURATION IN HOURS	0.40	0.20	0.50	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50
TEMPERATURE	.	.	.	.	.	7.2	.	.	.	6.2	6.3
PERFORMANCE	0	10	0	0	0	0	0	0	0	0	0
POLLOCK	38.6	0.0	11.0	243.9	104.8	284.6	0.0	124.5	39.8	210.9	94.6
PACIFIC COD	19.2	0.0	14.4	64.7	0.0	79.9	0.0	30.9	27.7	110.8	182.7
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.8	5.3	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7
OTHER ROCKFISH	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
SABLEFISH	0.0	0.0	0.0	0.5	0.7	0.0	0.0	77.0	2.4	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	47.1	512.9	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	15.7	0.0	56.5	93.4	80.0	114.0	6.5	274.3	144.7	169.5	155.2
FLATHEAD SOLE	77.6	0.0	196.6	464.3	493.6	19.0	1.7	56.5	74.4	37.7	46.9
ROCK SOLE	0.0	0.0	0.0	0.0	2.8	0.0	28.8	13.1	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	1.5	0.0	3.0
DOVER SOLE	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	13.5	0.0	0.0	5.0	17.7	25.4	5.7	43.5	14.5	72.4	165.0
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	106.8	0.0	253.1	609.8	1107.0	160.6	42.7	396.2	235.1	279.6	370.1
SKATES	3.0	0.0	11.5	0.0	143.8	0.0	0.0	2.0	0.9	0.0	0.0
OTHER ELASMOBRANCHS	3.5	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	9.3	0.0	27.9	49.0	2.5	10.6	0.0	6.8	0.3	2.5	1.5
KING CRAB	0.0	0.0	0.0	86.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.2	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	9.7	0.0	27.9	135.6	2.5	10.6	0.0	8.5	0.5	2.5	1.5
OTHER	0.0	0.0	0.0	0.0	1.6	0.0	0.6	0.0	0.0	0.0	0.0
TOTAL CATCH	180.8	0.0	320.0	1054.9	1360.4	535.7	43.6	639.1	307.2	607.1	660.6

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FISHING LOG FOR CRUISE 83002

RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	78	79	80	81	82	83	84	85	86	87	88
MONTH/DAY/YEAR	8/15/83	8/15/83	8/15/83	8/15/83	8/15/83	8/16/83	8/16/83	8/16/83	8/16/83	8/16/83	8/16/83
LATITUDE START	55 50.0	55 45.0	55 46.0	55 56.0	56 6.7	56 21.8	56 19.6	56 22.9	56 24.4	56 31.1	56 32.6
LONGITUDE START	158 1.1	157 55.5	157 35.0	157 45.5	157 49.6	157 43.4	157 36.5	157 42.4	157 28.0	157 38.2	157 41.4
GEAR DEPTH	45	65	70	49	102	105	110	101	98	57	49
DURATION IN HOURS	0.50	0.50	0.50	0.20	0.50	0.40	0.50	0.50	0.50	0.50	0.50
TEMPERATURE	7.2	6.3	6.7	7.3	7.1	6.4	7.	6.5	6.6	7.5	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	0.0	2544.2	12.0	0.1	1097.1	268.5	27.3	795.9	250.3	150.3	130.8
PACIFIC COD	0.0	63.7	47.9	0.0	75.6	66.0	27.2	150.7	301.4	30.7	4.7
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.7	0.7	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.1	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SABLEFISH	0.0	4.5	20.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
ARROWTOOTH FLOUNDER	0.4	327.7	120.3	2.6	43.3	98.5	66.6	85.7	125.8	228.4	389.5
FLATHEAD SOLE	0.0	31.6	70.4	0.0	100.7	102.7	42.8	67.2	39.5	234.4	142.3
ROCK SOLE	11.8	8.6	20.2	16.8	0.0	0.0	15.7	0.0	0.0	82.6	195.2
REX SOLE	0.0	31.6	16.4	0.0	0.0	1.1	0.9	0.0	0.0	0.0	0.0
DOVER SOLE	0.0	0.0	1.0	0.0	0.0	6.4	6.5	12.0	4.0	0.0	0.0
PACIFIC HALIBUT	3.4	14.2	35.2	1.4	26.0	10.0	6.9	116.7	47.2	44.6	134.7
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	15.6	413.7	263.5	20.8	170.0	218.7	139.4	284.6	216.5	590.0	866.5
SKATES	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	0.0	0.8	0.8	0.0	8.7	0.9	9.5	2.0	0.3	7.8	0.3
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	0.0	0.8	1.1	0.0	9.3	0.9	9.5	2.0	0.3	7.8	0.3
OTHER	0.3	0.0	-0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	3.0
TOTAL CATCH	16.0	3036.2	344.6	21.2	1355.6	554.1	203.4	1233.9	769.2	805.8	1006.2

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FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	89	90	91	92	93	94	95	96	97	98	99
MONTH/DAY/YEAR	8/17/83	8/17/83	8/17/83	8/17/83	8/17/83	8/18/83	8/18/83	8/18/83	8/18/83	8/18/83	8/18/83
LATITUDE START	56 30.6	56 24.9	56 22.5	56 23.5	56 24.4	56 30.2	56 25.0	56 24.6	56 24.3	56 23.0	56 21.0
LONGITUDE START	157 33.2	157 32.4	157 51.1	157 56.5	158 1.4	158 8.0	158 14.0	158 11.8	158 8.9	158 1.0	158 7.0
GEAR DEPTH	80	105	150	112	99	50	80	88	98	103	65
DURATION IN HOURS	0.50	0.50	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50
TEMPERATURE	6.9	6.7	.	6.4	.	7.2	6.3	6.3	6.3	6.3	6.2
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	30.8	9.7	2.5	9.8	13.5	111.3	65.1	45.2	168.7	33.9	1053.7
PACIFIC COD	62.0	110.5	51.1	55.3	13.3	9.3	46.7	26.2	77.4	81.8	100.9
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.6	2.1	1.6
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	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	2.1	0.0	0.0	14.6	1.1	0.0	0.0	0.0	0.0
ATKA MACKFREL	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	0.0	733.9	6.9	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	29.0	121.7	186.9	72.1	57.1	139.1	30.9	91.6	93.1	50.5	141.8
FLATHEAD SOLE	456.2	56.2	139.1	99.4	232.6	169.6	850.3	393.2	441.6	135.6	536.7
ROCK SOLE	384.6	2.2	4.2	0.0	0.0	626.6	73.1	4.2	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	0.0	3.5	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	276.0	0.0	67.2	24.1	0.0	22.2	10.3	24.0	6.0	7.5	15.5
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	1157.6	183.6	397.4	197.7	290.4	1691.4	971.5	513.0	540.7	193.6	694.0
SKATES	21.0	0.0	0.0	0.0	0.0	24.0	16.5	31.1	0.0	0.0	6.8
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	94.6	1.7	20.4	1.5	19.9	9.4	15.4	20.4	16.3	13.2	1.4
KING CRAB	10.5	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0
DUNGENESS CRAB	1.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	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	0.0	0.0	0.0	0.0	0.0	83.4	64.8	82.1	16.6	19.7
TOTAL INVERTS	105.1	1.7	20.4	1.5	19.9	9.4	112.6	85.2	98.4	29.8	21.1
OTHER	1.0	0.0	0.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0
TOTAL CATCH	1377.5	305.5	473.5	264.3	337.9	1878.5	1213.5	700.7	885.8	341.2	1878.1

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FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	100	101	102	103	104	105	106	107	108	109	110
MONTH/DAY/YEAR	8/20/83	8/21/83	8/21/83	8/21/83	8/21/83	8/21/83	8/21/83	8/22/83	8/22/83	8/22/83	8/22/83
LATITUDE START	56 14.4	55 43.1	55 43.1	55 42.3	55 44.3	55 46.8	55 48.5	55 51.2	55 50.0	55 51.3	55 49.7
LONGITUDE START	158 11.7	158 57.5	158 59.7	159 2.5	159 11.6	158 86.8	158 59.0	158 56.2	158 57.3	158 56.3	158 57.7
GEAR DEPTH	56	77	80	79	57	72	72	70	70	70	70
DURATION IN HOURS	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
TEMPERATURE	7.9	.	5.8	5.8	7.5	6.3	6.4	6.5	.	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	79.0	1079.8	1499.2	415.4	1081.7	730.6	537.3	181.7	219.3	567.3	226.5
PACIFIC COD	11.4	51.5	65.5	22.4	91.6	72.7	97.5	125.7	68.8	108.9	68.8
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	14.9	17.0	0.0	0.0	0.9	0.0	0.0	0.0	0.7
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
SABLEFISH	0.0	12.4	8.4	5.0	3.3	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	36.0	63.8	285.0	82.9	120.2	77.0	135.1	108.5	105.6	22.7	126.5
FLATHEAD SOLE	100.5	80.1	165.2	121.2	158.4	223.9	242.9	225.6	319.9	218.7	300.8
ROCK SOLE	0.0	10.0	0.0	0.0	0.0	12.2	0.0	5.5	0.0	3.0	5.9
REX SOLE	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
DOVER SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	12.8	0.0	38.7	10.9	58.5	8.5	9.6	3.8	32.1	52.5	9.4
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	149.3	166.4	488.9	215.0	364.4	321.6	387.6	343.4	457.6	367.9	442.6
SKATES	23.6	0.0	3.1	6.4	0.0	0.0	0.0	0.0	0.0	16.0	14.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	92.4	0.3	0.0	1.7	4.2	16.1	21.1	10.4	20.2	3.7	16.9
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
DUNGENESS CRAB	9.2	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.9	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL INVERTS	92.4	0.3	0.0	1.7	4.2	16.4	21.1	10.4	20.2	8.0	16.9
OTHER	9.5	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.9	0.0	0.0
TOTAL CATCH	365.2	1310.4	2080.0	682.9	1547.0	1141.3	1044.4	661.4	767.8	1068.1	769.5

