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TANNER CRAB AND BOTTOMFISH TRAWL SURVEY OF NORTHERN SHELIKOF STRAIT, UYAK AND UGANIK BAYS, AND THE CHIGNIK AREA, JULY AND AUGUST 1982

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April 1984

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Don W. Collinsworth
Commissioner

ADF&G TECHNICAL DATA REPORTS

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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 revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

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Kodiak, Alaska

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ABSTRACT

During July and August 1982 an otter trawl survey was conducted in four areas: northern Shelikof Strait, Uganik Bay, Uyak Bay, and in the Chignik shellfish management district. The primary objective was to evaluate the use of trawls in assessing commercial Tanner crab populations *(Chionoecetes bairdi)* and recruitment trends. Secondary objectives and prime concern of this report, were to determine the abundance, distribution, and size-age-sex composition of bottomfish stocks in the study areas. Average depth, cod end weight, species composition, and bottom temperatures were recorded for each of the 107 trawls successfully completed. Pacific cod *(Gadus macrocephalus)* was the principal species of investigation. Cod lengths, otoliths, incidence of skin lesions, and stomach contents were randomly sampled. Lengths were recorded for flathead sole *(Hippoglossoides elassodon)*, sablefish *(Anoplopoma fimbria)*, and halibut *(Hippoglossus stenolepis)*. Total catch rates were 1,944 kg/hr in Shelikof Strait, 2,366 kg/hr in Uganik Bay, 1,748 kg/hr in Uyak Bay, and 1,775 kg/hr in the Chignik area. Principal species caught were flathead sole, walleye pollock *(Theragra chalcogramma)*, arrowtooth flounder *(Atheresthes stomias)*, and Pacific cod. Tables and figures are presented that illustrate distribution of taxa in each study area.

KEY WORDS: groundfish assessment, otter trawl, Pacific cod, Shelikof Strait, Chignik area, distribution.

INTRODUCTION

During the summer of 1982 (19 July - 16 August) otter trawl surveys were completed by the Alaska Department of Fish and Game (ADF&G) in northern Shelikof Strait, in Uganik and Uyak Bays, and in the Chignik shellfish district. The primary objective was to test the feasibility, reproducibility, and cost effectiveness of using an otter trawl survey to estimate commercial Tanner crab *(Chionoecetes bairdi)* populations and recruitment trends. Survey areas were chosen on Tanner crab fishery grounds where prior assessment work had been either minimal or lacking or in areas where simultaneous trawl and pot survey results could be compared. The secondary objective, and prime concern of this report, was to determine the distribution, abundance, and composition of bottomfish stocks in the study areas. Pacific cod *(Gadus macrocephalus)* was the principal species investigated because of increasing commercial interest.

Starting in 1948, exploratory and resource assessment cruises had been conducted to locate and assess commercially important fish and shellfish species in various areas throughout the Gulf of Alaska by the Bureau of Commercial Fisheries (BCF), its successor the National Marine Fisheries Service (NMFS), and the International Pacific Halibut Commission (IPHC). These cruises were designed to define distributions and relative abundance of demersal fish and shellfish resources, provide estimates of standing stocks and size composition of commercially important species, define the nature of species associations by area and depth, and provide biological information such as the age compositon and growth rates of selected species (Ronholt et al. 1978). In 1980 and 1981, surveys were conducted by the ADF&G to assess Tanner crab populations and secondarily to assess distribution, abundance, and other biological information of bottomfish stocks in selected areas in the Westward management area (Owen and Blackburn 1981, 1983).

METHODS

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 dandy line cables (16 mm, 5/8 in) were 18 m (10 fm) long and the four bridle cables (13 mm, 1/2 in) were 27 m (15 fm) long. The doors were an 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.

The sample areas were in northern Shelikof Strait (Figure 1), Uganik and Uyak Bays (Figures 2 and 3), and in the Chignik shellfish management area (Figure 4). Trawling was attempted at the center of stratified systematic sampling grids but was not always possible because of bottom type and topography. Ocean stations were divided into 25 nmi^2 grids and bay stations into 6 nmi^2 grids. Trawls were made for 30 minutes at 2 knots and all catch rates were standardized to 1 hour. For each trawl, average depth in fathoms and bottom temperature to the nearest 0.1 degree celcius was recorded with an expendable bathythermograph[1]. Some stations within each study area were forfeited because of lack of time.

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[1] Technical difficulties prevented temperatures from being recorded for each trawl.

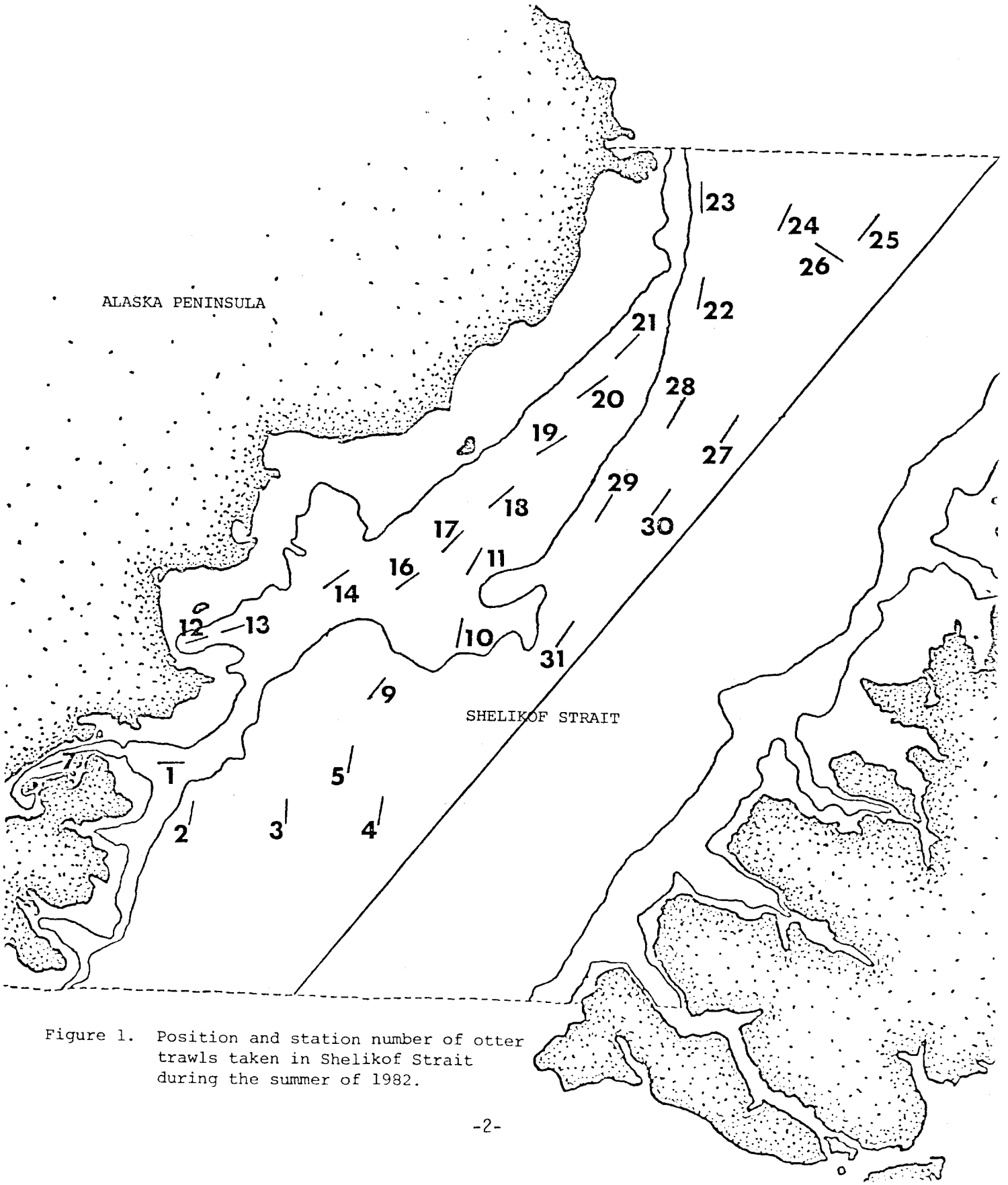

Figure 1. Position and station number of otter trawls taken in Shelikof Strait during the summer of 1982.

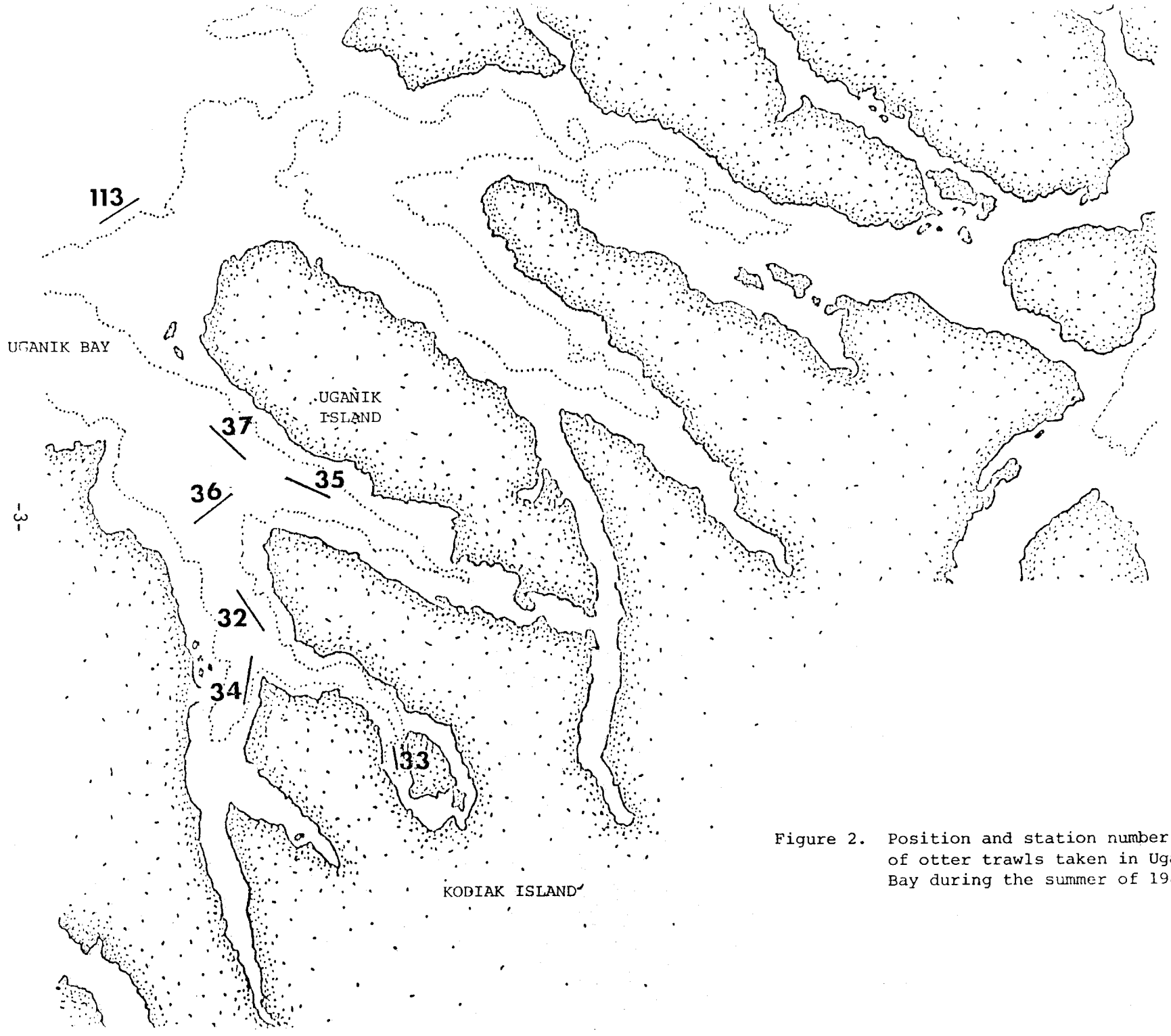

Figure 2. Position and station number of otter trawls taken in Uganik Bay during the summer of 1982.

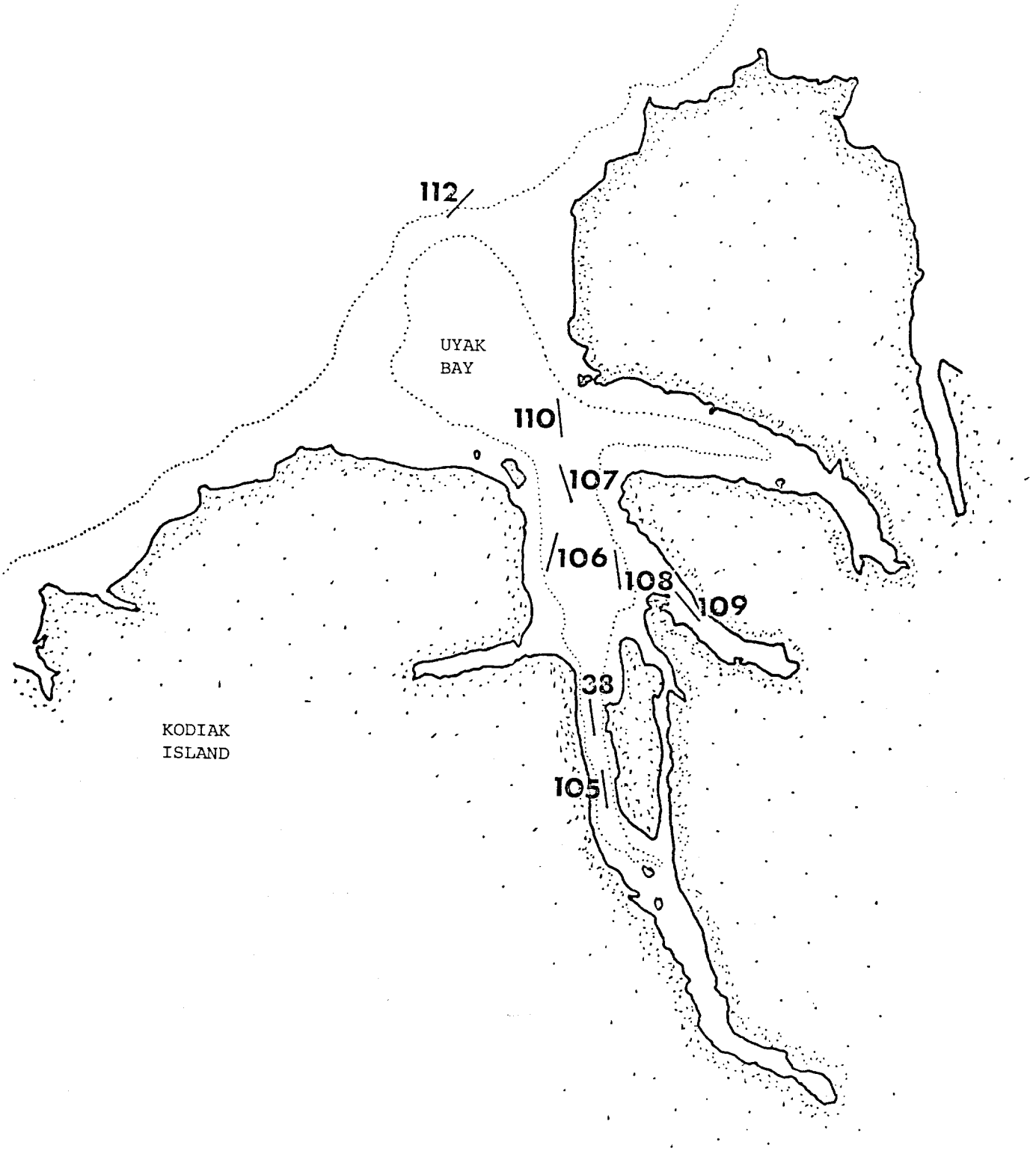

Figure 3. Position and station number of otter trawls taken in Uyak Bay during the summer of 1982.

