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F/V OCEAN PROWLER
CRUISE REPORT OP-92-01
LONGLINE SURVEY OF THE GULF OF ALASKA
JULY 13-SEPTEMBER 27, 1992

PREPARED BY

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On September 27, 1992, the National Marine Fisheries Service (NMFS), Alaska Fisheries Science Center (AFSC), completed the sixth annual longline survey of sablefish (*Anoplopoma fimbria*) resources of the Gulf of Alaska. The survey area extended from the Islands of Four Mountains eastward to Dixon Entrance (Figure 1). This survey was designed to continue the time series (1979-92) of the Gulf of Alaska portion of the Japan-U.S. cooperative longline survey.

OBJECTIVES

1. Determine the relative abundance and size composition of the commercially-important species: sablefish, shortspine thornyhead (*Sebastolobus alascanus*), and rougheye and shortraker rockfishes (*Sebastes aleutianus* and *S. borealis*).
2. Determine the relative abundance and size composition of other groundfish species caught during the survey, Pacific cod (*Gadus macrocephalus*), arrowtooth flounder (*Atheresthes stomias*), and grenadiers (*Macrouridae*), and the relative abundance of Pacific halibut (*Hippoglossus stenolepis*).





VESSEL AND GEAR

Survey operations were conducted using the F/V *Ocean Prowler*, a chartered U.S. longline vessel. The 47-m (155-ft) vessel carried standard longline hauling gear and was equipped with radios, radars, Global Positioning System receivers, LORAN receivers, video and paper track plotters, a processing line, three sets of plate freezers, and refrigerated holds. Vessel personnel consisted of a captain, an engineer, a cook, six fishermen, and six processors.

Gear configuration was unchanged from that of the 1988-91 surveys. Units of gear (skates) were 100 m (55 fm) long and contained 45 size 13/0 Mustad¹ circle hooks. Hooks were attached to 38-cm (15-in) gangions that were secured to beackets tied into the groundline at 2-m (6.5-ft) intervals. Five meters (16 ft) of groundline were left bare at each end. Gangions were constructed of medium lay #60 thread nylon, becket material was medium lay #72 thread nylon, and groundline was medium lay 9.5-mm (3/8-in) diameter nylon.

A set of gear consisted of a flag and buoy array at each end followed sequentially by a 9.5-mm diameter nylon buoyline, a 92-m (50-fm) section of 9.5-mm polypropylene floating line, a 16-kg (35-lb) piece of chain (to dampen the effect of wave surge on the buoyline), 92 m of 9.5-mm nylon, a 27-kg (60-lb) halibut anchor, and 366 m (200 fm) of 9.5-mm nylon. The groundline was weighted with 3.2-kg (7-lb) lead balls at the end of each skate. Hooks were hand baited with chopped squid (*Illex* spp.) at a rate of about 5.7 kg (12.5 lb) per 100 hooks. Squid heads and tentacles were not used for bait.

Total groundline set each day was 16 km (8.6 nmi) long and contained 160 skates and 7,200 hooks. Two 80-skate groundlines laid end to end were set at each station along the upper continental slope. Usually a single groundline of 80 skates was set at each station in the gullies.

OPERATIONS

The charter began at Unalaska, Alaska, and ended in Petersburg, Alaska. The charter period was divided into 25-day legs with a one-day port call after the first and second legs. During Leg 1 the survey sampled from the Islands of Four Mountains eastward to Shelikof Strait. Leg 2 began near Chirikof Island and continued eastward to Yakutat. During Leg 3 the area between Yakutat and Dixon Entrance was sampled.

¹ Use of commercial name does not imply endorsement by the National Marine Fisheries Service, NOAA.

The survey periods in 1991 and 1992 were 2-1/2 weeks later than in 1988 through 1990. From 1988 to 1990 the survey period was June 26 to September 12. The 1991 and 1992 surveys were delayed to avoid the commercial fishing period that started 45 days later than in 1988 through 1990.

