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Alaska Fisheries  
Center**

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Fisheries Service

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Report to Industry:  
Results of the 1987  
U.S.-U.S.S.R. Cooperative  
Bottom Trawl Survey  
of the Central and Western  
Gulf of Alaska

March 1989

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Report to Industry: Results of the 1987 U.S.-U.S.S.R.  
Cooperative Bottom Trawl Survey of the  
Central and Western Gulf of Alaska.

by

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## INTRODUCTION

A cooperative U.S.- U.S.S.R. bottom trawl survey was conducted in the central and western Gulf of Alaska, from 6 June-12 July 1987. Participants included the National Marine Fisheries Service's Northwest and Alaska Fisheries Center's Resource Assessment and Conservation Engineering Division (RACE), and the Pacific Scientific Research Institute of Fisheries and Oceanography (TINRO) Laboratory of North Pacific Fish Resources, Vladivostok, U.S.S.R..

One hundred ninety-six bottom trawl hauls were attempted between the Islands of Four Mountains ( $170^{\circ}$  W. long.) and the Barren Islands ( $149^{\circ} 43'$  W. long.) at depths ranging from 52 to 405 fathoms (95 to 741 meters) (Figure 1). The primary purpose of this report is to provide the results of each trawl haul to the U.S. fishing industry, including an estimate of the distribution and catch per unit effort for important species by geographic position and depth.

## METHODS

Vessels and Gear Characteristics

The survey employed the Soviet research vessel R/V Babaevsk a 103 m (338 ft), super BMRT- style stern trawler.

Trawling employed two Soviet kapron (nylon), six panel bottom trawls (Appendix). The small net, (43/61) had a 43 m (141 ft) headrope and 60.8 m (200 ft) footrope while the large net (51/68) had a 50.8 m (167 ft) headrope and 67.8 m (222 ft) footrope. Accessory gear for both nets included steel bobbin roller gear with a sliding bobbin section attached to each wing, double 100 m (328 ft) dandyines and oval steel doors weighing approximately 1.63 t (3,594 pounds) and measuring 2.76 m (9.06 ft) in diameter. Trawling speed averaged 3.5 nautical miles per hour.

The horizontal and vertical dimensions of the net opening were determined with a RACE trawl mensuration system. The width measurement used a master transducer attached to one wing which transmitted a signal to a minitransponder (slave) attached to the opposite wing. The height measurement used a transducer attached to the headrope that transmitted a signal to the bottom. Return signals were sent by the slave to the wing transducer and from the bottom to the headrope transducer. Each transducer measured the time delay between the transducer transmissions and the return signals and transmitted the measurement to a

hydrophone. A microprocessor aboard ship converted the encoded information from the hydrophone into trawl width and height data, which was displayed and stored on a computer system. Generally trawl width increased and height decreased with depth. The wingspread averaged 21 m for the 43/61 trawl with a 19-26 m range, while the 51/68 trawl averaged 27.5 m with a 25-30 m range.

### Survey Design and Operations

Trawling locations were selected to ensure adequate coverage of the groundfish resources by area and depth. The central and western Gulf of Alaska outer shelf and upper slope were divided into subareas 30 minutes of longitude wide, which were subdivided into four depth intervals. For each subarea two stations were assigned to the 100-200 m (55-109 fm) depth interval and one station each was assigned to the 201-300 m (110-163 fm), 301-500 m (164-273 fm) and 501-700 m (274-382 fm) depth intervals. Additional sampling was conducted east of Kodiak Island during a gear comparison experiment.

During survey operations, the first location encountered with trawlable bottom near a preselected station position was sampled. The echo sounder was only used to find trawlable bottom and the fish sign information was not a criteria for trawling. Each survey station was scheduled to be towed for one-half hour, however in cases where there was not enough trawlable bottom for a full one-half hour tow, shorter tows were completed. The on-bottom trawling time was determined by monitoring the headrope to bottom distance data provided by the RACE trawl mensuration equipment. During the gear comparison experiment, towing time was reduced to 15 minutes.

Because of the need to process catches within the limited time available between stations, large catches were sampled to obtain a representative portion of approximately 1,000 kg (2,200 lbs). Each catch sample was sorted to species, weighed and enumerated. Length measurements, sexual development indices, stomach content observations and structures used for age determination (otoliths, scales or fin rays) were collected for selected species.

### Gear Comparison Experiment

The R/V Babaevsk completed 33 tows at three sites east of Kodiak Island with two U.S. and one Japanese trawler to compare the relative fishing efficiencies of each vessel-trawl combination. The catches of these non-standard survey tows (Figures 31, 33; hauls 192-199, 200-208, 211-213, 218-233 and 241) are included in this report.

### ORGANIZATION OF REPORT

This report presents the catch data collected at successfully completed stations for the principal species encountered during the survey. Section 1 contains distribution and relative abundance charts of species by station (Figures 2-17). Section 2 contains the fishing results which are presented in three parts: (1) station charts with haul numbers plotted adjacent to their respective geographical locations (Figures 18-33), (2) summary listings of species catches by haul, and (3) summary listings of catch rates in descending order of magnitude for selected species of commercial interest. The Appendix contains diagrams and specifications of the fishing gear used during the survey.

Definitions of the codes and symbols used in the fishing logs are summarized in Table 1.

### ACKNOWLEDGEMENTS

The authors would like to thank the participating scientific staff of both nations and the Captain and crew of the Soviet R/V Babaeusk, for their cooperation and assistance during this cooperative groundfish survey.

Further information regarding this survey is available by contacting:

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Table 1.-- Guide to the fishing log of the 1987 U.S.- U.S.S.R. cooperative bottom trawl survey.

Haul # -	survey haul numbers ranged from 64-259 (not shown hauls 1-63 taken during a Soviet groundfish survey in the Bering Sea).
Gear depth-	fathoms.
Duration of tow-	tenths of an hour (standard tow one-half hour).
Distance fished-	nautical miles.
Gear performance-	<p>0 = satisfactory.</p> <p>1 = satisfactory tow, net snagged bottom but damage and fish loss were minimal.</p> <p>5 = unsatisfactory tow.</p> <p>6 = unsatisfactory tow, net snagged bottom.</p> <p>7 = unsatisfactory tow, torn net.</p>
Gear type-	<p>794 = Soviet kapron (nylon) bottom trawl with roller gear, 43 m headrope and 60.8 m footrope.</p> <p>795 = Soviet kapron (nylon) bottom trawl with roller gear, 50.8 m headrope and 67.8 m footrope.</p>
Catch units-	<p><u>Section 1:</u> Distribution and abundance plots use catch per unit effort units of kilograms of catch per nautical mile trawled.</p> <p><u>Section 2:</u> (2.2) Summary listings of species catches by haul in kilograms. (2.3) Summary listings of catch rates for selected species are in units of kilograms of catch per nautical mile trawled.</p>

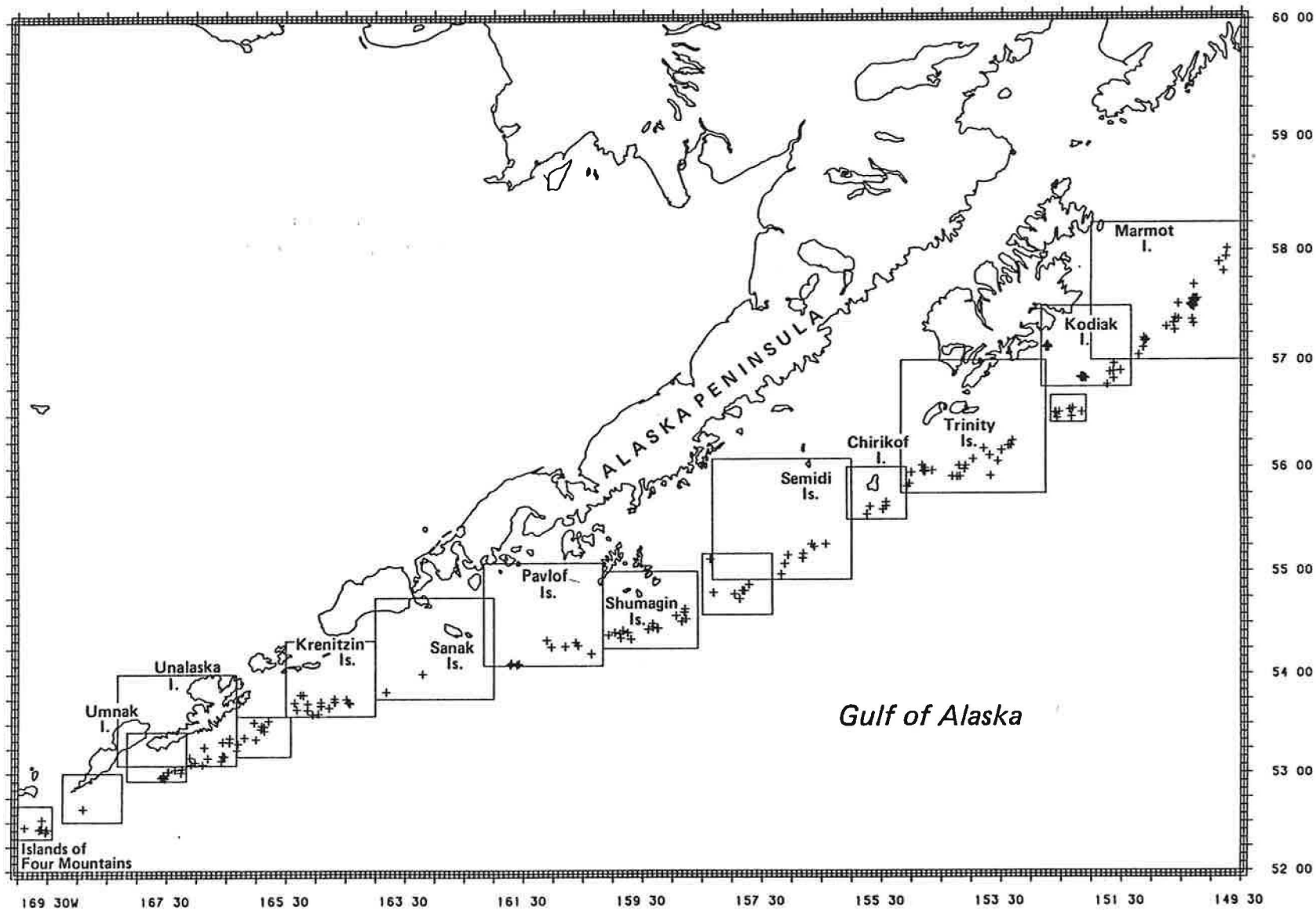
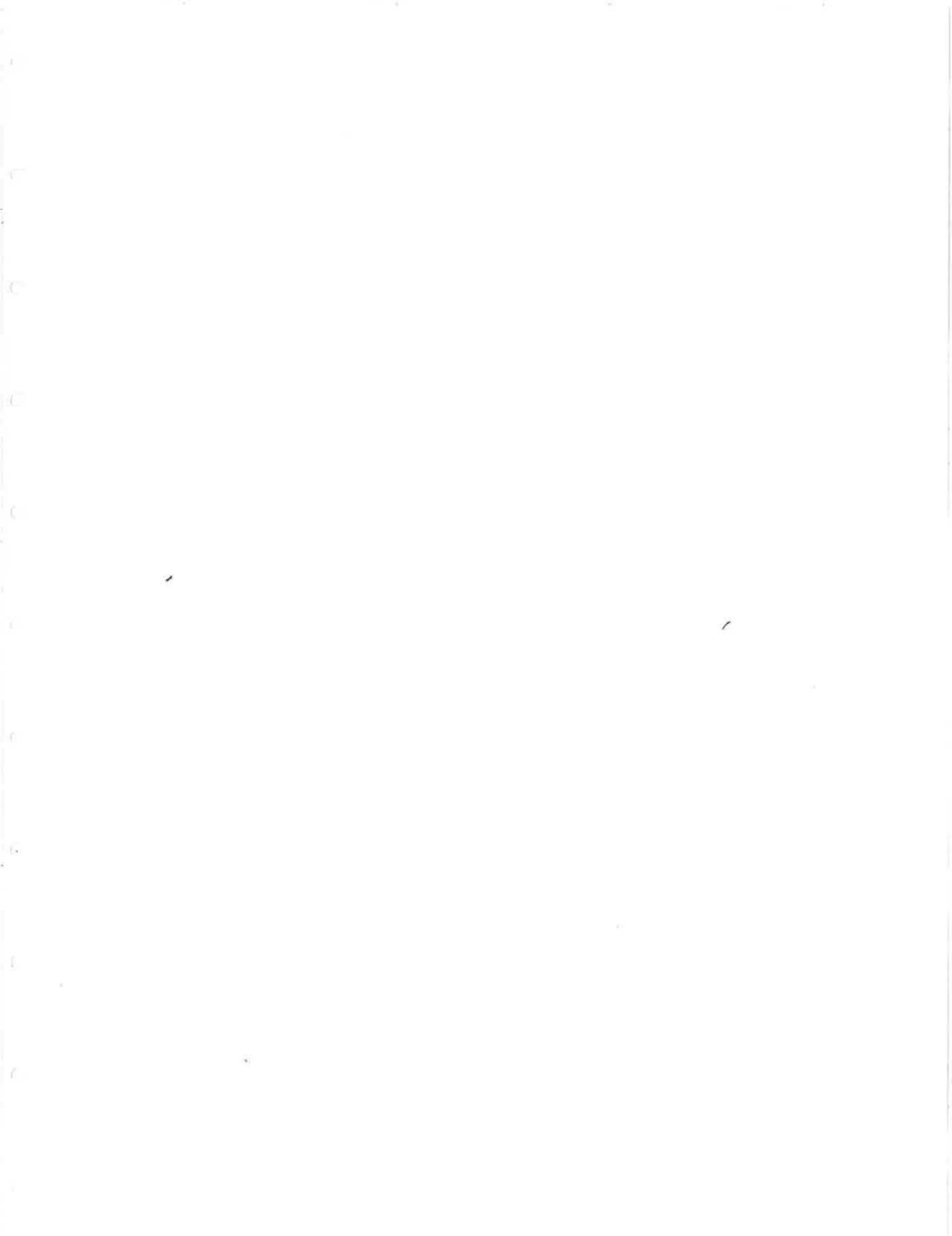


Figure 1.--Total survey stations attempted during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska 14 July-2 October 1987, and cited in Figures 18-33.



**Section 1**

**Distribution and Relative Abundance Plots  
for the principal groundfish species taken  
during the 1987 survey**



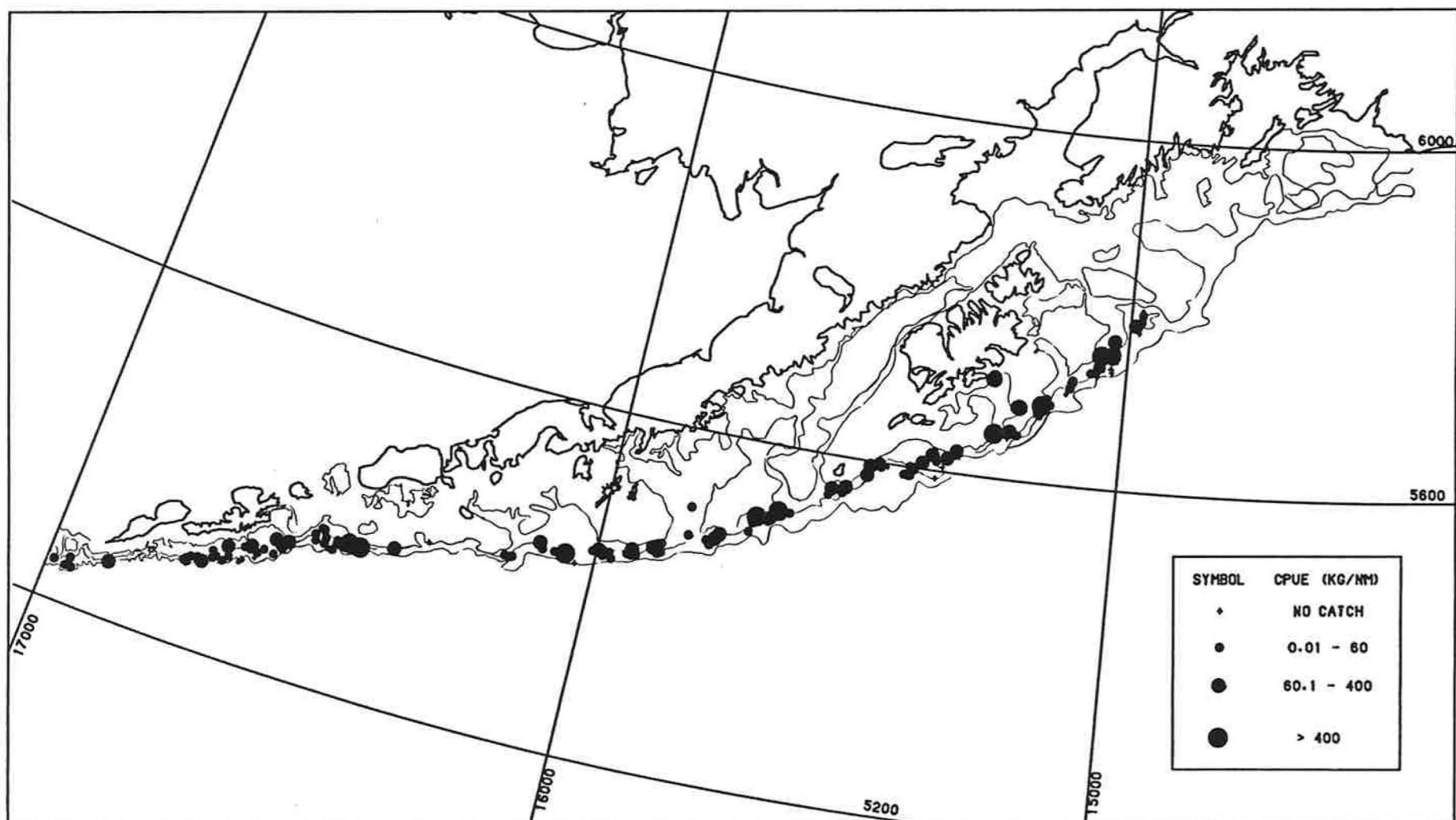


Figure 2.--Catch per unit effort (kilograms/nautical mile) of arrowtooth flounder, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

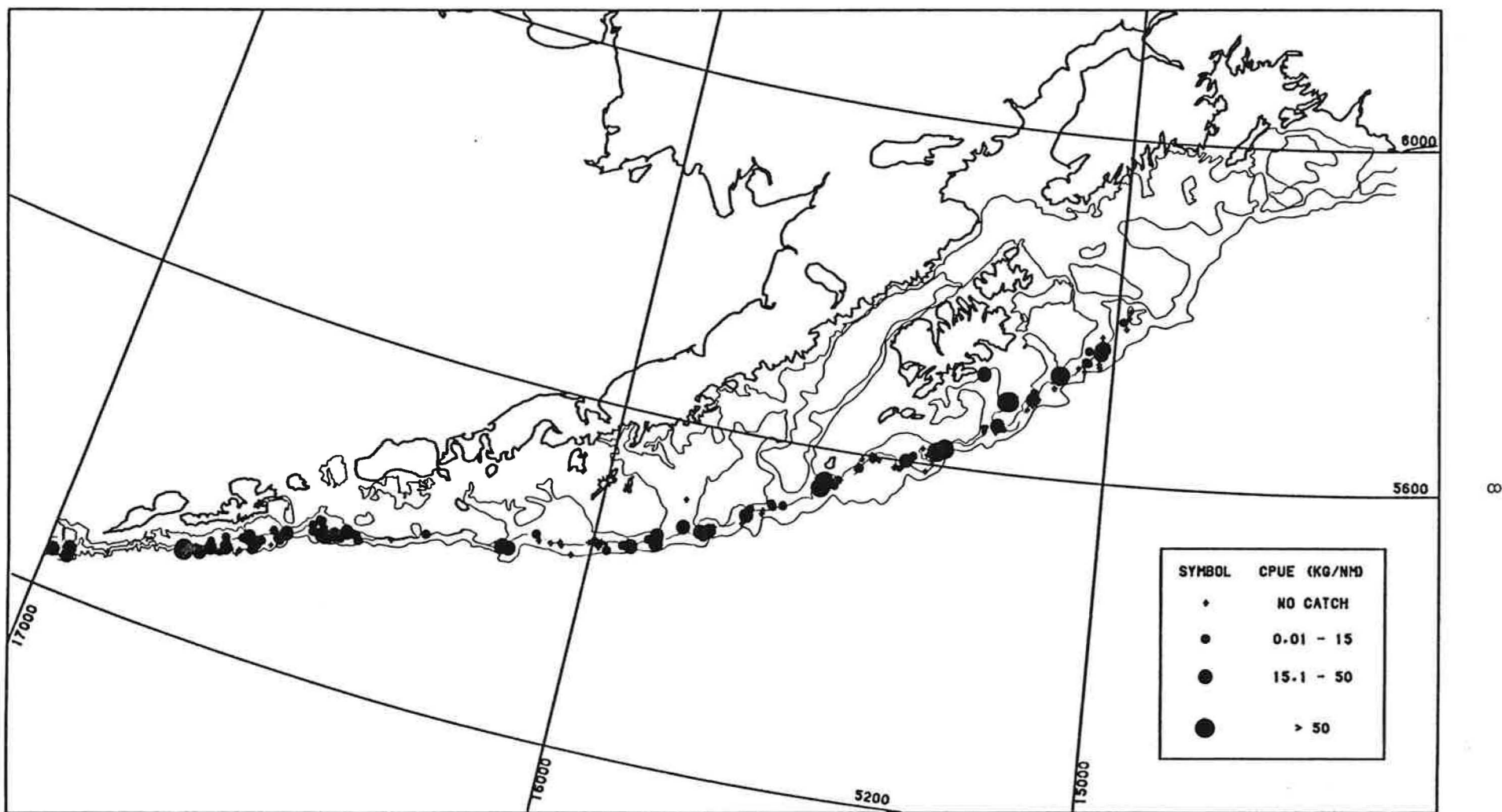


Figure 3.--Catch per unit effort (kilograms/nautical mile) of Pacific halibut, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