-Continued-

FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83

PROGRAM GF22

HAUL NO.	111	112	113	114	115	116	117	118	119	120	121
MONTH/DAY/YEAR	8/22/83	8/22/83	8/23/83	8/23/83	8/24/83	8/24/83	8/24/83	8/24/83	8/24/83	8/25/83	8/25/83
LATITUDE START	55 51.3	55 50.9	55 40.3	55 38.2	55 20.3	55 20.0	55 18.4	55 17.6	55 16.0	55 12.6	55 12.6
LONGITUDE START	158 56.4	158 56.4	159 13.0	159 25.2	161 33.8	161 37.4	161 34.6	161 38.8	161 48.1	161 58.2	161 47.6
GEAR DEPTH	70	70	55	60	57	53	57	56	56	43	59
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
TEMPERATURE	6.5	.	7.5	7.5	5.8	.	5.8	.	.	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	105.0	203.9	4254.6	1996.8	406.0	208.4	103.0	876.0	3102.4	59.5	2239.7
PACIFIC COD	72.3	38.3	53.0	68.0	68.4	106.9	206.1	265.5	263.7	81.6	307.9
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.7	1.6	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	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	15.7	13.0	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	0.0	0.0	40.6	65.5	121.2	49.5	25.2	42.2	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	0.0	0.0	31.9	0.0	610.2	548.9	688.4	558.0	323.9	346.5	19.9
ARROWTOOTH FLOUNDER	86.2	110.9	44.7	360.9	17.2	4.0	7.9	20.9	0.0	18.7	13.3
FLATHEAD SOLE	295.6	410.3	19.2	121.7	125.5	178.7	141.5	230.4	313.1	179.8	8.9
ROCK SOLE	0.9	0.0	0.0	0.0	0.0	6.0	6.8	22.9	0.0	33.2	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	85.5	4.8	49.7	29.8	11.3	13.3	15.2	34.0	111.5	43.5	3.9
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ALASKA PLAICE	2.3	0.0	3.0	0.0	0.0	0.0	0.0	0.0	9.4	1.8	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	470.5	526.0	148.5	512.4	764.2	750.9	859.8	866.2	757.9	623.5	46.0
SKATES	3.9	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	145.1	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	25.0	34.4	4.4	10.5	54.9	170.7	134.9	3.9	4.5	176.6	286.6
KING CRAB	0.0	5.4	0.0	0.0	142.4	0.0	0.0	0.0	0.0	158.0	0.0
DUNGENESS CRAB	2.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	2.5	4.0	7.9	11.4	0.0	6.9	6.6
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	3.1	2.8	0.0
TOTAL INVERTS	25.0	39.8	6.4	10.5	202.3	174.7	142.8	15.3	7.6	344.3	293.2
OTHER	2.0	2.2	0.0	0.0	40.6	46.7	70.2	28.6	3.6	14.9	22.9
TOTAL CATCH	679.4	817.5	4478.2	2602.1	1522.1	1498.2	1503.1	2101.1	4160.4	1166.0	2909.7

-Continued-

FISHING LOG FOR CRUISE 83002 RUN DATE 11/ 9/83 PROGRAM GF22

HAUL NO.	122	123	124	125	126	127	128	129	130	131	132
MONTH/DAY/YEAR	8/25/83	8/25/83	8/25/83	8/26/83	8/26/83	8/26/83	8/26/83	8/26/83	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0
LATITUDE START	55 17.1	55 23.7	55 20.5	55 12.1	55 13.9	55 28.4	55 24.4	55 20.0	0 0.0	0 0.0	0 0.0
LONGITUDE START	161 46.6	161 41.4	161 39.6	161 51.2	161 45.9	161 38.2	161 35.1	161 31.2	0 0.0	0 0.0	0 0.0
GEAR DEPTH	59	61	57	51	61	43	47	76	0	0	0
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.00	0.00
TEMPERATURE	.	.	.	6.5	.	7.	.	5.9	.	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	445.0	470.9	88.0	174.7	1418.7	54.1	24.1	84.3	0.0	0.0	0.0
PACIFIC COD	228.8	230.2	121.8	64.2	225.4	58.9	40.1	183.5	0.0	0.0	0.0
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ROCKFISH	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
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	51.1	8.8	80.3	53.6	131.6	59.6	32.7	84.4	0.0	0.0	0.0
OTHER ROUNDFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YELLOWFIN SOLE	179.5	462.2	555.4	207.5	299.2	278.5	409.6	525.5	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	43.6	0.0	7.6	23.8	28.4	2.4	0.0	46.4	0.0	0.0	0.0
FLATHEAD SOLE	478.6	95.1	181.6	202.3	552.0	43.9	25.3	294.5	0.0	0.0	0.0
ROCK SOLE	23.7	24.0	18.2	5.2	0.0	103.5	2.9	168.6	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	34.4	22.2	9.4	16.4	4.5	23.7	20.5	63.4	0.0	0.0	0.0
STARRY FLOUNDER	0.0	0.0	0.0	0.0	0.0	7.4	1.7	0.0	0.0	0.0	0.0
ALASKA PLAICE	3.8	1.4	5.8	0.0	1.9	0.6	0.0	1.1	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	763.6	604.9	770.0	455.2	886.0	460.0	460.0	1099.5	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	28.4	219.0	14.5	20.7	3.8	4.6	22.9	2.1	0.0	0.0	0.0
KING CRAB	129.7	284.9	396.8	0.0	16.3	745.2	187.0	1.5	0.0	0.0	0.0
DUNGENESS CRAB	0.5	1.2	0.0	0.0	0.0	13.9	0.5	0.0	0.0	0.0	0.0
PINK SHRIMP	26.2	8.7	8.6	14.9	23.2	3.6	17.2	3.7	0.0	0.0	0.0
SIDE STRIPES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCALLOPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	5.8	2.9	4.8	0.7	25.8	0.6	0.6	2.4	0.0	0.0	0.0
TOTAL INVERTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	1711.5	1881.8	1520.5	831.6	2787.6	1414.9	817.3	1478.5	0.0	0.0	0.0

Table 2. Catch amounts of important species in kilograms and numbers of fish caught in a trawl survey of northern Shelikof Strait, the Chignik area, and Pavlof Bay in July and August of 1983.

VESSEL - 00 CRUISE - 83002
SPECIES - POLLOCK

HAUL	WEIGHT	NUMBER	AVG WT
1	100.6	104.	1.0
2	58.4	74.	0.8
3	6.4	11.	0.6
4	241.0	421.	0.6
5	49.6	40.	1.2
6	101.7	0.	0.0
7	113.5	140.	0.8
8	195.0	319.	0.6
9	180.8	236.	0.8
10	41.0	45.	0.9
11	349.2	562.	0.6
12	50.7	93.	0.5
13	424.8	808.	0.5
14	415.5	770.	0.5
15	125.1	172.	0.7
16	553.5	995.	0.6
17	220.6	453.	0.5
18	1818.4	4054.	0.4
19	587.3	1094.	0.5
20	216.6	293.	0.7
21	301.6	571.	0.5
22	723.3	1410.	0.5
23	526.2	984.	0.5
24	652.9	1155.	0.6
25	181.4	282.	0.6
26	716.5	1273.	0.6
27	418.4	795.	0.5
28	509.8	898.	0.6
29	720.4	1300.	0.6
30	1149.6	1997.	0.6
31	1001.2	1727.	0.6
32	173.2	299.	0.6
33	607.7	1114.	0.5
34	482.6	922.	0.5
35	591.7	1102.	0.5
36	289.9	553.	0.5
37	60.4	112.	0.5
38	179.5	317.	0.6
39	583.7	1096.	0.5
40	73.4	76.	1.0
41	298.8	682.	0.4
42	16.1	14.	1.1
43	1001.3	1488.	0.7
44	426.5	596.	0.7
45	565.2	839.	0.7
46	36.7	45.	0.8
48	10.0	9.	1.1
49	3.4	4.	0.9
50	21.9	22.	1.0
51	15.5	11.	1.4
52	8.6	11.	0.8
53	10.0	20.	0.5
54	91.0	139.	0.7