Seventy-seven days were used to complete the survey, including 64 days of survey sampling, 2 days for loading and unloading gear, 1 day to search for lost gear, 1 day to repair gear, 4 days for travel, 2 days lost to bad weather, 1 day for unloading product and resupply, and 2 days for port calls.

Survey Operations

Forty-five stations were sampled along the upper continental slope of the Gulf of Alaska at a rate of one station per day (Figure 1). Surveyed depths ranged from approximately 200 to 1,000 m, although at some stations depths less than 150 m or more than 1,000 m were sampled (Table 1). Twenty-seven stations were sampled in gullies at the rate of two stations per day. The sampled gullies are Shumagin Gully, Shelikof Trough, Amatuli Gully, W-grounds, Yakutat Valley, Alsek Strath, Spencer Gully, Ommaney Trench, Iphigenia Gully, and Dixon Entrance. One station (42) was sampled on the continental shelf off Baranof Island. Four stations were resampled to study catch rate variability.

The gear was set from shallow to deep and was retrieved in the same order, except on occasions when groundlines parted or sea conditions dictated that it be pulled from the opposite direction. Setting began about 0630 h Alaska Daylight Time. Retrieval began about 0930 h and was completed by about 1930 h.

Data Collection

Catch data were recorded on a hand-held electronic data logger. During gear retrieval a scientist recorded the species of each hooked fish, the condition of each unoccupied hook (absent, broken, or tangled), and whether bait remained on the hook. Time of day was recorded constantly from an internal clock and depth was entered when the first and last skates came aboard, at the beginning of each fifth skate, and when crossing into a new depth interval (0-100 m, 101-200 m, 201-300 m, 301-400 m, 401-600 m, 601-800 m, 801-1,000 m and 1,001-1,200 m).

Length frequency data were collected with a bar code based measuring board and a bar code reader/data storage device. Length was measured by depth interval for sablefish, Pacific cod, grenadiers, arrowtooth flounder, rockfish, and thornyheads. Lengths of sablefish and Pacific cod also were recorded by sex. Pacific halibut were counted and released at the rail without measuring. Catch and length frequency data were transferred to a computer and electronic back-up media twice a day.

As in the previous surveys, the charter vessel was allowed to retain most of the catch once the scientific data were recorded.

RESULTS

One hundred and twenty-eight longline hauls (sets) were completed (Table 1). Severe currents and resulting hang-ups caused the sets at station 1 to be temporarily lost. They were retrieved with a grappling hook. During the recovery operation killer whales picked most of the fish caught at station 1. Gear loss during this cruise was insignificant.

Sablefish was the most frequently caught species, followed by grenadiers, Pacific cod, and thornyheads (Table 2). A total of 115,095 sablefish, with an estimated total round weight of 393,935 kg (868,233 lb), was taken during the survey (Table 3).

Preliminary analyses indicate that, since the 1991 survey, the relative abundance of sablefish on the upper continental slope of the Gulf of Alaska decreased about 10%, whereas sablefish abundance in gullies decreased 15%. The continental slope west of Kodiak Island showed the most notable decreases. Sablefish abundance increased about 13% in the Cape St. Elias-Yakutat area (stations 28-38) and in Shelikof Trough (stations 48-51) increased 18% to near 1990 levels. Juvenile and subadult sablefish were somewhat more abundant than during previous NMFS longline surveys. Juvenile and subadult sablefish were relatively abundant at stations 4, 5, 8, 9, 153, 162, and 163 (Table 3).

More detailed results for sablefish and other species sampled during this cruise and comparisons to the results of previous surveys will be reported in a subsequent technical document.

SCIENTIFIC PERSONNELLeg I (July 13 to August 6)

Michael Sigler, Field Party Chief, ABL
Tom Rutecki, ABL
Larry Haaga, ABL

Leg II (August 8 to September 1)

Harold Zenger, Field Party Chief, RACE
Jim Stark, RACE
Renn Hanson, RACE

Leg III (September 3 to 27)

Michael Martin, Field Party Chief, RACE
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Table 1.--Haul number (set), preassigned station number, and starting and ending positions and depths for the 1992 NMFS longline survey of the Gulf of Alaska, July 13 - September 27.