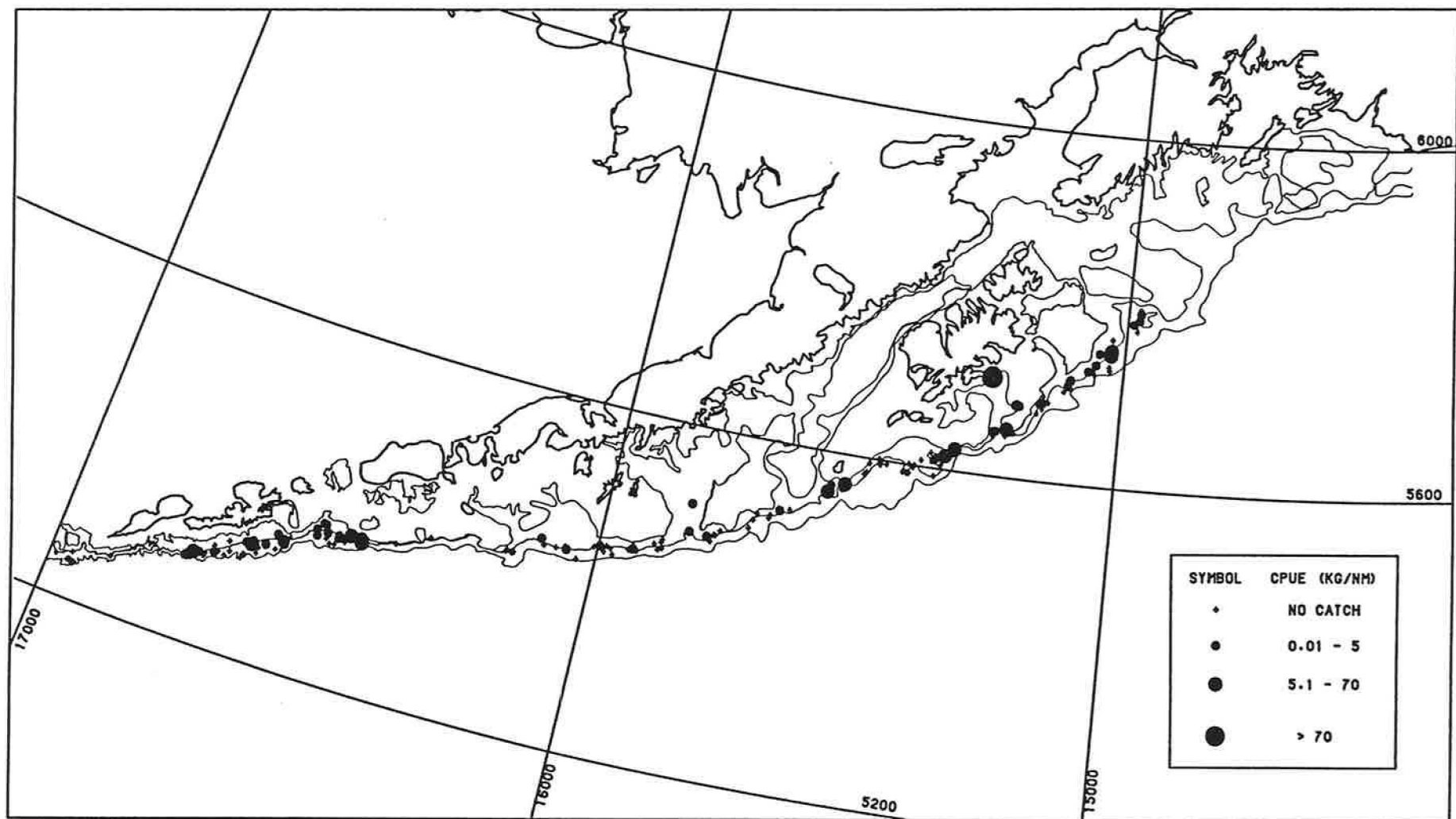


Figure 4.--Catch per unit effort (kilograms/nautical mile) of flathead sole, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.



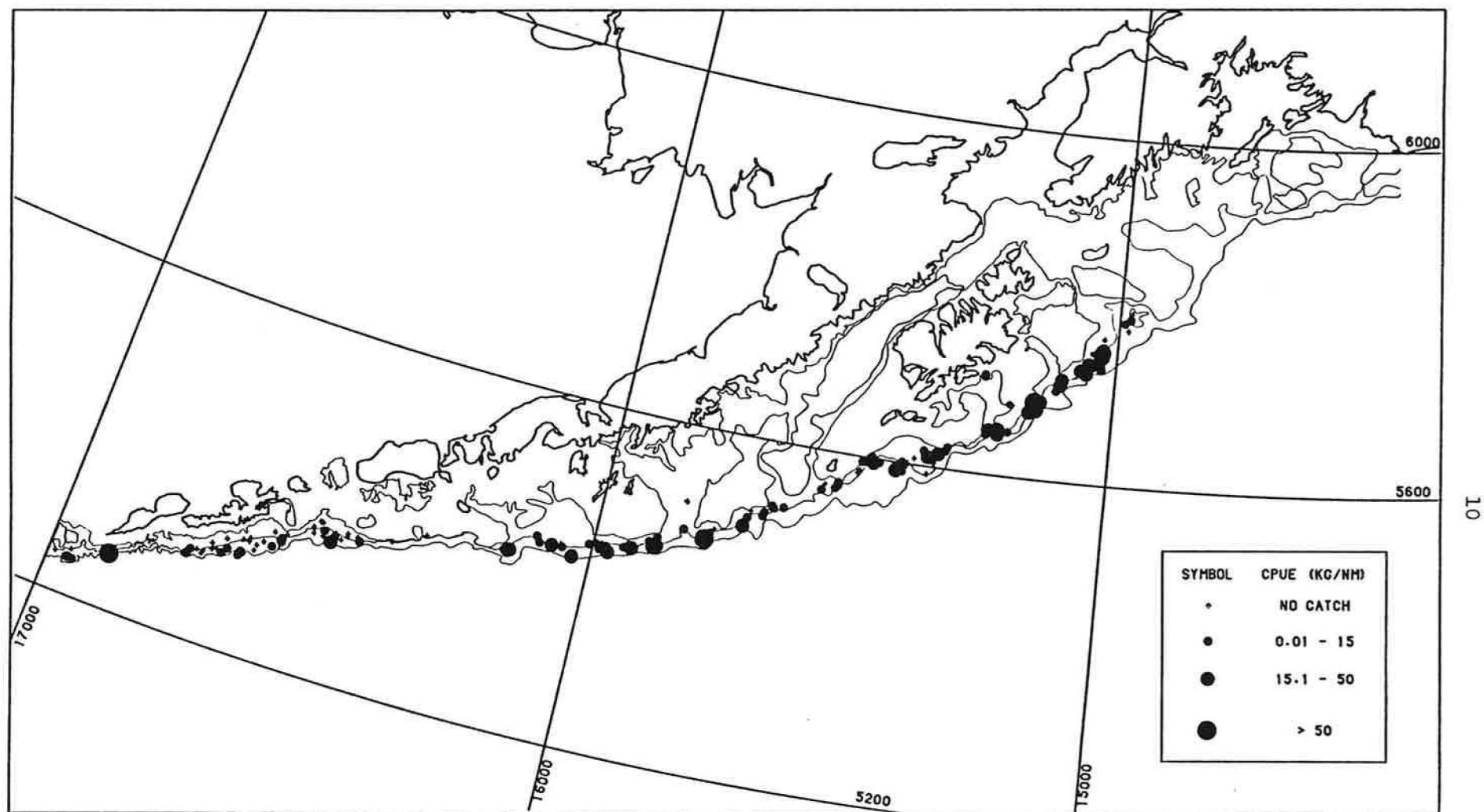


Figure 5.--Catch per unit effort (kilograms/nautical mile) of Dover sole, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

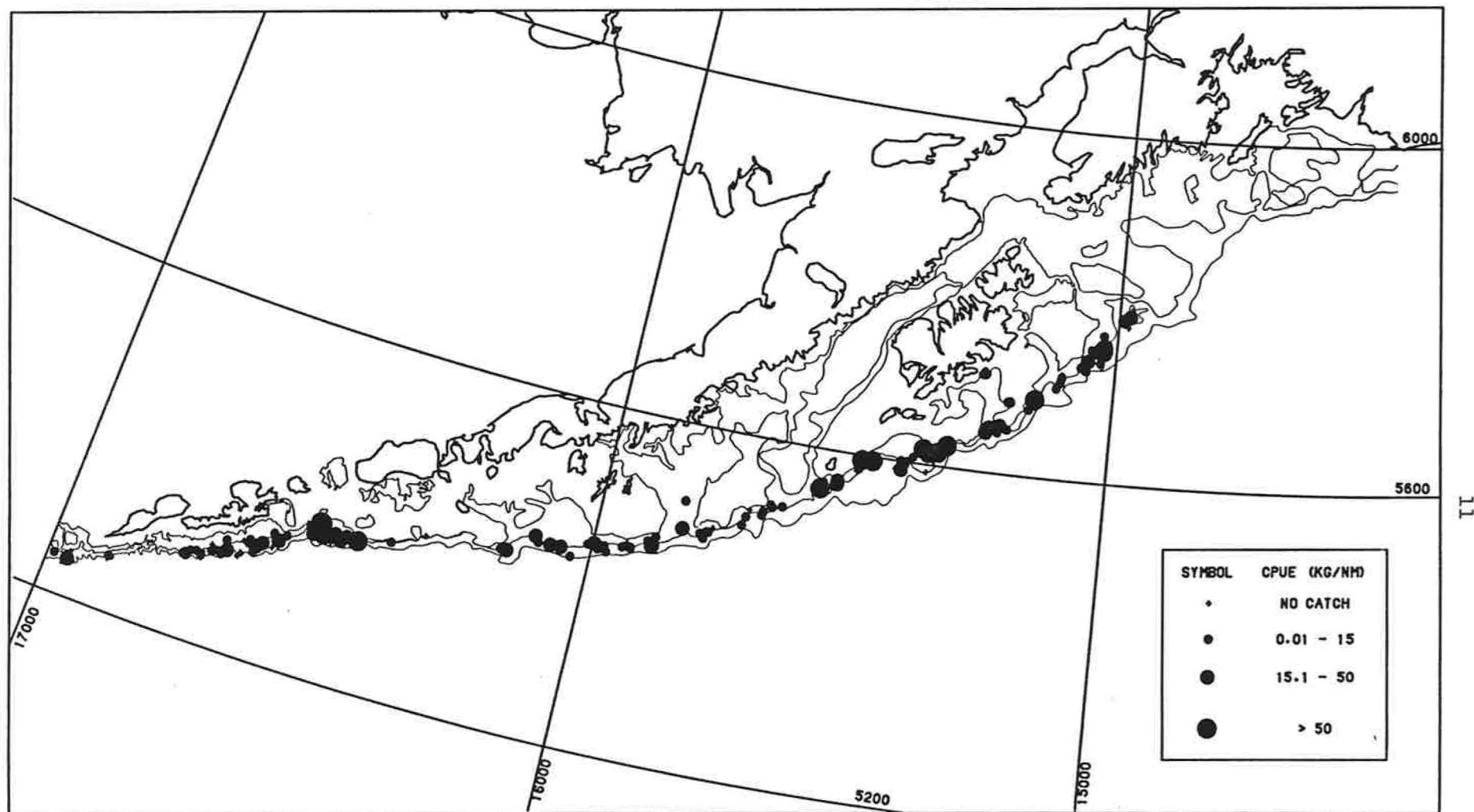


Figure 6.--Catch per unit effort (kilograms/nautical mile) of rex sole, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

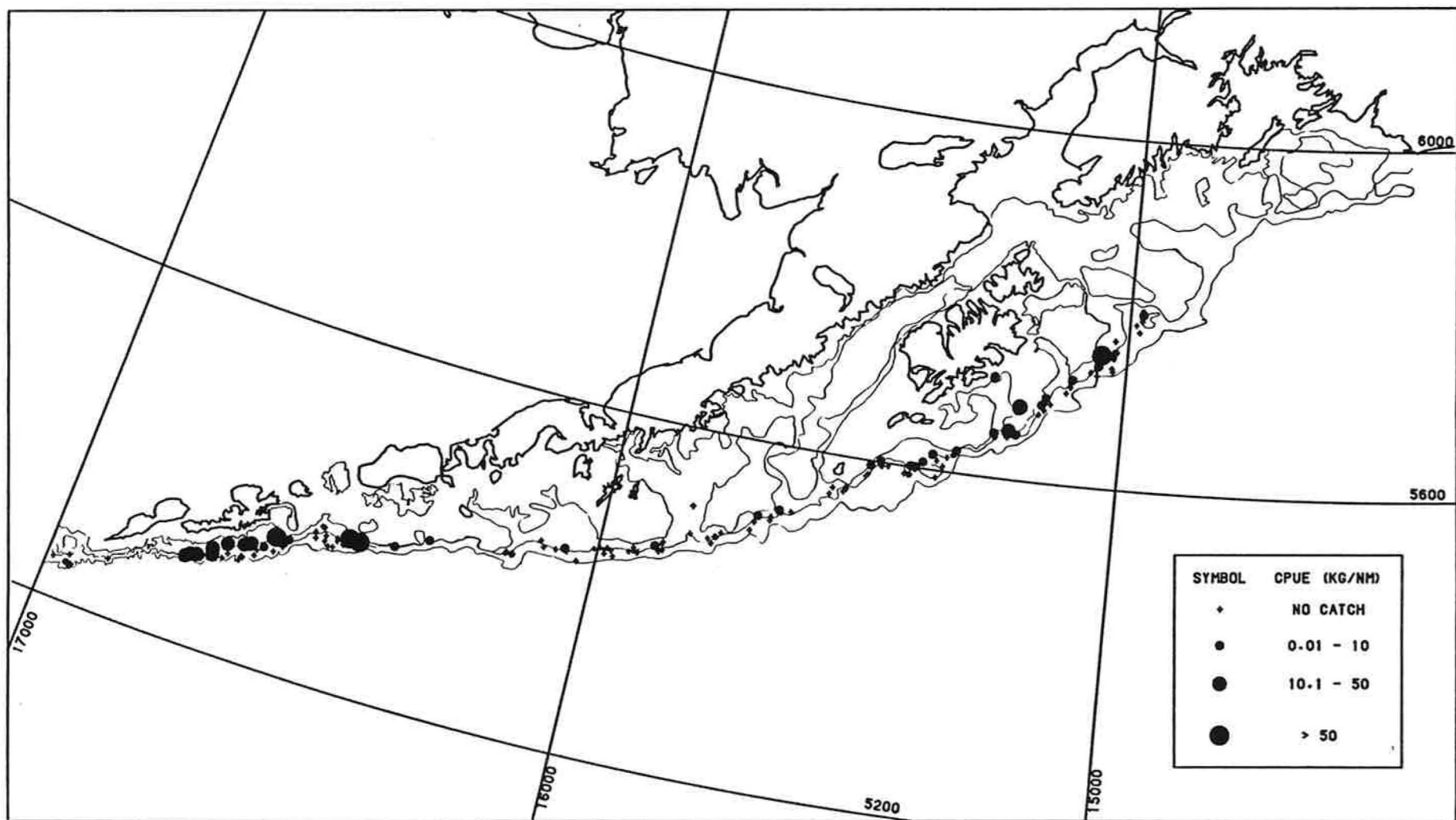


Figure 7.--Catch per unit effort (kilograms/nautical mile) of rock sole, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

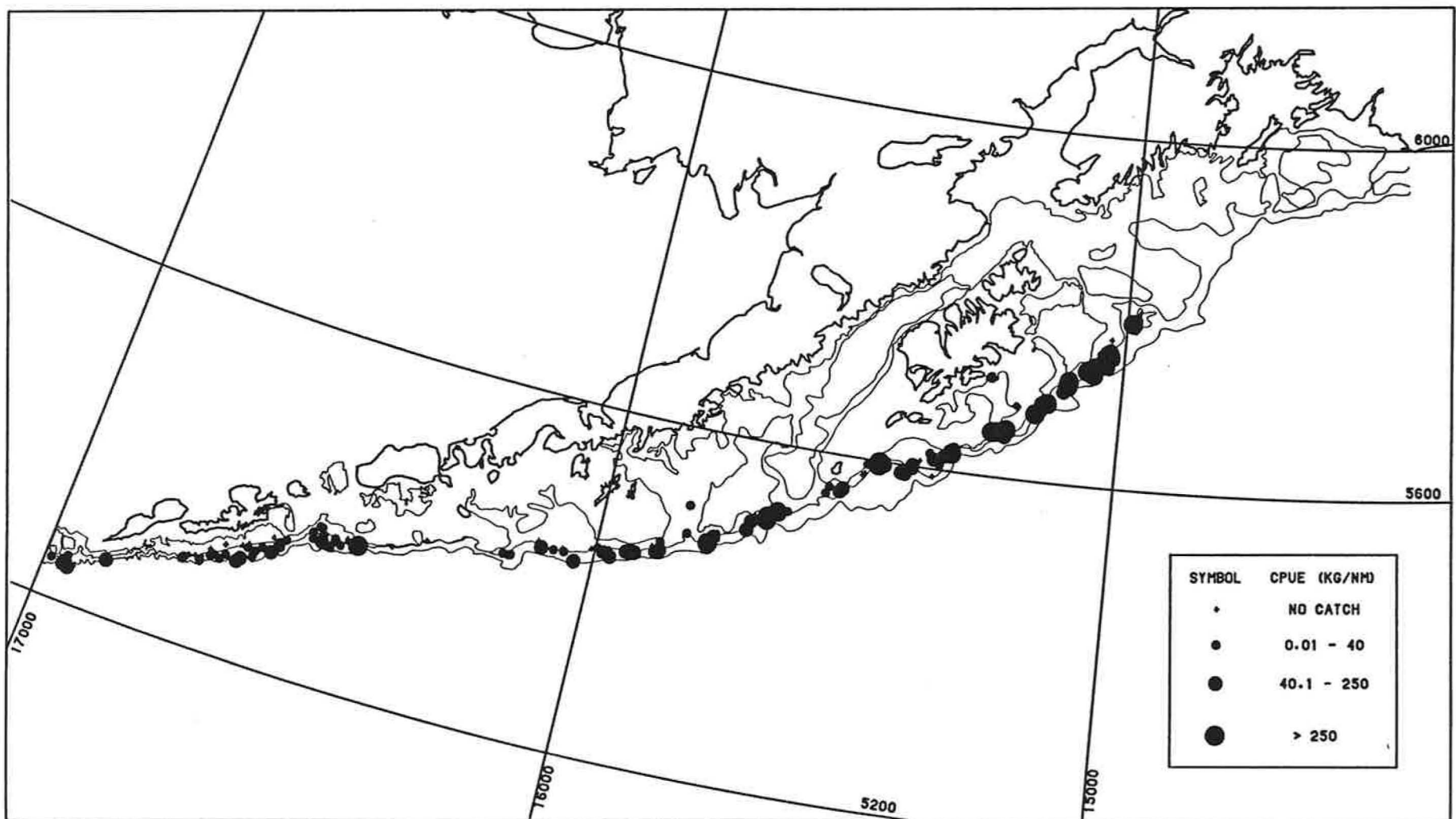


Figure 8.--Catch per unit effort (kilograms/nautical mile) of sablefish, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

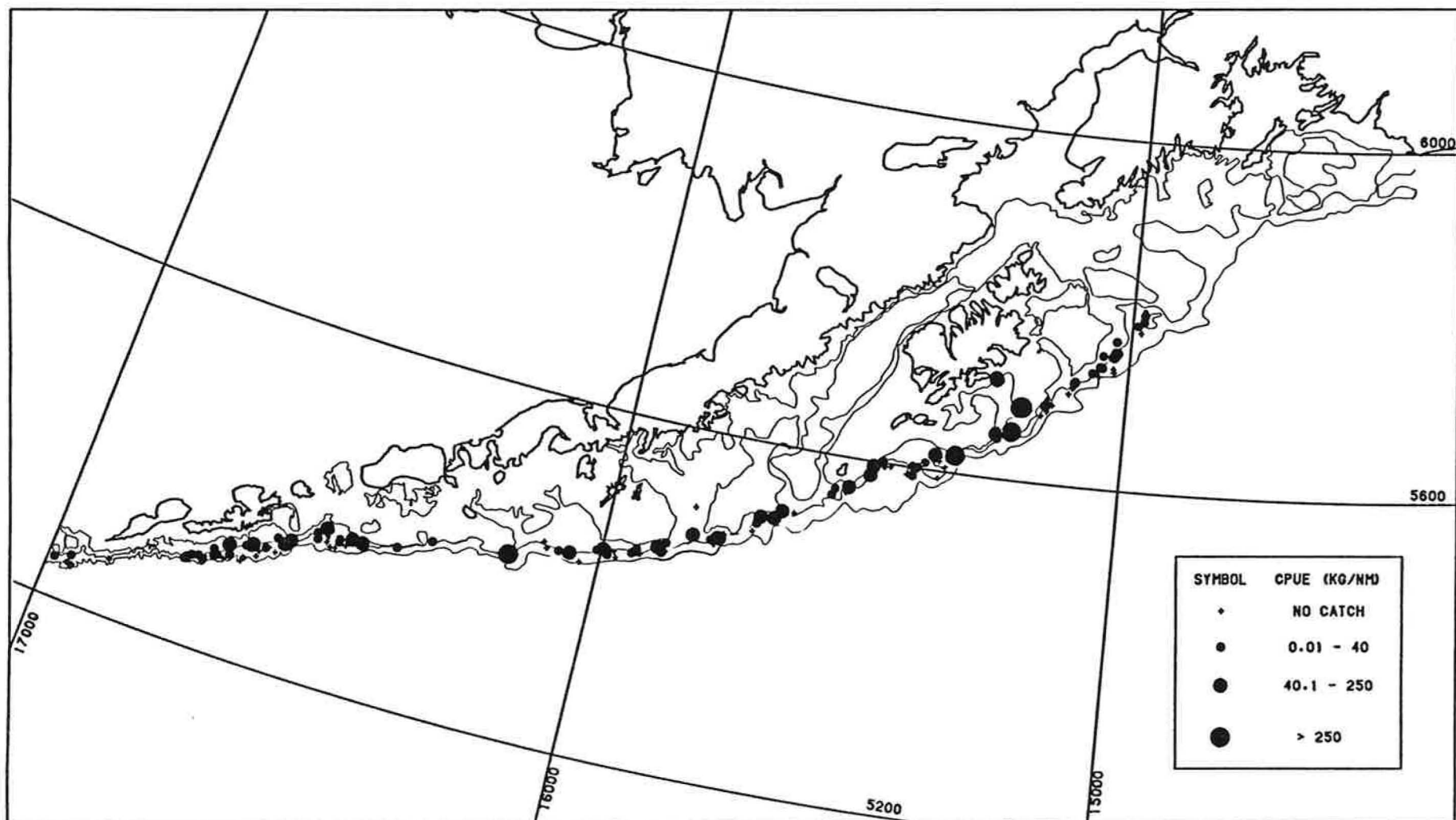


Figure 9.--Catch per unit effort (kilograms/nautical mile) of Pacific cod, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