VESSEL - 00 CRUISE - 83002
SPECIES - POLLOCK

HAUL	WEIGHT	NUMBER	AVG WT
55	75.1	104.	0.7
56	0.2	4.	0.1
57	0.4	2.	0.2
58	333.8	484.	0.7
59	155.4	205.	0.8
60	335.2	485.	0.7
61	209.1	304.	0.7
62	1650.5	2148.	0.8
63	1047.9	1514.	0.7
65	0.0	0.	0.0
66	67.0	99.	0.7
67	38.6	61.	0.6
69	11.0	15.	0.7
70	243.9	294.	0.8
71	104.8	156.	0.7
72	284.6	415.	0.7
74	124.5	171.	0.7
75	39.8	59.	0.7
76	210.9	270.	0.8
77	94.6	122.	0.8
79	2544.2	4140.	0.6
80	12.0	28.	0.4
81	0.1	25.	0.0
82	1097.1	1850.	0.6
83	268.5	440.	0.6
84	27.3	44.	0.6
85	795.9	1253.	0.6
86	250.3	364.	0.7
87	150.3	216.	0.7
88	130.8	596.	0.2
89	30.8	45.	0.7
90	9.7	13.	0.7
91	2.5	4.	0.7
92	9.8	29.	0.3
93	13.5	99.	0.1
94	111.3	331.	0.3
95	65.1	103.	0.6
96	45.2	71.	0.6
97	168.7	240.	0.7
98	33.9	67.	0.5
99	1053.7	1544.	0.7
100	79.0	118.	0.7
101	1079.8	1752.	0.6
102	1499.2	2305.	0.7
103	415.4	649.	0.6
104	1081.7	1707.	0.6
105	730.6	1165.	0.6
106	537.3	877.	0.6
107	181.7	268.	0.7
108	219.3	337.	0.6
109	567.3	826.	0.7
110	226.5	346.	0.7
111	105.0	153.	0.7

VESSEL - 00 CRUISE - 83002
SPECIES - POLLOCK

HAUL	WEIGHT	NUMBER	AVG WT
112	203.9	299.	0.7
113	4254.6	6516.	0.7
114	1996.8	3011.	0.7
115	406.0	7837.	0.1
116	208.4	2640.	0.1
117	103.0	1675.	0.1
118	876.0	15273.	0.1
119	3102.4	52115.	0.1
120	59.5	816.	0.1
121	2239.7	36885.	0.1
122	445.0	7167.	0.1
123	470.9	4359.	0.1
124	88.0	928.	0.1
125	174.7	1955.	0.1
126	1418.7	22261.	0.1
127	54.1	655.	0.1
128	24.1	459.	0.1
129	84.3	122.	0.7
TOTAL	53079.0	226441.	0.2

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC COD

HAUL	WEIGHT	NUMBER	AVG WT
1	27.9	13.	2.1
2	17.9	9.	2.0
3	23.0	11.	2.1
4	135.7	63.	2.2
5	57.4	28.	2.0
6	96.0	32.	3.0
7	13.9	7.	2.0
8	9.0	5.	1.8
9	86.3	42.	2.1
10	16.4	6.	2.7
11	42.5	20.	2.1
12	46.9	34.	1.4
13	45.3	18.	2.5
14	16.6	8.	2.1
15	51.7	33.	1.6
16	72.9	44.	1.7
17	12.5	7.	1.8
18	48.1	21.	2.3
19	51.0	17.	3.0
20	10.7	4.	2.7
21	69.1	35.	2.0
22	42.6	21.	2.0
23	149.2	87.	1.7
24	96.7	46.	2.1
25	70.7	40.	1.8
26	220.2	124.	1.8
27	36.2	19.	1.9
28	40.9	19.	2.2
29	58.9	53.	1.1
30	153.2	67.	2.3
31	165.7	72.	2.3
32	21.2	9.	2.4
33	25.6	15.	1.7
34	54.5	29.	1.9
35	52.5	25.	2.1
36	39.4	20.	2.0
37	47.1	17.	2.8
38	33.0	16.	2.1
39	49.0	23.	2.1
40	45.6	24.	1.9
41	219.3	119.	1.8
42	33.0	10.	3.3
43	63.4	36.	1.8
44	57.4	25.	2.3
45	101.8	48.	2.1
46	12.5	4.	3.1
47	6.8	2.	3.4
48	7.2	4.	1.8
49	13.6	6.	2.3
50	37.3	20.	1.9
51	17.1	7.	2.4
52	60.5	22.	2.8
53	36.9	16.	2.3

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC COD

HAUL	WEIGHT	NUMBER	AVG WT
54	336.2	123.	2.7
55	2.7	1.	2.7
56	18.6	21.	0.9
57	155.2	93.	1.7
58	52.5	16.	3.3
59	9.6	4.	2.4
60	28.4	13.	2.2
61	65.4	36.	1.8
62	64.0	24.	2.7
63	58.1	27.	2.2
64	68.2	52.	1.3
65	4.4	3.	1.5
66	13.7	13.	1.1
67	19.2	9.	2.1
69	14.4	6.	2.4
70	64.7	31.	2.1
72	79.9	47.	1.7
74	30.9	27.	1.1
75	27.7	12.	2.3
76	110.8	50.	2.2
77	182.7	63.	2.9
79	63.7	51.	1.2
80	47.9	18.	2.7
82	75.6	46.	1.6
83	66.0	29.	2.3
84	27.2	21.	1.3
85	150.7	69.	2.2
86	301.4	149.	2.0
87	30.7	13.	2.4
88	4.7	1.	4.7
89	62.0	39.	1.6
90	110.5	61.	1.8
91	51.1	25.	2.0
92	55.3	26.	2.1
93	13.3	7.	1.9
94	9.3	3.	3.1
95	46.7	19.	2.5
96	26.2	11.	2.4
97	77.4	36.	2.2
98	81.8	32.	2.6
99	100.9	40.	2.5
100	11.4	4.	2.8
101	51.5	30.	1.7
102	65.5	28.	2.3
103	22.4	10.	2.2
104	91.6	31.	3.0
105	72.7	33.	2.2
106	97.5	49.	2.0
107	125.7	61.	2.1
108	68.8	32.	2.2
109	108.9	52.	2.1
110	68.8	32.	2.2
111	72.3	33.	2.2

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC COD

HAUL	WEIGHT	NUMBER	AVG WT
112	38.3	15.	2.6
113	53.0	22.	2.4
114	68.0	23.	3.0
115	68.4	29.	2.4
116	106.9	54.	2.0
117	206.1	102.	2.0
118	265.5	122.	2.2
119	263.7	120.	2.2
120	81.6	46.	1.8
121	307.9	143.	2.2
122	228.8	102.	2.2
123	230.2	118.	2.0
124	121.8	63.	1.9
125	64.2	31.	2.1
126	225.4	118.	1.9
127	58.9	37.	1.6
128	40.1	20.	2.0
129	183.5	90.	2.0
TOTAL	9298.9	4519.	2.1

VESSEL - 00 CRUISE - 83002
SPECIES - ROUGHEYE ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
1	7.4	6.	1.2
2	6.3	6.	1.1
5	5.1	6.	0.8
9	8.6	7.	1.2
11	1.9	6.	0.3
15	0.1	1.	0.1
20	3.2	3.	1.1
31	5.4	10.	0.5
40	0.1	1.	0.1
41	0.1	1.	0.1
44	2.6	5.	0.5
45	0.5	1.	0.5
46	1.0	1.	1.0
47	4.2	5.	0.8
48	17.6	22.	0.8
49	6.4	7.	0.9
52	0.4	1.	0.4
53	2.8	4.	0.7
54	0.7	1.	0.7
59	7.2	10.	0.7
60	8.3	7.	1.2
61	20.5	33.	0.6
62	14.4	17.	0.8
63	0.0	1.	0.0
70	0.4	1.	0.4
75	0.8	2.	0.4
76	5.3	9.	0.6
82	3.6	6.	0.6
85	0.7	1.	0.7
86	0.7	1.	0.7
93	0.8	1.	0.8
97	0.6	1.	0.6
98	2.1	3.	0.7
99	1.6	3.	0.5
102	14.9	33.	0.5
103	17.0	31.	0.5
106	0.9	1.	0.9
110	0.7	1.	0.7
111	0.7	1.	0.7
112	1.6	3.	0.5
114	1.4	2.	0.7
TOTAL	178.6	262.	0.7