Haul no.	Station no.	Start		End		Start depth (m)	End depth (m)
		lat. (ddmm.m)	long. (dddmm.m)	lat. (ddmm.m)	long. (dddmm.m)		
1	3	5311.3	16651.2	5307.4	16653.6	216	313
2	3	5306.8	16654.1	5303.1	16656.9	319	794
3	1	5234.6	16931.2	5230.3	16931.9	129	413
4	1	5230.1	16932.2	5225.9	16931.7	382	595
5	2	5259.3	16751.6	5256.2	16756.7	106	276
6	2	5256.0	16757.4	5254.4	16702.8	286	650
7	4	5330.7	16544.1	5326.8	16546.9	268	465
8	4	5334.9	16541.2	5331.0	16543.9	121	267
9	5	5343.9	16428.4	5340.6	16434.1	137	297
10	5	5340.5	16434.2	5337.2	16439.8	328	830
11	6	5358.6	16311.2	5356.2	16316.7	118	223
12	6	5356.1	16316.8	5352.7	16320.3	242	548
13	7	5406.1	16147.3	5404.8	16154.1	126	299
14	7	5404.7	16154.5	5403.8	16200.0	315	686
15	8	5419.8	16100.3	5416.4	16105.0	128	326
16	8	5416.2	16105.3	5413.0	16109.9	342	683
17	9	5421.9	16014.2	5417.8	16017.4	140	334
18	9	5417.6	16017.6	5413.4	16018.8	336	626
19	10	5429.7	15920.8	5425.7	15924.6	140	287
20	10	5425.5	15924.9	5421.8	15929.5	298	590
21	11	5437.6	15835.0	5433.5	15838.9	132	386
22	11	5433.3	15839.2	5429.6	15842.0	401	862
23	12	5450.9	15744.3	5447.1	15748.2	187	501
24	12	5447.0	15748.3	5443.1	15752.1	435	664
25	254	5506.6	15830.5	5503.0	15835.4	190	204
26	154	5502.7	15831.4	5559.2	15836.8	147	213
27	150	5611.1	15558.2	5610.8	15606.3	207	241
28	250	5613.9	15608.2	5614.9	15616.2	249	268
29	149	5546.9	15604.8	5545.1	15612.3	205	241
30	249	5543.4	15620.4	5544.4	15612.5	244	249
31	13	5514.3	15640.4	5510.2	15644.6	121	335
32	13	5509.5	15645.3	5505.0	15645.3	331	792
33	14	5538.3	15551.0	5534.1	15551.8	153	211
34	14	5533.9	15551.8	5530.0	15550.0	211	212
35	15	5545.8	15508.5	5541.5	15511.1	162	321
36	15	5541.6	15511.3	5538.0	15515.6	327	582
37	148	5659.3	15504.3	5659.9	15512.3	173	236
38	248	5700.2	15518.4	5702.7	15525.2	254	267
39	151	5720.7	15502.7	5720.9	15511.2	240	242
40	251	5720.8	15515.2	5719.5	15522.8	246	258
41	16	5602.1	15434.1	5558.0	15434.4	243	550
42	16	5557.6	15434.2	5554.0	15434.3	591	877
43	17	5558.5	15401.9	5554.4	15401.7	271	557