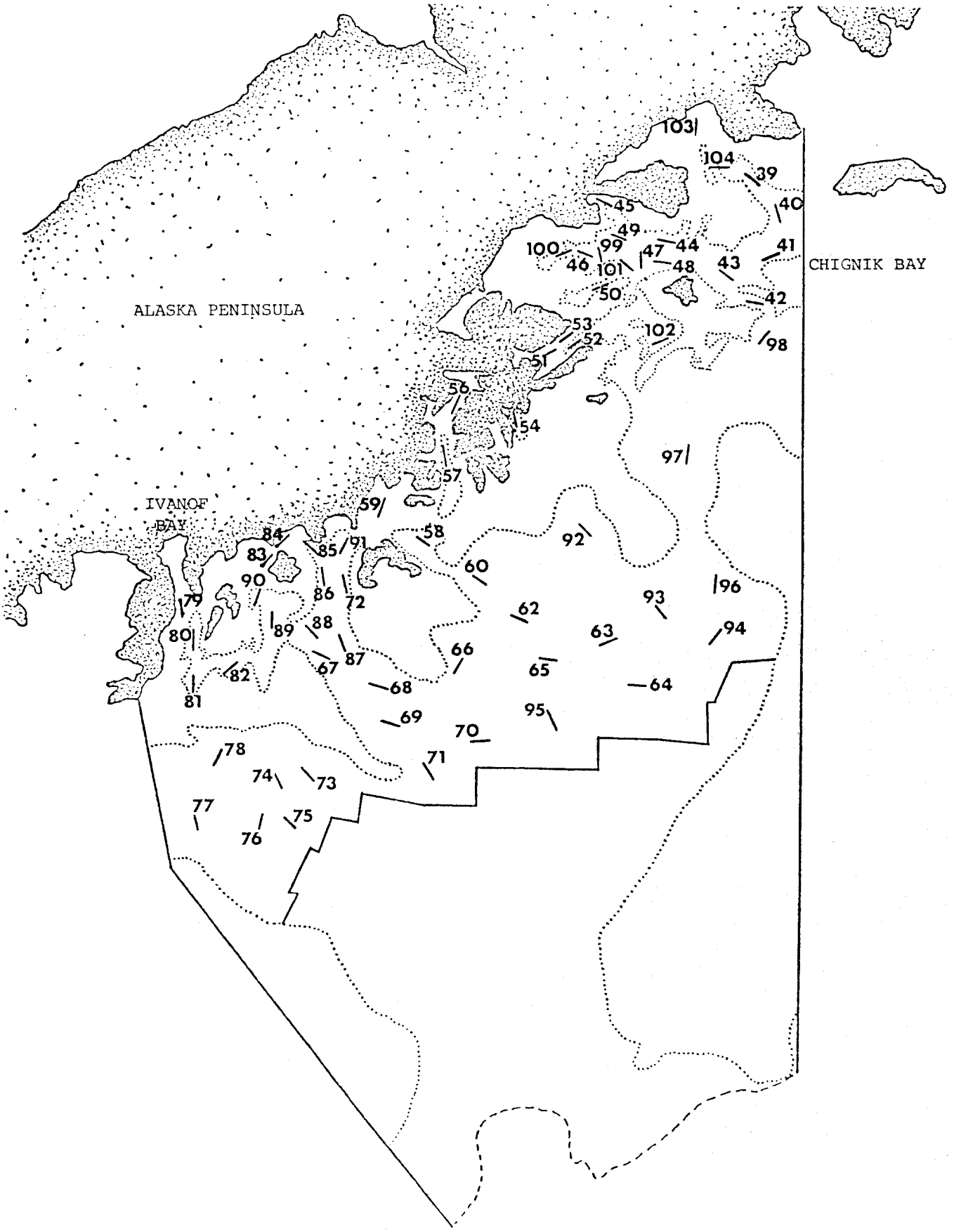

Figure 4. Position and station number of otter trawls taken in the Chignik shellfish management area during the summer of 1982.

After each tow was brought on board, the cod end was weighed, released into bins, and then sorted. The large or commercially important species groups [cod *(Gadus macrocephalus)*, pollock *(Theragra chalcogramma)*, sablefish *(Anoplopoma fimbria)*, rockfish *(Sebastes* sp.*)*, halibut *(Hippoglossus stenolepis)*, skates (Rajidae), wrymouth *(Delolepis gigantea)*. etc.] were separated from the haul and the rest of the catch was subsampled. Organisms were identified to species and weighed to the nearest 0.1 kilogram, and then measured, to the nearest centimeter. Fork lengths were used for all fish species except skates which were measured from the snout to the anterior notch of the pelvic fin.

Otoliths were collected randomly from Pacific cod, dusky rockfish *(Sebastes ciliatus)*, and rougheye rockfish *(Sebastes aleutianus)*. All measured cod were examined for parasitic skin lesions and stomachs from 109 cod were analyzed for food habits.

RESULTS AND DISCUSSION

A total of 107 trawls was successfully completed: 28 in northern Shelikof Strait, 7 in Uganik Bay, 8 in Uyak Bay, and 64 in the Chignik area (Figures 1 and 4). Tables 1 and 2 list the common and scientific names and Tables 3 through 6 list the catch by depth and survey area for all taxa caught. Table 7 presents haul by haul data and Table 8 shows catch data by species for important species.

Average catches were 1,944 kg/hr in Shelikof Strait, 2,366 kg/hr in Uganik, 1,748 kg/hr in Uyak Bays, and 1,775 kg/hr in the Chignik shellfish management district. In Shelikof Strait total catches were greater in shallow water than in deep water (Table 3). In Uyak and Uganik Bays the largest catches were between 71-90 fathoms (Tables 4 and 5), while in Chignik distributional patterns by depth were not apparent (Table 6).

Depths trawled and the number of trawls in each 18 m (fm) interval were different in each study area (Tables 3-6). The most complete bottom temperature profile was taken in the Chignik area where temperatures increased shoreward and into the heads of bays (Table 6). Temperatures recorded during the 1982 survey in Chignik were 1-2°C lower than those recorded at the same trawl location during the survey of 1981.

Length measurements were systematically taken for Pacific cod, Pacific halibut, flathead sole *(Hippoglossoides elassodon)*, and sablefish (Figure 5). In Shelikof the proportion of Pacific cod ≧ 60 cm has increased from 12% in 1980 to 34% in 1982. In Chignik the proportion increased from 22% in 1981 to 33% in 1982. The increase is due to the growth of a large 1977 year class. The proportion of small sablefish (about 30 cm, 12 in) to large sablefish (about 60 cm, 24 in) increased over that observed in surveys in 1980 and 1981 suggesting a larger 1981 year class.

Skin lesions on Pacific cod severe enough to expose underlying tissue were observed at a rate of 7.4% in Shelikof, 3.4% in Uganik Bay, 1.0% in Uyak Bay, and 0.2% in Chignik. Food habits analysis showed cod stomachs to be an estimated 35% full with the main items of prey being pollock. Tanner crab and shrimp (Pandalidae) occupying 25.6%, 20.4%, and 10.4%, respectively of the total volume.

Table 1. Invertebrate classification of species caught by otter trawl in northern Shelikof Strait, Uyak and Uganik Bays, and along the Alaska Peninsula in the Chignik shellfish management district during the summer of 1982.

Scientific Name	Common Name
Phylum Porifera	Sponges
Phylum Cnidaria	
Class Hydrozoa/Scyphozoa	Jelly fishes
Class Anthozoa	Sea anemone
Family Pennatulaceae	Sea pen
Phylum Mollusca	
Class Pelecypoda	Clams
Family Pectinidae	Scallops
Chlamys spp	
Pecten spp	
Class Gastropoda	
Subclass Prosobranchia	Snails
Family Cymatiidae	
Fusitriton oregonensis	Oregon triton
Family Buccinidae	
Beringius kennicottii	Kennicott's buccinum
Neptunea lyrata	Northwest neptune
Pyrolofuses harpa	Left-handed buccinum
Family Volutidae	
Arctomelon stearnsii	Stearns' volute
Subclass Opisthobranchia	
Order Nudibranchia	Sea slug
Class Cephalopoda	
Family unknown	Squid
Family Octopodidae	
Octopus dofleini	Octopus
Phylum Annelida	
Family Aphroditidae	Sea mouse
Family Nereidae	Polychaete worm
Phylum Arthropoda	
Class Crustacea	
Order Thoracica	Barnacles
Order Decapoda	
Family Pandalidae	Shrimp
Family Hippolytidae	
Family Crangonidae	
Family Paguridae	Hermit crab
Family Lithodidae	
Paralithodes camtschatica	Red king crab
Family Majidae	
Hyas lyrata	Lyre crab
Chionoecetes bairdi	Tanner crab
Family Canceridae	
Cancer magister	Dungeness crab

-Continued-

Table 1. Invertebrate classification of species caught by otter trawl in northern Shelikof Strait, Uyak and Uganik Bays, and along the Alaska Peninsula in the Chignik shellfish management district during the summer of 1982.

Scientific Name	Common Name
Phylum Brachiopoda	Lamp shells
Phylum Echinodermata	Starfish
Class Asteroidea	
Family Porcellanasteridae	
Ctenodiscus crispatus	Mud starfish
Class Ophiuroidea	Brittle starfish
Family Gorgonocephalidae	
Gorgonocephalus caryi	Basket starfish
Class Echinoidea	Sea Urchins
Class Holothuroidea	Sea cucumbers
Subphylum Urochordata	Sea potato

Table 2. Fish families and species caught by otter trawl in northern Shelikof Strait, in Uyak and Uganik Bays, and along the Alaska Peninsula in the Chignik shellfish management district during the summer of 1982.

Scientific Name	Common Name
Squalidae	
Squalus acanthias	Spiny dogfish shark
Rajidae	Skates
Raja binoculata	Big skate
Raja rhina	Longnose skate
Clupeidae	
Clupea harengus pallasi	Pacific herring
Osmeridae	
Mallotus villosus	Capelin
Thaleichthys pacificus	Eulachon
Gadidae	
Gadus macrocephalus	Pacific cod
Theragra chalcogramma	Walleye pollock
Zoarcidae	
Lycodes spp	Eelpouts
Trichodontidae	
Trichodon trichodon	Pacific sandfish
Bathymasteridae	
Bathymaster signatus	Searcher
Stichaeidae	Prickleback
Lumpenella longirostris	Longsnout prickleback
Lumpenus sagitta	Snake prickleback
Cryptacanthodidae	
Delolepis gigantea	Giant wrymouth
Scorpaenidae	Rockfish
Sebastes aleutianus	Rougheye rockfish
Sebastes alutus	Pacific ocean perch
Sebastes babcocki	Redbanded rockfish
Sebastes ciliatus	Dusky rockfish
Sebastes polyspinis	Northern rockfish
Anoplopomatidae	
Anoplopoma fimbria	Sablefish

-Continued-

Table 2. Fish families and species caught by otter trawl in northern Shelikof Strait, in Uyak and Uganik Bays, and along the Alaska Peninsula in the Chignik shellfish management district during the summer of 1982 (continued).

Scientific Name	Common Name
Cottidae	Sculpins
Dasycottus setiger	Spinyhead sculpin
Gymnocanthus spp	
Hemilepidotus jordani	Yellow Irish Lord
Hemitripterus bolini	Bigmouth sculpin
Myoxocephalus spp	Great sculpin
Triglops forficata	Scissortail sculpin
Agonidae	Poacher
Agonopsis emmelane	Northern spearnose poacher
Agonus acipenserinus	Sturgeon poacher
Cyclopteridae	Snailfishes
Aptocyclus ventricosus	Smooth lumpsucker
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
Microstomus pacificus	Dover sole
Parophrys vetulus	English sole
Platichthys stellatus	Starry flounder
Pleuronectes quadrituberculatus	Alaska plaice
Reinhardtius hippoglossoides	Greenland halibut

Table 3. Catch in kg/hr by species and depth for the entire catch taken by otter trawl in northern Shelikof Strait during the summer of 1982.