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC OCEAN PERCH

HAUL	WEIGHT	NUMBER	AVG WT
1	0.7	1.	0.7
47	1.0	1.	1.0
49	0.6	1.	0.6
TOTAL	2.3	3.	0.8

VESSEL - 00 CRUISE - 83002
SPECIES - DUSKY ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
23	2.5	4.	0.6
53	0.8	1.	0.8
66	0.5	1.	0.5
77	11.7	18.	0.6
TOTAL	15.5	24.	0.6

VESSEL - 00 CRUISE - 83002
SPECIES - OTHER ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
9	0.3	1.	0.3
20	0.3	1.	0.3
43	9.4	1.	9.4
49	0.7	3.	0.2
52	0.2	1.	0.2
62	0.2	1.	0.2
66	0.2	1.	0.2
69	0.2	1.	0.2
73	0.3	2.	0.2
78	0.1	1.	0.1
79	0.3	1.	0.3
81	0.3	1.	0.3
107	0.2	1.	0.2
TOTAL	12.7	16.	0.8

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - SABLEFISH

HAUL	WEIGHT	NUMBER	AVG WT
1	28.7	23.	1.2
2	51.1	35.	1.5
3	62.9	59.	1.1
4	0.9	1.	0.9
5	102.8	71.	1.4
6	117.4	103.	1.1
7	158.6	211.	0.8
8	13.1	16.	0.8
9	414.5	456.	0.9
11	0.8	1.	0.8
13	0.7	1.	0.7
16	2.0	3.	0.7
17	2.7	4.	0.7
18	9.4	12.	0.8
19	3.4	5.	0.7
20	37.6	44.	0.9
21	81.6	117.	0.7
22	56.4	77.	0.7
23	3.5	4.	0.9
24	0.7	1.	0.7
26	4.2	5.	0.8
27	10.4	15.	0.7
29	12.2	15.	0.8
30	2.0	2.	1.0
31	10.8	13.	0.8
32	3.7	4.	0.9
33	17.2	27.	0.6
34	31.5	47.	0.7
35	73.0	119.	0.6
36	24.2	34.	0.7
37	4.0	5.	0.8
38	15.3	24.	0.6
39	21.9	41.	0.5
41	10.6	14.	0.8
42	83.3	35.	2.4
43	1.5	2.	0.7
44	0.7	1.	0.7
46	124.4	76.	1.6
47	45.9	22.	2.1
48	73.6	27.	2.7
49	144.2	57.	2.5
50	40.4	16.	2.5
51	34.7	15.	2.3
52	68.4	38.	1.8
53	32.2	19.	1.7
54	7.2	5.	1.4
55	0.9	1.	0.9
56	8.1	9.	0.9
57	8.1	7.	1.2
58	1.9	1.	1.9
59	27.3	16.	1.7
60	11.5	6.	1.9
61	3.2	2.	1.6

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - SABLEFISH

HAUL	WEIGHT	NUMBER	AVG WT
62	4.2	3.	1.4
64	4.6	5.	0.9
66	2.0	3.	0.7
70	0.5	1.	0.5
71	0.7	1.	0.7
74	77.0	92.	0.8
75	2.4	2.	1.2
79	4.5	4.	1.1
80	20.1	24.	0.8
88	0.9	1.	0.9
91	2.1	2.	1.0
94	14.6	15.	1.0
95	1.1	1.	1.1
101	12.4	11.	1.1
102	8.4	6.	1.4
103	5.0	3.	1.7
104	3.3	4.	0.8
113	15.7	21.	0.7
114	13.0	15.	0.9
TOTAL	2299.8	2178.	1.1

VESSEL - 00 CRUISE - 83002
SPECIES - ATKA MACKEREL

HAUL	WEIGHT	NUMBER	AVG WT
57	0.5	1.	0.5
TOTAL	0.5	1.	0.5

VESSEL - 00 CRUISE - 83002
SPECIES - SALMON

HAUL	WEIGHT	NUMBER	AVG WT
4	5.4	1.	5.4
11	5.5	1.	5.5
54	7.8	2.	3.9
62	3.5	1.	3.5
TOTAL	22.2	5.	4.4

VESSEL - 00 CRUISE - 83002
SPECIES - YELLOWFIN SOLE

HAUL	WEIGHT	NUMBER	AVG WT
10	0.3	1.	0.3
15	9.8	25.	0.4
43	87.7	172.	0.5
44	9.4	10.	0.9
66	1.1	4.	0.3
70	47.1	101.	0.5
71	512.9	1131.	0.5
88	4.8	10.	0.5
94	733.9	1722.	0.4
95	6.9	12.	0.6
104	27.3	41.	0.7
113	31.9	64.	0.5
115	610.2	2030.	0.3
116	548.9	1896.	0.3
117	688.4	2423.	0.3
118	558.0	1371.	0.4
119	323.9	1044.	0.3
120	346.5	1120.	0.3
121	19.9	44.	0.4
122	179.5	499.	0.4
123	462.2	1322.	0.3
124	555.4	1673.	0.3
125	207.5	558.	0.4
126	299.2	825.	0.4
127	278.5	1041.	0.3
128	409.6	1712.	0.2
129	525.5	1503.	0.3
TOTAL	7486.3	22351.	0.3

VESSEL - 00 CRUISE - 83002
SPECIES - ARROWTOOTH FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
2	333.8	371.	0.9
3	2.2	8.	0.3
4	110.0	351.	0.3
5	6.6	20.	0.3
6	51.6	94.	0.6
7	344.6	672.	0.5
8	117.5	231.	0.5
9	99.2	145.	0.7
10	0.0	0.	0.0
11	189.7	471.	0.4
12	31.9	42.	0.8
13	42.6	159.	0.3
14	79.3	230.	0.3
15	15.9	122.	0.1
16	31.8	176.	0.2
17	56.8	244.	0.2
18	242.9	763.	0.3
19	226.7	791.	0.3
20	198.7	279.	0.7
21	120.9	277.	0.4
22	194.1	579.	0.3
23	209.8	492.	0.4
24	225.7	430.	0.5
25	154.9	312.	0.5
26	131.5	246.	0.5
27	116.3	322.	0.4
28	89.8	250.	0.4
29	233.1	747.	0.3
30	352.5	590.	0.6
31	640.8	1003.	0.6
32	56.4	102.	0.6
33	90.6	386.	0.2
34	219.3	594.	0.4
35	235.3	695.	0.3
36	204.8	650.	0.3
37	82.3	208.	0.4
38	118.8	454.	0.3
39	124.2	384.	0.3
40	1.5	15.	0.1
41	115.8	410.	0.3
42	256.3	138.	1.9
43	137.3	248.	0.6
44	140.1	387.	0.4
45	80.4	97.	0.8
46	86.7	74.	1.2
47	309.1	195.	1.6
48	122.8	84.	1.5
49	51.6	32.	1.6
50	173.7	167.	1.0
51	92.6	81.	1.1
52	278.4	278.	1.0
53	194.3	188.	1.0
54	147.9	170.	0.9

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - ARROWTOOTH FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
55	236.4	287.	0.8
56	157.6	383.	0.4
57	100.2	169.	0.6
58	172.4	256.	0.7
59	182.6	148.	1.2
60	198.3	221.	0.9
61	231.6	286.	0.8
62	268.0	110.	2.4
63	224.5	149.	1.5
64	275.6	751.	0.4
65	148.4	564.	0.3
66	107.5	500.	0.2
67	15.7	37.	0.4
69	56.5	62.	0.9
70	93.4	67.	1.4
71	80.0	230.	0.3
72	114.0	147.	0.8
73	6.5	19.	0.3
74	274.3	741.	0.4
75	144.7	190.	0.8
76	169.5	102.	1.7
77	155.2	155.	1.0
78	0.4	1.	0.4
79	327.7	632.	0.5
80	120.3	276.	0.4
81	2.6	43.	0.1
82	43.3	94.	0.5
83	98.5	0.	0.0
84	66.6	93.	0.7
85	85.7	111.	0.8
86	125.8	180.	0.7
87	228.4	394.	0.6
88	389.5	0.	0.0
89	29.0	45.	0.6
90	121.7	168.	0.7
91	186.9	280.	0.7
92	72.1	110.	0.7
93	57.1	82.	0.7
94	139.1	437.	0.3
95	30.9	46.	0.7
96	91.6	161.	0.6
97	93.1	138.	0.7
98	50.5	67.	0.8
99	141.8	269.	0.5
100	36.0	76.	0.5
101	63.8	150.	0.4
102	285.0	381.	0.7
103	82.9	108.	0.8
104	120.2	355.	0.3
105	77.0	193.	0.4
106	135.1	202.	0.7
107	108.5	134.	0.8
108	105.6	162.	0.6