Table 1.--continued

Haul no.	Station no.	Start		End		Start depth (m)	End depth (m)
		lat. (ddmm.m)	long. (dddmm.m)	lat. (ddmm.m)	long. (dddmm.m)		
44	17	5553.9	15401.5	5550.1	15403.0	589	971
45	18	5616.5	15303.2	5614.3	15310.4	584	964
46	18	5614.2	15311.3	5612.6	15317.8	957	730
47	19	5629.3	15212.5	5625.6	15217.9	125	439
48	19	5625.4	15218.4	5621.1	15221.2	421	627
49	20	5606.2	15113.9	5602.5	15117.4	270	576
50	20	5701.8	15118.2	5657.1	15118.1	635	884
51	21	5723.8	15034.6	5719.3	15036.2	216	523
52	21	5718.9	15036.2	5.87E4	15036.3	542	752
53	22	5737.4	14955.6	5733.3	14958.0	412	562
54	22	5732.5	14958.5	5728.3	15000.0	583	950
55	23	5758.0	14910.4	5755.0	14916.0	174	478
56	23	5754.8	14916.3	5750.9	14920.1	486	907
57	24	5817.2	14837.3	5813.0	14839.8	248	534
58	24	5812.7	14840.0	5808.7	14841.8	551	836
59	25	5841.0	14820.4	5836.5	14819.9	281	512
60	25	5838.9	14820.1	5831.5	14820.0	512	975
61	159	5843.6	14911.5	5846.2	14905.0	175	215
62	259	5848.3	14902.6	5850.9	14855.7	232	254
63	26	5907.3	14838.8	5903.2	14838.9	158	197
64	26	5903.0	14839.0	5859.1	14838.9	207	239
65	27	5909.1	14736.2	5904.7	14737.3	261	500
66	27	5904.2	14737.8	5900.0	14737.6	507	988
67	28	5915.7	14651.2	5912.5	14656.8	190	677
68	28	5912.1	14658.6	5909.3	14705.2	655	1078
69	29	5930.0	14532.3	5930.0	14540.3	159	657
70	29	5930.8	14541.0	5931.3	14549.2	685	508
71	30	5931.1	14443.0	5928.9	14450.9	118	492
72	30	5928.7	14452.0	5926.6	14458.6	480	898
71	30	5931.1	14443.0	5928.9	14450.9	118	492
73	31	5933.3	14339.5	5933.8	14347.6	167	641
74	31	5933.8	14348.9	5935.1	14356.9	618	677
75	262	5940.5	14323.4	5942.7	14329.8	293	312
76	162	5944.6	14335.7	5946.1	14343.7	296	153
77	32	5933.0	14234.4	5935.3	14241.1	127	587
78	32	5935.7	14241.3	5934.5	14248.1	571	636
79	33	5923.2	14210.0	5925.3	14217.1	232	407
80	33	5925.7	14217.2	5928.4	14223.8	355	881
81	34	5903.0	14121.3	5903.0	14129.7	289	542
82	34	5903.1	14130.6	5903.1	14139.5	581	980
83	263	5924.6	14110.5	5921.3	14115.3	319	326
84	163	5925.4	14104.6	5924.9	14056.3	230	292
85	35	5841.0	14038.8	5841.0	14047.2	245	727
86	35	5841.2	14047.8	5843.5	14054.0	720	734