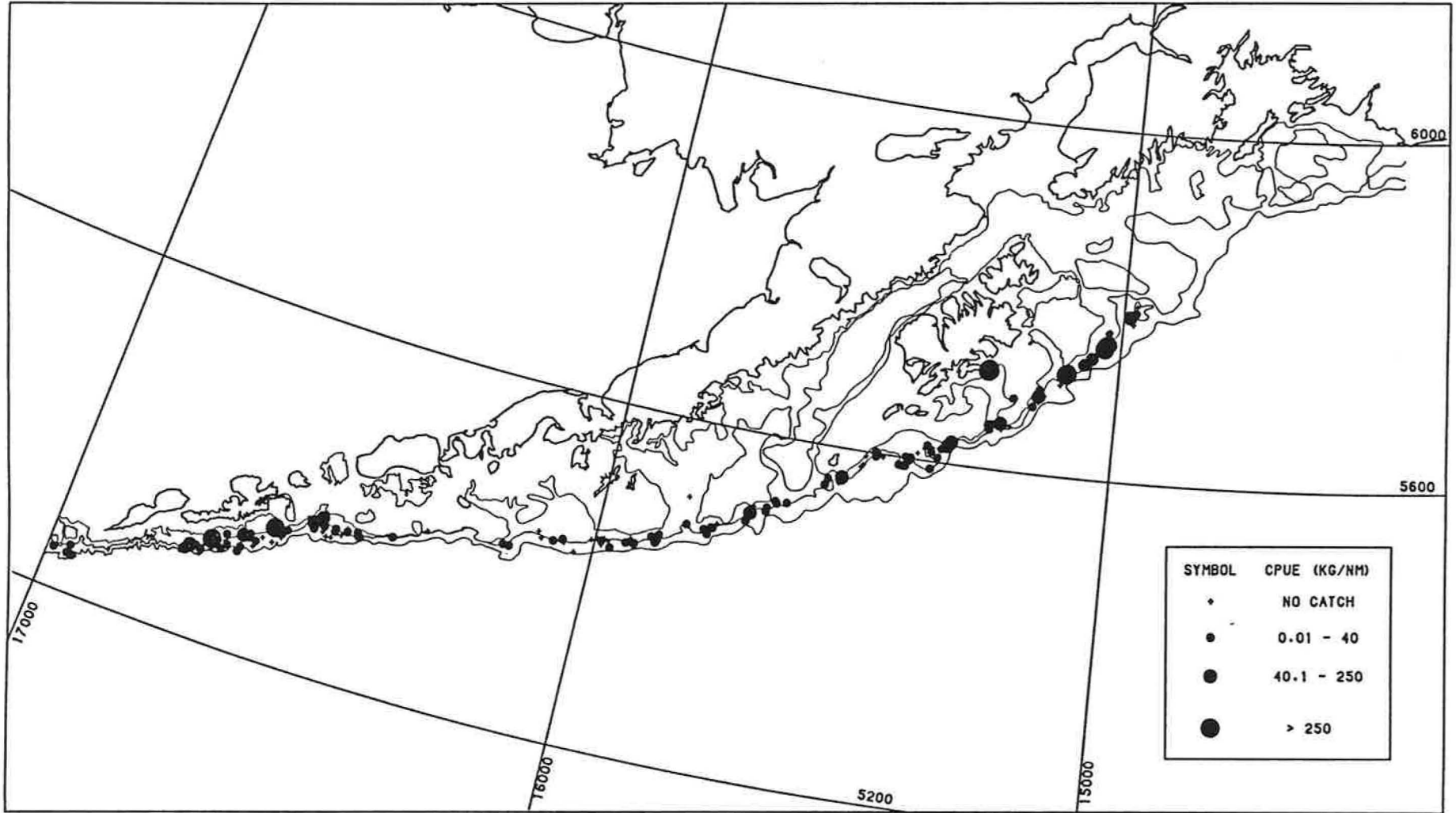


Figure 10.--Catch per unit effort (kilograms/nautical mile) of walleye pollock, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

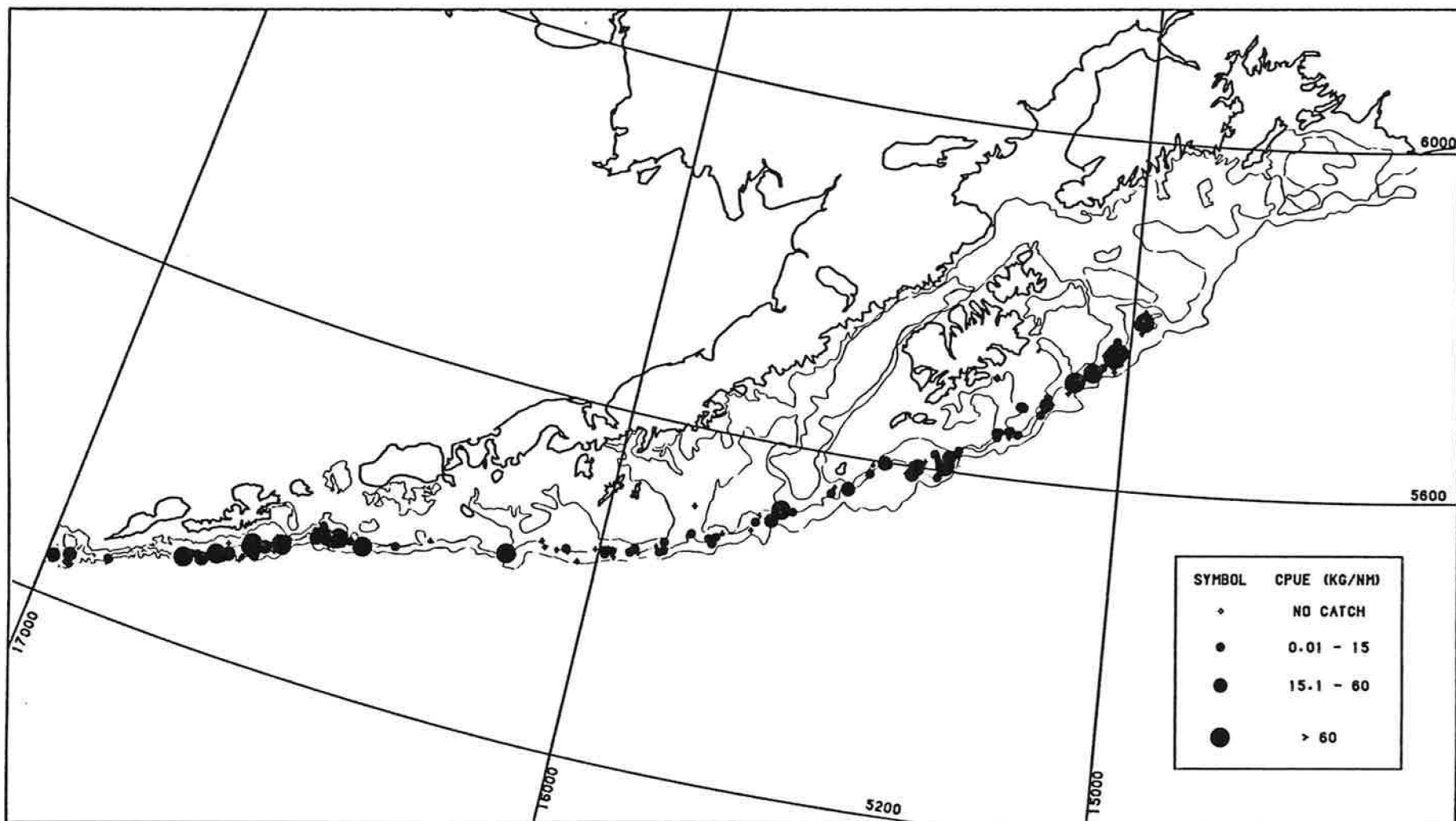


Figure 11.--Catch per unit effort (kilograms/nautical mile) of Pacific ocean perch, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

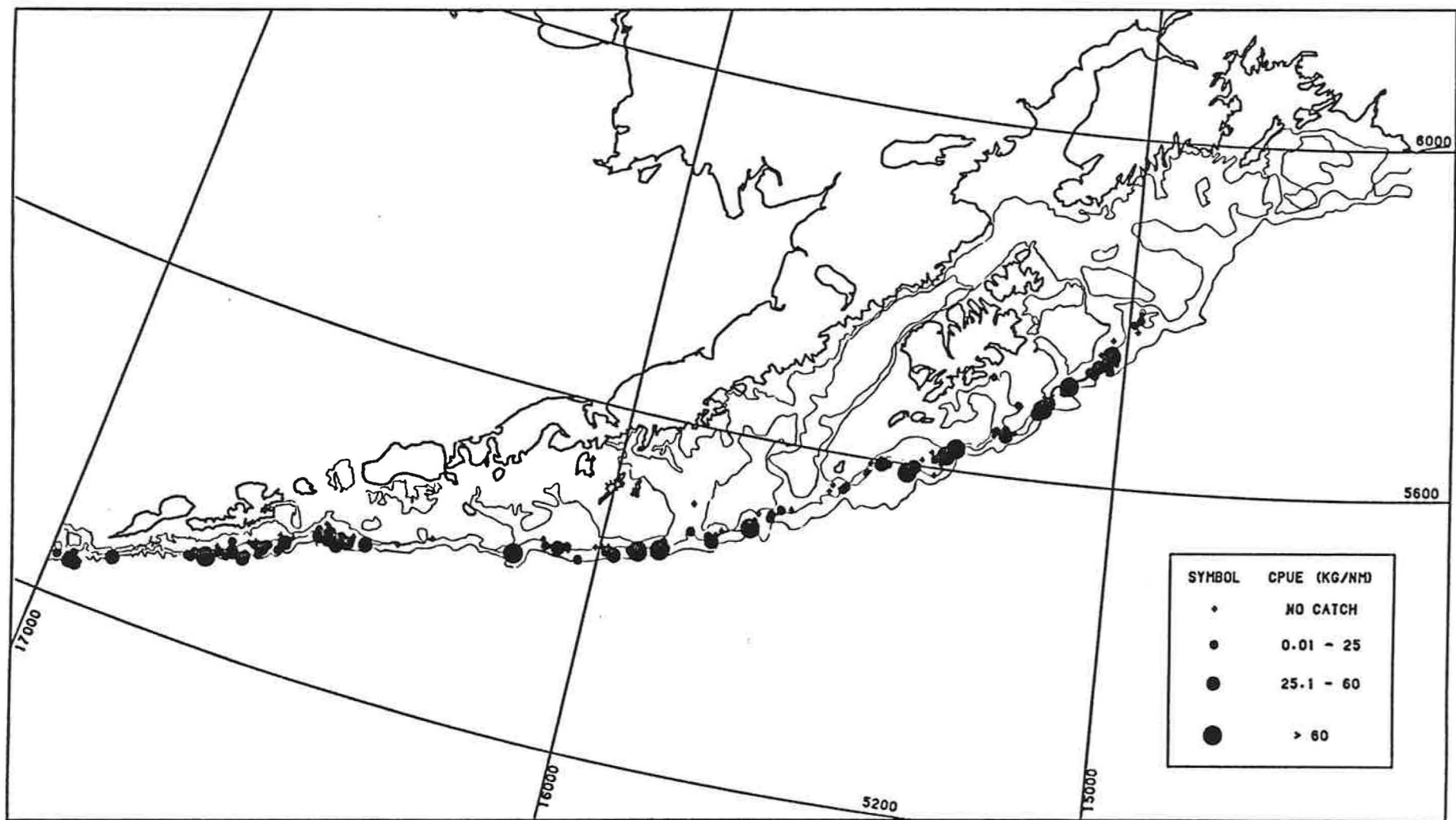


Figure 12.--Catch per unit effort (kilograms/nautical mile) of shortspine thornyhead, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.



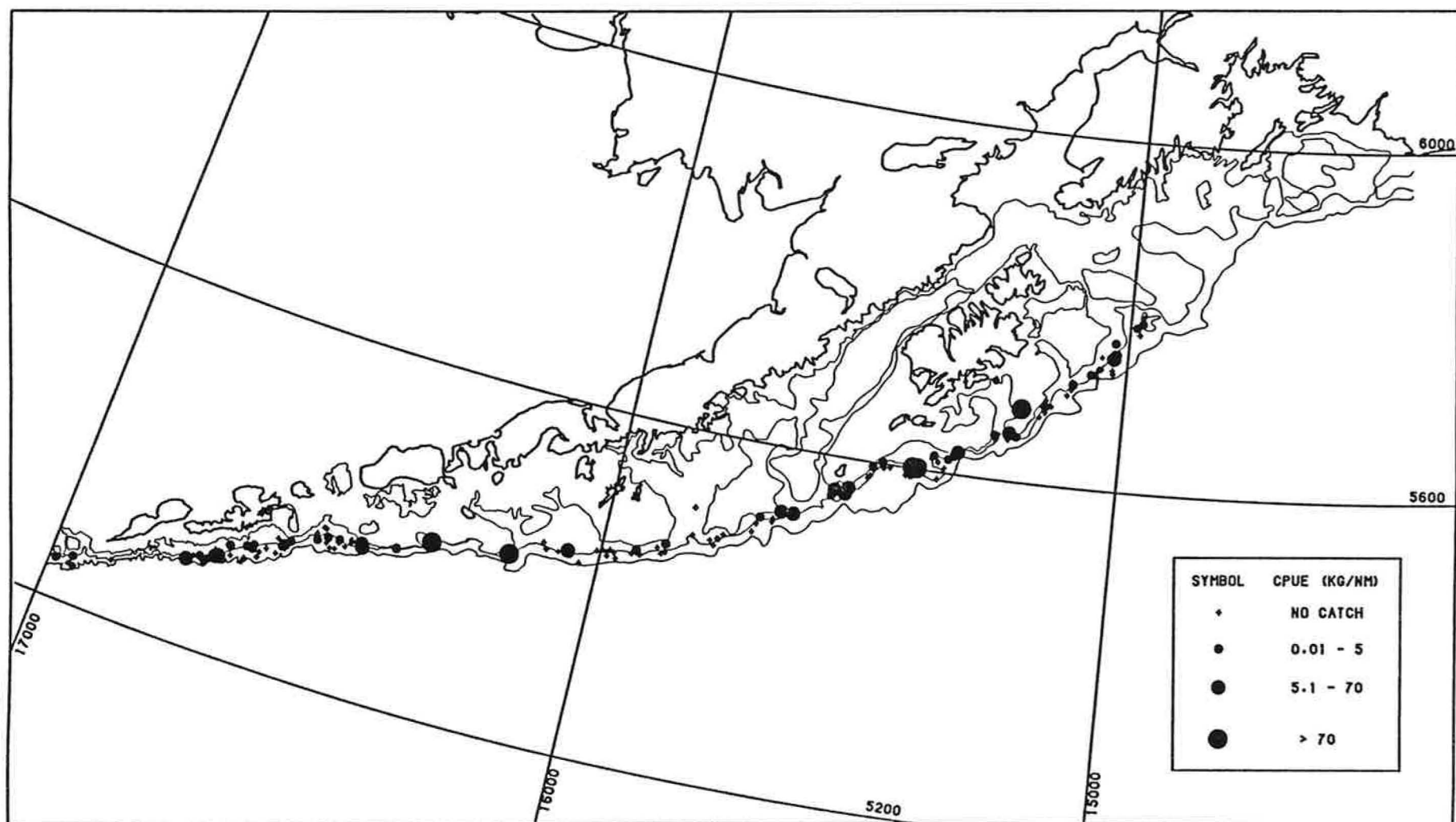


Figure 13.--Catch per unit effort (kilograms/nautical mile) of northern rockfish, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

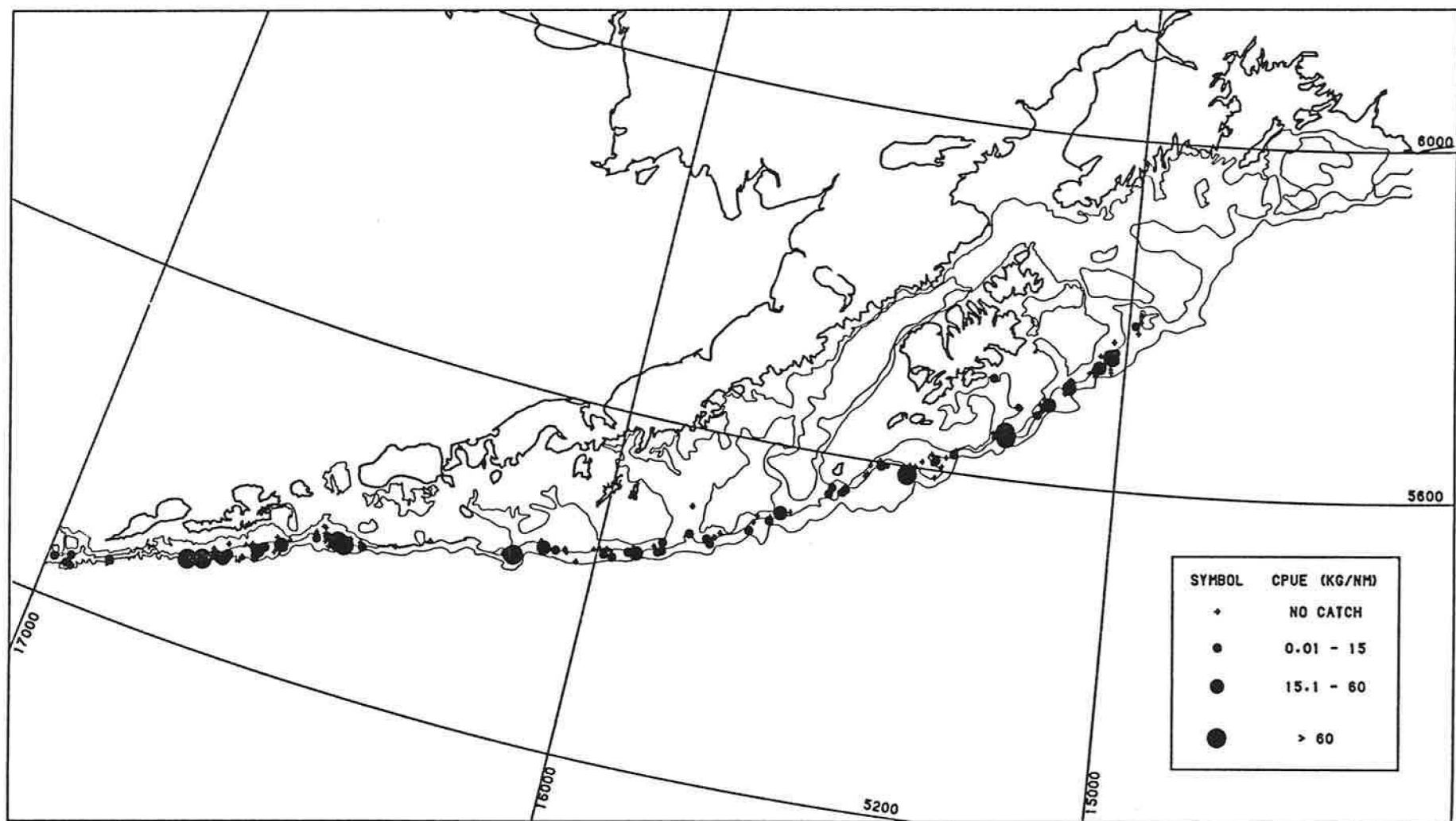


Figure 14.--Catch per unit effort (kilograms/nautical mile) of rougheye rockfish, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