				Depth as the Center of Ten Fathom Intervals								
			M	82	101	119	137	155	174	192	210	229
Common Name	Rank	Mean	FM	45	55	65	75	85	95	105	115	125
Walleye pollock	1	634		3630	510	282	427	337	180	44	61	38
Flathead sole	2	308		1579	578	194	125	83	69	48	29	137
Arrowtooth flounder	3	201		92	227	192	240	296	202	71	106	84
Tanner crab male	4	179		252	500	197	197	100	93	96	110	127
Pacific cod	5	156		224	208	128	205	143	131	227	62	108
Pacific halibut	6	92		154	157	104	140	76	54	7	29	61
Big skate	7	49		304	151	9	0	.2	1	0	2	0
Tanner crab female	8	42		14	58	55	41	18	83	8	2	1
Sablefish	9	39		48	38	3	7	9	25	124	191	250
Eelpout	10	29		46	74	38	58	10	10	3	31	11
Eulachon	11	26		14	62	36	48	21	17	.4	.8	16
Great sculpin	12	24		63	T	17	72	40	0	0	0	0
Sponge	13	16		0	0	0	0	44	27	0	0	0
Alaska plaice	14	14		57	29	22	20	0	0	0	0	0
King crab female	15	12		53	19	27	0	0	0	0	0	0
Shrimp	16	12		9	52	5	8	12	6	2	4	9
Dover sole	17	10		0	0	4	6	30	12	3	0	T
King crab male	18	9		28	25	15	0	.7	2	0	0	0
Mud starfish	19	7		0	0	0	0	0	11	.4	69	48
Dungeness crab	20	6		8	9	19	0	0	4	0	0	0
Oregon triton	21	5		0	5	4	5	6	8	1	4	4
Northwest neptune	21	5		26	3	.8	5	1	4	T	4	0
Sea Anemone	23	5		4	3	.1	0	4	15	T	0	0
Weathervane scallop	24	4		35	0	.5	0	0	.9	0	0	0
Skate	25	4		0	0	0	0	15	2	T	0	0
Hermit crab	26	4		7	4	2	11	3	3	T	.8	.8
Sea Urchin	27	3		0	0	0	0	10	5	0	0	0
Spinyhead sculpin	27	3		0	20	1	T	2	3	0	0	T
Longsnout prickleback	29	2		0	0	0	0	0	0	0	58	4
Rougheye rockfish	30	2		0	3	.3	0	6	0	2	9	3
Rock sole	30	2		0	5	5	0	.2	3	0	0	0
Starfish	32	2		0	0	0	7	.6	5	0	0	0
Kennicott's buccinum	32	2		0	0	0	0	5	4	0	.8	0
Longnose skate	34	1		0	0	0	0	6	0	0	4	0
Bigmouth sculpin	35	1		0	0	3	1	1	2	0	0	0
Basket starfish	36	1		0	0	0	10	1	.4	1	0	0
Octopus	37	1		0	10	0	0	.9	0	0	0	0
Yellow Irish Lord	38	.7		0	2	0	1	.4	1	.4	0	0
Giant wrymouth	39	.6		0	0	0	6	0	0	0	5	0
Spiny dogfish shark	40	.5		5	0	0	0	0	0	0	0	0
Sea pen	40	.5		3	0	0	0	0	.7	0	T	.8
Searcher	42	.4		0	0	0	0	.6	1	0	0	0
Smooth lumpsucker	42	.4		0	0	0	0	.9	0	0	7	0
Pacific ocean perch	44	.3		0	0	0	0	1	.2	0	0	0
Lyre crab	45	.1		0	0	0	0	.7	T	0	0	0
Dusky rockfish	45	.1		0	0	0	0	0	.3	1	0	0

-Continued-

Table 3. Catch in kg/hr by species and depth for the entire catch taken by otter trawl in northern Shelikof Strait during the summer of 1982 (continued).

				Depth as the Center of Ten Fathom Intervals								
			M	82	101	119	137	155	174	192	210	229
Common Name	Rank	Mean	FM	45	55	65	75	85	95	105	115	125
Sculpin	45	.1		0	0	.6	0	0	0	0	0	0
No. spearnose poacher	45	.1		0	0	0	T	0	.6	0	0	0
Sturgeon poacher	45	.1		0	0	0	0	0	.4	0	0	0
Barnacles	45	.1		0	0	0	0	0	.6	0	0	0
Squid	45	.1		0	0	0	0	T	.4	0	0	0
Sea potatoe	45	.1		0	0	0	0	0	.3	0	0	0
Sterns' volute	45	.1		0	0	0	0	.3	.3	0	0	0
Greenland halibut	54	T		0	0	0	0	0	.2	0	0	0
Rex sole	54	T		0	0	T	0	0	0	0	0	0
Yellowfin sole	54	T		0	0	.1	0	0	0	0	0	0
Scissortail sculpin	54	T		0	0	0	0	0	T	0	0	0
Poacher	54	T		0	0	0	0	T	T	0	0	0
Snailfish	54	T		0	0	0	0	T	T	0	0	0
Clams	54	T		0	0	0	0	T	T	0	0	0
Snail	54	T		0	0	.3	T	T	T	T	T	0
Branchiopods	54	T		0	0	0	0	0	T	0	0	0
Polychaete	54	T		0	0	0	0	T	T	0	0	0
Sea mouse	54	T		0	0	0	0	T	0	0	0	0
Nudibranchs	54	T		0	0	0	0	T	T	0	0	0
Sea cucumber	54	T		0	0	0	0	T	.1	0	0	0
Number of tows		28		3	3	5	2	6	6	1	1	1
Total kg/hr		1944		6660	2791	1391	1642	1237	1067	644	798	908

Table 4. Catch in kg/hr by species and depth for the entire catch taken by otter trawl in Uganik Bay during the summer of 1982.

				Depth as the Center of Ten Fathom Intervals				
			M	101	137	155	174	192
Common Name	Rank	Mean	FM	55	75	85	95	105
Flathead sole	1	960		471	517	1569	478	372
Walleye pollock	2	451		210	799	659	28	38
Arrowtooth flounder	3	368		72	857	396	122	163
Pacific cod	4	183		55	365	236	70	16
Tanner crab male	5	116		195	T	186	54	66
Pacific halibut	6	42		33	35	38	79	28
Dover sole	7	34		0	211	0	0	0
Great sculpin	8	22		60	0	18	8	54
Yellowfin sole	9	21		228	0	13	0	0
Bigmouth sculpin	10	21		0	0	23	66	0
Plain sculpin	10	21		0	0	44	0	0
Tanner crab female	12	15		5	T	16	20	24
Giant wrymouth	13	14		0	0	13	33	17
Big skate	14	12		0	74	0	0	0
Shrimp	15	12		0	0	12	18	20
Rex sole	16	11		0	61	0	0	10
Longsnout prickleback	17	9		0	0	2	14	34
Eelpout	18	9		2	0	14	6	7
King crab male	19	7		0	0	5	12	16
King crab female	20	5		0	0	11	0	0
Eulachon	21	4		0	24	0	1	0
Rock sole	22	2		6	0	4	0	0
Spinyhead sculpin	23	2		0	0	3	0	1
Longnose skate	24	2		0	9	0	0	0
Dusky rockfish	25	1		0	9	0	0	0
Rougheye rockfish	26	.6		0	0	0	4	0
Sea anomone	27	.5		0	3	0	0	0
Pacific ocean perch	28	.4		0	2	.1	0	0
Hermit crab	29	.2		0	0	0	0	1
Oregon triton	30	T		0	T	0	0	0
Number of Tows		7		1	1	3	1	1
Total kg/hr		2366		1385	3002	3271	1062	838

Table 5. Catch in kg/hr by species and depth for the entire catch taken by otter trawl in Uyak Bay during the summer of 1982.

				Depth as the Center of Ten Fathom Intervals			
			M	82	137	155	174
Common Name	Rank	Mean	FM	45	75	85	95
Flathead sole	1	646		1,472	679	682	327
Arrowtooth flounder	2	502		125	479	436	671
Walleye pollock	3	84		37	121	10	91
Tanner crab male	4	73		66	104	137	25
Yellowfin sole	5	72		559	2	0	0
Great sculpin	6	70		125	145	18	0
Pacific cod	7	50		37	44	13	73
Pacific halibut	8	23		0	49	0	13
Tanner crab female	9	19		38	26	2	12
Alaska plaice	10	18		0	51	0	0
Eelpout	11	15		T	20	37	8
Dungeness crab	12	13		104	0	0	0
Bigmouth sculpin	13	11		0	16	0	14
Sablefish	14	11		0	0	0	28
Dover sole	15	10		0	8	0	18
Yellow Irish Lord	16	8		0	8	9	18
Longnose skate	17	7		0	12	0	8
Giant wrymouth	18	5		0	0	0	13
Rock sole	19	4		26	0	7	0
Starfish	19	4		0	12	0	T
Longsnout prickleback	21	4		0	T	0	11
Hermit crab	22	4		T	3	0	8
Shrimp	23	3		0	T	T	5
Rougheye rockfish	24	2		0	2	0	5
Big skate	25	2		0	6	0	.3
Plain sculpin	26	2		0	0	13	0
Northwest neptune	26	2		0	.6	0	4
King crab male	28	1		10	0	0	0
Sea anemones	28	1		0	T	10	T
Spinyhead sculpin	30	1		T	2	0	.6
Eulachon	30	1		0	T	0	3
Rex sole	32	.9		0	1	0	1
King crab female	32	.9		7	0	0	0
English sole	34	.8		0	2	0	0
Mud starfish	34	.8		0	0	0	2
Skate	36	.6		0	0	0	2
Sea urchin	37	.2		0	0	1	T
Oregon triton	38	.2		0	T	0	.6
Prickleback	39	.2		0	0	1	0
Sturgeon poacher	40	T		0	0	0	T
Clams	41	T		0	T	T	0
Snail	42	T		0	T	0	T
Stern's volute	43	T		0	T	0	0
Sea pen	44	T		0	T	0	0
Number of tows		8		1	3	1	3
Total kg/hr		1,748		2,956	1,808	1,424	1,397

Table 6. Catch in kg/hr by species and depth for the entire catch taken by otter trawl along the Peninsula in the Chignik shellfish management district during the summer of 1982.

				Depth as the Center of Ten Fathom Intervals										
			M	46	64	82	101	119	137	155	174	192	210	229
Common Name	Rank	Mean	FM	25	35	45	55	65	75	85	95	105	115	125
Walleye pollock	1	505		191	336	466	371	629	889	481	548	233	56	15
Flathead sole	2	428		127	519	481	380	379	712	414	389	288	497	147
Arrowtooth flounder	3	272		38	48	112	211	255	342	412	305	353	237	77
Pacific cod	4	147		4	45	87	121	185	125	110	251	164	208	46
Yellowfin sole	5	78		268	550	388	88	15	0	75	0	0	0	0
Tanner male crab	6	63		79	69	49	28	41	106	26	115	71	144	79
Pacific halibut	7	56		37	57	84	78	74	34	16	82	34	36	32
Rock sole	8	36		28	50	132	76	59	11	0	0	4	2	0
Great sculpin	9	31		127	74	21	39	31	31	4	38	36	18	0
Sablefish	10	24		0	0	0	0	0	13	36	59	49	0	0
Bigmouth sculpin	11	18		0	5	2	25	15	13	22	30	21	22	8
Eelpout	12	14		0	4	3	8	9	25	29	14	14	2	0
Big skate	13	10		0	19	48	4	21	7	0	0	0	0	0
Starfish	14	8		0	8	67	4	4	14	.8	3	.3	0	0
Yellow Irish Lord	15	7		0	2	10	11	12	3	.5	2	9	0	0
Tanner crab female	16	5		T	17	5	8	5	4	3	3	6	3	T
Shrimp	17	5		T	.7	4	2	2	4	4	5	11	21	10
Plain sculpin	17	5		0	17	0	14	7	0	4	0	0	0	0
Rex sole	19	4		0	.9	T	.6	13	3	3	.3	1	0	0
Mud starfish	20	4		0	0	0	T	.3	4	17	.8	6	0	0
Rougheye rockfish	21	3		0	0	0	2	2	7	11	2	2	4	0
Dungeness crab	22	3		0	5	12	19	.6	.2	0	0	0	0	0
Skate	23	3		0	0	0	14	.8	0	4	0	3	0	0
Oregon triton	24	3		0	0	0	.4	8	2	1	2	1	0	0
Hermit crab	25	2		0	3	.8	6	3	.3	2	.3	.5	0	T
Eulachon	26	2		0	0	T	5	.3	5	7	4	T	T	.8
Spinyhead sculpin	27	2		0	.7	7	4	2	5	.6	0	.4	.8	0
Weathervane scallop	28	2		0	0	0	.4	8	.1	0	0	0	0	0
King crab male	29	2		0	6	5	1	3	0	0	0	0	0	0
Longsnout prickleback	30	1		0	0	0	0	0	.5	.4	3	2	7	7
Alaska plaice	31	.9		46	5	0	0	0	0	0	0	0	0	0
Sea anemone	31	.9		5	2	1	.7	2	T	T	.5	T	0	0
Northwest neptune	33	.7		0	.9	0	.4	2	T	2	0	.2	0	0
Searcher	34	.6		0	0	0	4	.8	0	0	0	0	0	0
Sculpin	35	.5		0	0	6	1	T	0	0	0	0	0	0
Longnose skate	36	.4		0	0	0	0	0	0	3	0	0	0	0
Starry flounder	37	.2		0	4	0	0	0	0	0	0	0	0	0
Giant wrymouth	37	.2		0	0	0	0	0	0	1	0	0	0	0
Jellyfish	37	.2		0	0	0	2	0	0	0	0	0	0	0
Dusky rockfish	37	.2		0	0	0	0	.7	0	.1	0	0	0	0
Prickleback	37	.2		0	0	0	0	0	0	.4	0	0	4	0
King crab female	40	.1		0	.6	0	0	.4	0	0	0	0	0	0
Spiny dog shark	40	.1		0	2	.9	0	0	0	0	0	0	0	0
Dover sole	40	.1		0	0	0	0	0	0	0	T	1	0	0
Pacific sandfish	40	.1		0	0	0	.9	0	0	0	0	0	0	0
Octopus	40	.1		0	0	0	0	0	0	.4	0	0	0	0
Capelin	40	.1		0	2	0	0	0	0	T	0	0	0	0

-Continued-

Table 6. Catch in kg/hr by species and depth for the entire catch taken by otter trawl along the Peninsula in the Chignik shellfish management district during the summer of 1982 (continued).

				Depth as the Center of Ten Fathom Intervals										
			M	46	64	82	101	119	137	155	174	192	210	229
Common Name	Rank	Mean	FM	25	35	45	55	65	75	85	95	105	115	125
Nudibranchs	40	.1		0	0	0	0	.1	0	0	0	.6	0	0
Pacific herring	40	.1		0	2	0	0	0	0	0	0	0	0	0
Basket starfish	40	.1		0	0	T	0	.4	0	.3	0	0	0	0
Snail	40	.1		0	0	0	T	T	T	T	T	T	.2	0
Sea urchin	40	.1		0	0	0	T	T	.4	0	0	.2	0	0
Pacific ocean perch	42	.1		0	0	0	0	.1	0	0	.2	0	0	0
Poacher	42	.1		0	0	T	0	0	0	0	.9	0	0	0
Sea pen	42	.1		4	0	T	0	.2	T	0	0	0	0	0
Butter sole	54	T		0	0	.7	0	0	0	0	0	0	0	0
Northern rockfish	54	T		0	0	0	.1	0	0	0	0	0	0	0
Redbanded rockfish	54	T		0	0	0	0	0	0	0	0	.1	0	0
Sturgeon poacher	54	T		0	.7	T	0	0	0	0	0	0	0	0
Snake prickleback	54	T		0	0	0	T	0	0	0	0	0	0	0
Clams	54	T		0	0	0	0	0	0	T	0	T	0	0
Scallop	54	T		0	0	0	T	.1	0	0	0	0	0	0
Kennicott's volute	54	T		0	0	0	0	T	0	0	0	0	0	0
Brachiopod	54	T		0	0	0	T	T	0	0	0	0	0	0
Polychaete	54	T		0	0	0	0	0	0	0	T	0	0	0
Sea potatoe	54	T		0	0	0	.2	T	0	0	.3	0	0	0
English sole	57	T		0	.2	0	0	0	0	0	0	0	0	0
Sponge	57	T		0	0	0	T	0	0	0	0	0	0	0
Number of tows		64		1	3	4	8	15	8	9	7	6	2	1
Total kg/hr		1781		1016	1875	2106	1564	1824	2401	1726	1894	1341	1288	436

Table 7. 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.