Table 1.--continued

Haul no.	Station no.	Start		End		Start depth (m)	End depth (m)
		lat. (ddmm.m)	long. (dddmm.m)	lat. (ddmm.m)	long. (dddmm.m)		
87	164	5839.9	13905.1	5839.9	13913.4	158	247
88	264	5838.6	13920.1	5836.3	13927.3	252	258
89	36	5828.2	13928.2	5827.6	13935.7	194	452
90	36	5824.8	13942.2	5827.7	13937.4	427	893
91	37	5808.6	13844.6	5813.4	13852.5	252	607
92	37	5810.1	13853.2	5810.5	13858.8	735	864
93	260	5758.0	13705.1	5757.9	13713.1	225	416
94	160	5755.0	13701.3	5755.2	13709.4	385	445
95	38	5752.6	13722.9	5753.2	13730.3	207	664
96	38	5753.2	13731.3	5753.2	13736.8	664	729
97	39	5753.4	13632.7	5736.9	13639.3	236	691
98	39	5737.9	13641.1	5739.6	13646.9	727	698
99	40	5711.5	13614.3	5712.0	13621.9	215	784
100	40	5712.2	13622.3	5715.5	13625.2	848	1064
101	41	5651.1	13600.3	5606.2	13653.9	254	803
102	41	5654.6	13606.7	5658.3	13608.6	645	1020
103	42	5622.2	13521.2	5622.8	13529.5	155	189
104	42	5622.8	13529.9	5621.9	13537.6	192	240
105	43	5558.9	13527.5	5601.5	13532.1	412	621
106	43	5601.9	13532.1	5604.1	13537.3	628	857
107	153	5556.2	13454.7	5600.2	13455.1	215	369
108	253	5602.2	13455.5	5605.5	13502.3	335	354
109	165	5532.8	13427.0	5534.8	13433.9	187	269
110	265	5531.6	13439.8	5534.4	13445.7	289	262
111	44	5533.3	13457.9	5534.5	13502.9	248	509
112	44	5534.8	13503.9	5537.5	13508.0	580	610
113	45	5521.0	13444.4	5523.3	13450.2	324	624
114	45	5523.8	13450.8	5523.5	13457.5	600	814
115	46	5454.2	13417.5	5457.4	13421.3	226	630
116	46	5457.7	13421.7	5459.7	13426.4	530	992
117	47	5428.0	13355.7	5429.0	13401.4	253	859
118	47	5429.3	13401.8	5432.8	13404.7	737	864
119	161	5438.9	13250.3	5436.2	13254.9	147	374
120	261	5435.9	13301.6	5435.6	13307.3	405	409
121	345	5521.0	13444.4	5523.4	13450.3	358	619
122	345	5523.8	13451.3	5523.2	13457.6	620	852
123	340	5711.4	13614.6	5712.7	13621.1	242	793
124	340	5713.6	13620.7	5715.9	13624.4	726	1062
125	341	5651.1	13600.2	5653.9	13605.9	250	760
126	341	5654.7	13606.4	5658.3	13608.1	643	967
127	343	5559.1	13526.5	5601.4	13532.3	338	652
128	343	5602.0	13532.8	5605.0	13538.8	645	952

Table 2.--Catch in number by species and station for the 1992 NMFS longline survey of the Gulf of Alaska, July 13 - September 27. Abbreviations SF = sablefish, PC = Pacific cod, GR = giant grenadiers, PH = Pacific halibut, ATF = arrowtooth flounder, RF = red rockfish, ST = thornyheads, SK = skates, and OS = other species.

Station	SF	PC	GR	PH	ATF	RF	ST	SK	OS
1	10	239	29	65	124	1	79	10	27
2	105	614	1,483	154	92	407	368	11	88
3	1,366	229	352	247	491	160	501	17	46
4	547	1,558	608	379	476	24	192	70	35
5	975	392	1,488	82	165	18	191	32	88
6	814	1,514	332	101	330	170	486	14	59
7	417	1,124	908	181	252	146	367	7	45
8	795	1,116	1,216	119	394	128	302	9	59
9	881	1,344	1,525	84	187	37	160	11	49
10	284	1,550	1,011	161	516	179	282	14	56
11	1,228	359	1,248	94	175	52	421	5	136
12	1,374	328	1,957	52	305	25	299	5	27
13	1,387	36	1,119	36	177	22	474	1	65
14	1,787	809	2	650	797	6	1	15	65
15	1,462	190	711	35	457	54	125	50	149
16	1,861	0	1,171	7	120	62	327	13	28
17	1,009	0	1,316	26	193	33	310	4	518
18	1,359	0	1,069	0	1	2	117	1	886
19	1,153	109	470	286	241	176	267	3	75
20	2,088	0	627	24	80	29	102	1	378
21	1,972	86	175	137	333	6	241	3	42
22	1,536	1	424	1	6	0	150	2	207
23	1,833	73	470	42	78	66	132	10	158
24	1,241	124	205	79	82	41	415	14	66
25	1,553	22	450	107	38	116	181	7	703
26	2,649	123	0	134	137	15	35	59	728
27	1,966	72	613	30	33	88	143	3	212
28	2,096	97	645	50	73	53	156	6	885
29	1,627	76	479	114	47	270	253	25	25
30	2,040	125	217	70	25	61	175	3	94
31	2,517	36	170	45	16	22	163	0	14
32	3,981	69	62	156	4	41	214	5	21