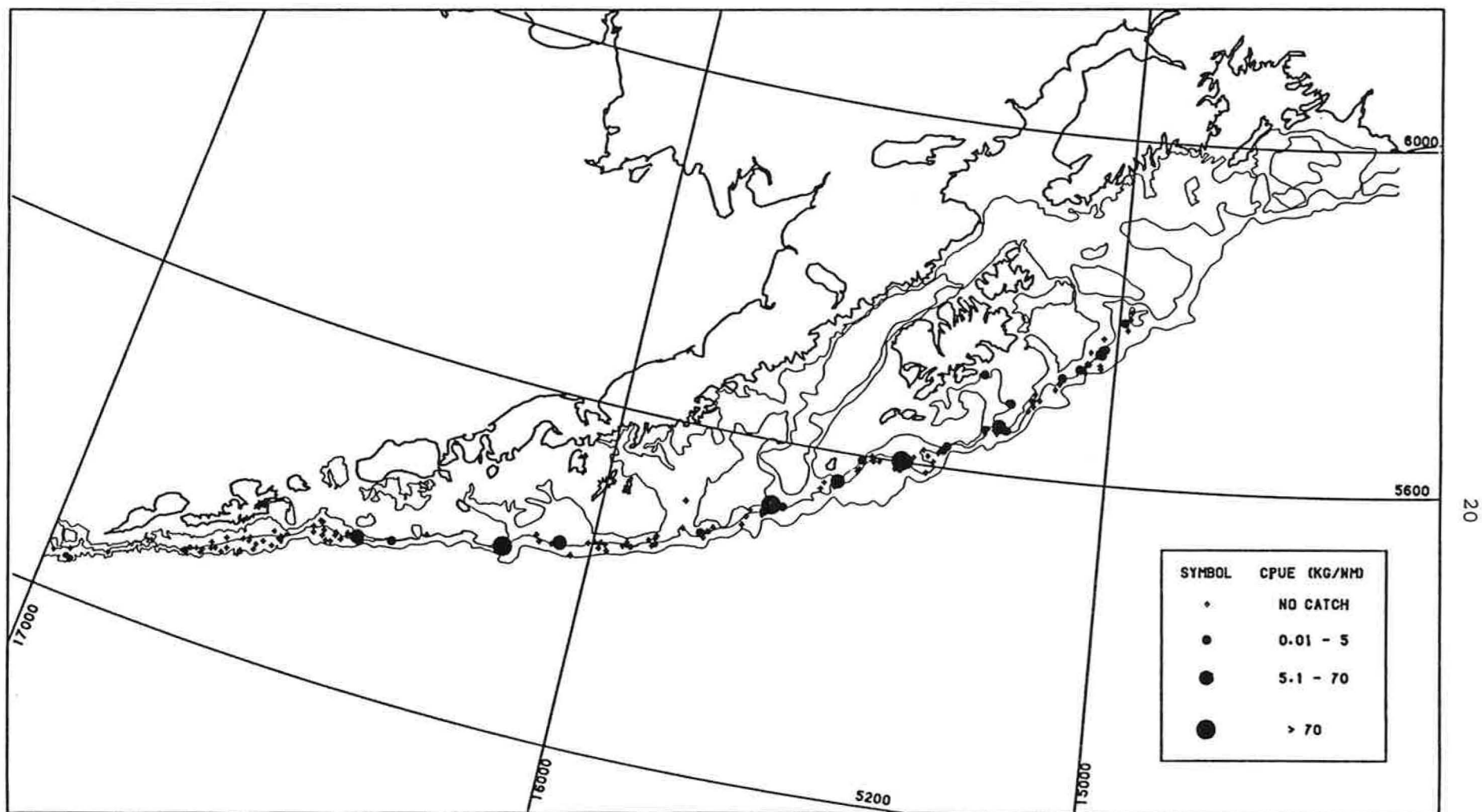


Figure 15.--Catch per unit effort (kilograms/nautical mile) of dusky rockfish, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

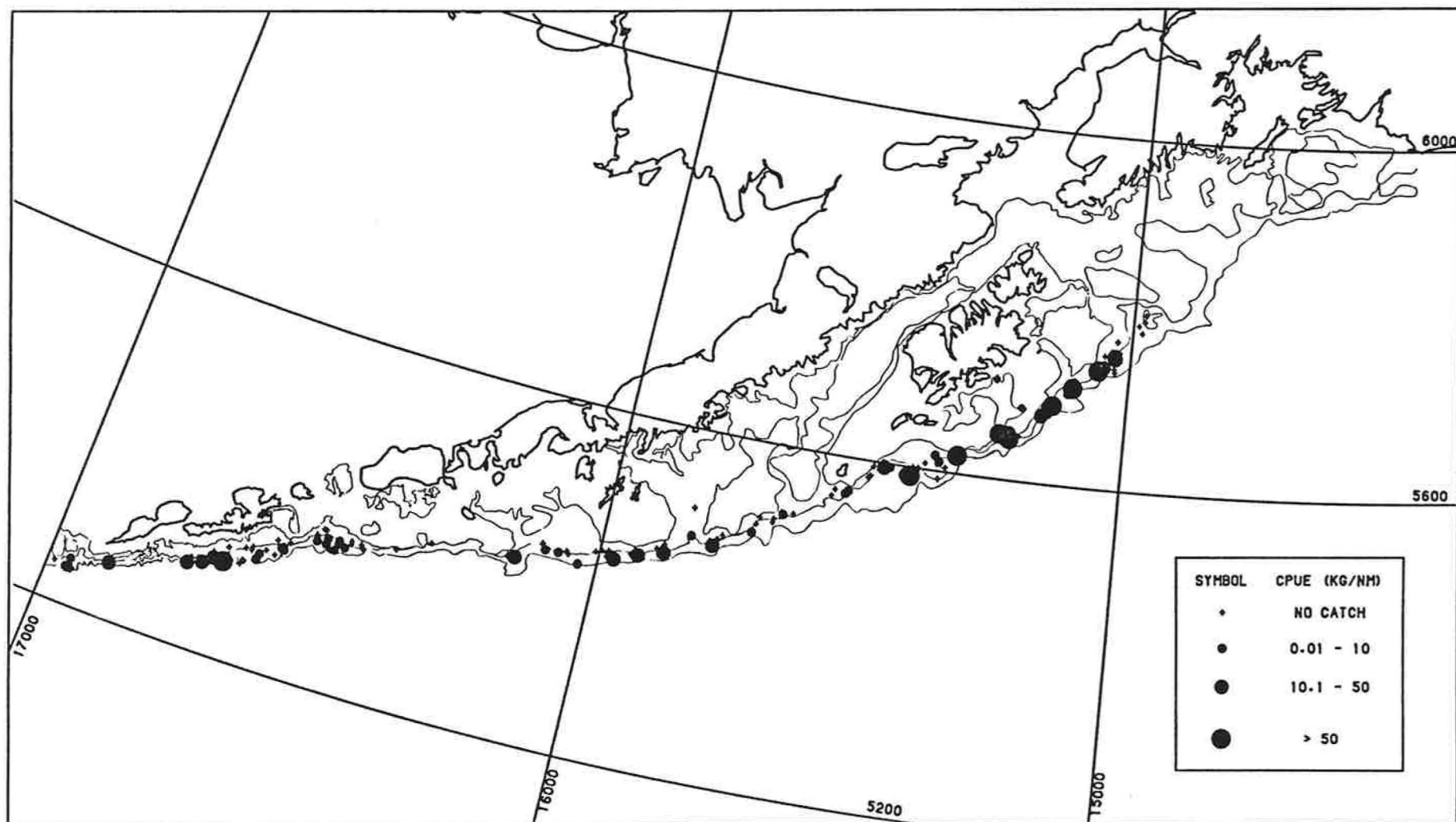


Figure 16.--Catch per unit effort (kilograms/nautical mile) of shorttraker rockfish, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

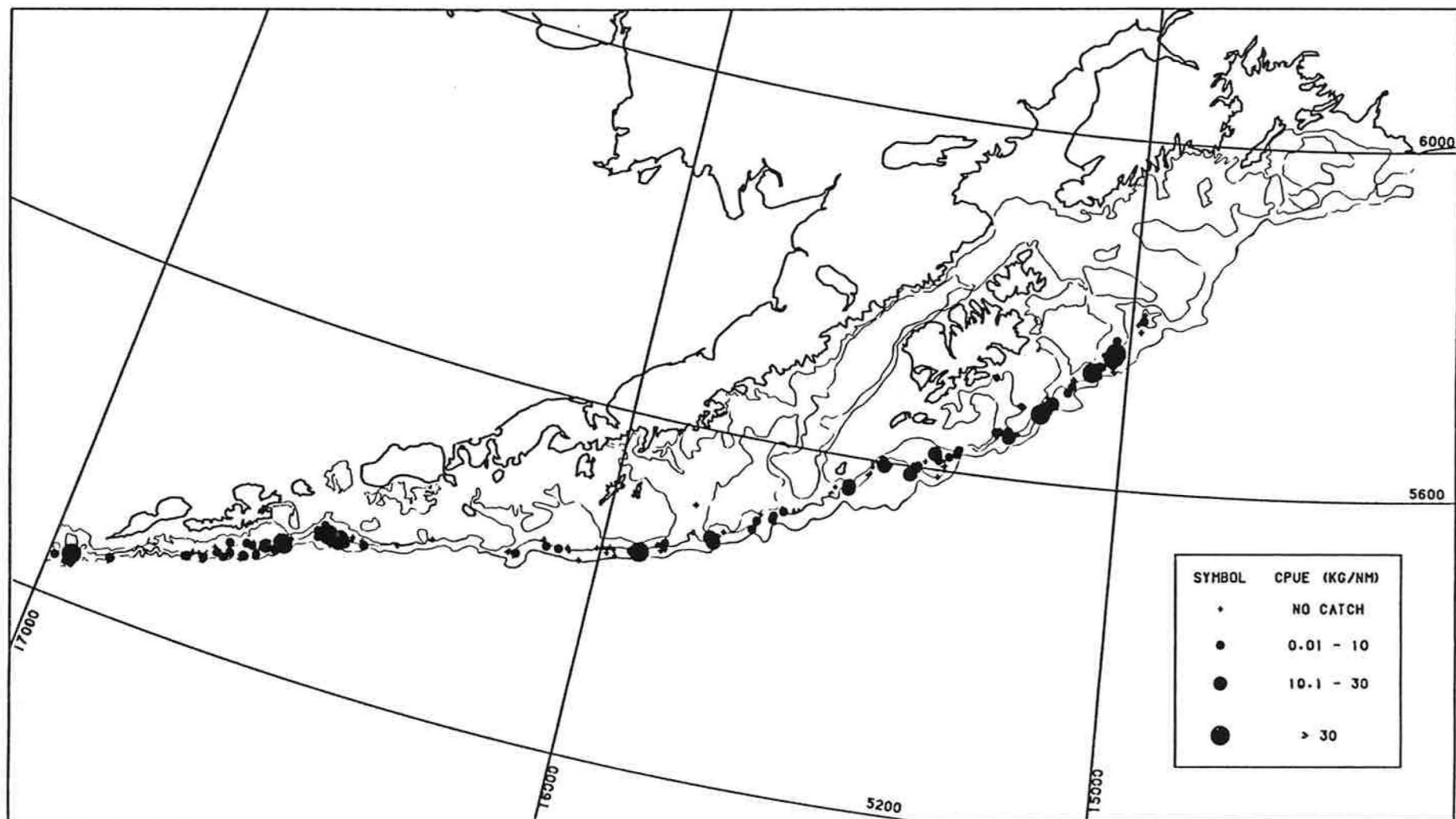


Figure 17.--Catch per unit effort (kilograms/nautical mile) of red squid, during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

Section 2.1

Fishing log for the 1987 U.S.- U.S.S.R. cooperative survey

Station charts of haul numbers plotted adjacent to their  
respective geographical locations

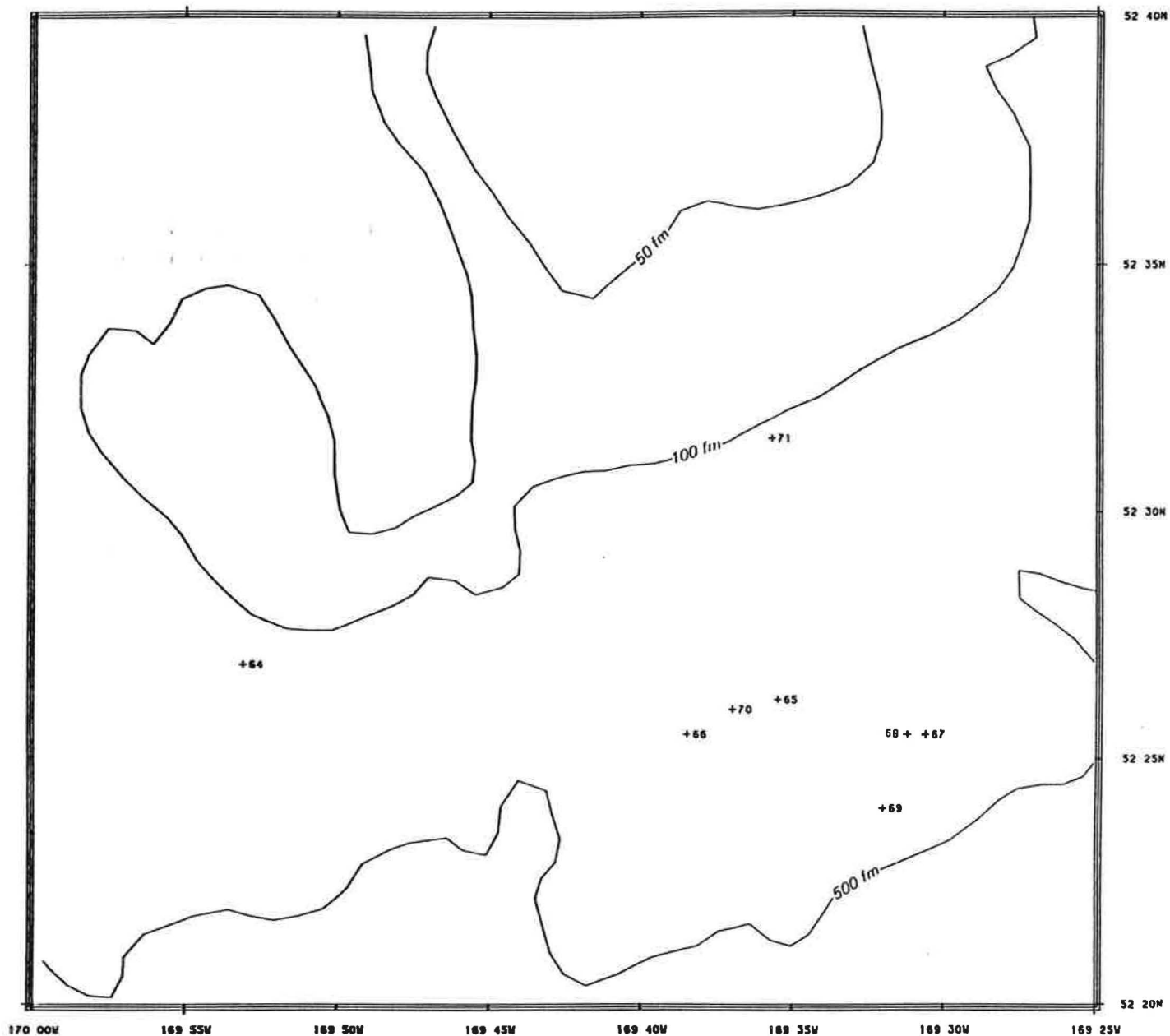


Figure 18.--Stations surveyed by the Soviet research vessel Babaevsk in the Islands of Four Mountains area (hauls 64-71).

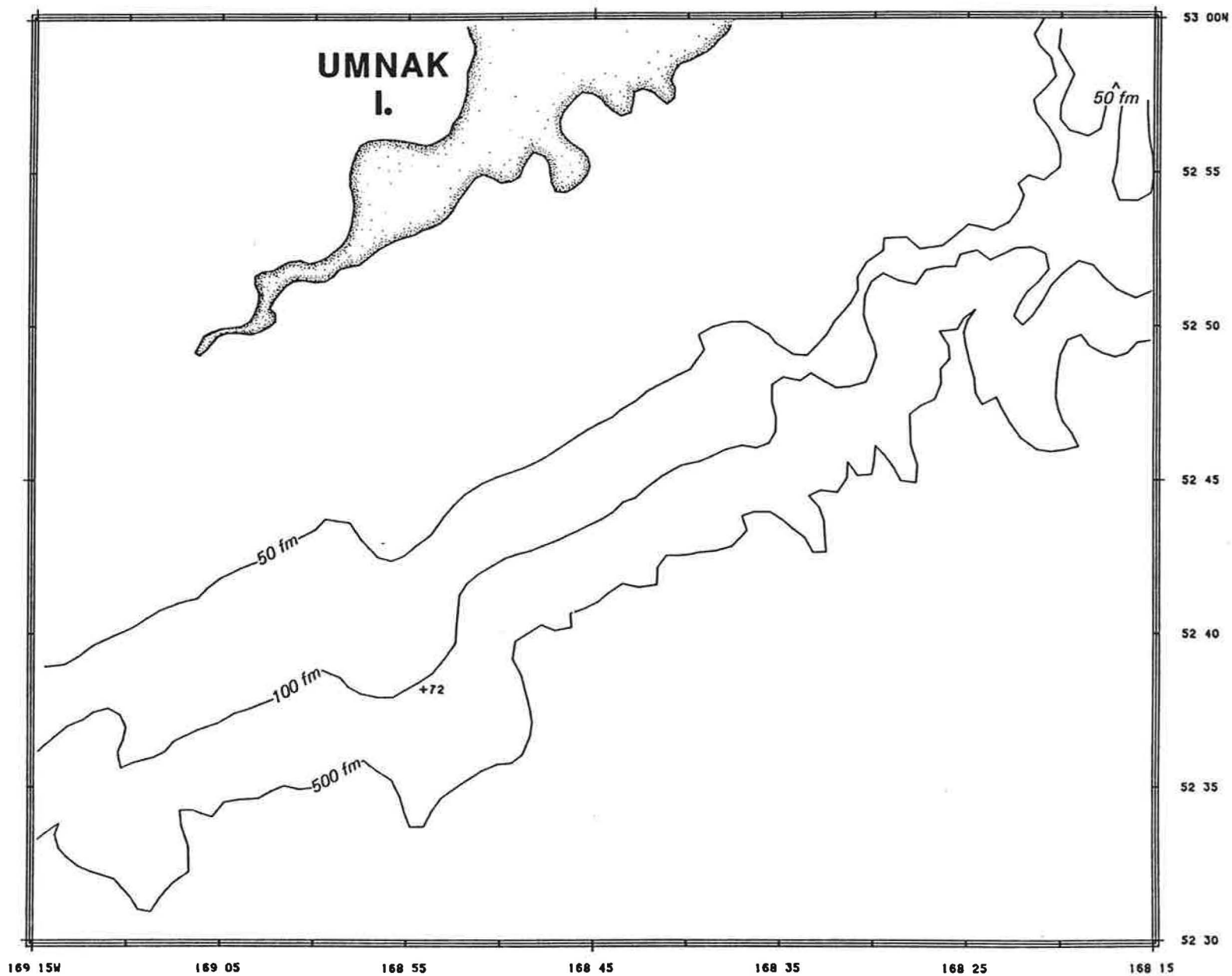


Figure 19.--Stations surveyed by the Soviet research vessel Babaevsk in the western Umnak Island area (haul 72).



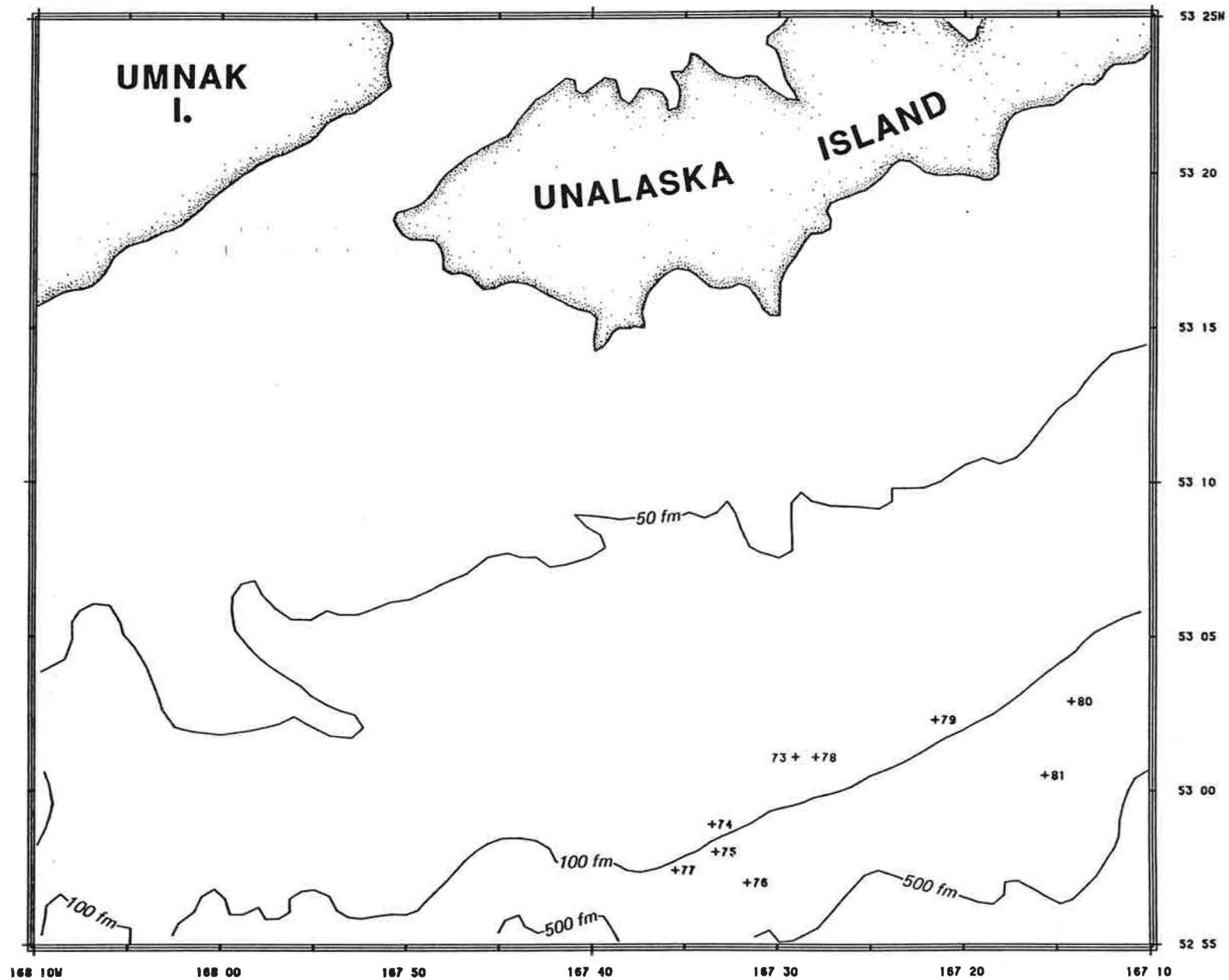


Figure 20.--Stations surveyed by the Soviet research vessel Babaevsk in the western Unalaska Island area (hauls 73-81).