VESSEL - 00 CRUISE - 83002
SPECIES - ARROWTOOTH FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
109	92.7	171.	0.5
110	126.5	177.	0.7
111	86.2	117.	0.7
112	110.9	170.	0.7
113	44.7	319.	0.1
114	360.9	448.	0.8
115	17.2	37.	0.5
116	4.0	10.	0.4
117	7.9	23.	0.3
118	20.9	38.	0.6
120	18.7	69.	0.3
121	13.3	22.	0.6
122	43.6	87.	0.5
124	7.6	10.	0.8
125	23.8	74.	0.3
126	28.4	52.	0.6
127	2.4	6.	0.4
129	46.4	73.	0.6
TOTAL	15957.1	29321.	0.5

VESSEL - 00 CRUISE - 83002
SPECIES - OTHER FLATFISH

HAUL	WEIGHT	NUMBER	AVG WT
1	234.4	244.	1.0
3	149.4	117.	1.3
5	445.8	298.	1.5
6	571.3	470.	1.2
TOTAL	1400.9	1129.	1.2

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
1	57.7	185.	0.3
2	104.8	352.	0.3
3	17.3	39.	0.4
4	1413.1	5685.	0.2
5	43.0	146.	0.3
6	203.5	814.	0.2
7	191.9	784.	0.2
8	145.4	673.	0.2
9	44.5	139.	0.3
10	50.9	177.	0.3
11	635.7	2302.	0.3
12	19.8	70.	0.3
13	47.7	248.	0.2
14	97.8	548.	0.2
15	738.4	3017.	0.2
16	107.8	760.	0.1
17	64.2	358.	0.2
18	116.4	462.	0.3
19	28.3	117.	0.2
20	140.1	608.	0.2
21	90.9	388.	0.2
22	27.0	145.	0.2
23	12.1	47.	0.3
24	17.8	73.	0.2
25	27.4	103.	0.3
26	8.6	43.	0.2
27	59.8	322.	0.2
28	14.2	68.	0.2
29	31.4	90.	0.3
30	22.6	52.	0.4
31	100.3	353.	0.3
32	9.4	26.	0.4
33	612.2	2184.	0.3
34	145.5	0.	0.0
35	109.2	586.	0.2
36	79.0	474.	0.2
37	23.3	114.	0.2
38	141.5	692.	0.2
39	158.9	977.	0.2
40	1434.1	4204.	0.3
41	68.2	538.	0.1
42	107.2	351.	0.3
43	549.3	3490.	0.2
44	426.5	2457.	0.2
45	178.4	1060.	0.2
46	113.8	616.	0.2
47	70.8	369.	0.2
48	93.5	427.	0.2
49	40.2	165.	0.2
50	139.5	508.	0.3
51	159.3	623.	0.3
52	144.0	648.	0.2
53	131.0	669.	0.2

VESSEL - 00 CRUISE - 83002
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
54	57.8	234.	0.2
55	141.4	819.	0.2
56	44.9	369.	0.1
57	21.1	107.	0.2
58	85.6	600.	0.1
59	62.0	448.	0.1
60	141.9	863.	0.2
61	135.0	894.	0.2
62	126.7	1010.	0.1
63	74.4	528.	0.1
64	8.8	88.	0.1
65	19.8	213.	0.1
66	55.0	561.	0.1
67	77.6	425.	0.2
69	196.6	842.	0.2
70	464.3	1783.	0.3
71	493.6	2261.	0.2
72	19.0	99.	0.2
73	1.7	8.	0.2
74	56.5	460.	0.1
75	74.4	631.	0.1
76	37.7	279.	0.1
77	46.9	332.	0.1
79	31.6	345.	0.1
80	70.4	474.	0.1
82	100.7	363.	0.3
83	102.7	371.	0.3
84	42.8	134.	0.3
85	67.2	239.	0.3
86	39.5	126.	0.3
87	234.4	1764.	0.1
88	142.3	885.	0.2
89	456.2	1397.	0.3
90	56.2	172.	0.3
91	139.1	361.	0.4
92	99.4	313.	0.3
93	232.6	727.	0.3
94	169.6	1471.	0.1
95	850.3	2720.	0.3
96	393.2	1404.	0.3
97	441.6	1715.	0.3
98	135.6	569.	0.2
99	536.7	2333.	0.2
100	100.5	533.	0.2
101	80.1	438.	0.2
102	165.2	944.	0.2
103	121.2	786.	0.2
104	158.4	1488.	0.1
105	223.9	1327.	0.2
106	242.9	1361.	0.2
107	225.6	1256.	0.2
108	319.9	1912.	0.2
109	218.7	1310.	0.2

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VESSEL - 00 CRUISE - 83002
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
110	300.8	1625.	0.2
111	295.6	1449.	0.2
112	410.3	2315.	0.2
113	19.2	192.	0.1
114	121.7	1196.	0.1
115	125.5	652.	0.2
116	178.7	933.	0.2
117	141.5	985.	0.1
118	230.4	1371.	0.2
119	313.1	1224.	0.3
120	179.8	954.	0.2
121	8.9	356.	0.0
122	478.6	1608.	0.3
123	95.1	481.	0.2
124	181.6	927.	0.2
125	202.3	1190.	0.2
126	552.0	2012.	0.3
127	43.9	223.	0.2
128	25.3	155.	0.2
129	294.5	745.	0.4
TOTAL	22455.2	104026.	0.2

VESSEL - 00 CRUISE - 83002
SPECIES - ROCK SOLE

HAUL	WEIGHT	NUMBER	AVG WT
12	0.6	1.	0.6
14	2.2	7.	0.3
15	9.8	25.	0.4
17	4.0	10.	0.4
43	24.8	57.	0.4
44	18.8	31.	0.6
45	3.5	9.	0.4
49	6.7	34.	0.2
52	3.2	5.	0.6
56	2.1	5.	0.4
64	4.4	10.	0.4
65	7.0	17.	0.4
66	74.1	238.	0.3
71	2.8	9.	0.3
73	28.8	115.	0.3
74	13.1	39.	0.3
78	11.8	45.	0.3
79	8.6	29.	0.3
80	20.2	64.	0.3
81	16.8	100.	0.2
84	15.7	35.	0.5
87	82.6	164.	0.5
88	195.2	510.	0.4
89	384.6	726.	0.5
90	2.2	7.	0.3
91	4.2	7.	0.6
94	626.6	1338.	0.5
95	73.1	114.	0.6
96	4.2	6.	0.7
101	10.0	25.	0.4
105	12.2	41.	0.3
107	5.5	12.	0.4
109	3.0	10.	0.3
110	5.9	15.	0.4
111	0.9	2.	0.4
116	6.0	10.	0.6
117	6.8	11.	0.6
118	22.9	38.	0.6
120	33.2	62.	0.5
122	23.7	62.	0.4
123	24.0	44.	0.6
124	18.2	38.	0.5
125	5.2	15.	0.3
127	103.5	205.	0.5
128	2.9	6.	0.5
129	168.6	354.	0.5
TOTAL	2104.2	4705.	0.4

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - REX SOLE

HAUL	WEIGHT	NUMBER	AVG WT
9	0.5	5.	0.1
19	2.0	10.	0.2
23	10.2	37.	0.3
28	3.4	14.	0.2
41	3.1	26.	0.1
46	7.7	42.	0.2
47	3.4	13.	0.3
52	6.4	32.	0.2
53	0.0	0.	0.0
54	0.9	3.	0.3
55	1.0	5.	0.2
56	29.1	195.	0.1
57	14.1	71.	0.2
58	2.3	12.	0.2
59	3.8	33.	0.1
61	1.2	6.	0.2
64	4.1	24.	0.2
65	1.5	4.	0.4
66	2.1	17.	0.1
74	8.8	35.	0.2
75	1.5	7.	0.2
77	3.0	12.	0.2
79	31.6	115.	0.3
80	16.4	92.	0.2
83	1.1	6.	0.2
84	0.9	2.	0.4
93	0.7	4.	0.2
101	12.5	62.	0.2
109	1.0	10.	0.1
TOTAL	174.3	893.	0.2

VESSEL - 00 CRUISE - 83002
SPECIES - DOVER SOLE

HAUL	WEIGHT	NUMBER	AVG WT
4	23.4	47.	0.5
5	2.6	6.	0.4
7	15.4	42.	0.4
8	9.5	20.	0.5
11	34.0	78.	0.4
12	10.8	20.	0.5
14	3.0	7.	0.4
17	1.5	5.	0.3
19	23.5	49.	0.5
20	2.1	7.	0.3
22	4.8	10.	0.5
23	13.9	28.	0.5
24	58.8	105.	0.6
25	20.5	34.	0.6
26	20.3	53.	0.4
27	2.6	6.	0.4
28	25.0	47.	0.5
29	26.9	90.	0.3
30	152.8	295.	0.5
31	79.9	167.	0.5
32	3.4	8.	0.4
36	3.0	6.	0.5
37	2.5	6.	0.4
41	20.5	67.	0.3
48	4.1	3.	1.3
49	53.9	34.	1.6
56	0.7	2.	0.3
57	0.8	2.	0.4
72	2.2	4.	0.5
80	1.0	2.	0.4
83	6.4	16.	0.4
84	6.5	14.	0.5
85	12.0	28.	0.4
86	4.0	9.	0.4
90	3.5	7.	0.5
92	2.1	4.	0.5
TOTAL	657.9	1330.	0.5