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM GF22

HAUL NO.	12	13	14	16	17	18	19	20	21	22	23
MONTH/DAY/YEAR	7/20/82	7/22/82	7/25/82	7/25/82	7/25/82	7/25/82	7/25/82	7/25/82	7/26/82	7/26/82	7/27/82
LATITUDE START	58 24.4	58 25.3	58 26.7	58 28.0	58 29.6	58 31.3	58 33.7	58 36.3	58 42.4	58 43.3	58 47.2
LONGITUDE START	153 57.9	153 57.9	153 47.1	153 38.7	153 36.4	153 34.3	153 28.3	153 23.0	153 13.2	153 10.8	153 8.5
GEAR DEPTH	45	56	45	73	67	59	62	53	70	93	100
DURATION IN HOURS	0.50	0.40	0.40	0.50	0.50	0.40	0.40	0.50	0.50	0.50	0.50
TEMPERATURE	.	.	.	.	.	.	.	.	.	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	152.9	433.4	4356.5	150.5	312.3	91.7	65.3	137.8	34.4	3.4	2.0
PACIFIC COD	209.2	125.0	105.0	132.5	74.5	3.5	20.5	141.5	12.0	8.5	6.4
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	4.3	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	67.0	0.1	2.0	48.0	3.0	1.3	0.0	0.4	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	6.5	0.0	31.4	17.9	20.7	1.3	0.0	20.2	1.0	3.5
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	4.9	26.0	93.1	86.4	79.2	62.1	135.0	206.7	113.0	32.5	13.0
FLATHEAD SOLE	1131.6	541.8	114.2	73.6	55.8	42.3	108.9	167.4	184.3	13.0	2.0
ROCK SOLE	0.0	0.0	0.0	0.0	7.8	0.0	2.6	6.9	0.0	1.5	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	0.7	1.7
PACIFIC HALIBUT	36.7	36.7	114.8	72.0	37.2	77.8	88.1	89.6	7.5	59.6	0.0
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	11.2	6.1	37.5	32.0	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	0.6
TOTAL FLATFISH	1173.2	604.5	322.1	232.0	191.2	188.3	372.1	502.6	304.8	107.3	24.5
SKATES	272.2	86.5	0.0	0.0	0.0	0.0	0.0	110.0	0.0	4.5	3.5
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	221.5	442.9	11.0	129.0	46.0	153.0	87.0	130.5	292.5	199.0	152.0
KING CRAB	16.5	49.0	0.0	0.0	0.0	4.0	22.0	3.5	70.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	10.0	0.0	0.0	0.0	3.0	11.5	39.5	10.0	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	41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	61.7	80.2	4.2	19.2	5.0	6.2	2.6	12.5	1.5	3.0	31.0
TOTAL INVERTS	299.7	572.1	56.2	148.2	51.0	163.2	111.6	146.5	364.0	202.0	183.0
OTHER	44.4	62.8	10.0	49.3	44.7	49.9	70.0	75.4	51.8	21.6	4.1
TOTAL CATCH	2151.6	1895.1	4916.8	744.0	693.6	565.3	643.8	1115.1	787.2	349.5	227.0

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM 0F22

HAUL NO.	1	2	3	4	5	6	7	8	9	10	11
MONTH/DAY/YEAR	7/19/82	7/19/82	7/19/82	7/19/82	7/19/82	7/19/82	7/19/82	7/20/82	7/20/82	7/20/82	7/20/82
LATITUDE START	58 17.7	58 16.0	58 16.2	58 16.3	58 16.1	58 17.5	58 17.1	58 19.2	58 18.5	58 23.2	58 22.6
LONGITUDE START	154 4.6	154 0.8	153 57.2	153 41.0	153 49.0	153 50.3	154 14.9	153 53.6	153 39.5	153 31.0	153 31.8
GEAR DEPTH	45	68	100	120	121	105	63	103	95	89	80
DURATION IN HOURS	0.50	0.40	0.40	0.50	0.50	0.50	0.40	0.50	0.50	0.50	0.50
TEMPERATURE	.	.	.	.	.	.	.	.	.	.	.
PERFORMANCE	0	0	0	0	0	1	0	1	0	0	0
POLLOCK	573.0	202.1	412.7	30.6	19.0	0.0	5.5	0.0	0.0	145.0	226.0
PACIFIC COD	0.0	157.0	86.5	31.0	54.0	0.0	17.5	0.0	57.7	95.0	72.0
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	4.5	1.5	0.0	0.6	0.0	0.0	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	1.0	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	1.5	2.0	95.5	125.0	0.0	0.0	0.0	63.7	6.0	6.5
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	88.1	5.5	118.1	0.0	0.0	0.0	1.5	0.0	0.8	0.0	42.9
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	0.2	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	30.9	94.1	127.6	53.0	41.9	0.0	0.2	0.0	265.0	166.7	153.3
FLATHEAD SOLE	965.2	77.5	16.0	14.3	68.5	0.0	1.0	0.0	138.6	25.6	51.1
ROCK SOLE	0.0	0.0	8.5	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	0.0	0.0	0.0
DOVER SOLE	0.0	8.9	12.8	0.0	0.0	0.0	0.0	0.0	9.4	34.1	6.1
PACIFIC HALIBUT	64.0	42.4	0.0	14.3	30.6	0.0	53.0	0.0	12.6	3.6	68.1
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	79.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4
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	1139.4	222.9	164.9	81.6	141.0	0.0	54.4	0.0	415.6	229.6	289.0
SKATES	153.1	19.6	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.7	0.0
OTHER ELASMOBRANCHS	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	140.5	83.7	117.5	56.2	64.0	0.0	45.0	0.0	31.0	23.5	100.0
KING CRAB	96.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0
DUNGENESS CRAB	1.5	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	8.5	1.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	2.2	5.7	29.8	41.4	31.3	0.0	11.4	0.0	43.7	26.7	26.5
TOTAL INVERTS	247.7	90.6	150.0	97.6	95.3	0.0	56.4	0.0	80.2	50.2	134.5
OTHER	41.2	37.1	28.8	50.6	15.6	0.0	1.1	0.0	11.0	38.3	61.8
TOTAL CATCH	2249.0	736.3	964.0	394.8	451.4	0.0	137.0	0.0	629.7	570.6	892.7

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83

PROGRAM GF22

HAUL NO.	24	25	26	27	28	29	30	31	32	33	34
MONTH/DAY/YEAR	7/27/82	7/27/82	7/27/82	7/27/82	7/28/82	7/28/82	7/28/82	7/28/82	7/31/82	7/31/82	7/31/82
LATITUDE START	58 46.8	58 49.3	58 45.4	58 38.2	58 37.4	58 33.5	58 33.1	58 27.2	57 46.9	57 45.4	57 47.9
LONGITUDE START	153 1.0	152 54.3	152 55.2	153 2.6	153 13.0	153 18.0	153 14.7	153 21.0	153 28.8	153 20.6	153 21.1
GEAR DEPTH	81	85	83	90	98	93	90	101	90	59	85
DURATION IN HOURS	0.50	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.20	0.50
TEMPERATURE	.	.	6.2	.	4.8	4.9	.	.	4.5	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	266.1	268.5	234.4	46.7	65.3	37.9	17.8	21.9	113.5	42.0	495.6
PACIFIC COD	49.1	43.0	136.0	43.0	167.6	53.6	47.5	113.5	226.2	11.0	33.2
PACIFIC OCEAN PERCH	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
ROUGHEYE ROCKFISH	10.2	1.4	1.8	2.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	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	2.0	2.8	0.0	4.1	0.0	7.0	10.5	62.0	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	3.4	0.0	3.6	9.1	2.1	1.8	0.2	35.2	15.2	55.5
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	45.6	18.5
ARROWTOOTH FLOUNDER	157.6	155.8	132.7	149.7	122.0	95.3	96.3	35.5	140.6	14.4	226.8
FLATHEAD SOLE	69.1	49.8	70.8	15.0	19.9	14.3	11.1	24.2	970.1	94.1	687.1
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	4.8	1.2	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	2.8	11.3	22.1	10.8	2.8	5.9	5.9	1.5	0.0	0.0	0.0
PACIFIC HALIBUT	54.2	57.2	74.4	2.3	35.5	49.7	28.3	3.6	0.0	6.6	6.6
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	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	283.7	274.1	300.0	177.8	180.2	95.2	142.3	64.8	1115.5	161.9	939.0
SKATES	5.0	0.6	43.4	3.0	0.0	0.0	1.9	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	106.5	121.5	8.5	3.8	4.4	6.0	77.5	52.0	137.5	40.0	65.0
KING CRAB	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	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	1.4	17.6	134.5	44.4	45.8	100.5	26.1	2.6	4.8	0.0	6.7
TOTAL INVERTS	109.9	139.1	143.0	48.2	50.2	106.5	103.6	54.6	156.3	40.0	71.7
OTHER	9.7	9.0	15.1	13.8	10.3	21.1	7.4	1.7	12.4	0.4	8.4
TOTAL CATCH	735.7	745.2	873.7	342.2	482.7	323.4	332.8	320.3	1659.3	270.5	1603.4

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83

PROGRAM GF22

HAUL NO.	35	36	37	38	39	40	41	42	43	44	45
MONTH/DAY/YEAR	7/31/82	7/31/82	7/31/82	8/ 2/82	8/ 3/82	8/ 3/82	8/ 3/82	8/ 3/82	8/ 3/82	8/ 3/82	8/ 4/82
LATITUDE START	57 52.3	57 50.4	57 52.1	57 29.0	56 31.5	55 20.5	56 23.1	55 19.2	55 21.4	55 25.2	56 30.0
LONGITUDE START	153 27.4	153 32.7	153 30.6	153 54.6	157 40.5	157 31.1	157 32.5	157 36.3	157 43.1	157 55.0	158 7.8
GEAR DEPTH	90	107	100	82	61	83	105	105	105	110	53
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	4.6	.	.	.	5.1	.	5.	5.3	.	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	313.7	19.0	14.0	5.1	234.2	282.6	93.1	74.3	87.1	33.8	208.0
PACIFIC COD	71.2	8.2	35.0	6.4	152.7	180.3	93.0	64.2	111.0	140.5	8.0
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	1.8	0.0	0.0	17.8	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	0.4	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	1.1
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	33.1	27.8	36.9	19.8	25.4	16.3	1.1	3.6	22.0	49.9	48.0
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	243.6
ARROWTOOTH FLOUNDER	187.1	81.4	41.2	218.1	126.7	282.4	110.0	86.1	54.9	214.5	194.9
FLATHEAD SOLE	539.7	186.0	239.0	341.0	201.0	164.8	236.9	62.5	103.2	130.1	266.8
ROCK SOLE	0.0	0.0	0.0	3.7	192.3	0.0	5.6	1.8	0.0	3.5	199.6
REX SOLE	0.0	4.8	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	1.7	0.9	0.0	0.0	0.0
PACIFIC HALIBUT	47.0	13.9	39.5	0.0	70.9	8.0	0.9	0.0	8.3	50.9	49.5
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	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	773.8	286.1	339.7	562.8	590.9	455.4	355.1	151.3	166.4	399.0	951.4
SKATES	0.0	0.0	0.0	0.0	158.3	0.0	0.0	8.0	0.0	0.0	4.8
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	80.0	45.0	37.0	69.7	49.5	2.4	31.0	64.5	15.0	53.0	30.5
KING CRAB	9.0	8.0	6.0	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	0.3	0.0	0.0	0.0	0.0	0.0	49.8
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	5.8	10.9	8.9	9.5	0.9	3.8	15.8	3.7	6.4	1.4	1.2
TOTAL INVERTS	94.8	63.9	51.9	79.2	50.4	6.2	46.8	68.2	21.4	54.4	31.7
OTHER	20.1	28.9	27.3	19.0	1.2	11.5	9.6	8.6	7.6	4.9	54.6
TOTAL CATCH	1306.7	433.9	506.6	692.3	1213.1	970.1	599.1	378.2	415.5	682.5	1308.4

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM GF22

HAUL NO.	46	47	48	49	50	51	52	53	54	56	57
MONTH/DAY/YEAR	8/ 4/82	8/ 4/82	8/ 4/82	8/ 4/82	8/ 4/82	8/ 5/82	8/ 5/82	8/ 5/82	8/ 5/82	8/ 6/82	8/ 6/82
LATITUDE START	56 24.3	55 22.3	55 21.4	56 25.5	56 20.5	56 14.2	56 14.4	56 14.9	56 7.8	56 8.0	56 0.0
LONGITUDE START	158 11.4	158 0.4	157 57.2	158 4.7	158 7.0	158 15.9	158 11.0	158 13.0	158 23.7	158 37.6	158 35.0
GEAR DEPTH	79	99	115	93	65	42	54	40	42	87	95
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.40	0.50	0.50
TEMPERATURE	4.6	.	5.	.	.	6.1	.	6.2	6.4	3.8	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	363.8	20.4	19.5	217.4	491.7	249.1	172.3	241.9	2.3	218.8	183.5
PACIFIC COD	7.2	200.7	192.7	195.3	264.1	16.0	39.8	6.0	114.9	148.0	132.5
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	0.5	0.0	3.8	4.2	4.2	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	109.5	2.4	5.5	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	48.2	3.5	33.1	51.5	78.8	0.0	61.8	109.6	28.6	20.5	10.3
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	221.7	9.9	74.6	99.0	335.1	0.0
ARROWTOOTH FLOUNDER	184.0	55.1	156.4	238.3	215.8	57.5	55.2	23.9	61.8	0.0	93.9
FLATHEAD SOLE	315.7	116.0	189.5	454.1	473.0	235.4	320.2	159.2	201.0	588.1	183.5
ROCK SOLE	13.9	0.0	2.3	0.0	0.0	0.0	9.9	9.0	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	5.4	0.0	4.0	20.8	11.8	48.3	37.6	44.8	18.8	0.0	45.2
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	7.0	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	519.0	171.1	352.2	713.2	700.6	562.9	432.8	318.5	380.6	923.2	322.6
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	48.4	0.0	81.5	0.0	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0
TANNER CRAB	48.0	49.9	86.5	58.5	76.9	12.0	46.5	128.5	84.5	66.5	139.2
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0
DUNGENESS CRAB	0.6	0.0	0.0	0.0	0.0	6.0	18.5	2.0	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	6.4	1.2	7.7	3.2	15.0	8.2	4.4	6.0	27.1	7.5	2.6
TOTAL INVERTS	54.4	51.1	94.2	61.7	91.9	20.2	50.9	138.9	111.6	74.0	141.8
OTHER	11.3	3.2	6.1	6.4	3.8	6.0	20.7	5.0	0.8	5.0	2.6
TOTAL CATCH	1004.4	450.0	701.6	1249.7	1635.1	963.7	829.1	828.2	720.3	1389.5	800.3