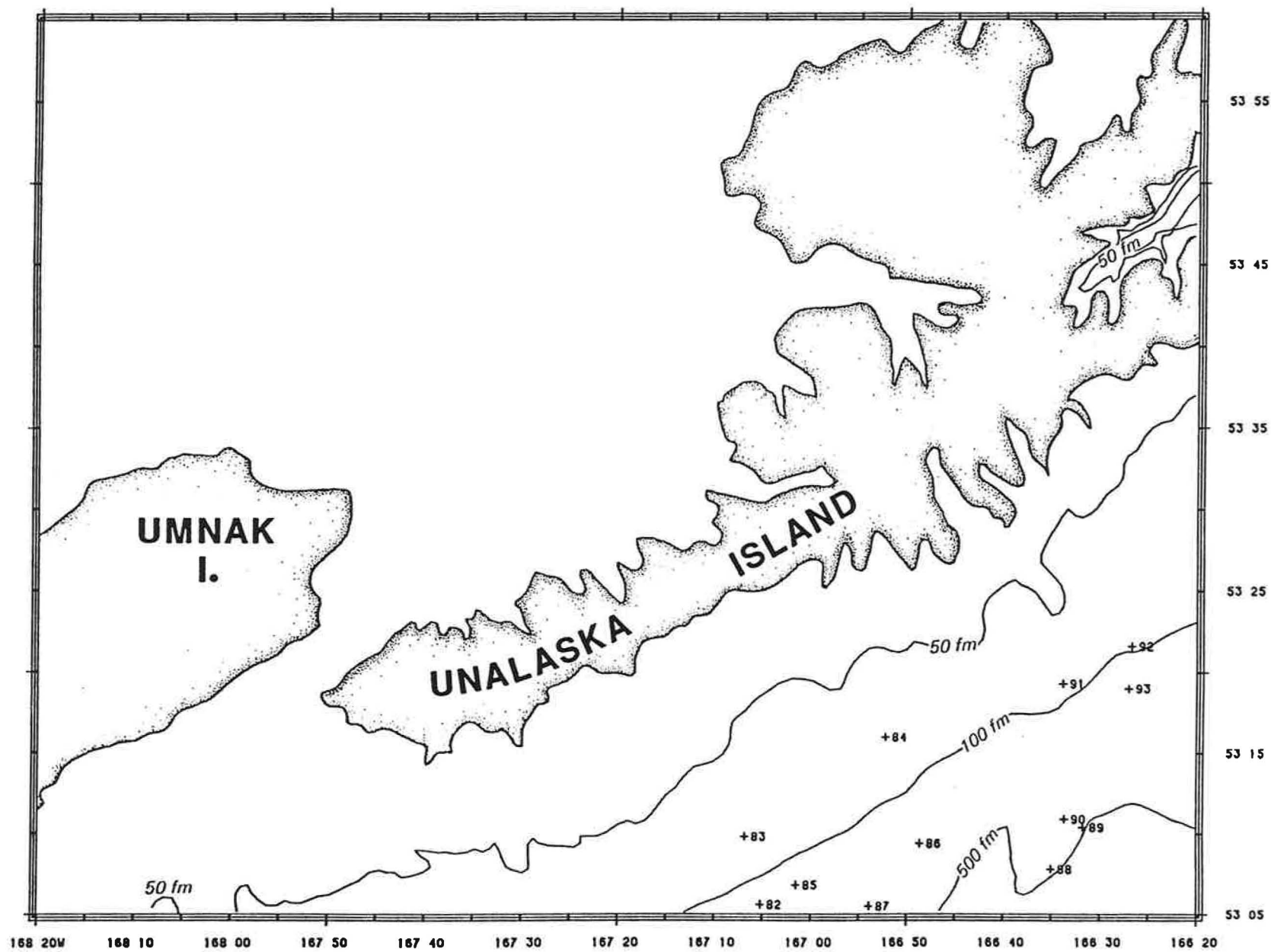


Figure 21.--Stations surveyed by the Soviet research vessel Babaevsk in the central Unalaska Island area (hauls 82-93).

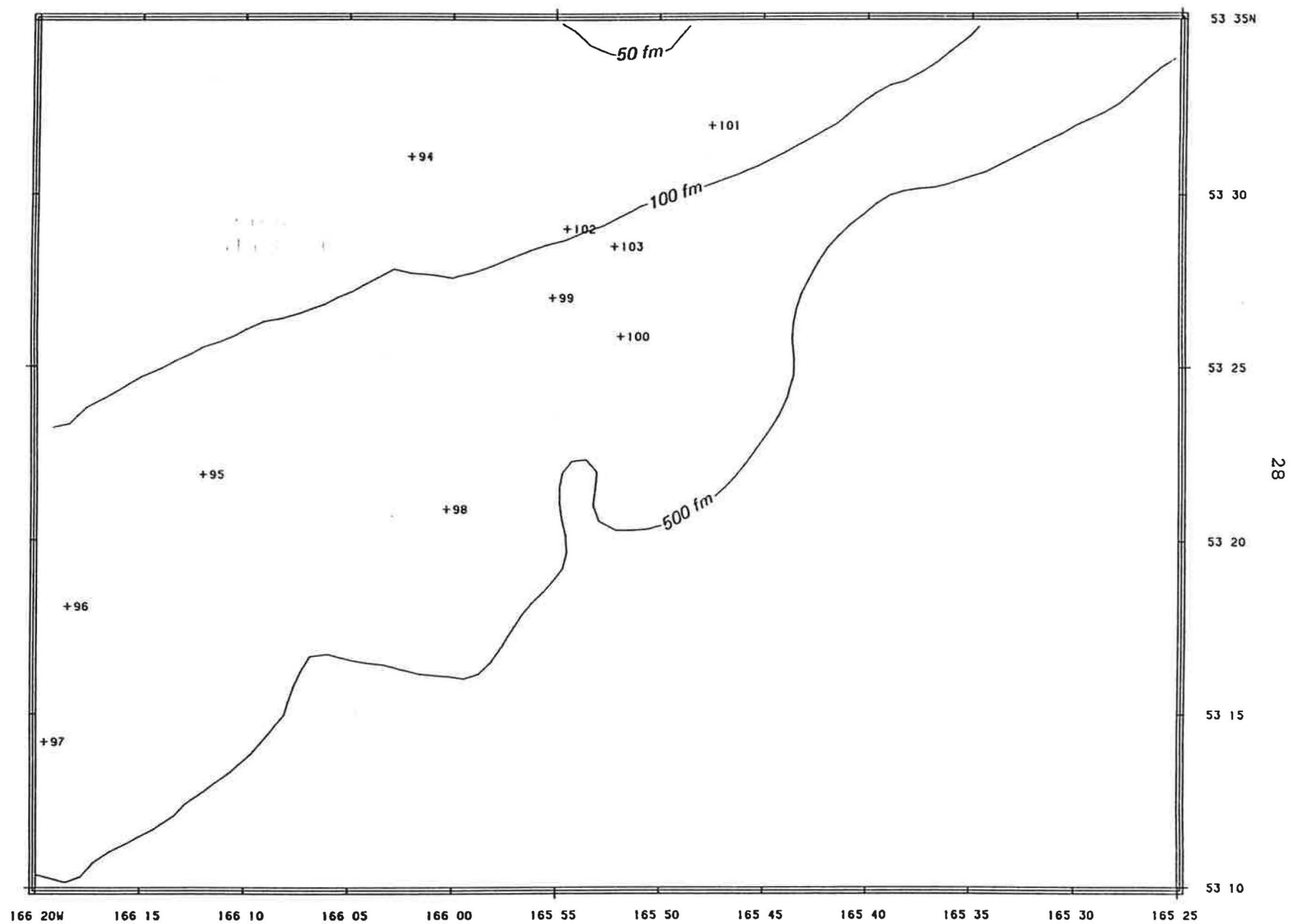


Figure 22.--Stations surveyed by the Soviet research vessel Babaevsk in the eastern Unalaska Island area (hauls 94-103).

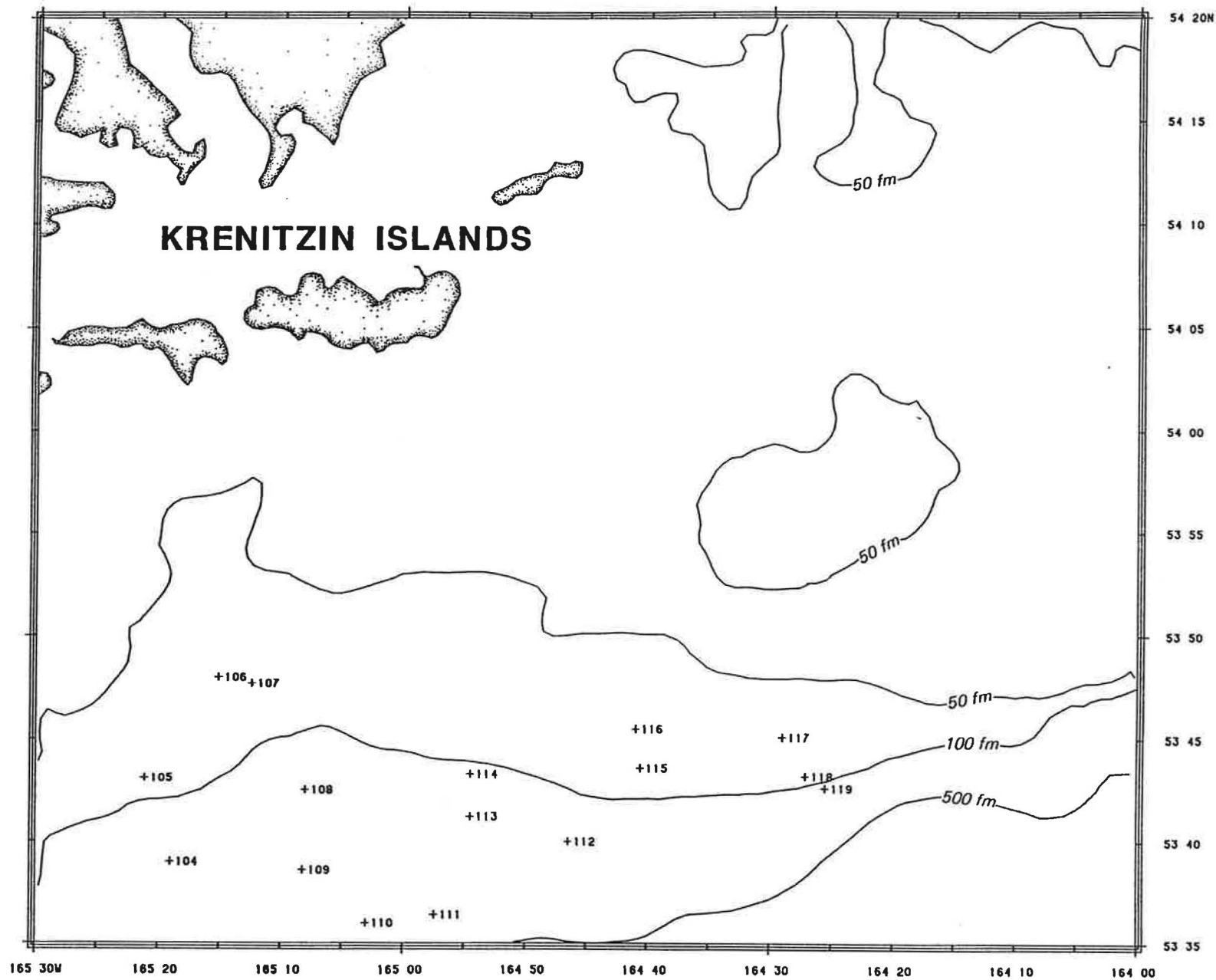


Figure 23.--Stations surveyed by the Soviet research vessel Babaevsk in the Krenitzin Islands area (hauls 104-119).

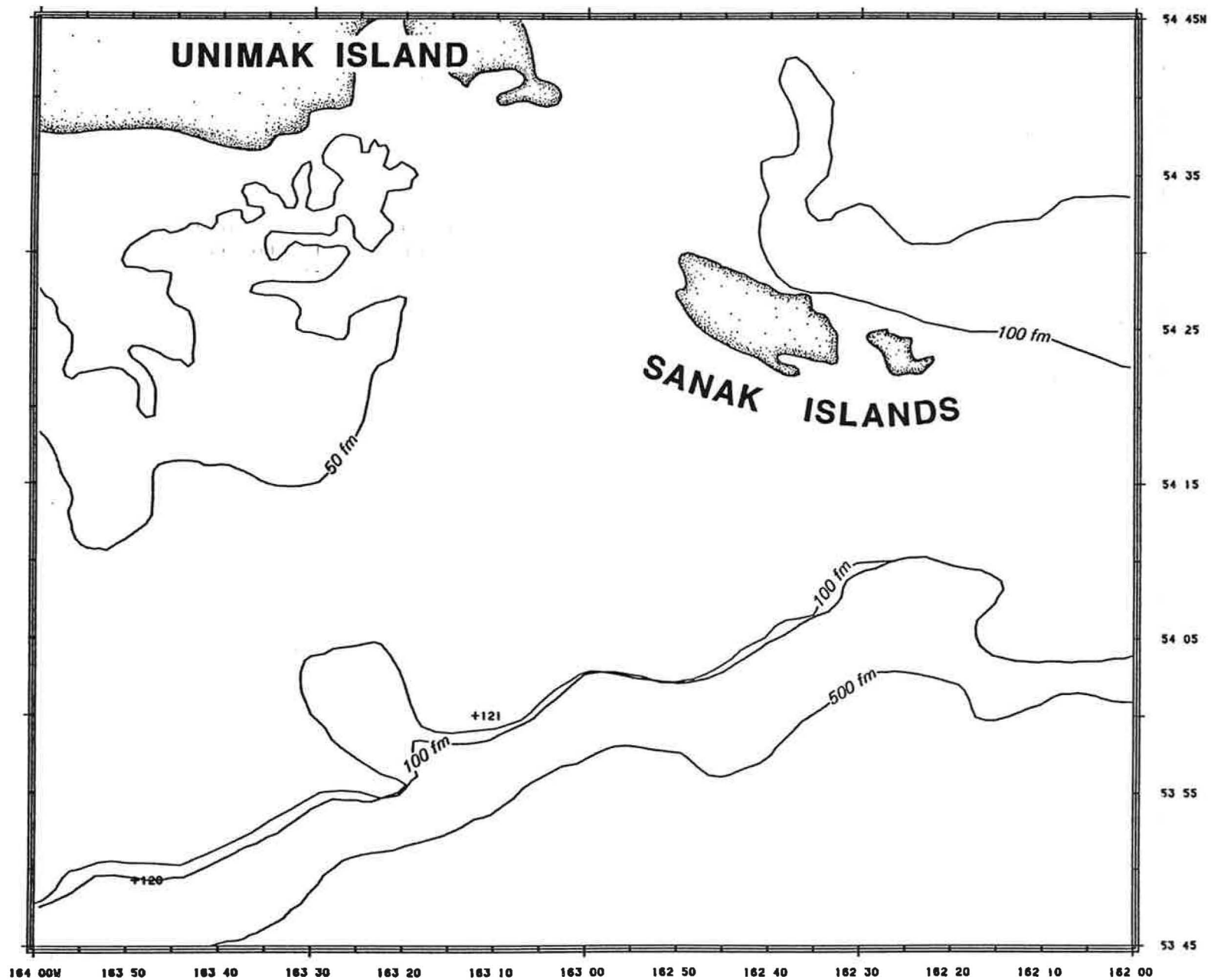


Figure 24.--Stations surveyed by the Soviet research vessel Babaevsk in the Sanak Island area (hauls 122-131).

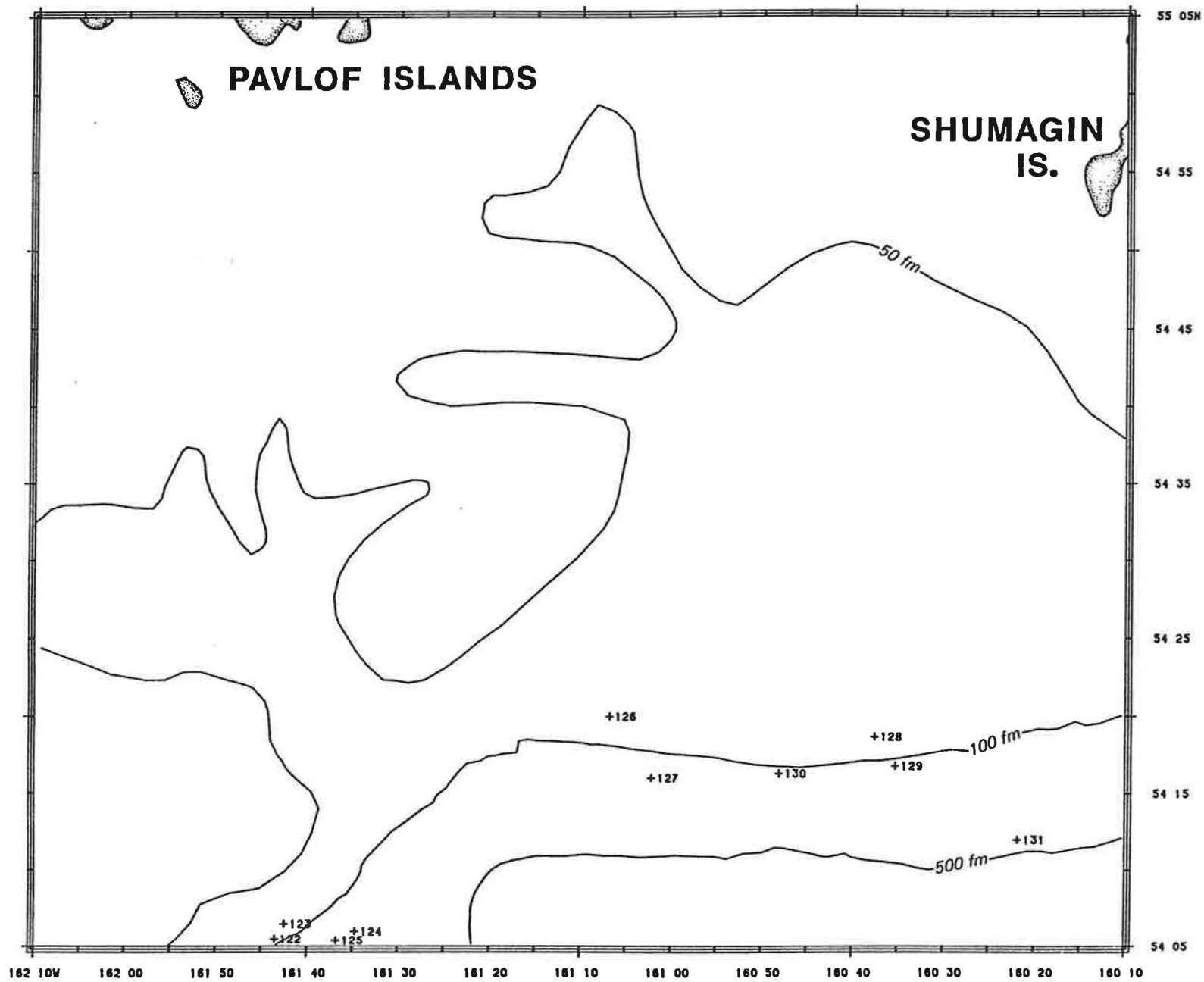


Figure 25.--Stations surveyed by the Soviet research vessel Babaevsk in the Pavlof Islands area (hauls 120-121).

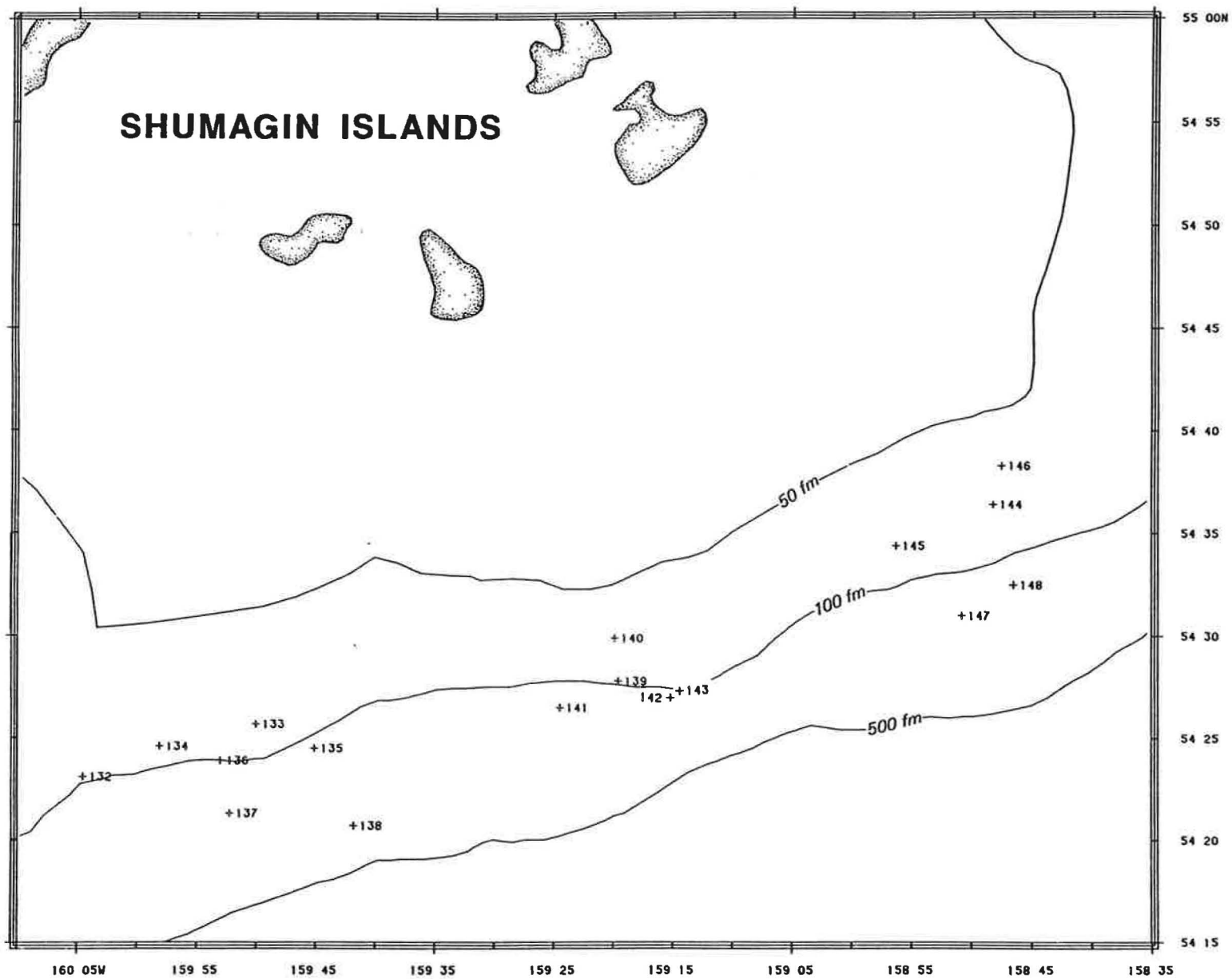


Figure 26.--Stations surveyed by the Soviet research vessel Babaevsk in the Shumagin Islands area (hauls 132-148).