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC HALIBUT

HAUL	WEIGHT	NUMBER	AVG WT
2	12.5	2.	6.2
3	8.7	1.	8.7
4	85.0	7.	12.1
5	47.5	4.	11.9
6	58.7	7.	8.4
7	21.8	3.	7.3
8	5.4	2.	2.7
9	3.3	1.	3.3
10	103.2	3.	34.4
11	47.5	10.	4.8
13	9.5	4.	2.4
15	412.5	16.	25.8
16	21.6	10.	2.2
17	66.2	18.	3.7
18	10.8	5.	2.2
19	12.2	4.	3.0
20	18.0	2.	9.0
21	8.9	4.	2.2
22	30.1	13.	2.3
23	8.4	2.	4.2
24	27.2	2.	13.6
25	7.0	2.	3.5
26	20.8	3.	6.9
27	0.2	1.	0.2
29	44.9	5.	9.0
30	22.8	4.	5.7
31	83.3	9.	9.3
32	60.7	8.	7.6
33	30.8	3.	10.3
34	95.2	15.	6.3
35	15.3	5.	3.1
36	10.4	3.	3.5
37	5.3	2.	2.7
38	55.2	19.	2.9
39	13.9	4.	3.5
40	235.3	12.	19.6
41	10.7	4.	2.7
42	14.8	1.	14.8
43	6.9	2.	3.5
44	105.6	8.	13.2
48	21.1	2.	10.6
49	5.9	1.	5.9
52	119.4	1.	119.4
54	25.1	3.	8.4
55	5.2	1.	5.2
56	19.9	3.	6.6
57	145.4	9.	16.2
59	38.6	3.	12.9
60	16.2	1.	16.2
61	28.2	3.	9.4
62	23.5	2.	11.8
63	20.8	2.	10.4
64	11.3	2.	5.7

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC HALIBUT

HAUL	WEIGHT	NUMBER	AVG WT
65	80.7	12.	6.7
66	103.2	14.	7.4
67	13.5	1.	13.5
70	5.0	1.	5.0
71	17.7	4.	4.4
72	25.4	3.	8.5
73	5.7	6.	0.9
74	43.5	6.	7.3
75	14.5	3.	4.8
76	72.4	4.	18.1
77	165.0	15.	11.0
78	3.4	2.	1.7
79	14.2	2.	7.1
80	35.2	3.	11.7
81	1.4	2.	0.7
82	26.0	4.	6.5
83	10.0	1.	10.0
84	6.9	1.	6.9
85	116.7	6.	19.4
86	47.2	2.	23.6
87	44.6	4.	11.1
88	134.7	13.	10.4
89	276.0	12.	23.0
91	67.2	3.	22.4
92	24.1	3.	8.0
94	22.2	10.	2.2
95	10.3	2.	5.2
96	24.0	3.	8.0
97	6.0	2.	3.0
98	7.5	1.	7.5
99	15.5	3.	5.2
100	12.8	3.	4.3
102	38.7	3.	12.9
103	10.9	2.	5.4
104	58.5	10.	5.8
105	8.5	2.	4.3
106	9.6	4.	2.4
107	3.8	1.	3.8
108	32.1	5.	6.4
109	52.5	3.	17.5
110	9.4	2.	4.7
111	85.5	4.	21.4
112	4.8	1.	4.8
113	49.7	6.	8.3
114	29.8	6.	5.0
115	11.3	4.	2.8
116	13.3	4.	3.3
117	15.2	5.	3.0
118	34.0	8.	4.3
119	111.5	6.	18.6
120	43.5	6.	7.3
121	3.9	2.	2.0
122	34.4	7.	4.9

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - PACIFIC HALIBUT

HAUL	WEIGHT	NUMBER	AVG WT
123	22.2	1.	22.2
124	9.4	2.	4.7
125	16.4	3.	5.5
126	4.5	3.	1.5
127	23.7	7.	3.4
128	20.5	5.	4.1
129	63.4	2.	31.7
TOTAL	4612.2	528.	8.7

VESSEL - 00 CRUISE - 83002
SPECIES - STARRY FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
127	7.4	4.	1.9
128	1.7	1.	1.7
TOTAL	9.1	5.	1.8

VESSEL - 00 CRUISE - 83002
SPECIES - ALASKA PLAICE

HAUL	WEIGHT	NUMBER	AVG WT
11	53.6	65.	0.8
15	6.1	12.	0.5
17	20.9	15.	1.4
21	24.9	22.	1.1
33	19.3	15.	1.3
34	99.4	0.	0.0
35	8.9	10.	0.9
37	2.7	2.	1.4
38	24.8	21.	1.2
85	3.0	1.	3.0
89	11.8	9.	1.3
111	2.3	1.	2.3
113	3.0	2.	1.5
119	9.4	8.	1.2
120	1.8	1.	1.8
122	3.8	3.	1.3
123	1.4	2.	0.7
124	5.8	5.	1.2
126	1.9	2.	0.9
127	0.6	1.	0.6
129	1.1	1.	1.1
TOTAL	306.5	198.	1.0

VESSEL - 00 CRUISE - 83002
SPECIES - SKATES

HAUL	WEIGHT	NUMBER	AVG WT
2	0.3	1.	0.3
3	9.1	2.	4.6
4	114.3	9.	12.7
5	0.5	1.	0.5
6	2.2	1.	2.2
8	1.7	1.	1.7
9	3.5	2.	1.8
11	27.9	2.	13.9
12	2.6	3.	0.9
14	0.3	1.	0.3
15	205.5	12.	17.1
19	0.7	1.	0.7
20	2.9	2.	1.5
21	36.0	2.	18.0
23	47.0	3.	15.7
24	28.5	7.	4.1
25	23.1	23.	1.0
27	45.6	3.	15.2
28	2.0	8.	0.2
29	3.1	3.	1.0
30	12.6	14.	0.9
31	3.6	3.	1.2
32	21.6	9.	2.4
34	126.8	8.	15.9
35	127.3	8.	15.9
36	25.8	2.	12.9
37	47.3	4.	11.8
38	55.8	2.	27.9
39	177.2	10.	17.7
40	489.2	22.	22.2
41	0.5	1.	0.5
42	37.2	6.	6.2
43	42.5	5.	8.5
44	12.7	1.	12.7
49	46.7	4.	11.7
50	37.1	3.	12.4
51	16.3	1.	16.3
54	1.2	1.	1.2
55	1.8	1.	1.8
58	2.8	3.	0.9
61	25.5	4.	6.4
64	2.4	3.	0.8
66	0.9	1.	0.9
67	3.0	1.	3.0
69	11.5	3.	3.8
71	143.8	8.	18.0
74	2.0	1.	2.0
75	0.9	1.	0.9
79	9.0	1.	9.0
87	27.0	2.	13.5
89	21.0	3.	7.0
94	24.0	2.	12.0
95	16.5	3.	5.5

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - SKATES

HAUL	WEIGHT	NUMBER	AVG WT
96	31.1	6.	5.2
99	6.8	1.	6.8
100	23.6	3.	7.9
102	3.1	1.	3.1
103	6.4	1.	6.4
109	16.0	1.	16.0
110	14.0	1.	14.0
111	3.9	1.	3.9
112	5.7	1.	5.7
TOTAL	2240.9	244.	9.2