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM GF22

HAUL NO.	58	59	60	62	63	64	65	66	67	68	69
MONTH/DAY/YEAR	8/ 6/82	8/ 6/82	8/ 7/82	8/ 7/82	8/ 7/82	8/ 7/82	8/ 7/82	8/ 7/82	8/ 8/82	8/ 8/82	8/ 8/82
LATITUDE START	55 52.0	55 52.4	55 47.9	55 44.9	55 46.0	55 34.0	55 43.3	55 41.8	55 41.8	55 40.7	55 20.5
LONGITUDE START	158 39.4	158 51.7	158 32.8	158 19.1	158 13.7	157 60.1	158 16.3	158 28.9	158 57.9	158 24.0	158 42.1
GEAR DEPTH	70	63	59	67	68	68	65	70	78	82	90
DURATION IN HOURS	0.50	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
TEMPERATURE	4.2	.	.	.	4.7	4.3	3.8	4.	4.1	.	4.2
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	591.2	153.9	0.0	156.1	654.6	382.4	0.5	766.8	155.3	260.2	550.5
PACIFIC COD	66.0	77.0	138.5	49.0	20.5	40.0	51.2	50.0	26.0	54.5	2.2
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	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	12.5	0.2
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	1.0	1.2	0.3	0.0	1.1	1.8	7.0	4.8	10.2
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	7.0	15.8	45.1	54.3	0.0	80.7	22.8	0.0	24.4	79.9	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	96.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	232.2	33.9	143.4	108.6	127.9	63.7	130.5	49.9	288.5	205.5	253.9
FLATHEAD SOLE	218.2	337.2	82.5	84.8	195.6	229.4	106.8	74.8	127.6	139.3	176.0
ROCK SOLE	0.0	129.0	78.9	8.1	4.5	7.1	0.0	6.2	0.0	0.0	0.0
REX SOLE	0.0	0.0	2.2	0.0	10.5	7.1	3.8	1.2	0.0	0.0	3.4
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	82.7	0.0	91.5	64.1	9.3	16.8	32.7	25.3	12.9	10.7	0.0
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	533.1	596.3	398.5	265.6	347.8	324.1	273.8	157.4	429.0	355.5	433.3
SKATES	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
OTHER PLASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TANNER CRAB	34.0	9.5	0.0	7.6	9.5	9.5	8.5	2.1	2.5	10.3	10.5
KING CRAB	0.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	4.0	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	3.2	0.0	0.0	14.0	29.0	10.5	3.4	2.4	0.0	0.0	0.0
OTHER INVERTS	11.3	2.3	33.7	8.1	30.0	24.0	12.3	3.6	5.5	20.6	10.2
TOTAL INVERTS	48.5	38.3	33.7	29.7	68.5	44.0	24.2	8.1	8.0	30.9	20.7
OTHER	2.8	8.5	13.6	0.0	0.0	7.1	1.9	0.0	21.1	45.7	15.2
TOTAL CATCH	1252.8	895.8	630.4	555.9	1091.7	878.3	375.5	984.1	678.8	841.3	1040.3

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM BF22

HAUL NO.	70	71	72	73	74	75	76	77	78	79	80
MONTH/DAY/YEAR	8/ 8/82	8/ 8/82	8/ 8/82	8/ 9/82	8/ 9/82	8/ 9/82	8/ 9/82	8/ 9/82	8/ 9/82	8/10/82	8/10/82
LATITUDE START	55 30.8	55 29.3	55 47.7	55 28.4	55 25.7	55 23.1	55 21.5	55 21.5	55 25.5	55 47.5	55 43.5
LONGITUDE START	158 30.0	158 52.3	158 57.4	159 5.5	159 6.6	159 8.3	159 11.2	159 20.0	159 20.5	159 29.2	159 25.4
GEAR DEPTH	90	86	75	68	90	101	100	88	70	43	55
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	4.7	4.2	4.1	4.2	4.3	4.1	.	.	.	5.3	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	68.6	307.6	533.4	77.8	184.7	53.9	24.7	130.9	446.9	2.8	32.9
PACIFIC COD	35.0	33.2	94.5	183.0	15.0	16.0	21.2	13.0	68.0	25.0	134.0
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.3	0.0	0.0	0.8	0.0	0.7	0.0	0.0
ROUGHEYE ROCKFISH	1.3	0.0	0.0	0.0	4.0	3.5	0.0	4.5	0.5	0.0	1.5
DUSKY ROCKFISH	0.3	0.0	0.0	5.0	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	0.4
SABLEFISH	13.8	68.0	0.0	1.4	13.0	146.0	205.7	53.5	3.2	1.8	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	2.2	0.0	6.6	35.8	10.4	21.6	2.7	8.5	23.7	38.3	64.2
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	416.9	41.2
ARROWTOOTH FLOUNDER	354.1	235.2	121.2	194.6	189.4	226.6	161.3	134.5	123.8	29.8	40.4
FLATHEAD SOLE	249.0	186.9	550.5	54.5	151.5	93.5	64.5	74.3	48.5	297.8	128.9
ROCK SOLE	0.0	0.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	79.4	2.7
REX SOLE	0.0	0.0	5.3	37.4	5.7	3.6	1.1	1.4	3.2	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	7.8	20.7	17.4	72.4	15.5	22.8	102.3	5.4	22.7	59.2	16.0
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	1.4	0.0
TOTAL FLATFISH	610.9	442.8	704.9	358.9	362.1	346.5	329.2	215.6	198.2	884.5	238.2
SKATES	44.9	1.8	0.0	0.0	13.9	0.0	0.0	0.0	0.0	9.5	0.0
OTHER ELASMOBRANCHS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
TANNER CRAB	8.7	12.5	215.0	0.3	3.4	1.7	9.0	9.3	4.0	1.0	8.2
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	5.5
DUNGENESS CRAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	3.3	2.4	32.9	14.0	17.9	23.7	22.7	58.7	7.6	0.0	4.3
TOTAL INVERTS	12.0	14.9	248.0	14.3	21.3	25.4	31.7	68.0	11.6	11.0	18.0
OTHER	19.9	13.3	17.1	8.5	0.9	10.0	6.5	5.0	1.1	15.9	3.2
TOTAL CATCH	808.9	881.6	1604.5	685.0	625.3	622.9	622.5	499.0	753.9	990.6	492.4

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM GF22

HAUL NO.	81	82	83	84	85	86	87	88	89	90	91
MONTH/DAY/YEAR	8/10/82	8/10/82	8/10/82	8/10/82	8/10/82	8/11/82	8/11/82	8/11/82	8/11/82	8/11/82	8/11/82
LATITUDE START	55 38.0	55 38.5	55 50.2	55 53.2	55 52.5	55 48.0	55 41.4	55 41.1	55 45.3	55 44.4	55 51.0
LONGITUDE START	159 25.1	159 20.5	159 12.4	159 8.2	159 2.2	159 0.0	158 57.1	159 1.5	159 10.0	159 15.5	158 57.1
GEAR DEPTH	61	59	39	40	52	70	80	82	59	57	73
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	10.	5.2	.	.	6.	4.2	6.7	4.2	5.	5.3	4.1
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	211.2	263.6	16.4	246.2	137.8	164.9	627.2	142.6	530.4	102.9	365.9
PACIFIC COD	21.0	7.5	47.0	14.0	45.4	31.0	11.0	14.5	90.5	6.5	114.0
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	0.7	0.0	0.0	0.0	4.2	2.2	0.0	1.8	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	3.0	0.0	0.0	0.0	7.5	0.5	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	41.4	57.2	0.0	37.9	35.4	39.4	0.0	16.8	24.0	30.9	25.2
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	12.4	5.9	434.4	315.6	7.9	0.0	0.0	0.0	24.0	10.3	0.0
ARROWTOOTH FLOUNDER	66.3	70.5	32.8	15.2	47.2	73.3	145.9	199.7	151.5	102.0	48.3
FLATHEAD SOLE	153.2	89.1	409.8	209.6	413.3	233.6	138.6	132.6	94.7	90.8	678.9
ROCK SOLE	0.0	0.0	54.1	11.4	3.9	0.0	2.9	0.0	0.0	3.0	0.0
REX SOLE	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.7	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	12.3	17.9	25.8	14.6	21.7	4.0	0.5	5.2	31.4	37.5	4.8
STARRY FLOUNDER	0.0	0.0	6.5	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	244.2	183.4	963.7	567.7	494.0	310.9	287.9	339.2	301.6	250.6	752.0
SKATES	0.0	0.0	29.0	0.0	15.3	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	31.0	2.2	0.2	0.0	16.6	80.0	7.3	7.5	4.0	32.0	43.5
KING CRAB	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	0.0	1.8	3.0	3.8	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	1.6	0.0	0.0
OTHER INVERTS	6.6	11.9	11.5	3.9	0.0	14.6	23.4	0.0	0.0	3.6	1.7
TOTAL INVERTS	37.6	14.1	16.7	3.9	16.6	94.6	30.7	7.5	5.6	35.6	45.2
OTHER	6.6	3.0	8.4	5.5	25.4	21.1	24.8	53.7	13.9	4.8	24.2
TOTAL CATCH	562.7	528.8	1084.2	875.2	774.1	664.1	989.1	576.6	966.0	431.3	1327.2

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83 PROGRAM GF22

HAUL NO.	92	93	94	95	96	97	98	99	100	101	102
MONTH/DAY/YEAR	8/12/82	8/12/82	8/12/82	8/12/82	8/12/82	8/13/82	8/13/82	8/13/82	8/13/82	8/14/82	8/14/82
LATITUDE START	55 55.4	55 44.5	55 43.4	55 32.4	55 50.0	56 1.7	56 16.0	56 23.1	56 24.8	56 23.9	56 15.0
LONGITUDE START	158 9.5	157 56.5	157 45.2	158 9.0	157 44.2	157 53.5	157 35.0	158 6.9	158 13.9	158 3.9	157 55.0
GEAR DEPTH	98	67	72	78	70	106	100	95	75	112	130
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	5.	4.7	.	4.3	5.	4.9	5.5	4.5	4.4	.	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	393.6	1.4	411.0	399.5	386.8	357.7	352.4	724.4	700.2	36.4	7.7
PACIFIC COD	27.0	180.8	54.5	91.5	130.0	67.0	176.0	118.6	99.4	15.0	23.0
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
POUGHEYE ROCKFISH	0.0	0.0	0.0	18.5	0.0	1.0	0.0	2.0	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	28.5	4.5	32.5	0.0	0.0	0.0	0.3	0.6	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	23.7	38.1	0.0	3.7	32.2	103.3	18.8	134.1	93.9	8.1	3.9
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	125.2	200.6	225.6	264.7	161.2	365.6	152.7	242.2	88.0	80.9	33.7
FLATHEAD SOLE	52.2	159.8	370.7	168.5	274.0	238.4	129.2	363.3	479.2	307.5	73.6
ROCK SOLE	0.0	9.5	0.0	0.0	83.8	0.0	0.0	0.0	15.6	0.0	0.0
REX SOLE	0.0	23.1	4.8	1.2	12.9	0.0	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
PACIFIC HALIBUT	25.5	104.6	70.0	18.8	21.8	18.4	0.0	92.2	6.6	32.4	16.1
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	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	202.9	497.6	671.1	453.2	553.7	624.0	281.9	697.7	589.4	420.8	128.4
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	47.5	7.0	4.0	15.0	13.7	67.5	47.0	61.0	103.0	59.6	39.5
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	0.4	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER INVERTS	0.9	4.1	19.3	6.2	8.0	7.9	4.7	6.5	11.8	14.6	5.0
TOTAL INVERTS	48.4	11.1	23.3	21.5	21.7	75.4	51.7	67.5	114.8	74.2	44.5
OTHER	10.4	12.9	8.1	7.4	4.8	7.9	23.5	10.8	10.2	7.3	3.9
TOTAL CATCH	706.0	770.4	1172.5	1027.8	1129.2	1236.3	904.3	1755.4	1608.5	561.2	211.4

Table 7. Haul data (continued).