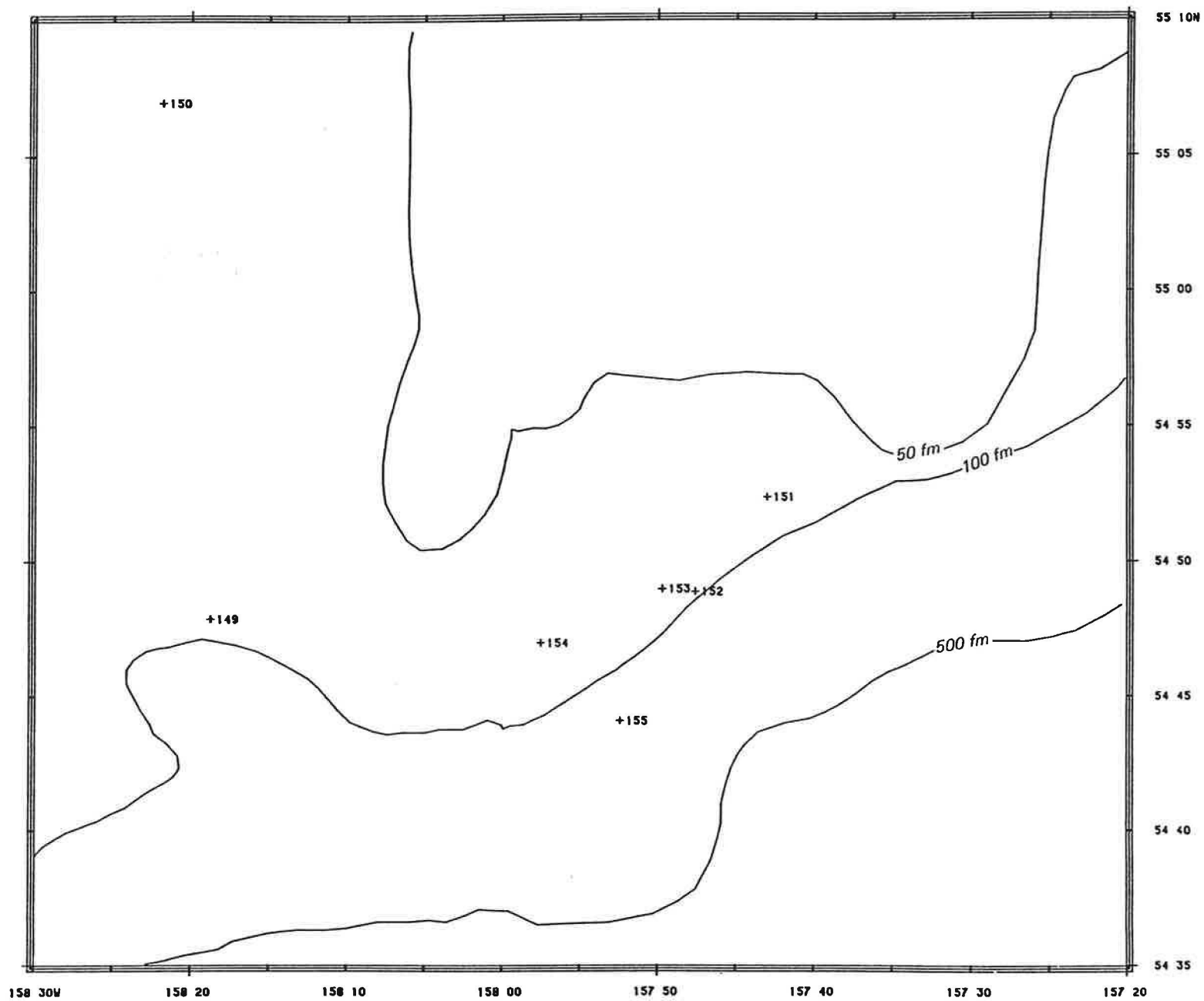


Figure 27.--Stations surveyed by the Soviet research vessel Babaevsk in the Shumagin Islands-Semidi Islands area (hauls 149-155).



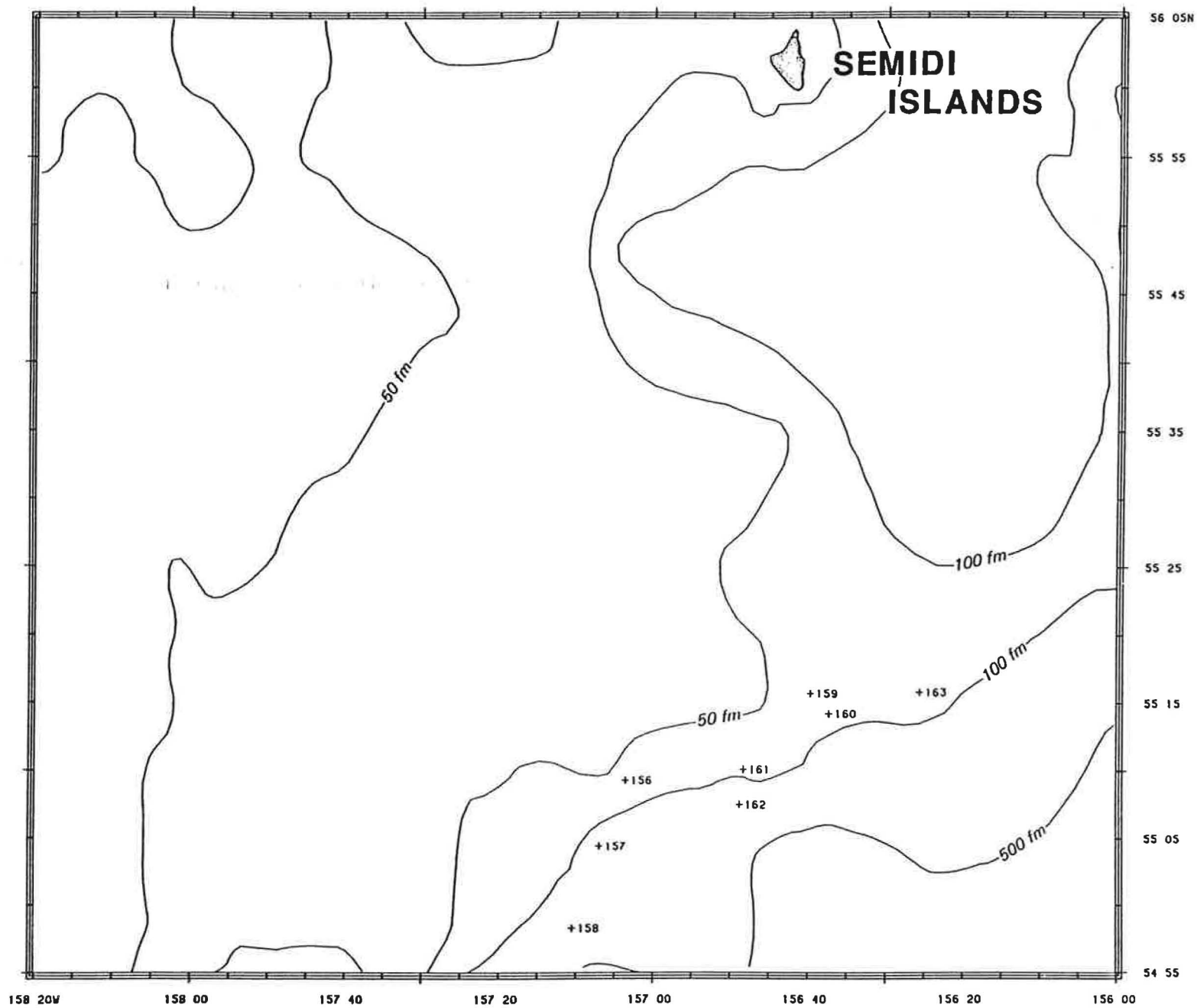


Figure 28.--Stations surveyed by the Soviet research vessel Babaevsk in the Semidi Islands area (hauls 156-163).

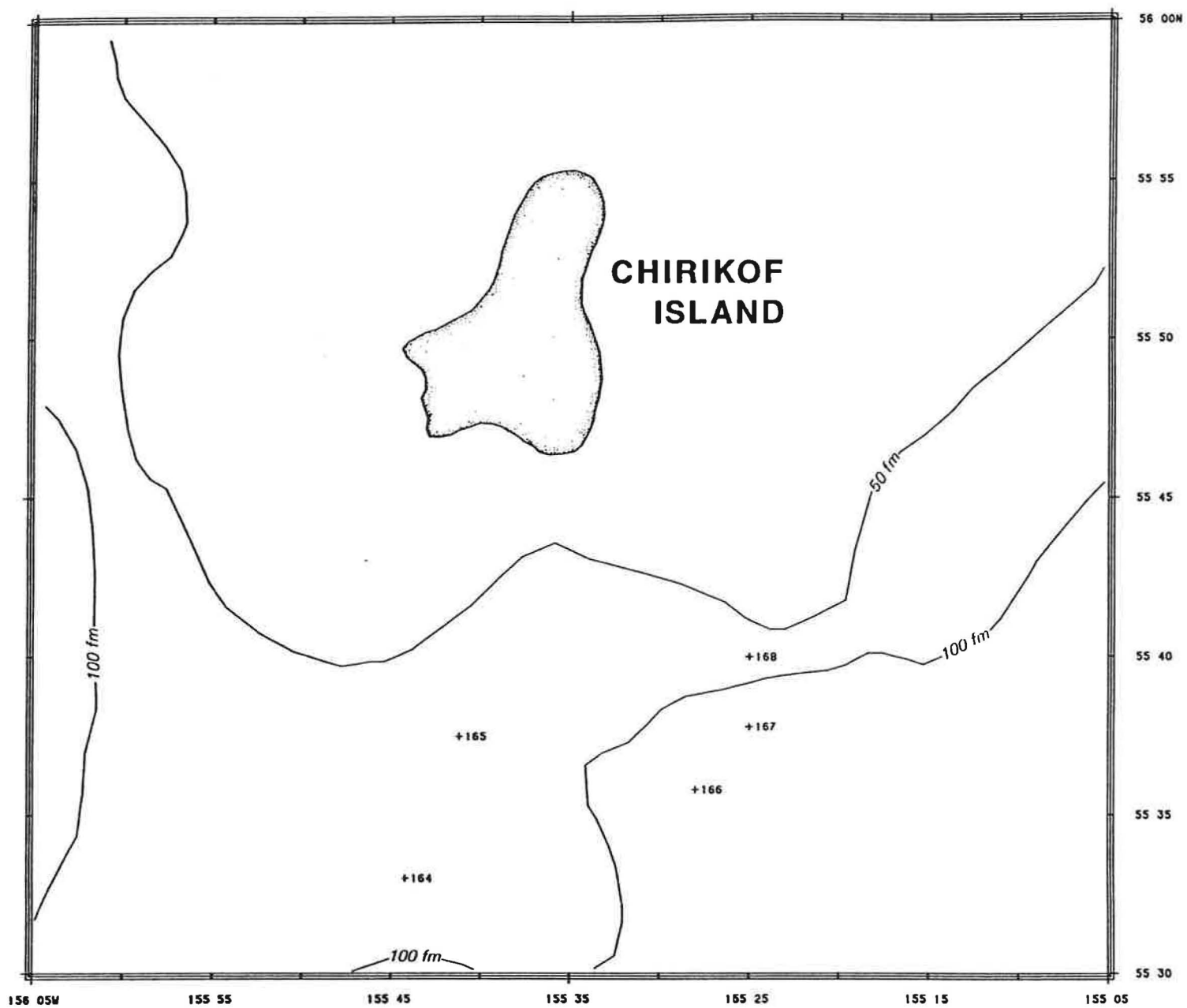


Figure 29.--Stations surveyed by the Soviet research vessel Babaevsk in the Chirikof Island area (hauls 164-168).

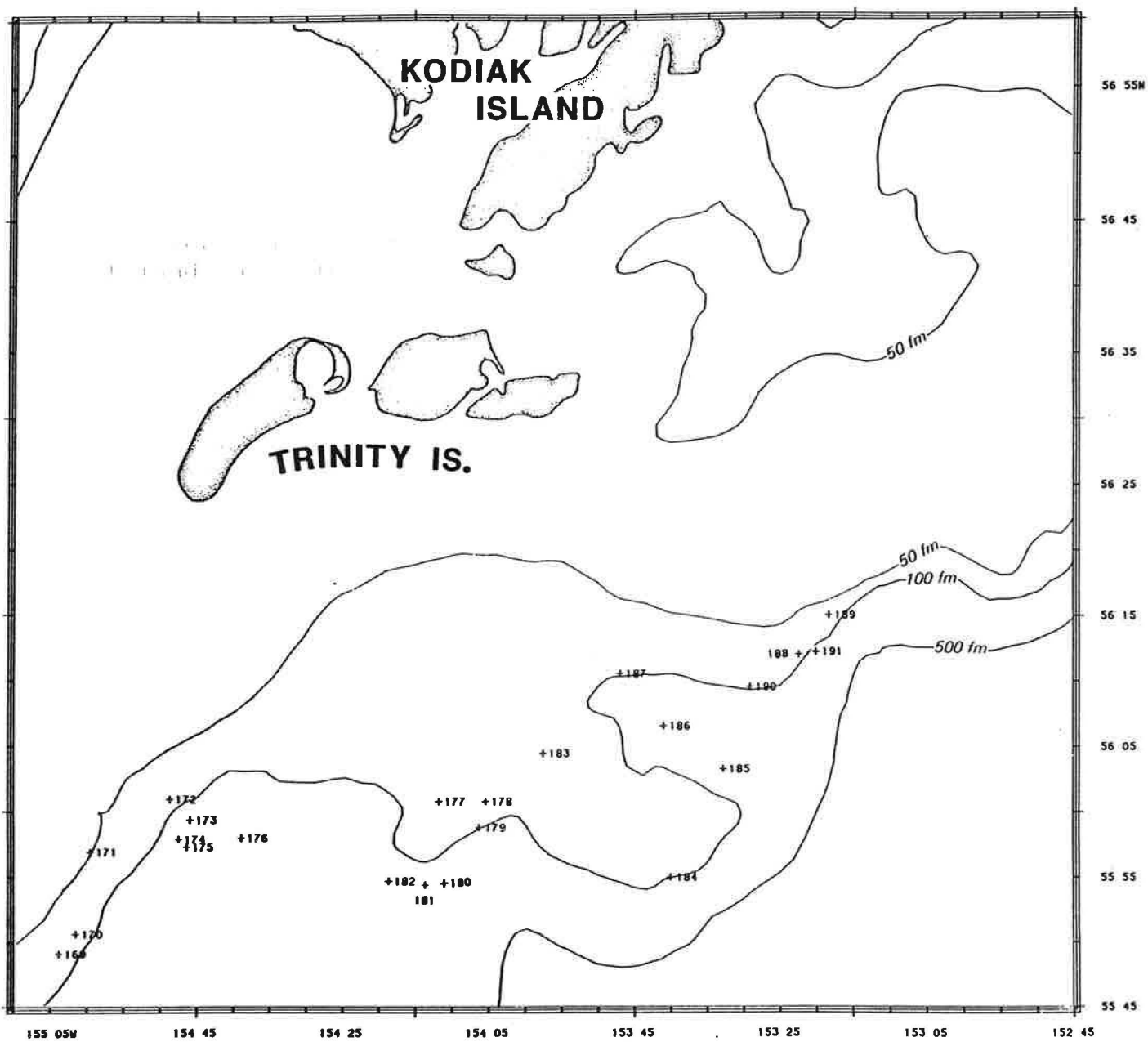


Figure 30.--Stations surveyed by the Soviet research vessel Babaevsk in the Trinity Islands area (hauls 169-191).

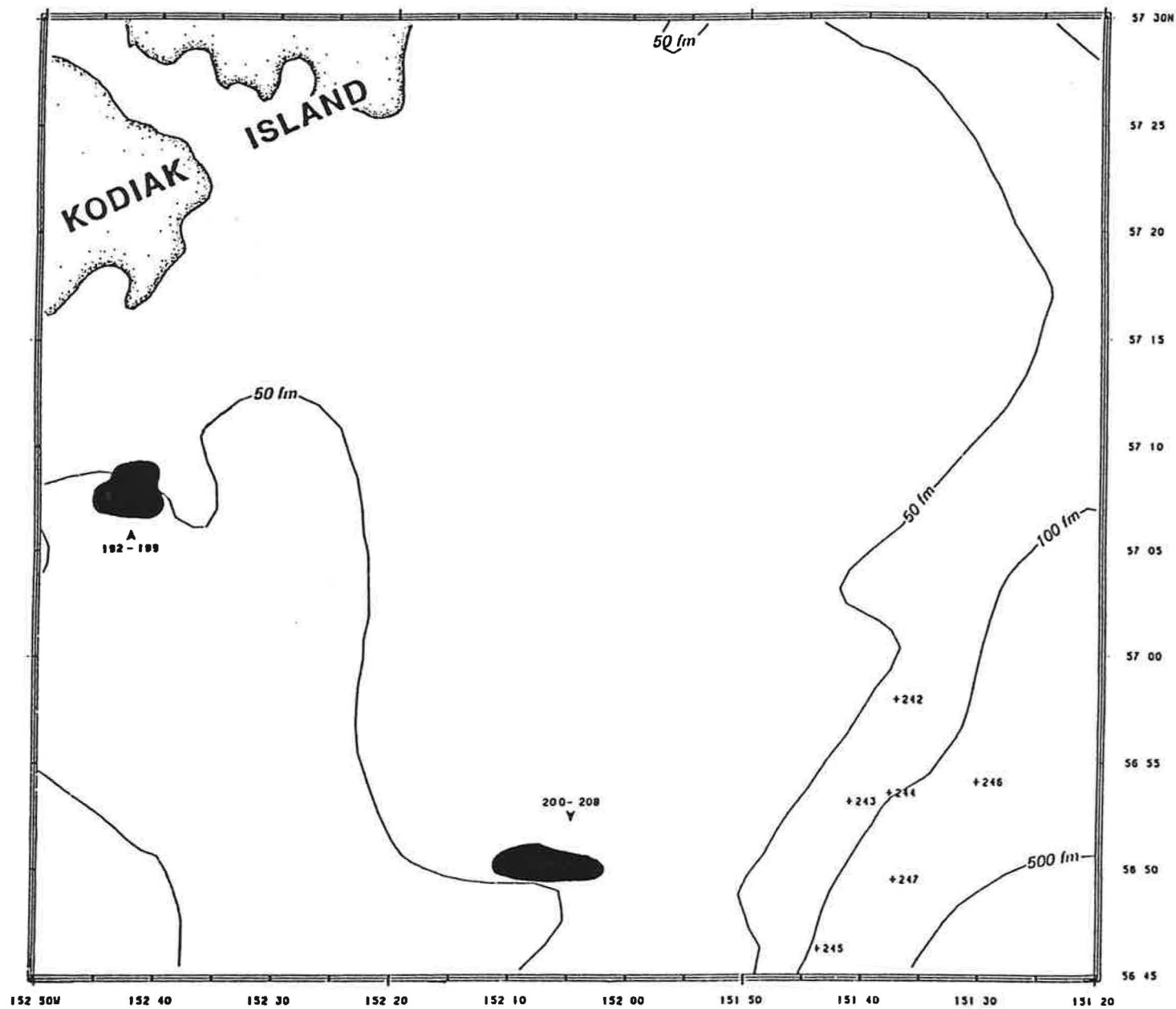


Figure 31.--Stations surveyed by the Soviet research vessel Babaevsk in the eastern Kodiak Island area (hauls 242-247 and trawl comparison hauls 192-199 and 200-208).