VESSEL - 00 CRUISE - 83002
SPECIES - OTHER ELASMOBRANCHS

HAUL	WEIGHT	NUMBER	AVG WT
67	3.5	1.	3.5
69	1.9	1.	1.9
116	145.1	1.	145.1
TOTAL	150.5	3.	50.2

VESSEL - 00 CRUISE - 83002
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
1	3.2	19.	0.2
2	4.9	29.	0.2
3	17.2	26.	0.7
4	194.6	287.	0.7
5	20.5	34.	0.6
6	21.5	27.	0.8
7	13.0	17.	0.8
8	9.4	17.	0.6
9	80.7	122.	0.7
10	52.8	142.	0.4
11	126.6	137.	0.9
12	62.7	124.	0.5
13	15.4	57.	0.3
14	27.0	58.	0.5
15	34.4	83.	0.4
16	1.9	11.	0.2
17	4.5	11.	0.4
18	32.1	64.	0.5
19	47.2	74.	0.6
20	6.4	12.	0.5
21	28.8	55.	0.5
22	50.2	98.	0.5
23	18.7	64.	0.3
24	17.9	50.	0.4
25	20.6	87.	0.2
26	4.9	36.	0.1
27	108.8	278.	0.4
28	47.3	253.	0.2
29	2.3	23.	0.1
30	50.0	74.	0.7
31	57.3	78.	0.7
32	25.4	58.	0.4
33	41.2	55.	0.7
34	38.4	80.	0.5
35	36.9	75.	0.5
36	90.4	260.	0.3
37	46.5	113.	0.4
38	24.1	40.	0.6
39	89.7	255.	0.4
40	27.9	37.	0.8
41	22.0	52.	0.4
42	16.1	42.	0.4
43	18.3	157.	0.1
44	1.1	39.	0.0
45	19.5	35.	0.6
46	1.2	15.	0.1
47	0.3	21.	0.0
48	6.0	23.	0.3
49	6.8	18.	0.4
50	9.6	33.	0.3
51	2.5	13.	0.2
52	12.0	28.	0.4
53	3.8	12.	0.3

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VESSEL - 00 CRUISE - 83002
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
54	0.7	5.	0.1
55	12.0	59.	0.2
56	1.6	9.	0.2
58	1.2	25.	0.0
59	5.2	15.	0.3
60	0.3	2.	0.2
61	3.1	12.	0.3
62	0.1	1.	0.1
63	1.1	6.	0.2
64	0.0	1.	0.0
65	0.8	3.	0.3
66	0.0	1.	0.0
67	9.3	22.	0.4
69	27.9	176.	0.2
70	49.0	276.	0.2
71	2.5	30.	0.1
72	10.6	17.	0.6
74	6.8	10.	0.7
75	0.3	2.	0.2
76	2.5	3.	0.8
77	1.5	2.	0.7
79	0.8	2.	0.4
80	0.8	1.	0.8
82	8.7	15.	0.6
83	0.9	7.	0.1
84	9.5	23.	0.4
85	2.0	14.	0.1
86	0.3	8.	0.0
87	7.8	54.	0.1
88	0.3	13.	0.0
89	94.6	110.	0.9
90	1.7	7.	0.2
91	20.4	20.	1.0
92	1.5	7.	0.2
93	19.9	26.	0.8
94	9.4	31.	0.3
95	15.4	70.	0.2
96	20.4	61.	0.3
97	16.3	27.	0.6
98	13.2	24.	0.6
99	1.4	26.	0.1
100	92.4	615.	0.2
101	0.3	2.	0.2
102	0.0	2.	0.0
103	1.7	12.	0.1
104	4.2	8.	0.5
105	16.1	43.	0.4
106	21.1	75.	0.3
107	10.4	23.	0.5
108	20.2	52.	0.4
109	3.7	37.	0.1
110	16.9	49.	0.3
111	25.0	95.	0.3

-Continued-

VESSEL - 00 CRUISE - 83002
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
112	34.4	52.	0.7
113	4.4	8.	0.6
114	10.5	31.	0.3
115	54.9	219.	0.3
116	170.7	409.	0.4
117	134.9	380.	0.4
118	3.9	220.	0.0
119	4.5	128.	0.0
120	176.6	467.	0.4
121	286.6	673.	0.4
122	28.4	151.	0.2
123	219.0	519.	0.4
124	14.5	199.	0.1
125	20.7	208.	0.1
126	3.8	250.	0.0
127	4.6	12.	0.4
128	22.9	46.	0.5
129	2.1	116.	0.0
TOTAL	3513.7	10232.	0.3

VESSEL - 00 CRUISE - 83002
SPECIES - KING CRAB

HAUL	WEIGHT	NUMBER	AVG WT
4	244.8	113.	2.2
11	11.1	5.	2.2
35	11.7	6.	2.0
40	8.6	3.	2.9
70	86.6	18.	4.8
89	10.5	5.	2.1
95	13.8	4.	3.5
109	4.3	1.	4.3
112	5.4	1.	5.4
115	142.4	46.	3.1
120	158.0	100.	1.6
122	129.7	41.	3.2
123	284.9	106.	2.7
124	396.8	133.	3.0
126	16.3	5.	3.3
127	745.2	543.	1.4
128	187.0	132.	1.4
129	1.5	1.	1.5
TOTAL	2458.6	1263.	1.9

VESSEL - 00 CRUISE - 83002
SPECIES - PINK SHRIMP

HAUL	WEIGHT	NUMBER	AVG WT
115	2.5	0.	0.0
116	4.0	0.	0.0
117	7.9	0.	0.0
118	11.4	0.	0.0
120	6.9	0.	0.0
121	6.6	0.	0.0
122	26.2	0.	0.0
123	8.7	0.	0.0
124	8.6	0.	0.0
125	14.9	0.	0.0
126	23.2	0.	0.0
127	3.6	0.	0.0
128	17.2	0.	0.0
129	3.7	0.	0.0
TOTAL	145.4	0.	0.0

VESSEL - 00 CRUISE - 83002
SPECIES - SCALLOPS

HAUL	WEIGHT	NUMBER	AVG WT
4	0.4	1.	0.4
11	0.0	1.	0.0
13	1.2	7.	0.2
14	1.8	7.	0.3
16	4.3	16.	0.3
17	0.8	2.	0.4
18	1.9	15.	0.1
20	0.6	4.	0.2
22	9.4	41.	0.2
25	0.2	1.	0.2
35	0.1	1.	0.1
36	0.5	3.	0.2
37	0.3	2.	0.2
65	0.1	1.	0.1
66	3.4	15.	0.2
67	0.4	3.	0.1
74	1.7	6.	0.3
75	0.2	1.	0.2
80	0.3	4.	0.1
82	0.6	4.	0.2
105	0.3	2.	0.2
113	2.0	6.	0.3
TOTAL	30.5	143.	0.2

VESSEL - 00 CRUISE - 83002
SPECIES - DUNGENESS CRAB

HAUL	WEIGHT	NUMBER	AVG WT
10	24.3	41.	0.6
11	1.1	2.	0.6
15	73.6	123.	0.6
27	5.6	6.	0.9
33	5.7	10.	0.6
34	6.3	9.	0.7
35	0.3	1.	0.3
38	34.6	43.	0.8
39	9.3	13.	0.7
40	1.7	3.	0.6
44	1.2	1.	1.2
71	1.6	2.	0.8
88	3.0	4.	0.7
89	1.0	2.	0.5
94	12.4	26.	0.5
100	9.2	12.	0.8
104	1.8	2.	0.9
108	1.9	2.	0.9
111	2.0	2.	1.0
112	2.2	2.	1.1
120	1.1	2.	0.6
122	0.5	1.	0.5
123	1.2	1.	1.2
127	13.9	22.	0.6
128	0.5	1.	0.5
TOTAL	216.0	333.	0.6

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Table 3. Size frequencies taken during the August 1983 trawl survey in Shelikof Strait (Sh), Chignik (Ch), and Pavlof Bay (P).

Length	Flathead			Rock Sole			Yellowfin Sole			Dover Sole			Rex Sole		
Cm	Sh	Ch	P	Sh	Ch	P	Sh	Ch	P	Sh	Ch	P	Sh	Ch	P
7		8													
8	1	10	1												
9	1	14	1		1										
10		15													
11	2	29			2										
12	4	50	1		5										
13	3	101			4										
14	3	138	1		4										
15	1	172	2		3									1	
16	7	172	3		2										
17	13	176	3		9									5	
18	14	202	6		6									5	
19	8	233	11		12									4	
20	11	241	8		14								1	4	
21	16	243	7		19								1	4	
22	33	284	11		21				1	1				6	
23	55	278	6		22				1					3	
24	91	334	5		19				1	1				4	
25	110	383	10		28			3	9					3	
26	127	434	11		23			3	19	1				5	
27	150	560	16		37			5	27					14	
28	188	776	16		34			21	30	3				28	
29	177	629	21		45			20	33	2	1		1	30	
30	175	619	8		42			26	37	3			2	24	
31	123	550	4		44			26	34		1		3	21	
32	134	512	7	1	55		1	36	34	5			2	27	
33	131	404	2	1	36		1	43	10	3	2			13	
34	112	327	1		46			29	15	13	2			15	
35	118	281	4		44			25	2	19	4			15	
36	94	264	4	1	36			24	1	20	7			4	
37	59	193	2		27			11		14	2		2	1	
38	54	148	2		14			4	1	10	1				
39	33	97	1		15			4		9					
40	14	60			8			3		4					
41	12	40	2		3					1					
42	2	18			5			1		2	2				
43	1	7			2					2	1				
44	2	4			3					1					
45		1													
46		1													
47															
48															
49											1				
50											1				
51															
52															
53															
Total	2079	9008	177	3	690		2	284	255	114	25		12	236	
Mean	29.8	27.2	25.8	33.7	29.5		32.5	32.4	29.6	35.6	37.0		30.1	29.0	

-Continued-

Table 3. Size frequencies taken during the August 1983 trawl survey in Shelikof Strait (Sh), Chignik (Ch), and Pavlof Bay (P) - continued.