FISHING LOG FOR CRUISE 334 RUN DATE 9/15/83

PROGRAM GF22

HAUL NO.	103	104	105	106	107	108	109	110	112	113	115
MONTH/DAY/YEAR	8/14/82	8/14/82	8/15/82	8/15/82	8/15/82	8/15/82	8/16/82	8/16/82	8/16/82	8/16/82	0/ 0/ 0
LATITUDE START	56 38.1	56-33.0	57 27.2	57 35.5	57 39.0	57 34.6	57 34.5	57 39.1	57 48.6	57 58.4	0 0.0
LONGITUDE START	157 46.5	157 42.0	153 53.0	153 56.4	153 57.0	153 53.1	153 49.3	153 57.0	154 4.2	153 38.6	0 0.0
GEAR DEPTH	23	48	78	72	100	75	44	100	100	79	0
DURATION IN HOURS	0.50	0.50	0.50	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.00
TEMPERATURE	7.	5.8	5.7	5.6	.	5.6	6.1	5.2	4.8	4.8	.
PERFORMANCE	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	95.3	631.1	11.1	92.2	41.3	65.9	18.4	57.4	37.5	399.4	0.0
PACIFIC COD	1.8	9.0	13.4	32.4	28.3	15.5	18.6	34.7	46.7	182.3	0.0
PACIFIC OCEAN PERCH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
ROUGHEYE ROCKFISH	0.0	0.0	0.0	0.8	0.6	1.5	0.0	2.3	4.2	0.0	0.0
DUSKY ROCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	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	22.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	41.2	0.0	0.0
ATKA MACKERFL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	63.7	19.8	89.0	34.0	7.9	106.1	62.6	40.5	0.9	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	134.2	0.0	0.0	2.3	0.0	0.0	279.6	0.0	0.0	0.0	0.0
ARROWTOOTH FLOUNDER	18.8	63.1	294.7	105.8	324.5	269.9	62.6	97.9	584.4	428.3	0.0
FLATHEAD SOLE	63.7	180.3	305.8	155.0	226.2	490.1	735.9	214.1	50.6	258.4	0.0
ROCK SOLE	14.1	171.3	0.0	0.0	0.0	0.0	12.9	0.0	0.0	0.0	0.0
REX SOLE	0.0	0.0	0.0	0.0	2.0	1.6	0.0	0.0	0.0	30.6	0.0
DOVER SOLE	0.0	0.0	0.0	11.3	0.0	0.0	0.0	0.0	27.0	105.4	0.0
PACIFIC HALIBUT	18.5	33.7	17.8	23.3	14.8	27.5	0.0	4.4	0.0	17.4	0.0
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	23.0	0.0	4.4	42.3	0.0	24.1	0.0	0.0	0.0	0.0	0.0
OTHER FLATFISH	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL FLATFISH	272.3	448.4	622.7	343.0	567.5	813.2	1091.0	316.4	662.0	840.1	0.0
SKATES	0.0	0.0	7.5	7.8	1.8	9.5	0.0	12.9	0.0	41.6	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	39.5	4.0	103.0	26.5	26.5	51.5	52.2	26.5	3.2	0.0	0.0
KING CRAB	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0
DUNGENESS CRAB	0.0	1.8	0.0	0.0	0.0	0.0	51.8	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	4.7	102.8	16.7	4.6	14.7	0.0	0.0	13.1	1.8	1.7	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	499.3	1228.5	873.4	554.9	716.2	1068.0	1303.3	527.7	797.5	1482.3	0.0

Table 8. Catch amounts of important species in kilograms and numbers of animals caught in a trawl survey of northern Shelikof Strait, Uyak and Uganik Bays, and in the Chignik area in the summer of 1982.

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - POLLOCK

HAUL	WEIGHT	NUMBER	AVG WT
1	573.0	837.	0.7
2	202.1	238.	0.8
3	412.7	745.	0.6
4	30.6	37.	0.8
5	19.0	23.	0.8
7	5.5	7.	0.8
10	145.0	230.	0.6
11	276.0	480.	0.6
12	152.9	197.	0.8
13	433.4	368.	1.2
14	4356.5	8967.	0.5
16	150.5	134.	1.1
17	312.3	647.	0.5
18	91.7	127.	0.7
19	65.3	87.	0.7
20	137.8	207.	0.7
21	34.4	44.	0.8
22	3.4	8.	0.4
23	2.0	9.	0.2
24	266.1	491.	0.5
25	268.5	487.	0.6
26	234.4	416.	0.6
27	46.7	54.	0.9
28	65.3	85.	0.8
29	37.9	46.	0.8
30	17.8	22.	0.8
31	21.9	23.	1.0
32	113.5	80.	1.4
33	42.0	120.	0.3
34	495.6	806.	0.6
35	313.7	547.	0.6
36	19.0	41.	0.5
37	14.0	13.	1.1
38	5.1	7.	0.7
39	234.2	253.	0.9
40	282.6	460.	0.6
41	93.1	118.	0.8
42	74.3	104.	0.7
43	87.1	108.	0.8
44	33.8	35.	1.0
45	208.0	297.	0.7
46	363.8	417.	0.9
47	20.4	20.	1.0
48	19.5	45.	0.4
49	217.4	225.	1.0
50	491.7	657.	0.7
51	249.1	6214.	0.0
52	172.3	320.	0.5
53	241.9	5724.	0.0
54	2.3	23.	0.1
56	218.8	383.	0.6
57	183.5	230.	0.8
58	591.2	1647.	0.4

VESSEL - 00 CRUISE 334
SPECIES - POLLOCK

HAUL	WEIGHT	NUMBER	AVG WT
59	153.9	453.	0.3
62	156.1	305.	0.5
63	654.6	1279.	0.5
64	382.4	694.	0.6
65	0.5	15.	0.0
66	766.8	1259.	0.6
67	155.3	266.	0.6
68	268.2	354.	0.8
69	558.5	829.	0.7
70	68.6	89.	0.8
71	307.6	470.	0.7
72	533.4	896.	0.6
73	77.8	257.	0.3
74	184.7	246.	0.7
75	53.9	65.	0.8
76	24.7	27.	0.9
77	130.9	184.	0.7
78	446.9	969.	0.5
79	2.8	42.	0.1
80	32.9	38.	0.9
81	211.2	571.	0.4
82	263.6	423.	0.6
83	16.4	16.	1.0
84	246.2	631.	0.4
85	137.8	128.	1.1
86	164.9	202.	0.8
87	627.2	948.	0.7
88	142.6	168.	0.9
89	530.4	695.	0.8
90	102.9	115.	0.9
91	365.9	518.	0.7
92	393.6	569.	0.7
93	1.4	42.	0.0
94	411.0	774.	0.5
95	399.5	512.	0.8
96	386.8	1434.	0.3
97	357.7	556.	0.6
98	352.4	552.	0.6
99	724.4	1146.	0.6
100	700.2	1193.	0.6
101	36.4	32.	1.1
102	7.7	4.	2.0
103	95.3	121.	0.8
104	631.1	1136.	0.6
105	11.1	22.	0.5
106	92.2	204.	0.5
107	41.3	79.	0.5
108	65.9	145.	0.5
109	18.4	55.	0.3
110	57.4	99.	0.6
112	37.5	61.	0.6
113	399.4	578.	0.7
TOTAL	26140.9	56380.	0.5

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - PACIFIC COD

HAUL	WEIGHT	NUMBER	AVG WT
2	157.0	31.	5.1
3	86.5	29.	3.0
4	31.0	15.	2.1
5	54.0	27.	2.0
7	17.5	8.	2.2
9	57.7	25.	2.3
10	95.0	82.	1.2
11	72.0	26.	2.8
12	209.2	94.	2.2
13	125.0	59.	2.1
14	105.0	38.	2.8
16	132.5	70.	1.9
17	74.5	29.	2.6
18	3.5	5.	0.7
19	20.5	8.	2.6
20	141.5	44.	3.2
21	12.0	5.	2.4
22	8.5	6.	1.4
23	6.4	6.	1.1
24	49.1	22.	2.2
25	43.0	19.	2.3
26	136.0	89.	1.5
27	43.0	24.	1.8
28	167.6	100.	1.7
29	53.6	38.	1.4
30	47.5	28.	1.7
31	113.5	48.	2.4
32	226.2	74.	3.1
33	11.0	4.	2.8
34	33.2	10.	3.3
35	71.2	29.	2.5
36	8.2	2.	4.1
37	35.0	17.	2.1
38	6.4	6.	1.1
39	152.7	73.	2.1
40	180.3	81.	2.2
41	93.0	47.	2.0
42	64.2	32.	2.0
43	111.0	49.	2.3
44	140.5	65.	2.2
45	8.0	5.	1.6
46	7.2	4.	1.8
47	200.7	82.	2.4
48	192.7	96.	2.0
49	195.3	90.	2.2
50	264.1	103.	2.6
51	16.0	5.	3.2
52	39.8	17.	2.3
53	6.0	4.	1.5
54	114.9	50.	2.3
56	148.0	63.	2.3
57	139.5	68.	2.1
58	66.0	24.	2.8

VESSEL - 00 CRUISE - 334
SPECIES - PACIFIC COD

HAUL	WEIGHT	NUMBER	AVG WT
59	77.0	63.	1.2
60	138.5	154.	0.9
62	49.0	33.	1.5
63	20.5	14.	1.5
64	40.0	30.	1.3
65	51.2	36.	1.4
66	50.0	38.	1.3
67	26.0	13.	2.0
68	54.5	26.	2.1
69	2.2	1.	2.2
70	35.0	16.	2.2
71	33.2	10.	3.3
72	94.5	74.	1.3
73	183.0	157.	1.2
74	15.0	4.	3.7
75	16.0	7.	2.3
76	21.2	8.	2.7
77	13.0	7.	1.9
78	68.0	22.	3.1
79	25.0	14.	1.8
80	134.0	68.	2.0
81	21.0	11.	1.9
82	7.5	3.	2.5
83	47.0	23.	2.0
84	14.0	11.	1.3
85	45.4	22.	2.1
86	31.0	16.	1.9
87	11.0	8.	1.4
88	14.5	6.	2.4
89	90.5	44.	2.1
90	6.5	3.	2.2
91	114.0	57.	2.0
92	27.0	13.	2.1
93	180.8	104.	1.7
94	54.5	33.	1.7
95	91.5	38.	2.4
96	130.0	85.	1.5
97	67.0	42.	1.6
98	176.0	107.	1.6
99	118.6	47.	2.5
100	99.4	52.	1.9
101	15.0	7.	2.1
102	23.0	12.	1.9
103	1.8	1.	1.8
104	9.0	4.	2.3
105	13.4	6.	2.2
106	32.4	16.	2.0
107	28.3	13.	2.2
108	15.5	4.	3.9
109	18.6	8.	2.3
110	34.7	13.	2.7
112	46.7	24.	1.9
113	182.3	72.	2.5
TOTAL	7508.4	3775.	2.0

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - ROUGHEYE ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
4	4.5	12.	0.4
5	1.5	2.	0.7
7	0.6	1.	0.6
10	0.8	2.	0.4
13	4.3	22.	0.2
24	10.2	9.	1.1
25	1.4	3.	0.5
26	1.8	9.	0.2
27	2.0	2.	1.0
31	1.0	1.	1.0
37	1.8	1.	1.8
40	17.8	1.	17.8
46	0.5	1.	0.5
48	3.8	7.	0.5
49	4.2	7.	0.6
50	4.2	8.	0.5
58	4.2	11.	0.4
67	8.0	16.	0.5
68	19.5	22.	0.9
69	0.2	1.	0.2
70	1.3	3.	0.4
74	4.0	2.	2.0
75	3.5	3.	1.2
77	4.5	4.	1.1
78	0.5	1.	0.5
80	1.5	3.	0.5
81	0.7	1.	0.7
85	4.2	10.	0.4
86	2.2	4.	0.6
88	1.8	6.	0.3
95	18.5	28.	0.7
97	1.0	2.	0.5
99	2.0	4.	0.5
106	0.8	1.	0.8
107	0.6	1.	0.6
108	1.5	1.	1.5
110	2.3	4.	0.6
112	4.2	5.	0.8
TOTAL	147.4	221.	0.7

VESSEL - 00 CRUISE - 334
SPECIES - PACIFIC OCEAN PERCH

HAUL	WEIGHT	NUMBER	AVG WT
9	0.7	1.	0.7
25	3.3	3.	1.1
32	0.2	1.	0.2
73	0.3	2.	0.2
76	0.8	1.	0.8
78	0.7	2.	0.3
113	1.0	2.	0.5
TOTAL	7.0	12.	0.6

VESSEL - 00 CRUISE - 334
SPECIES - DUSKY ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
3	1.0	2.	0.5
31	0.6	1.	0.6
70	0.3	1.	0.3
73	5.0	15.	0.3
113	4.3	4.	1.1
TOTAL	11.2	23.	0.5

VESSEL - 00 CRUISE - 334
SPECIES - OTHER ROCKFISH

HAUL	WEIGHT	NUMBER	AVG WT
41	0.4	1.	0.4
80	0.4	1.	0.4
TOTAL	0.8	2.	0.4

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - SABLEFISH

HAUL	WEIGHT	NUMBER	AVG WT
2	1.5	2.	0.7
3	2.0	2.	1.0
4	95.5	50.	1.9
5	125.0	56.	2.2
9	63.7	57.	1.1
10	6.0	6.	1.0
11	6.5	7.	0.9
14	67.0	176.	0.4
16	0.1	2.	0.1
17	2.0	3.	0.7
18	48.0	17.	2.8
19	3.0	4.	0.7
20	1.3	2.	0.6
22	0.4	1.	0.4
24	2.0	2.	1.0
25	2.8	4.	0.7
27	4.1	3.	1.4
29	7.0	6.	1.2
30	10.5	7.	1.5
31	62.0	58.	1.1
45	1.1	4.	0.3
51	109.5	370.	0.3
52	2.4	8.	0.3
53	5.5	21.	0.3
60	1.0	2.	0.5
62	1.2	2.	0.6
63	0.3	1.	0.3
65	1.1	1.	1.1
66	1.8	2.	0.9
67	7.0	6.	1.2
68	4.8	3.	1.6
69	10.2	10.	1.0
70	13.8	11.	1.3
71	68.0	63.	1.1
73	1.4	2.	0.7
74	13.0	10.	1.3
75	146.0	98.	1.5
76	205.7	127.	1.6
77	53.5	48.	1.1
78	3.2	7.	0.5
79	1.8	7.	0.3
83	3.0	10.	0.3
87	7.5	6.	1.2
88	0.5	1.	0.5
93	28.5	39.	0.7
94	4.5	5.	0.9
95	32.5	22.	1.5
99	0.3	1.	0.3
100	0.6	2.	0.3
103	22.0	68.	0.3
104	8.0	25.	0.3
112	41.2	20.	2.1
TOTAL	1311.3	1467.	0.9

VESSEL - 00 CRUISE - 334
SPECIES - SCULPINS

HAUL	WEIGHT	NUMBER	AVG WT
1	88.1	22.	4.0
2	5.5	11.	0.5
3	118.1	43.	2.8
7	1.5	4.	0.4
9	0.8	8.	0.1
11	42.9	10.	4.2
13	6.5	22.	0.3
16	31.4	19.	1.6
17	17.9	17.	1.0
18	20.7	14.	1.5
19	1.3	3.	0.4
21	20.2	15.	1.4
22	1.0	4.	0.2
23	3.5	2.	1.8
25	3.4	6.	0.6
27	3.6	24.	0.2
28	9.1	46.	0.2
29	2.1	21.	0.1
30	1.8	11.	0.2
31	0.2	2.	0.1
32	35.2	32.	1.1
33	15.2	8.	1.9
34	55.5	34.	1.6
35	33.1	43.	0.8
36	27.8	21.	1.3
37	36.9	25.	1.5
38	19.8	22.	0.9
39	25.4	26.	1.0
40	16.3	10.	1.7
41	1.1	6.	0.2
42	3.6	9.	0.4
43	22.0	11.	2.0
44	49.9	21.	2.4
45	48.8	60.	0.8
46	48.2	183.	0.3
47	3.5	4.	0.9
48	33.1	39.	0.9
49	51.5	48.	1.1
50	78.8	75.	1.1
52	61.8	77.	0.8
53	109.6	110.	1.0
54	28.6	46.	0.6
56	20.5	55.	0.4
57	10.3	17.	0.6
58	7.0	14.	0.5
59	15.8	56.	0.3
60	45.1	179.	0.3
62	54.3	34.	1.6
64	80.7	71.	1.1
65	22.8	19.	1.2
67	24.4	33.	0.7
68	79.9	56.	1.4
70	2.2	11.	0.2