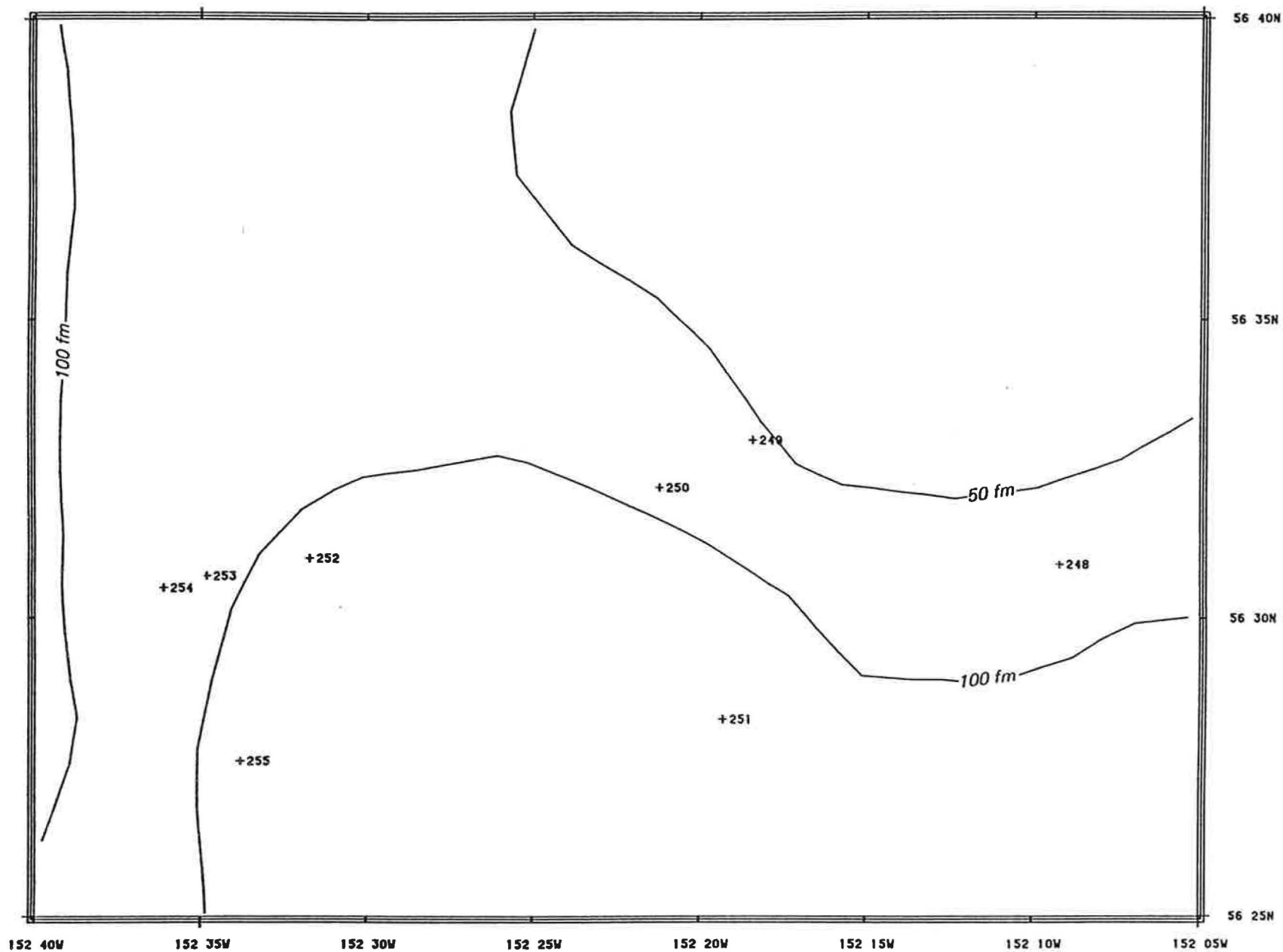


Figure 32.--Stations surveyed by the Soviet research vessel Babaevsk in the western Kodiak Island area (hauls 248-255).

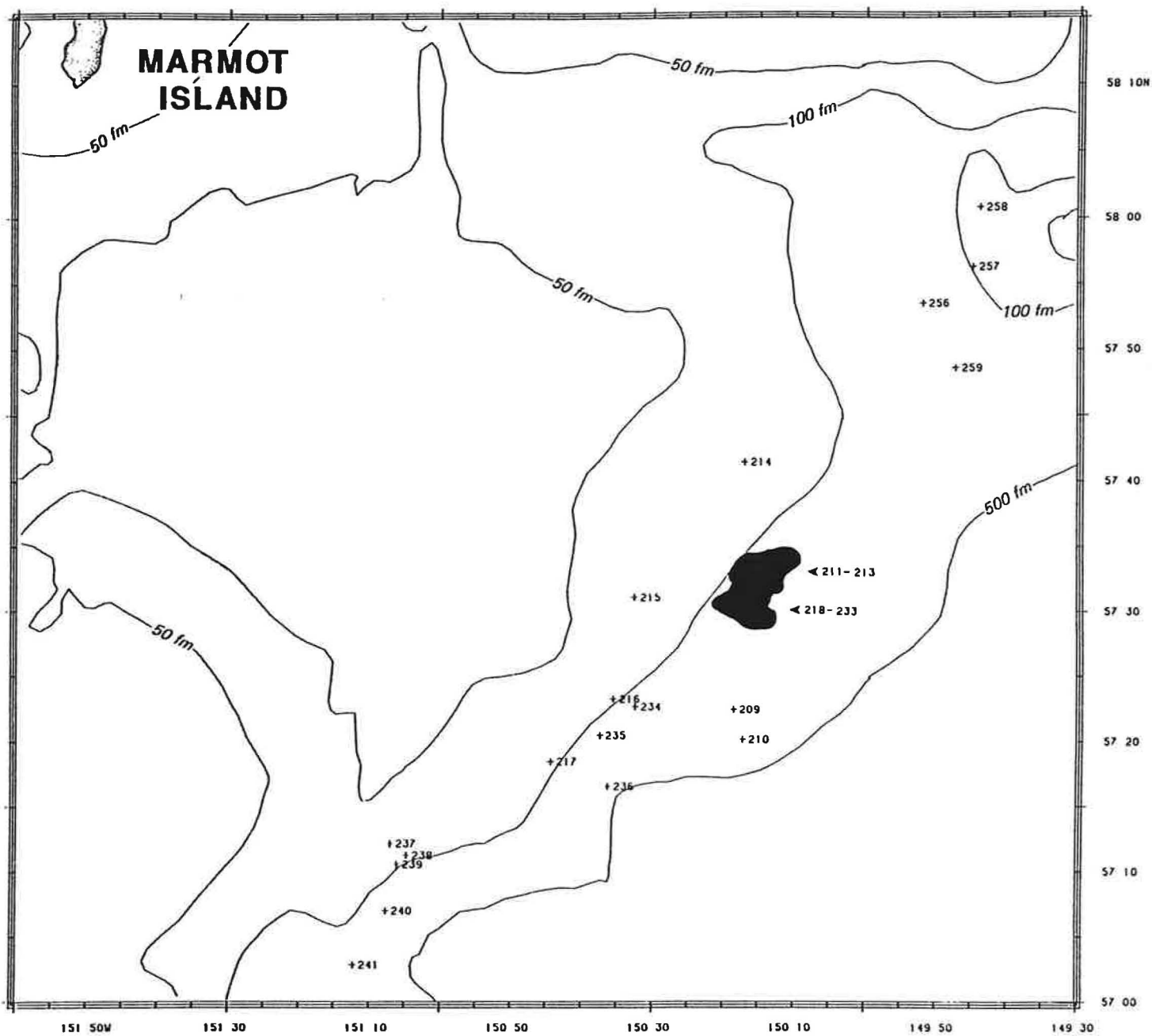


Figure 33.--Stations surveyed by the Soviet research vessel Babaevsk in the Marmot Island area (hauls 209-217, 234-240, 256-259 and trawl comparison hauls 218-233 and 241).



Section 2.2

Fishing log for the 1987 U.S.- U.S.S.R. cooperative survey

Summary listings of position and catch data by station





KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	64	65	66	67	68	69	70	71	72	73	74
MONTH/DAY/YEAR	6/ 6/87	6/ 6/87	6/ 6/87	6/ 7/87	6/ 7/87	6/ 7/87	6/ 7/87	6/ 7/87	6/ 7/87	6/ 8/87	6/ 8/87
LATITUDE START	52 26.9	52 26.2	52 25.5	52 25.5	52 25.5	52 24.0	52 26.0	52 31.5	52 38.2	53 1.1	52 58.9
LONGITUDE START	169 53.0	169 35.5	169 38.4	169 30.5	169 31.2	169 31.9	169 37.0	169 35.6	168 54.1	167 29.0	167 33.5
LATITUDE END	52 26.4	52 25.2	52 26.2	52 23.7	52 26.3	52 23.2	52 25.4	52 32.0	52 39.1	53 0.0	52 59.4
LONGITUDE END	169 50.5	169 38.0	169 36.5	169 31.2	169 29.4	169 35.0	169 39.6	169 34.0	168 52.1	167 31.4	167 31.4
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	139	234	223	361	336	405	217	132	175	77	100
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.50	0.50	0.50
DISTANCE FISHED	1.80	1.80	1.70	1.60	1.40	2.00	1.70	1.30	1.80	1.60	1.70
PERFORMANCE / GEAR	0 /794	7 /794	0 /794	5 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	4.8	2.7	0.0	1.4	1.8	0.0	0.9	23.3	0.0	230.9	18.1
PACIFIC COD	11.0	0.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0	57.2	8.8
SABLEFISH	5.0	104.0	418.9	0.0	33.1	110.9	134.3	3.4	247.4	0.0	0.9
ARROWTOOTH FL	5.0	9.0	15.0	0.0	2.3	0.0	23.1	5.0	246.5	23.6	13.4
GREENLAND TURB	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	5.9	0.0	0.0
HALIBUT	41.1	31.8	0.0	0.0	0.0	0.0	0.0	21.1	0.0	6.3	168.9
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.1
DOVER SOLE	0.0	0.0	18.1	0.0	17.2	0.0	5.2	0.0	210.2	2.5	0.0
REX SOLE	12.7	0.0	18.4	0.0	0.0	0.0	30.0	0.0	26.8	0.0	2.3
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.5	29.0
PAC OC PERCH	27.4	6.2	0.0	0.0	0.0	0.0	0.0	52.4	2.5	0.0	0.3
ROUGHEYE RKFH	1.4	0.0	1.6	0.0	0.0	0.0	22.2	2.7	14.3	0.0	0.0
THORNYHEADS	17.5	25.0	47.0	6.8	36.3	13.4	66.0	12.0	53.5	0.1	0.0
NORTHERN RKFH	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.8
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	0.0	3.5	2.2	0.0	0.0	0.0	12.9	9.3	70.5	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	365.0	241.3	22.2	118.9	4790.7	774.7	0.0	3250.4	0.0	0.0
SCULPINS	14.3	2.2	0.4	0.0	0.0	0.0	6.4	7.2	0.0	1.0	2.3
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	5.7
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	10.4	0.0	0.0	58.0	0.0	0.0	10.7	0.0	0.0
RED SQUID	7.9	0.0	1.4	0.0	0.0	0.0	4.5	41.0	1.8	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 STRIPE SHRIMP	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	75	76	77	78	79	80	81	82	83	84	85
MONTH/DAY/YEAR	6/ 8/87	6/ 8/87	6/ 8/87	6/ 8/87	6/ 8/87	6/ 8/87	6/ 9/87	6/ 9/87	6/ 9/87	6/ 9/87	6/ 9/87
LATITUDE START	52 58.0	52 57.0	52 57.4	53 1.1	53 2.3	53 2.9	53 0.5	53 5.6	53 9.8	53 16.0	53 6.8
LONGITUDE START	167 33.3	167 31.6	167 35.5	167 28.0	167 21.5	167 14.1	167 15.5	167 5.1	167 6.8	166 52.1	167 1.4
LATITUDE END	52 57.6	52 58.0	52 57.6	53 1.4	53 2.2	53 3.3	53 1.2	53 6.5	53 8.8	53 15.0	53 7.6
LONGITUDE END	167 35.0	167 30.5	167 33.7	167 25.4	167 19.0	167 12.3	167 13.2	167 3.2	167 9.4	166 54.9	166 58.9
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	118	154	108	91	106	120	144	126	71	68	134
DURATION IN HOURS	0.33	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.12	0.83	1.70	1.70	1.70	1.70	1.50	1.40	2.00	2.00	1.60
PERFORMANCE / GEAR	0 /794	5 /794	0 /794	0 /794	0 /794	5 /794	0 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	8.8	6.8	17.2	336.1	42.4	0.0	1.1	5.4	504.7	2.9	0.0
PACIFIC COD	44.7	0.0	30.6	22.9	12.0	0.0	15.6	21.8	79.3	100.7	25.9
SABLEFISH	0.0	0.0	2.4	0.0	0.0	0.0	14.7	2.3	0.0	0.0	2.3
ARROWTOOTH FL.	62.6	6.8	31.5	24.5	17.9	0.0	161.2	81.9	52.4	125.0	63.3
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	146.6	9.6	34.3	6.5	3.1	0.0	41.9	58.6	13.7	26.9	0.0
FLATHEAD SOLE	1.3	0.0	0.4	8.8	6.1	0.0	0.0	1.4	0.0	0.0	0.0
DOVER SOLE	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	8.4	1.1	0.2	1.4	0.1	0.0	7.9	9.1	0.0	0.1	12.2
ROCK SOLE	2.9	0.0	4.3	48.8	27.2	0.0	0.0	16.8	98.0	22.7	0.0
PAC OC PERCH	7.3	0.0	958.2	0.1	2.0	0.0	27.2	43.8	0.0	0.0	1379.6
ROUGHEYE RKFH	0.0	61.0	0.0	0.0	0.0	0.0	161.5	6.8	0.0	0.0	0.5
THORNYHEADS	0.0	9.5	1.7	0.0	0.0	0.0	94.3	25.4	0.0	0.1	32.0
NORTHERN RKFH	0.5	0.0	71.7	0.0	0.5	0.0	4.2	17.9	0.0	0.5	9.1
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	0.0	28.8	0.0	0.0	0.0	0.0	68.5	14.7	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0
GRENADIERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.2	4.0	0.0	2.1	2.9	0.0	11.8	1.0	12.2	0.0	0.9
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	1.0	0.0	9.3	0.0	0.0	0.0	0.9	0.0	0.0	0.0	2.0
SKATES	0.0	0.0	0.0	0.0	12.7	0.0	0.0	0.0	0.0	8.2	0.1
SPINY DOGFISH	1.5	0.0	0.0	2.0	5.0	0.0	0.0	0.0	8.1	2.7	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	1.1	0.0	1.3	0.0	0.0	0.0	7.8	0.0	0.0	1.0	5.9
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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	86	87	88	89	90	91	92	93	94	95	96
MONTH/DAY/YEAR	6/ 9/87	6/ 9/87	6/10/87	6/10/87	6/10/87	6/10/87	6/10/87	6/10/87	6/13/87	6/13/87	6/13/87
LATITUDE START	53 9.4	53 5.5	53 7.8	53 10.4	53 10.9	53 19.3	53 21.6	53 19.0	53 31.1	53 21.9	53 18.1
LONGITUDE START	166 48.6	166 53.9	166 35.0	166 31.7	166 33.6	166 33.7	166 26.7	166 27.0	166 1.9	166 12.0	166 18.5
LATITUDE END	53 8.8	53 6.8	53 9.2	53 11.3	53 11.8	53 20.3	53 20.5	53 19.2	53 30.7	53 21.0	53 17.3
LONGITUDE END	166 51.1	166 51.5	166 38.9	166 30.5	166 30.5	166 30.7	166 29.5	166 24.4	166 4.7	166 15.0	166 21.0
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	162	191	377	288	254	93	98	131	68	159	195
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.60	1.80	1.80	2.00	2.00	2.10	1.60	1.50	1.70	1.80	1.60
PERFORMANCE / GEAR	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	1.4	0.9	0.7	0.0	0.7	95.0	46.3	27.4	475.0	0.0	1.1
PACIFIC COD	35.8	0.0	0.0	0.0	0.0	20.2	143.1	11.8	26.3	3.4	0.0
SABLEFISH	15.9	17.0	135.5	162.3	7.4	0.0	0.0	2.5	0.0	23.4	59.6
ARROWTOOTH FL.	72.3	7.3	0.0	0.0	0.0	14.3	124.3	15.6	161.7	63.4	29.1
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
HALIBUT	24.4	19.1	0.0	0.0	0.0	6.0	26.4	3.8	12.3	14.1	35.9
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	1.1	1.5	10.2	1.3	2.5	0.0
DOVER SOLE	0.7	6.4	6.7	19.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	33.6	3.4	0.0	0.0	0.0	0.0	17.7	17.2	0.5	52.2	51.1
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	26.5	40.6	1.9	128.0	9.1	0.0
PAC OC PERCH	40.1	7.9	0.0	0.0	0.0	0.0	1201.6	107.6	0.0	49.8	16.3
ROUGHEYE RKFH	4.5	69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	37.7
THORNYHEADS	66.7	22.0	56.7	34.5	5.1	0.0	0.0	19.7	0.0	43.5	44.4
NORTHERN RKFH	0.0	0.0	0.0	0.0	0.0	0.5	2.3	2.0	0.0	0.0	0.0
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	0.0	257.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	8.4	0.0	0.0
GRENADIERS	0.0	11.6	489.2	198.7	61.1	0.0	0.0	0.0	0.0	0.0	76.4
SCULPINS	0.2	0.0	0.0	0.0	0.0	1.9	4.5	0.0	1.7	0.0	0.1
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	2.7	0.0	1.8	1.7	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	15.0	17.2	0.0	1.1	0.5	0.2	0.0	5.1	0.0	31.3	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	97	98	99	100	101	102	103	104	105	106	107
MONTH/DAY/YEAR	6/13/87	6/13/87	6/13/87	6/13/87	6/14/87	6/14/87	6/14/87	6/14/87	6/14/87	6/14/87	6/15/87
LATITUDE START	53 14.2	53 20.9	53 27.0	53 25.9	53 32.0	53 29.0	53 28.5	53 39.0	53 43.1	53 48.0	53 47.7
LONGITUDE START	166 19.6	166 0.3	165 55.2	165 51.9	165 47.4	165 54.4	165 52.1	165 19.0	165 21.1	165 15.0	165 12.3
LATITUDE END	53 13.8	53 21.3	53 25.8	53 26.4	53 31.2	53 29.9	53 27.8	53 38.5	53 44.0	53 49.0	53 47.0
LONGITUDE END	166 21.8	165 57.6	165 57.1	165 49.6	165 50.7	165 52.0	165 55.4	165 22.1	165 19.0	165 12.0	165 15.3
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	314	281	159	208	69	96	130	139	96	74	74
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.30	1.50	1.50	1.60	1.70	1.80	1.70	1.90	1.50	1.80	1.80
PERFORMANCE / GEAR	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	0.0	0.0	0.0	0.0	62.4	31.5	6.6	8.8	107.4	53.5	170.0
PACIFIC COD	0.0	0.0	20.2	0.0	190.7	71.0	104.3	33.1	54.3	59.9	210.9
SABLEFISH	1.2	64.0	44.7	47.5	1.4	8.4	42.3	25.3	25.5	2.1	0.9
ARROWTOOTH FL.	0.0	8.8	39.5	19.6	340.1	46.8	33.1	28.9	31.7	31.4	64.0
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	6.6	0.0	4.2	6.1	27.9	18.0	25.1	19.8	12.0	23.5	19.7
FLATHEAD SOLE	0.0	0.0	1.7	0.7	0.0	5.7	8.4	5.7	2.9	0.7	1.1
DOVER SOLE	0.0	9.2	0.0	2.9	0.0	0.0	1.1	0.0	0.0	0.0	0.0
REX SOLE	1.5	0.0	36.2	14.1	2.0	7.5	21.8	30.8	27.9	218.1	244.5
ROCK SOLE	0.0	0.0	0.0	0.0	11.1	14.1	0.7	0.0	0.0	0.0	0.0
PAC DC PERCH	0.8	0.0	129.4	9.7	0.0	0.0	94.2	88.1	11.2	0.9	0.0
ROUGHEYE RKFH	3.1	0.0	38.1	5.4	0.0	0.0	0.0	5.9	0.0	0.0	0.0
THORNYHEADS	2.0	32.0	49.8	29.8	0.0	2.0	36.5	76.2	7.7	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.9	0.0	0.8	2.3	4.9	2.0	0.0	0.0	0.0
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	5.0	0.0	4.4	4.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	8.6	2.7	0.0	0.0	0.0	1.4	10.8
GRENADIERS	43.1	174.2	0.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.0	0.0	0.2	0.0	5.9	1.5	0.5	1.0	0.1	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
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.0
SKATES	0.0	1.1	1.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	2.7	0.0	3.9	2.9	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	2.3	0.5	156.1	18.7	0.0	0.6	0.0	15.2	1.8	1.8	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## KILOGRAMS OF CATCH TAKEN BY THE BADAJEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	108	109	110	111	112	113	114	115	116	117	118
MONTH/DAY/YEAR	6/15/87	6/15/87	6/15/87	6/15/87	6/15/87	6/15/87	6/15/87	6/16/87	6/16/87	6/16/87	6/16/87
LATITUDE START	53 42.5	53 38.6	53 36.0	53 36.4	53 40.0	53 41.2	53 43.3	53 43.6	53 45.5	53 45.1	53 43.2
LONGITUDE START	165 8.0	165 8.2	165 2.9	164 57.3	164 46.4	164 54.4	164 54.4	164 40.6	164 41.0	164 29.0	164 27.1
LATITUDE END	53 43.0	53 38.5	53 35.8	53 36.4	53 40.0	53 41.6	53 42.8	53 42.5	53 45.8	53 45.0	53 45.5
LONGITUDE END	165 10.8	165 6.0	165 6.8	164 54.8	164 44.0	164 56.7	164 52.0	164 38.3	164 44.0	164 26.0	164 24.8
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	150	215	302	270	196	155	127	98	67	71	101
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.74	1.40	2.30	1.80	1.70	1.70	1.50	1.80	1.70	1.70	1.60
PERFORMANCE / GEAR	0 /794	0 /794	5 /794	0 /794	0 /794	0 /794	0 /794	1 /794	0 /794	0 /794	0 /794
POLLOCK	6.4	0.0	0.0	0.0	0.0	36.1	26.1	1.8	0.0	0.5	3.6
PACIFIC COD	0.0	0.0	0.0	0.0	0.0	1.6	20.9	37.3	73.7	71.6	46.3
SABLEFISH	58.8	185.1	0.0	69.0	15.3	42.4	13.4	0.0	0.0	0.0	1385.7
ARROWTOOTH FL.	35.1	37.2	0.0	2.6	53.0	65.8	49.1	729.1	390.8	274.0	1006.1
GREENLAND TURB.	6.4	0.0	0.0	0.0	3.0	17.5	0.0	0.0	0.0	0.0	0.0
HALIBUT	22.8	43.6	7.8	0.0	4.0	33.5	22.2	6.8	29.7	10.4	0.0
FLATHEAD SOLE	0.5	0.0	0.0	0.0	0.0	0.9	2.5	3.9	19.7	28.5	9.5
DOVER SOLE	4.1	0.0	0.0	36.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0
REX SOLE	79.6	63.5	0.0	0.0	45.6	80.2	43.7	73.9	25.4	7.9	114.4
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.7	102.7	109.3	0.9
PAC DC PERCH	35.4	13.8	0.0	0.0	0.0	55.9	115.1	10.9	0.0	2.0	35.8
ROUGHEYE RKFH	21.1	0.0	0.0	0.0	283.5	189.7	0.0	0.0	0.0	0.0	0.0
THORNYHEADS	61.0	67.1	0.0	80.9	90.0	71.9	26.2	0.0	0.0	0.0	0.0
NORTHERN RKFH	0.3	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	22.7	16.6
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0
SHORTRAKER RF	12.2	10.0	0.0	5.2	16.6	11.6	3.6	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	4.1	8.2	0.0
GRENADIERS	47.2	498.4	90.6	551.9	202.1	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.4	0.1	0.0	0.0	0.1	0.4	6.4	0.0	0.6	0.7	0.7
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
SMELT	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	1.9	0.0	0.5	0.0	0.0	55.6	8.2	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	3.5	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	72.3	0.0	0.0	0.0	4.9	56.5	19.7	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	119	120	121	122	123	124	125	126	127	128	129
MONTH/DAY/YEAR	6/16/87	6/17/87	6/17/87	6/18/87	6/18/87	6/18/87	6/18/87	6/19/87	6/19/87	6/19/87	6/19/87
LATITUDE START	53 42.6	53 49.3	54 0.0	54 5.5	54 6.5	54 6.0	54 5.4	54 20.0	54 16.0	54 18.7	54 16.8
LONGITUDE START	164 25.4	163 49.0	163 12.0	161 43.5	161 42.3	161 34.6	161 36.6	161 6.6	161 1.9	160 37.5	160 35.1
LATITUDE END	53 43.0	53 49.0	53 59.0	54 5.5	54 6.1	54 5.1	54 6.6	54 19.5	54 16.0	54 18.7	54 17.4
LONGITUDE END	164 24.6	163 46.9	163 15.0	161 45.5	161 44.0	161 37.6	161 34.5	161 9.8	160 59.1	160 40.6	160 37.3
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	126	79	55	119	60	211	159	73	202	69	96
DURATION IN HOURS	0.33	0.33	0.42	0.33	0.33	0.54	0.50	0.50	0.50	0.50	0.33
DISTANCE FISHED	1.32	1.19	1.80	1.20	0.99	1.60	1.70	1.60	1.50	1.80	1.10
PERFORMANCE / GEAR	1 /794	0 /794	1 /794	0 /794	0 /794	1 /794	7 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	28.8	0.1	0.0	0.1	0.0	0.0	29.8	0.0	0.0	0.1	0.0
PACIFIC COD	12.2	17.7	37.2	485.6	0.0	0.0	0.0	0.0	0.0	0.0	114.4
SABLEFISH	29.5	0.0	0.0	6.4	0.0	45.9	4.5	0.0	95.5	0.0	24.0
ARROWTOOTH FL.	92.4	128.8	0.0	39.9	0.0	39.7	43.5	303.5	25.4	12.0	1058.2
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	12.7	0.0	21.0	30.0	24.7	73.9	0.0	7.9	0.0	0.0	0.0
FLATHEAD SOLE	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.7
DOVER SOLE	1.4	0.0	0.0	0.0	0.0	69.2	40.5	6.8	11.0	0.0	12.4
REX SOLE	14.3	3.4	0.0	1.0	0.0	2.3	34.1	33.3	8.5	0.0	22.7
ROCK SOLE	0.0	3.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0
PAC OC PERCH	309.0	2.0	0.0	995.1	20.2	0.0	4.5	0.0	0.0	4.6	0.0
ROUGHEYE RKFH	4.0	0.0	0.0	3.2	0.0	378.7	32.4	0.0	34.1	0.0	0.0
THORNYHEADS	71.0	0.0	0.0	5.3	0.0	37.1	449.1	0.0	36.3	0.9	0.0
NORTHERN RKFH	1.6	4.3	172.1	0.0	2397.0	0.0	0.0	0.0	0.0	23.0	0.5
DUSKY RCKFISH	1.1	2.0	0.0	0.0	3808.9	0.0	0.0	0.0	0.0	60.1	0.0
SHORTRAKER RF	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0	11.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.8	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
GRENADIERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	749.8	0.0	0.0
SCULPINS	2.1	1.1	0.0	4.1	0.0	6.4	112.3	0.1	0.0	0.2	0.3
SALMON	1.8	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	7.7	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	0.5	0.0	0.0	0.0	0.0	5.6	0.0	0.0	3.7	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	130	131	132	133	134	135	136	137	138	139	140
MONTH/DAY/YEAR	6/19/87	6/20/87	6/20/87	6/20/87	6/20/87	6/20/87	6/21/87	6/21/87	6/21/87	6/21/87	6/21/87
LATITUDE START	54 16.3	54 12.0	54 23.1	54 25.7	54 24.6	54 24.5	54 23.9	54 21.3	54 20.7	54 27.8	54 29.9
LONGITUDE START	160 47.9	160 21.8	160 4.5	159 50.0	159 58.0	159 45.0	159 53.0	159 52.1	159 41.7	159 19.6	159 19.8
LATITUDE END	54 16.3	54 13.2	54 22.1	54 25.2	54 25.1	54 24.5	54 24.3	54 21.9	54 20.1	54 27.6	54 30.0
LONGITUDE END	160 45.0	160 19.8	160 7.5	159 53.4	159 54.9	159 48.6	159 49.5	159 49.0	159 44.3	159 22.8	159 22.6
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	160	257	96	84	87	98	98	145	224	95	71
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.70	1.80	1.90	2.10	1.70	1.80	1.80	1.90	1.40	1.80	1.70
PERFORMANCE / GEAR	0 /794	0 /794	7 /794	5 /794	0 /794	7 /794	0 /794	0 /794	0 /794	0 /794	0 /794
POLLOCK	0.5	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.9	0.0	0.0
PACIFIC COD	5.9	0.0	27.2	0.0	259.0	0.0	0.0	1.9	0.0	6.0	0.1
SABLEFISH	34.5	127.2	0.0	0.0	2.5	2.4	1.7	12.0	134.6	110.0	4.5
ARROWTOOTH FL.	85.1	0.0	109.8	0.0	391.0	21.3	21.0	32.2	12.5	110.2	353.6
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	0.0	0.0	0.0	16.6	0.0	14.8	0.0	18.2	0.0	0.0
FLATHEAD SOLE	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5	0.0
DOVER SOLE	39.5	37.6	1.1	0.0	11.0	2.9	5.0	9.8	58.0	4.4	0.0
REX SOLE	40.0	20.1	2.2	0.0	81.8	3.0	10.0	5.2	18.1	18.6	0.0
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	6.1	1.6	5.6	0.0	0.0	0.2
ROUGHEYE RKFH	9.2	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.9	0.0	0.0
THORNYHEADS	97.8	40.6	0.0	0.0	0.0	0.0	0.0	46.9	42.9	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	3.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	4.7	669.9	0.0	0.0	0.0	0.0	0.0	0.0	281.7	0.0	0.0
SCULPINS	13.8	0.0	0.0	0.0	17.5	0.0	6.4	1.0	1.4	0.0	0.1
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.5	0.5	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	0.0	0.0	0.0
RED SQUID	11.1	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