Table 2.--continued

Station	SF	PC	GR	PH	ATF	RF	ST	SK	OS
33	2,331	72	45	108	36	200	215	24	45
34	3,422	0	73	35	2	307	94	13	89
35	2,221	2	330	65	50	335	57	24	87
36	1,729	3	164	29	53	488	148	6	188
37	1,661	0	535	31	29	518	37	5	63
38	2,419	3	204	12	11	102	75	12	131
39	3,323	5	259	24	12	98	82	2	43
40	2,815	24	183	82	59	78	117	4	103
41	3,211	8	189	68	30	35	90	6	256
42	629	637	0	861	117	0	11	54	1,139
43	2,784	0	119	9	11	215	240	3	122
44	2,630	98	83	141	48	89	171	33	163
45	2,928	0	105	1	45	467	167	6	72
46	2,260	15	125	55	19	281	123	10	118
47	1,528	6	149	17	23	317	157	15	428
148	501	1,035	0	152	442	14	0	56	51
149	283	955	0	65	128	0	0	50	22
150	785	884	0	65	247	2	0	56	46
151	512	527	0	224	114	0	0	50	25
153	282	89	0	186	85	60	248	37	443
154	538	434	0	57	138	8	0	75	24
159	1,150	12	1	30	123	8	61	48	352
160	2,038	0	70	5	54	3	112	10	11
161	642	124	0	145	40	3	31	31	1,006
162	788	43	0	257	214	7	48	147	59
163	555	13	0	158	204	78	109	38	95
164	510	62	0	150	216	4	9	58	290
165	146	287	0	514	32	0	4	14	514
248	693	635	3	307	339	0	0	57	37
249	749	327	0	93	176	0	0	91	41
250	1,193	300	0	107	255	0	0	60	16
251	486	906	0	288	73	2	0	27	10
253	1,835	0	0	66	29	36	76	27	91
254	408	60	0	23	130	2	0	76	12
259	1,127	56	0	83	140	9	97	130	143

Table 2.--continued

Station	SF	PC	GR	PH	ATF	RF	ST	SK	OS
260	1,765	0	10	36	59	11	36	23	23
261	839	4	0	66	18	9	164	48	177
262	692	0	0	69	32	0	30	39	29
263	1,514	0	0	27	158	13	63	38	24
264	1,158	0	0	108	132	10	20	51	52
265	414	86	0	309	69	1	38	25	157
340	3,209	6	213	77	23	128	169	1	76
341	3,233	3	262	35	26	48	126	5	205
343	3,116	0	91	13	9	210	102	5	296
345	2,130	1	112	2	29	493	276	11	103
Total	115,095	20,137	25,877	9,003	10,724	7,199	11,232	2,031	13,511

Table 3.--Mean length, mean round weight, mean dressed weight, number, and estimated total round weight of sablefish, by station, for the 1992 NMFS longline survey of the Gulf of Alaska, July 13 - September 27.

Station number	Mean length (cm)	Mean round weight (kg) ^a	Mean dressed weight (lb) ^b	Number of sablefish	Estimated total round weight (kg) ^c
1	63.4	2.7	3.6	10	27
2	65.5	3.2	4.2	105	336
3	60.4	2.4	3.2	1,366	3,278
4	59.4	2.2	2.9	547	1,203
5	60.2	2.3	3.0	975	2,243
6	61.4	2.6	3.4	814	2,116
7	66.5	3.3	4.4	417	1,376
8	60.3	2.4	3.2	795	1,908
9	59.5	2.2	2.9	881	1,938
10	64.8	3.0	4.0	284	852
11	66.1	3.1	4.1	1,228	3,807
12	66.3	3.2	4.2	1,374	4,397
13	68.2	3.5	4.6	1,387	4,855
14	64.1	2.8	3.7	1,787	5,004
15	64.8	3.0	4.0	1,462	4,386
16	67.4	3.4	4.5	1,861	6,327
17	68.1	3.5	4.6	1,009	3,532
18	71.7	4.1	5.4	1,359	5,572
19	67.6	3.4	4.5	1,153	3,920
20	66.3	3.2	4.2	2,088	6,682
21	64.9	3.0	4.0	1,972	5,916
22	64.5	3.0	4.0	1,536	4,608
23	66.0	3.2	4.2	1,833	5,866
24	64.9	3.0	4.0	1,241	3,723
25	68.2	3.5	4.6	1,553	5,436
26	66.8	3.2	4.2	2,649	8,477
27	68.6	3.6	4.8	1,966	7,078
28	70.3	3.9	5.2	2,096	8,174
29	66.7	3.3	4.4	1,627	5,369
30	66.2	3.3	4.4	2,040	6,732
31	67.7	3.5	4.6	2,517	8,810
32	69.2	3.7	4.9	3,981	14,730