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - SCULPINS

HAUL	WEIGHT	NUMBER	AVG WT
72	6.6	26.	0.3
73	35.8	23.	1.5
74	10.4	9.	1.1
75	21.6	7.	3.0
76	2.7	5.	0.5
77	8.5	14.	0.6
78	23.7	11.	2.2
79	38.3	99.	0.4
80	64.2	88.	0.7
81	41.4	58.	0.7
82	57.2	30.	1.9
84	37.9	38.	1.0
85	35.4	59.	0.6
86	39.4	27.	1.4
88	16.8	17.	1.0
89	24.0	25.	1.0
90	30.9	42.	0.7
91	25.9	35.	0.8
92	23.7	9.	2.5
93	38.1	20.	1.9
95	3.7	25.	0.2
96	32.2	161.	0.2
97	103.3	127.	0.8
98	18.8	23.	0.8
99	134.1	43.	3.1
100	93.9	98.	1.0
101	8.1	16.	0.5
102	3.9	4.	1.0
103	63.7	101.	0.6
104	19.8	54.	0.4
105	89.0	89.	1.0
106	34.0	68.	0.5
107	7.9	20.	0.4
108	106.1	96.	1.1
109	62.6	55.	1.1
110	40.5	46.	0.9
112	0.9	18.	0.0
TOTAL	2953.3	3446.	0.9

VESSEL - 00 CRUISE - 334
SPECIES - YELLOWFIN SOLE

HAUL	WEIGHT	NUMBER	AVG WT
7	0.2	1.	0.2
33	45.6	200.	0.2
34	18.5	50.	0.4
45	243.6	713.	0.3
51	221.7	643.	0.3
52	9.9	22.	0.4
53	74.6	149.	0.5
54	99.0	217.	0.5
56	335.1	1039.	0.3
59	96.2	226.	0.4
79	416.9	1390.	0.3
80	41.2	110.	0.4
81	12.4	25.	0.5
82	5.9	15.	0.4
83	434.4	1098.	0.4
84	315.6	770.	0.4
85	7.9	20.	0.4
89	24.0	51.	0.5
90	10.3	18.	0.6
103	134.2	939.	0.1
106	2.3	8.	0.3
109	279.6	1012.	0.3
TOTAL	2829.1	8716.	0.3

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - ARROWTOOTH FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
1	30.9	44.	0.7
2	94.1	216.	0.4
3	127.6	234.	0.5
4	53.0	61.	0.9
5	41.9	88.	0.5
7	0.2	1.	0.2
9	265.0	452.	0.6
10	166.3	443.	0.4
11	153.3	552.	0.3
12	4.9	25.	0.2
13	26.0	195.	0.1
14	93.1	635.	0.1
16	86.4	269.	0.3
17	79.2	262.	0.3
18	62.1	188.	0.3
19	135.0	375.	0.4
20	206.7	492.	0.4
21	113.0	265.	0.4
22	32.5	90.	0.4
23	13.0	36.	0.4
24	157.6	456.	0.3
25	155.8	436.	0.4
26	132.7	495.	0.3
27	149.7	485.	0.3
28	122.0	289.	0.4
29	25.3	67.	0.4
30	96.3	178.	0.5
31	35.5	74.	0.5
32	140.6	336.	0.4
33	14.4	32.	0.4
34	226.8	622.	0.4
35	187.1	518.	0.4
36	81.4	251.	0.3
37	61.2	210.	0.3
38	218.1	520.	0.4
39	126.7	481.	0.3
40	282.6	718.	0.4
41	110.0	305.	0.4
42	86.1	213.	0.4
43	54.9	145.	0.4
44	214.5	549.	0.4
45	194.9	903.	0.2
46	184.0	770.	0.2
47	55.1	150.	0.4
48	156.4	421.	0.4
49	238.3	644.	0.4
50	215.8	901.	0.2
51	57.5	178.	0.3
52	55.2	298.	0.2
53	23.9	249.	0.1
54	61.8	155.	0.4
57	93.9	179.	0.5
58	232.2	310.	0.7

VESSEL - 00 CRUISE - 334
SPECIES - ARROWTOOTH FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
59	33.9	90.	0.4
60	143.4	609.	0.2
62	108.6	326.	0.3
63	127.9	361.	0.4
64	63.7	184.	0.3
65	130.5	261.	0.5
66	49.9	599.	0.1
67	288.5	499.	0.6
68	205.5	422.	0.5
69	253.9	559.	0.5
70	354.1	476.	0.7
71	235.2	458.	0.5
72	121.2	356.	0.3
73	194.6	451.	0.4
74	189.4	445.	0.4
75	226.6	281.	0.8
76	161.3	199.	0.8
77	134.5	304.	0.4
78	123.8	344.	0.4
79	29.8	227.	0.1
80	49.4	55.	0.9
81	66.3	83.	0.8
82	70.5	186.	0.4
83	32.8	115.	0.3
84	15.2	101.	0.2
85	47.2	108.	0.4
86	73.3	156.	0.5
87	145.9	350.	0.4
88	199.7	310.	0.6
89	151.5	455.	0.3
90	109.0	266.	0.4
91	48.3	242.	0.2
92	125.2	199.	0.6
93	200.6	578.	0.3
94	225.6	532.	0.4
95	264.7	300.	0.9
96	161.2	451.	0.4
97	365.6	874.	0.4
98	152.7	399.	0.4
99	242.2	757.	0.3
100	88.0	352.	0.2
101	80.9	218.	0.4
102	38.7	101.	0.4
103	18.8	195.	0.1
104	63.1	397.	0.2
105	294.7	912.	0.3
106	105.8	401.	0.3
107	324.5	777.	0.4
108	269.9	964.	0.3
109	62.6	203.	0.3
110	97.9	214.	0.5
112	584.4	558.	1.0
113	428.3	986.	0.4
TOTAL	14413.3	37706.	0.4

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
1	965.2	3328.	0.3
2	77.5	476.	0.2
3	16.0	64.	0.2
4	14.3	131.	0.1
5	68.5	240.	0.3
7	1.0	3.	0.3
9	128.6	662.	0.2
10	25.6	111.	0.2
11	51.1	266.	0.2
12	1131.6	4019.	0.3
13	541.8	2341.	0.2
14	114.2	888.	0.1
16	73.6	403.	0.2
17	55.8	346.	0.2
18	42.3	207.	0.2
19	108.9	488.	0.2
20	167.4	916.	0.2
21	184.3	983.	0.2
22	13.0	61.	0.2
23	9.2	33.	0.3
24	69.1	346.	0.2
25	49.8	249.	0.2
26	70.8	354.	0.2
27	15.0	66.	0.2
28	19.9	85.	0.2
29	14.3	50.	0.3
30	11.1	37.	0.3
31	24.2	100.	0.2
32	970.1	3532.	0.3
33	94.1	164.	0.6
34	687.1	1932.	0.4
35	539.7	2648.	0.2
36	186.0	794.	0.2
37	239.0	880.	0.3
38	341.0	1098.	0.3
39	201.0	1040.	0.2
40	164.8	699.	0.2
41	236.9	615.	0.4
42	62.5	204.	0.3
43	103.2	339.	0.3
44	130.1	387.	0.3
45	263.8	2828.	0.1
46	315.7	1605.	0.2
47	116.0	354.	0.3
48	189.5	632.	0.3
49	454.1	1417.	0.3
50	473.0	1971.	0.2
51	235.4	2217.	0.1
52	320.2	2164.	0.1
53	159.2	1463.	0.1
54	201.0	2196.	0.1
56	588.1	1614.	0.4
57	183.5	879.	0.2

VESSEL - 00 CRUISE - 334
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
58	218.2	1886.	0.1
59	337.2	1810.	0.2
60	82.5	344.	0.2
62	84.8	651.	0.1
63	195.6	1384.	0.1
64	229.4	1558.	0.1
65	106.8	627.	0.2
66	74.8	312.	0.2
67	127.6	954.	0.1
68	139.3	993.	0.1
69	176.0	1100.	0.2
70	249.0	1472.	0.2
71	186.9	1290.	0.1
72	550.5	2976.	0.2
73	54.5	311.	0.2
74	151.5	1032.	0.1
75	93.5	547.	0.2
76	64.5	312.	0.2
77	74.3	439.	0.2
78	48.5	216.	0.2
79	297.8	2921.	0.1
80	128.9	976.	0.1
81	153.2	1457.	0.1
82	89.1	1359.	0.1
83	409.8	3590.	0.1
84	209.6	1187.	0.2
85	413.3	2923.	0.1
86	233.6	1960.	0.1
87	138.6	700.	0.2
88	132.6	974.	0.1
89	94.7	998.	0.1
90	90.8	914.	0.1
91	698.9	3969.	0.2
92	52.2	304.	0.2
93	159.8	1469.	0.1
94	370.7	2482.	0.1
95	168.5	1273.	0.1
96	274.0	2466.	0.1
97	238.4	1208.	0.2
98	129.2	364.	0.4
99	363.3	1384.	0.3
100	479.2	2210.	0.2
101	307.5	923.	0.3
102	73.6	190.	0.4
103	63.7	805.	0.1
104	180.3	1388.	0.1
105	305.8	1612.	0.2
106	155.0	1240.	0.1
107	226.2	1298.	0.2
108	490.1	3921.	0.1
109	735.9	3680.	0.2
110	214.1	979.	0.2
112	50.6	166.	0.3

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - PACIFIC HALIBUT

HAUL	WEIGHT	NUMBER	AVG WT
1	64.0	13.	4.9
2	42.4	6.	7.1
4	14.3	2.	7.2
5	30.6	2.	15.3
7	53.0	2.	26.5
9	12.6	1.	12.6
10	3.6	1.	3.6
11	68.1	10.	6.8
12	36.7	7.	5.2
13	36.7	2.	18.4
14	114.8	22.	5.2
16	72.0	7.	10.3
17	37.2	6.	6.2
18	77.8	16.	4.9
19	88.1	6.	14.7
20	89.6	15.	6.0
21	7.5	1.	7.5
22	59.6	3.	19.9
24	54.2	10.	5.4
25	57.2	7.	8.2
26	74.4	7.	10.6
27	2.3	1.	2.3
28	35.5	4.	8.9
29	49.7	3.	16.6
30	28.3	2.	14.1
31	3.6	1.	3.6
33	6.6	1.	6.6
34	6.6	1.	6.6
35	47.0	4.	11.8
36	13.9	1.	13.9
37	39.5	4.	9.9
39	70.9	7.	10.1
40	8.0	2.	4.0
41	0.9	1.	0.9
43	8.3	2.	4.2
44	50.9	2.	25.5
45	49.5	23.	2.2
46	5.4	2.	2.7
48	4.0	1.	4.0
49	20.8	3.	6.9
50	11.8	3.	3.9
51	48.3	24.	2.0
52	37.6	7.	5.4
53	44.8	34.	1.3
54	18.8	8.	2.3
57	45.2	1.	45.2
58	82.7	14.	5.9
60	91.5	16.	5.7
62	64.1	8.	8.0
63	9.3	2.	4.7
64	16.8	3.	5.6
65	32.7	6.	5.5
66	25.3	5.	5.1

VESSEL - 00 CRUISE - 334
SPECIES - PACIFIC HALIBUT

HAUL	WEIGHT	NUMBER	AVG WT
67	12.9	3.	4.3
68	10.7	2.	5.3
70	7.8	1.	7.8
71	20.7	3.	6.9
72	17.4	6.	2.9
73	72.4	5.	14.5
74	15.5	3.	5.2
75	22.8	4.	5.7
76	102.3	2.	51.2
77	5.4	1.	5.4
78	22.7	4.	5.7
79	59.2	19.	3.1
80	16.0	2.	8.0
81	12.3	2.	6.2
82	17.9	3.	6.0
83	25.8	5.	5.2
84	14.6	4.	3.7
85	21.7	1.	21.7
86	4.0	1.	4.0
87	0.5	1.	0.5
88	5.2	1.	5.2
89	31.4	8.	3.9
90	37.5	6.	6.2
91	4.8	1.	4.8
92	25.5	1.	25.5
93	104.6	9.	11.6
94	70.0	12.	5.8
95	18.8	3.	6.3
96	21.8	7.	3.1
97	18.4	3.	6.1
99	92.2	7.	13.2
100	6.6	1.	6.6
101	32.4	7.	4.6
102	16.1	2.	8.1
103	18.5	22.	0.8
104	33.7	9.	3.7
105	17.8	1.	17.8
106	23.3	3.	7.8
107	14.8	1.	14.8
108	27.5	2.	13.8
110	4.4	1.	4.4
113	17.4	3.	5.8
TOTAL	3200.3	524.	6.1

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - FLATHEAD SOLE

HAUL	WEIGHT	NUMBER	AVG WT
113	258.4	1632.	0.2
TOTAL	23151.9	126057.	0.2

VESSEL - 00 CRUISE - 334
SPECIES - ROCK SOLE

HAUL	WEIGHT	NUMBER	AVG WT
3	8.5	11.	0.8
17	7.8	6.	1.4
19	2.6	9.	0.3
20	6.9	10.	0.7
22	1.5	3.	0.5
30	0.7	4.	0.2
32	4.8	16.	0.3
33	1.2	8.	0.2
38	3.7	7.	0.5
39	192.3	411.	0.5
41	5.6	6.	1.0
42	1.8	5.	0.4
44	3.5	7.	0.5
46	13.9	32.	0.4
48	2.3	8.	0.3
52	9.9	33.	0.3
53	9.0	20.	0.4
59	129.0	317.	0.4
60	78.9	366.	0.2
62	8.1	20.	0.4
63	4.5	15.	0.3
64	7.1	14.	0.5
66	6.2	12.	0.5
72	10.5	13.	0.8
79	79.4	156.	0.5
80	2.7	5.	0.5
83	54.1	148.	0.4
84	11.4	25.	0.4
85	3.9	10.	0.4
87	2.9	15.	0.2
90	3.0	6.	0.5
93	9.5	27.	0.3
96	83.8	274.	0.3
100	15.6	20.	0.8
103	14.1	40.	0.3
104	171.3	361.	0.5
109	12.9	18.	0.7
TOTAL	1184.5	2455.	0.4