Length	Cod			Sablefish		
Cm	Sh	Ch	P	Sh	Ch	P
25						
26						
27			1			
28			2			
29			1			
30			2			
31			2			
32	1					
33	1		2			
34	1					
35	8		1			
36	16	4	2	1		
37	12	4		2		
38	35	4	4	8	1	
39	41	9	3	23	3	
40	32	10	8	68	6	
41	27	11	5	98	14	
42	30	15	3	152	27	
43	21	11	6	159	39	
44	23	13	6	145	45	
45	19	36	4	125	35	
46	21	51	14	66	18	
47	27	76	13	44	10	
48	49	90	12	31	7	
49	47	104	22	14	9	
50	63	104	22	14	9	
51	51	94	42	9	11	
52	57	110	22	6	21	
53	70	90	40	2	18	
54	53	105	43	3	19	
55	59	81	36	5	25	
56	45	85	45	9	37	
57	45	97	66	6	22	
58	33	71	61	7	30	
59	26	68	43	3	31	
60	31	71	53	7	20	
61	38	65	46	2	23	
62	25	56	42	5	23	
63	35	63	37	3	15	
64	32	41	29	2	8	
65	24	55	20	1	11	
66	26	40	18	1	7	
67	27	36	19		7	
68	17	38	10	1	5	
69	12	31	7		4	
70	13	31	5		1	
71	15	38	3			
72	12	20	4		2	
73	11	20	1	1	1	
74	10	15			2	
75	17	18				
76	6	9				
77	3	10				
78	6	5				
79	6	6				
80	5	2				
81	2	1				
82	2	1				
83	6					
84		2				
85	1					
86	2					
87	2	1				
88						
89		1				
90	1					
91		1				
92						
93						
94						
95						
96						
97	1					
98						
Total	1301	2020	839	1012	569	0
Mean	54.7	56.6	56.4	44.4	52.9	

-Continued-

Table 3. Size frequencies taken during the August 1983 trawl survey in Shelikof Strait (Sh), Chignik (Ch), and Pavlof Bay (P) - continued.

Length	Pollock			Rougheye Rockfish		
Cm	Sh	Ch	P	Sh	Ch	P
9		9	1			
10		1	1			
11					3	
12					1	
13			1			
14				1		
15			4			
16			8	1		
17		1	27			
18		4	79	2	1	
19		4	92	1		
20	1	2	48			
21	1		21			
22			2		3	
23						
24					4	
25		3		1	8	
26	3	4	1		13	
27	3	4	3	1	17	
28	9	4	2	4	16	
29	13	6	1	2	14	
30	8	5	10	2	14	
31	4	4	5	1	15	
32	7	9	14	2	13	
33	6	8	7	3	7	
34	8	6	3	1	6	
35	11	5	4	1	11	
36	36	12	1	2	15	
37	74	12			8	
38	151	47	1		6	
39	239	102		2	8	
40	296	157	1	1	7	
41	320	264		6	5	
42	276	406	2	4		
43	234	404	2	4	5	
44	196	429	1	2	4	
45	164	382	2		6	
46	76	348	5	1	1	
47	57	277	6			
48	32	206	5		1	
49	28	141	8	1		
50	17	102	8			
51	11	48	3			
52	13	29	7			
53	8	12	8			
54	10	11	3			
55	8	4	5	1		
56	4	6	5	1		
57	6	3	3			
58	6	3	3			
59	2	1	3			
60	4	1	2			
61	2		1			
62	4	1				
63	4				1	
64	1					
65	1					
66	1					
67						
68						
69					1	
70						
71						
72						
73					1	
Total	2355	3484	419	47	215	
Mean	41.9	44.1	26.7	35.0	32.6	

-Continued-

Table 3. Size frequencies taken during the August 1983 trawl survey in Shelikof Strait (Sh), Chignik (Ch), and Pavlof Bay (P) - continued.

Length Cm	Alaska Plaice Sh	Ch	P	Starry Flounder Sh	Ch	P
30						
31						
32						
33						
34	1					
35						
36			1			
37			1			
38						
39	3		2			
40		1	3			
41			1			
42	1					
43	4		1			
44			4			1
45	1		2			
46	1					
47	2	1	1			
48	2		1			1
49	1		1			1
50	2		1			
51			1			
52			1			
53						
54						
55		1	1			
56						1
57		1				
58		1				
59						
60						
Total	18	5	22			5
Mean	44.2	51.4	44.2			49.6

-Continued-

Table 3. Size frequencies taken during the August 1983 trawl survey in Shelikof Strait (Sh), Chignik (Ch), and Pavlof Bay (P) - continued.

Length Cm	Halibut Sh	Ch	P
28	1		
33		2	
38	1	2	1
43	4	4	3
48	6	9	6
53	22	15	9
58	39	16	6
63	32	14	10
68	21	18	9
73	13	34	14
78	5	18	2
83	17	20	3
88	14	18	2
93	8	15	2
98	7	11	1
103	4	10	
108	3	7	
113	5	3	
118	2	5	3
123	3	1	1
128	4	4	
133	2	3	
138	1	5	
143		3	1
148		1	
153	1		
158		1	
163		1	
168	2	1	
173		1	
178		1	
183			
188	1		1
193			
198		1	
203	1		
Total	219	244	74
Mean	75.4	82.9	70.5

Table 4. Total catch amounts in kg and coefficient of variation of major taxa taken in a series of side-by-side trawl hauls at increasing depth in Shelikof Strait.

Haul #	38	33	34	35	36	37	Coefficient
Depth	38	42	54	59	73	78	of Variation
Pollock	180	607	482	592	290	60	.61 [1]
Cod	33	25	55	53	39	47	.28
Sablefish	15	17	31	73	24	4	.88
Arrowtooth	118	90	219	235	204	82	.44
Flathead sole	142	612	145	109	79	23	1.16
Halibut	55	31	95	15	10	5	.98 [2]
Alaska plaice	25	19	99	9	0	3	1.44
Big Skate	56	0	127	120	17	47	.86
TOTAL	683	1450	1300	1260	767	324	

[1] Correlation between pollock catch and total catch is very high; r = .977.

[2] Coefficient of variation of halibut catch based on numbers of halibut is 0.93.

Table 5. Total catch amounts in kg and coefficient of variation of major taxa taken in a series of side-by-side trawl hauls at one depth in a uniform area west of Mitrofania Island.

Haul # Depth	107 70	108 70	109 70	110 70	111 70	112 70	Coefficient of Variation
Pollock	182	219	567	227	105	204	.64 [1]
Cod	126	69	109	69	72	38	.39
Rockfish	0	T	0	1	1	2	
Arrowtooth	109	106	93	127	86	111	.14
Flathead	226	320	219	301	296	410	.24
Rocksole	6	0	3	6	1	0	1.05
Halibut	4	32	53	9	86	5	1.04 [2]
Big Skate	0	0	16	14	4	6	1.03
TOTAL	661	768	1068	770	679	818	

[1] Correlation between pollock catch and total catch is very high; r = .95.

[2] Coefficient of variation of halibut catch based on numbers of halibut is 0.61.

Table 6. Average weight in kg of major taxa taken in a series of side-by-side trawl hauls at increasing depth in Shelikof Strait.

	Haul Number						Coefficient of Variation
	38	33	34	35	36	37	
Pollock	.57	.54	.52	.54	.52	.54	.03
Cod	2.06	1.71	1.88	2.10	1.97	2.77	.17
Sablefish	.64	.64	.67	.61	.71	.80	.10
Arrowtooth	.26	.23	.37	.34	.31	.40	.20
Flathead	.20	.28		.19	.17	.21	.20
Halibut	2.9	10.3	6.3	3.1	3.5	2.7	.63
Alaska Plaice	1.2	1.3		.9		1.4	.18
Big Skate	27.9		15.9	17.1	16.7	15.6	.28

Table 7. Average weight in kg of major taxa taken in a series of side-by-side trawl hauls at one depth in a uniform area west of Mitrofania Island.

	Haul Number						Coefficient
	107	108	109	110	111	112	of Variation
Pollock	.68	.65	.69	.66	.69	.68	.02
Cod	2.06	2.15	2.09	2.15	2.19	2.55	.08
Arrowtooth	.81	.65	.54	.72	.74	.65	.14
Flathead	.18	.17	.17	.19	.20	.18	.06
Rocksole	.45		.30	.40	.45		.18
Halibut	3.8	6.4	17.5	4.7	21.4	4.8	.78
Big Skate			16.0	14.0	3.9	5.7	.61

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