Table 3.--continued

Station number	Mean length (cm)	Mean round weight (kg) ^a	Mean dressed weight (lb) ^b	Number of sablefish	Estimated total round weight (kg) ^c
33	66.7	3.3	4.4	2,331	7,692
34	66.8	3.3	4.4	3,422	11,293
35	71.6	4.1	5.4	2,221	9,106
36	68.9	3.7	4.9	1,729	6,397
37	71.7	4.2	5.6	1,661	6,976
38	72.8	4.4	5.8	2,419	10,644
39	69.9	3.8	5.0	3,323	12,627
40	70.3	3.9	5.2	2,815	10,979
41	71.5	4.1	5.4	3,211	13,165
42	66.7	3.3	4.4	629	2,076
43	67.3	3.4	4.5	2,784	9,466
44	68.5	3.6	4.8	2,630	9,468
45	67.3	3.3	4.4	2,928	9,662
46	68.8	3.6	4.8	2,260	8,136
47	69.6	3.7	4.9	1,528	5,654
148	66.0	3.2	4.2	501	1,603
149	64.5	2.9	3.8	283	821
150	63.2	2.7	3.6	785	2,120
151	66.5	3.2	4.2	512	1,638
153	59.5	2.4	3.2	282	677
154	63.9	2.8	3.7	538	1,506
159	66.1	3.1	4.1	1,150	3,565
160	69.7	3.8	5.0	2,038	7,744
161	66.8	3.3	4.4	642	2,119
162	58.3	2.3	3.0	788	1,812
163	56.3	2.0	2.6	555	1,110
164	69.4	3.9	5.2	510	1,989
165	60.4	2.5	3.3	146	365
248	64.5	2.9	3.8	693	2,010
249	63.2	2.7	3.6	749	2,022
250	63.5	2.7	3.6	1,193	3,221
251	69.1	3.6	4.8	486	1,750
253	68.2	3.6	4.8	1,835	6,606

Table 3.--continued

Station number	Mean length (cm)	Mean round weight (kg) ^a	Mean dressed weight (lb) ^b	Number of sablefish	Estimated total round weight (kg) ^c
254	63.2	2.7	3.6	408	1,102
259	69.4	3.7	4.9	1,127	4,170
260	68.5	3.6	4.8	1,765	6,354
261	63.8	2.8	3.7	839	2,349
262	62.5	2.7	3.6	692	1,868
263	61.4	2.5	3.3	1,514	3,785
264	70.1	3.8	5.0	1,158	4,400
265	60.9	2.6	3.4	414	1,076
340	70.1	3.8	5.0	3,209	12,194
341	72.3	4.2	5.6	3,233	13,579
343	67.9	3.5	4.6	3,116	10,906
345	68.0	3.5	4.6	2,130	7,455
				115,095	393,935

^a Mean weight was estimated by applying a length-weight relationship to the length frequency distribution from each station.

^b Mean dressed weight was estimated using a recovery rate of 0.6 of round weight in pounds.

^c Estimated total round weight is the product of mean round weight and the number of hooked sablefish that came to the surface, including a small percentage that was lost during landing.