VESSEL - 00 CRUISE - 334
SPECIES - REX SOLE

HAUL	WEIGHT	NUMBER	AVG WT
36	4.8	21.	0.2
60	2.2	15.	0.2
63	10.5	60.	0.2
64	7.1	43.	0.2
65	3.8	33.	0.1
66	1.2	12.	0.1
69	3.4	34.	0.1
72	5.3	40.	0.1
73	37.4	273.	0.1
74	5.7	67.	0.1
75	3.6	36.	0.1
76	1.1	6.	0.2
77	1.4	14.	0.1
78	3.2	64.	0.1
84	1.3	13.	0.1
88	1.7	9.	0.2
93	23.1	143.	0.2
94	4.8	32.	0.2
95	1.2	12.	0.1
96	12.9	113.	0.1
107	2.0	10.	0.2
108	1.6	48.	0.0
113	30.6	85.	0.4
TOTAL	169.9	1180.	0.1

VESSEL - 00 CRUISE - 334
SPECIES - DOVER SOLE

HAUL	WEIGHT	NUMBER	AVG WT
2	8.9	28.	0.3
3	12.8	43.	0.3
9	9.4	55.	0.2
10	34.1	102.	0.3
11	6.1	20.	0.3
22	0.7	2.	0.3
23	1.7	3.	0.6
24	2.8	14.	0.2
25	11.3	40.	0.3
26	22.1	88.	0.2
27	10.8	42.	0.3
28	2.8	11.	0.2
29	5.9	17.	0.3
30	5.9	15.	0.4
31	1.5	5.	0.3
41	1.7	6.	0.3
42	0.9	5.	0.2
97	1.6	16.	0.1
106	11.3	38.	0.3
112	27.0	52.	0.5
113	105.4	255.	0.4
TOTAL	284.7	855.	0.3

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - STARRY FLOUNDER

HAUL	WEIGHT	NUMBER	AVG WT
83	6.5	2.	3.3
TOTAL	6.5	2.	3.3

VESSEL - 00 CRUISE - 334
SPECIES - ALASKA PLAICE

HAUL	WEIGHT	NUMBER	AVG WT
1	79.3	44.	1.8
11	20.4	10.	2.0
17	11.2	11.	1.0
18	6.1	9.	0.6
19	37.5	38.	1.0
20	32.0	29.	1.1
53	7.0	10.	0.7
103	23.0	25.	0.9
105	4.4	11.	0.4
106	42.3	53.	0.8
108	24.1	16.	1.5
TOTAL	287.3	257.	1.1

VESSEL - 00 CRUISE - 334
SPECIES - OTHER FLATFISH

HAUL	WEIGHT	NUMBER	AVG WT
23	0.6	1.	0.6
79	1.4	14.	0.1
83	0.3	1.	0.3
106	3.0	7.	0.4
TOTAL	5.3	24.	0.2

VESSEL - 00 CRUISE - 334
SPECIES - SKATES

HAUL	WEIGHT	NUMBER	AVG WT
1	153.1	7.	21.9
2	19.6	1.	19.6
4	3.4	5.	0.7
10	5.7	3.	1.9
12	272.2	17.	16.0
13	86.5	4.	21.6
20	110.0	6.	18.3
22	4.5	4.	1.1
23	3.5	3.	1.2
24	5.0	1.	5.0
25	0.6	6.	0.1
26	43.4	10.	4.4
27	3.0	6.	0.5
30	1.9	4.	0.5
39	158.3	9.	17.6
42	8.0	1.	8.0
45	4.8	12.	0.4
52	48.4	6.	8.1
54	81.5	8.	10.2
59	6.0	1.	6.0
68	2.3	1.	2.3
70	44.9	2.	22.5
71	1.8	1.	1.8
74	13.9	10.	1.3
79	9.5	2.	4.8
83	29.0	3.	9.7
85	15.3	1.	15.3
105	7.5	1.	7.5
106	7.8	1.	7.8
107	1.8	1.	1.8
108	9.5	1.	9.5
110	12.9	5.	2.6
113	41.6	4.	10.4
TOTAL	1217.2	147.	8.3

VESSEL - 00 CRUISE - 334
SPECIES - OTHER ELASMOBRANCHS

HAUL	WEIGHT	NUMBER	AVG WT
1	6.5	1.	6.5
53	2.8	1.	2.8
79	1.8	1.	1.8
TOTAL	11.1	3.	3.7

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
1	140.5	300.	0.5
2	83.7	143.	0.6
3	117.5	335.	0.4
4	56.2	89.	0.6
5	64.0	101.	0.6
7	45.0	239.	0.2
9	31.0	86.	0.4
10	23.5	113.	0.2
11	108.0	265.	0.4
12	221.5	430.	0.5
13	442.9	911.	0.5
14	11.0	49.	0.2
16	129.0	298.	0.4
17	46.0	116.	0.4
18	153.0	480.	0.3
19	87.0	259.	0.3
20	130.5	262.	0.5
21	292.5	1827.	0.2
22	199.0	628.	0.3
23	152.0	652.	0.2
24	106.5	260.	0.4
25	121.5	289.	0.4
26	8.5	79.	0.1
27	3.8	47.	0.1
28	4.4	46.	0.1
29	6.0	100.	0.1
30	77.5	249.	0.3
31	52.0	118.	0.4
32	137.5	182.	0.8
33	40.0	55.	0.7
34	65.0	122.	0.5
35	80.0	143.	0.6
36	45.0	210.	0.2
37	37.0	93.	0.4
38	69.7	87.	0.8
39	49.5	148.	0.3
40	2.4	14.	0.2
41	31.0	78.	0.4
42	64.5	106.	0.6
43	15.0	60.	0.2
44	53.0	78.	0.7
45	30.5	38.	0.8
46	48.0	93.	0.5
47	49.9	68.	0.7
48	86.5	128.	0.7
49	58.5	101.	0.6
50	76.9	129.	0.6
51	12.0	118.	0.1
52	46.5	114.	0.4
53	128.5	371.	0.3
54	84.5	282.	0.3
56	66.5	182.	0.4
57	139.2	164.	0.8

VESSEL - 00 CRUISE - 334
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
58	34.0	41.	0.8
59	9.5	25.	0.4
60	0.0	1.	0.0
62	7.6	11.	0.7
63	9.5	14.	0.7
64	9.5	12.	0.8
65	8.5	11.	0.8
66	2.1	6.	0.3
67	2.5	14.	0.2
68	10.3	54.	0.2
69	10.5	42.	0.2
70	8.7	28.	0.3
71	12.5	22.	0.6
72	215.0	214.	1.0
73	0.3	2.	0.2
74	3.4	23.	0.1
75	1.7	13.	0.1
76	9.0	31.	0.3
77	9.3	45.	0.2
78	4.0	9.	0.4
79	1.0	13.	0.1
80	8.2	59.	0.1
81	31.0	31.	1.0
82	2.2	23.	0.1
83	0.2	14.	0.0
84	0.0	23.	0.0
85	16.6	63.	0.3
86	80.0	154.	0.5
87	7.3	19.	0.4
88	7.5	64.	0.1
89	4.0	7.	0.6
90	32.0	106.	0.3
91	43.5	68.	0.6
92	47.5	63.	0.8
93	7.0	11.	0.6
94	4.0	12.	0.3
95	15.0	24.	0.6
96	13.7	23.	0.6
97	67.5	103.	0.7
98	47.0	71.	0.7
99	61.0	93.	0.7
100	103.0	192.	0.5
101	59.6	65.	0.9
102	39.5	52.	0.8
103	39.5	52.	0.8
104	4.0	22.	0.2
105	103.0	363.	0.3
106	26.5	68.	0.4
107	26.5	78.	0.3
108	51.5	168.	0.3
109	52.2	87.	0.6
110	26.5	88.	0.3
112	3.2	48.	0.1

Table 8 (continued).

VESSEL - 00 CRUISE - 334
SPECIES - TANNER CRAB

HAUL	WEIGHT	NUMBER	AVG WT
113	0.0	7.	0.0
TOTAL	5830.2	14887.	0.4

VESSEL - 00 CRUISE - 334
SPECIES - DUNGENESS CRAB

HAUL	WEIGHT	NUMBER	AVG WT
1	1.5	2.	0.7
14	10.0	10.	1.0
19	3.0	5.	0.6
20	11.5	15.	0.8
21	39.5	62.	0.6
22	10.0	15.	0.7
23	1.1	1.	1.1
39	0.3	1.	0.3
45	49.8	125.	0.4
46	0.6	2.	0.3
51	6.0	11.	0.5
52	18.5	35.	0.5
53	2.0	4.	0.5
59	4.0	3.	1.3
79	14.5	15.	1.0
83	1.8	2.	0.9
84	3.0	3.	1.0
85	3.8	5.	0.8
100	0.4	1.	0.4
104	1.8	3.	0.6
109	51.8	71.	0.7
TOTAL	234.9	391.	0.6

VESSEL - 00 CRUISE - 334
SPECIES - KING CRAB

HAUL	WEIGHT	NUMBER	AVG WT
1	96.5	38.	2.5
9	5.5	1.	5.5
12	16.5	6.	2.8
13	49.0	20.	2.5
18	4.0	1.	4.0
19	22.0	12.	1.8
20	3.5	1.	3.5
21	70.0	34.	2.1
24	2.0	1.	2.0
32	14.0	4.	3.5
35	9.0	3.	3.0
36	8.0	2.	4.0
37	6.0	2.	3.0
53	4.4	3.	1.5
59	26.5	10.	2.7
79	10.0	2.	5.0
80	5.5	1.	5.5
83	5.0	1.	5.0
109	8.7	5.	1.7
TOTAL	366.1	147.	2.5

VESSEL - 00 CRUISE - 334
SPECIES - SCALLOPS

HAUL	WEIGHT	NUMBER	AVG WT
1	8.5	17.	0.5
2	1.2	3.	0.4
3	2.7	7.	0.4
14	41.0	84.	0.5
58	3.2	8.	0.4
62	14.0	51.	0.3
63	29.0	110.	0.3
64	10.5	37.	0.3
65	3.4	13.	0.3
66	2.4	11.	0.2
72	0.1	2.	0.1
89	1.6	4.	0.4
95	0.3	1.	0.3
TOTAL	117.9	348.	0.3

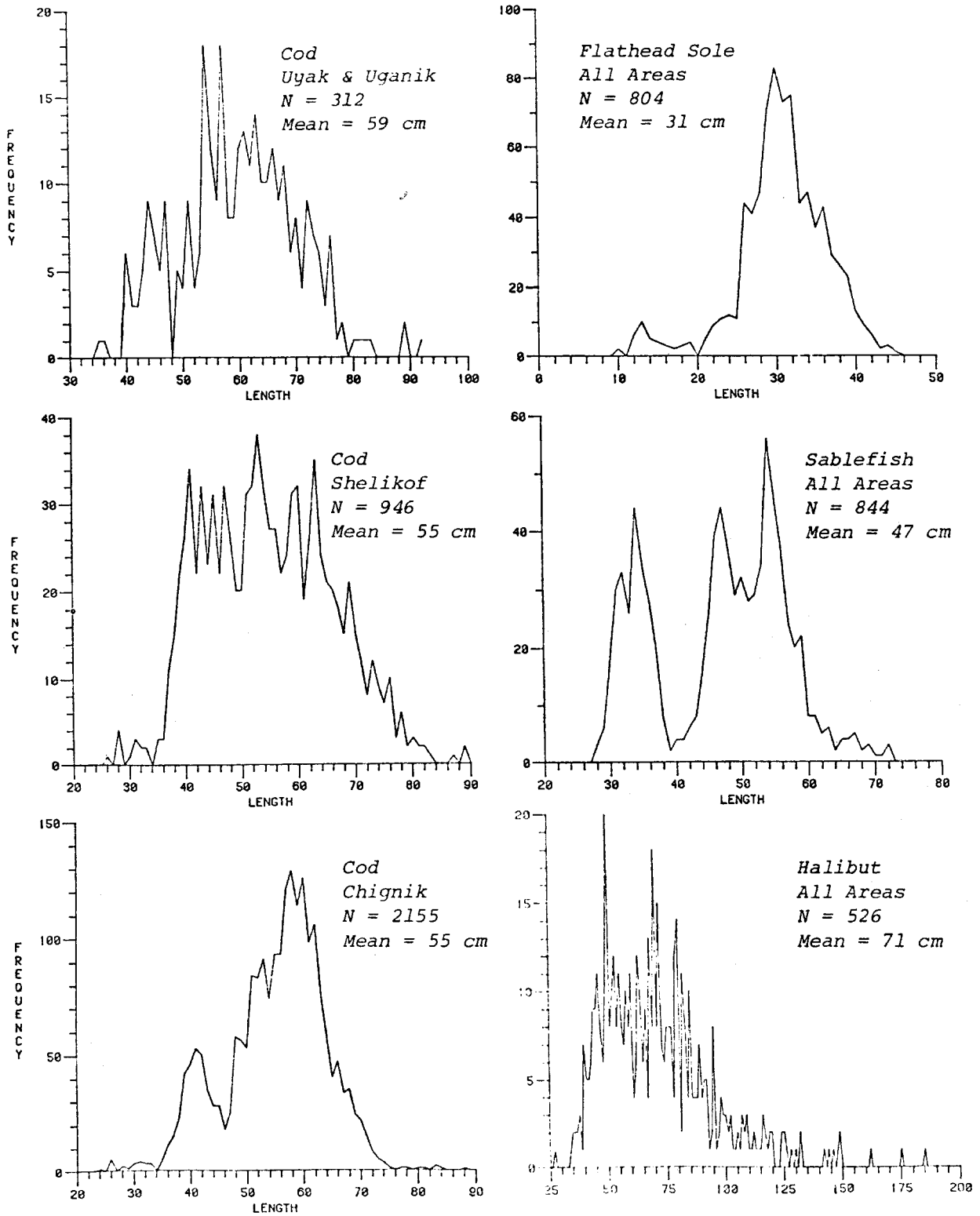

Figure 5. Length frequencies of Pacific cod, flathead sole, sablefish, and Pacific halibut from a 1982 trawl survey in northern Shelikof Strait, Uyak and Uganik Bays, and the Chignik area.

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