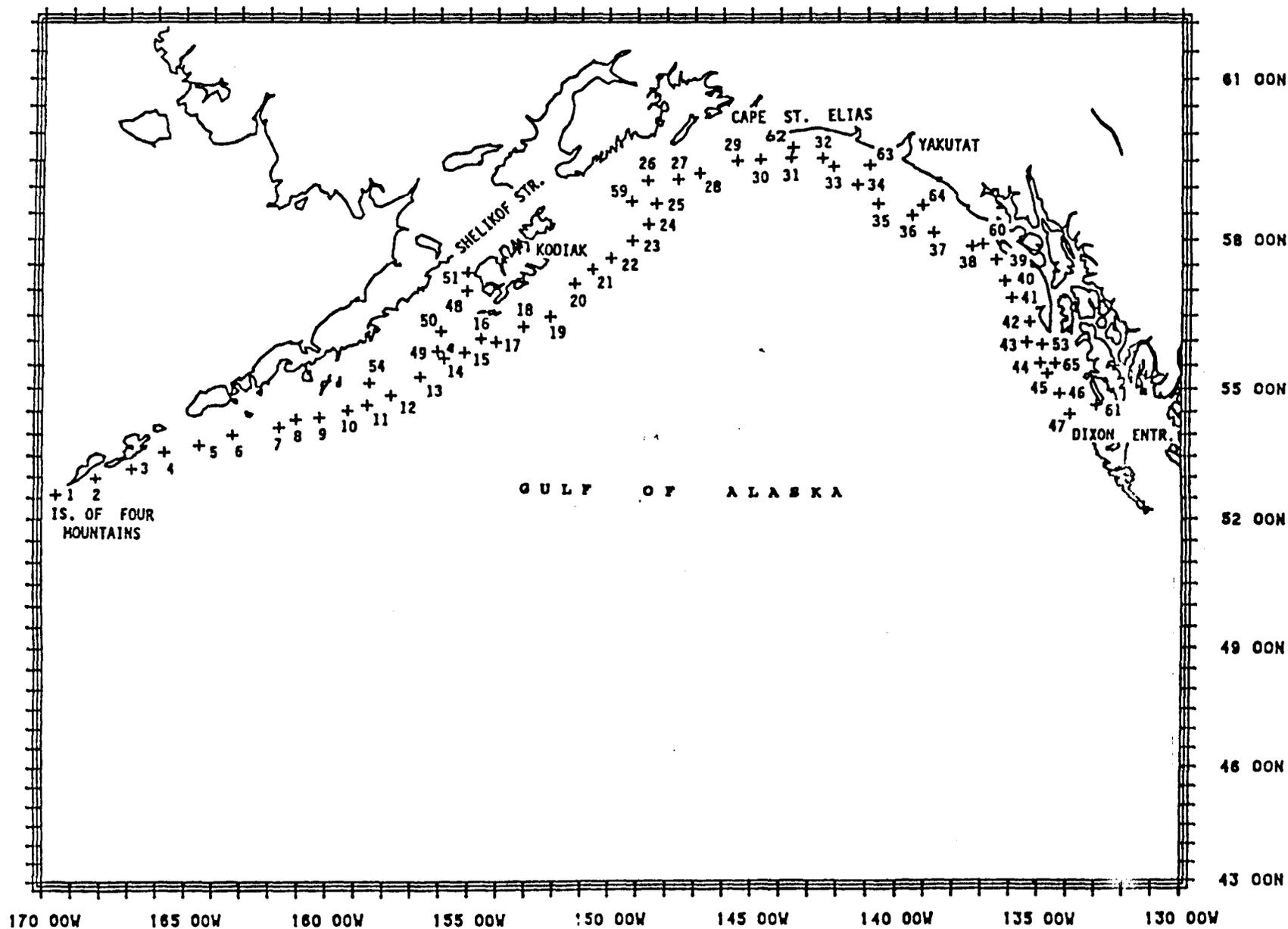


Figure 1.--Station locations for the 1992 NMFS longline survey. Station numbers between 48 and 65 refer to gully stations and actually represent a pair of adjacent stations (e.g. 53 locates stations 153 and 253).