KILOGRAMS OF CATCH TAKEN BY THE BABAIEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	141	142	143	144	145	146	147	148	149	150	151
MONTH/DAY/YEAR	6/21/87	6/21/87	6/21/87	6/22/87	6/22/87	6/22/87	6/22/87	6/22/87	6/22/87	6/22/87	6/23/87
LATITUDE START	54 26.5	54 27.0	54 27.3	54 36.4	54 34.4	54 38.3	54 31.0	54 32.5	54 47.9	55 7.0	54 52.4
LONGITUDE START	159 24.4	159 15.1	159 14.5	158 48.2	158 56.2	158 47.4	158 50.7	158 46.4	158 18.7	158 21.8	157 43.0
LATITUDE END	54 27.3	54 26.1	54 26.8	54 35.6	54 35.0	54 38.0	54 31.3	54 31.8	54 46.5	55 5.6	54 52.0
LONGITUDE END	159 21.5	159 16.7	159 17.9	158 51.0	158 53.7	158 50.9	158 53.0	158 49.6	158 19.8	158 21.8	157 45.5
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	136	193	149	70	72	98	141	185	114	96	71
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.90	1.70	2.00	1.80	1.90	1.60	1.20	1.94	1.60	1.80	1.70
PERFORMANCE / GEAR	0 /794	0 /794	0 /794	5 /794	0 /794	0 /794	0 /794	0 /794	7 /794	5 /794	5 /795
POLLOCK	18.8	0.9	2.7	0.9	0.9	0.0	7.3	0.0	11.2	0.0	0.0
PACIFIC COD	4.9	0.0	0.0	0.0	212.1	7.3	1.8	0.0	354.1	0.0	0.0
SABLEFISH	420.0	293.4	86.1	0.0	0.0	3.3	92.4	297.3	7.5	1.6	0.0
ARROWTOOTH FL.	46.8	25.2	1.8	0.9	706.7	32.2	48.9	28.1	36.4	17.2	153.5
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	22.8	45.0	0.0	0.0	7.7	32.8	0.0	35.9	42.3	0.0	0.0
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.5	0.0
DOVER SOLE	9.5	65.1	3.2	0.0	3.2	1.8	38.1	41.3	16.8	0.0	0.0
REX SOLE	12.4	12.0	0.5	0.0	1.2	1.1	25.9	15.9	46.4	0.5	0.0
ROCK SOLE	0.0	0.0	0.0	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0
PAC OC PERCH	3.3	0.0	0.0	0.0	0.0	1.0	2.7	1.4	1.1	0.0	0.0
ROUGHEYE RKFH	6.6	97.1	1.4	0.0	0.0	0.5	3.4	23.8	10.8	0.0	0.0
THORNYHEADS	31.5	117.2	4.4	0.5	0.0	0.0	80.4	93.9	1.8	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	0.0	72.0	1.8	0.0	0.0	0.0	0.0	59.2	4.1	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	52.4	0.0	0.0	0.0	0.0	0.0	155.1	0.0	0.0	0.0
SCULPINS	9.0	24.0	0.0	0.0	0.1	0.0	2.0	3.4	14.7	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	9.5
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	5.2	7.0	4.8	2.3	2.3	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	1.5	60.2	2.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PINK SHRIMP	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE DABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	152	153	154	155	156	157	158	159	160	161	162
MONTH/DAY/YEAR	6/23/87	6/23/87	6/23/87	6/23/87	6/24/87	6/24/87	6/24/87	6/24/87	6/24/87	6/25/87	6/25/87
LATITUDE START	54 48.9	54 49.0	54 47.0	54 44.1	55 9.3	55 4.4	54 58.3	55 15.7	55 14.2	55 10.1	55 7.5
LONGITUDE START	157 47.6	157 49.6	157 57.5	157 52.4	157 3.6	157 6.9	157 10.3	156 39.6	156 37.1	156 48.3	156 48.7
LATITUDE END	54 48.0	54 48.2	54 45.8	54 43.8	55 8.8	55 3.0	54 56.7	55 14.3	55 13.7	55 9.8	55 6.9
LONGITUDE END	157 50.6	157 53.4	157 53.3	157 54.1	157 6.5	157 9.2	157 11.3	156 42.1	156 40.3	156 51.5	156 51.5
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	92	97	149	208	73	120	225	85	155	102	134
DURATION IN HOURS	0.50	0.50	0.50	0.33	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.80	2.30	2.00	1.03	1.80	1.90	1.70	1.90	1.80	1.92	1.60
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	7 /795	7 /794	0 /795	0 /795	1 /795	0 /795
POLLOCK	0.1	0.1	19.5	3.1	0.0	126.9	0.7	1.8	22.2	2.0	15.0
PACIFIC COD	226.3	136.3	74.3	0.0	90.1	36.1	0.0	118.8	0.0	78.9	0.0
SABLEFISH	92.3	16.4	77.5	379.0	0.0	326.8	131.8	265.1	2554.0	517.5	950.5
ARROWTOOTH FL.	145.1	119.1	56.1	10.9	1982.1	102.1	5.2	3320.4	124.3	129.9	21.3
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	75.2	0.0	61.3	10.0	21.1	32.6	0.0	12.8	25.6	0.0	0.0
FLATHEAD SOLE	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
DOVER SOLE	1.4	0.0	20.8	57.2	0.0	1.5	61.5	27.7	14.3	5.4	0.5
REX SOLE	17.7	22.4	10.4	4.8	0.0	5.7	12.2	10.9	15.7	6.8	0.7
ROCK SOLE	0.0	0.0	0.0	0.0	0.5	0.0	0.0	3.6	0.0	0.0	0.0
PAC OC PERCH	0.0	0.1	28.0	2.9	0.0	11.1	0.0	247.3	20.0	1.8	25.9
ROUGHEYE RKFH	0.0	0.0	3.8	1.4	0.0	0.0	0.5	0.0	91.2	0.0	11.3
THORNYHEADS	0.0	0.0	26.2	43.5	0.0	0.0	131.0	0.0	22.7	0.6	4.5
NORTHERN RKFH	0.0	0.0	0.0	0.0	0.5	0.0	0.0	27.2	0.0	0.0	0.0
DUSKY RCKFISH	0.0	0.0	1.8	0.0	0.0	0.0	0.0	2272.7	0.0	1.1	0.0
SHORTTRAKER RF	0.0	0.0	0.0	18.1	0.0	0.0	8.8	0.0	9.5	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	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
GRENADIERS	0.0	0.0	0.0	138.9	0.0	0.0	383.1	0.0	7.3	0.0	0.0
SCULPINS	0.0	0.0	0.1	0.0	0.5	26.4	4.4	0.0	1.1	0.1	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.2	0.0	0.0	0.0
SMELT	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	0.0	0.0	33.5	10.4	0.0	11.8	1.0	0.0	0.9	1.0	1.4
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 STRIPE SHRIMP	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	163	164	165	166	167	168	169	170	171	172	173
MONTH/DAY/YEAR	6/25/87	6/25/87	6/25/87	6/26/87	6/26/87	6/26/87	6/26/87	6/26/87	6/26/87	6/26/87	6/27/87
LATITUDE START	55 15.8	55 33.0	55 37.5	55 35.8	55 37.8	55 40.0	55 49.1	55 50.6	55 56.9	56 1.0	55 59.4
LONGITUDE START	156 25.4	155 44.1	155 41.2	155 28.0	155 24.9	155 24.9	155 3.7	155 1.4	154 59.5	154 48.6	154 45.8
LATITUDE END	55 15.0	55 32.0	55 36.2	55 34.6	55 37.4	55 39.2	55 50.5	55 52.0	55 58.6	56 1.6	56 0.0
LONGITUDE END	156 28.5	155 41.7	155 44.0	155 29.5	155 28.0	155 29.0	155 1.6	155 0.0	154 58.1	154 45.9	154 42.7
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	93	114	77	205	142	93	68	77	73	97	137
DURATION IN HOURS	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.90	1.80	1.60	1.50	1.70	1.50	1.60	1.60	1.60	1.90	1.70
PERFORMANCE / GEAR	7 /795	0 /795	0 /795	0 /795	0 /795	0 /795	5 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	66.9	41.0	0.5	0.0	67.6	119.3	0.0	0.0	0.0	34.4	7.9
PACIFIC COD	0.0	19.7	38.2	0.0	0.0	157.4	0.0	352.0	236.8	29.6	0.0
SABLEFISH	43.5	3.4	5.0	348.4	234.5	0.0	0.0	0.0	2.4	344.4	512.1
ARROWTOOTH FL.	110.0	98.7	505.2	31.9	77.1	253.5	0.0	99.4	394.2	66.9	13.3
GREENLAND TURB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	17.4	106.7	138.6	21.6	0.0	21.9	0.0	19.0	0.0	0.0	5.7
FLATHEAD SOLE	0.0	29.5	0.5	0.0	0.4	9.7	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	1.1	18.0	0.0	11.9	13.2	4.7	0.0	0.0	4.8	2.5	0.5
REX SOLE	5.7	144.5	4.5	8.8	25.6	73.3	0.0	11.6	81.0	4.7	4.8
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.5	0.0
PAC OC PERCH	2.5	0.2	0.0	0.0	38.3	1.6	0.0	0.2	0.0	0.7	35.6
ROUGHEYE RKFH	0.0	16.9	1.8	1.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
THORNYHEADS	0.0	0.0	0.0	5.9	36.7	0.0	0.0	0.0	0.0	0.0	12.2
NORTHERN RKFH	12.2	1.5	17.9	8.4	0.0	60.5	0.0	0.0	2.0	1.4	0.0
DUSKY RCKFISH	1.2	0.0	0.0	0.0	0.0	47.6	0.0	0.0	1.3	0.0	0.0
SHORTRAKER RF	0.0	0.0	0.0	11.3	1.8	0.0	0.0	0.0	0.0	0.0	4.1
HARLEQUIN RF	0.5	0.0	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	0.0	0.0	124.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.8	12.0	1.1	0.0	0.2	0.1	0.0	0.5	0.9	4.5	0.0
SALMON	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	24.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	0.0	0.0	0.0	0.0	48.1	15.4	0.0	0.0	1.0	1.8	5.7
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BARAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	174	175	176	177	178	179	180	181	182	183	184
MONTH/DAY/YEAR	6/27/87	6/27/87	6/27/87	6/27/87	6/27/87	6/27/87	6/27/87	6/28/87	6/28/87	6/28/87	6/28/87
LATITUDE START	55 57.9	55 57.3	55 58.0	56 0.8	56 0.8	55 58.8	55 54.6	55 54.4	55 54.7	56 4.5	55 53.0
LONGITUDE START	154 47.3	154 46.3	154 38.8	154 11.7	154 5.2	154 6.1	154 10.9	154 13.6	154 18.6	153 57.5	153 39.9
LATITUDE END	55 58.7	55 55.9	55 58.0	56 2.5	55 59.8	55 58.7	55 53.0	55 55.6	55 56.2	56 4.6	55 54.6
LONGITUDE END	154 44.1	154 48.3	154 40.8	154 10.4	154 5.9	154 7.1	154 11.8	154 16.3	154 20.1	154 0.3	153 43.1
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	150	215	294	68	89	149	148	195	383	81	109
DURATION IN HOURS	0.50	0.50	0.33	0.50	0.50	0.16	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.80	1.90	1.12	1.90	1.80	0.60	1.80	1.80	1.72	1.60	1.80
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	5 /795
POLLOCK	4.1	0.0	0.0	1.4	5.1	8.2	9.5	21.8	2.7	0.0	0.7
PACIFIC COD	0.0	0.0	0.0	2.0	52.5	0.0	9.3	0.0	0.0	6.8	0.0
SABLEFISH	497.8	558.0	159.3	0.0	83.5	91.9	19.5	151.5	100.9	0.0	0.0
ARROWTOOTH FL.	20.2	7.4	0.0	44.7	23.6	21.3	14.4	20.4	5.4	216.5	0.0
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
HALIBUT	0.0	0.0	0.0	0.0	64.5	0.0	0.0	0.0	0.0	4.2	0.0
FLATHEAD SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DOVER SOLE	1.6	66.7	7.0	2.4	0.0	0.0	16.8	16.6	28.6	0.0	0.0
REX SOLE	4.2	118.5	10.0	2.6	11.1	4.3	29.0	6.6	0.0	12.7	0.0
ROCK SOLE	0.0	0.0	0.0	1.1	1.4	0.0	0.0	0.0	0.0	0.5	0.0
PAC OC PERCH	4.5	0.0	0.0	0.5	103.1	15.3	69.9	6.6	0.0	0.0	5.5
ROUGEYE RKFH	6.8	1.8	0.0	0.0	0.0	0.0	10.6	268.8	4.5	0.0	0.0
THORNYHEADS	7.5	113.9	15.1	0.0	0.0	20.8	102.9	149.2	10.7	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.0	1846.6	146.2	3.5	0.0	0.0	0.0	0.0	0.0
DUSKY RKFISH	0.0	0.0	0.0	834.8	38.8	0.9	0.0	0.0	0.0	0.0	0.0
SHORTRAKER RF	0.0	25.0	9.5	0.0	0.0	0.0	15.3	338.4	22.7	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	11.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	414.7	99.8	0.0	0.0	0.0	0.0	80.4	391.9	0.0	0.0
SCULPINS	0.1	0.0	0.0	6.4	1.1	1.7	0.2	2.5	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	6.6	40.9	0.0	0.0	1.0	0.5	10.9	23.1	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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

## KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	185	186	187	188	189	190	191	192	193	194	195
MONTH/DAY/YEAR	6/28/87	6/28/87	6/28/87	6/30/87	6/30/87	6/30/87	6/30/87	7/ 1/87	7/ 1/87	7/ 1/87	7/ 1/87
LATITUDE START	56 3.3	56 6.6	56 10.6	56 12.1	56 15.1	56 9.6	56 12.4	57 8.8	57 7.5	57 7.8	57 7.2
LONGITUDE START	153 32.8	153 41.0	153 46.9	153 22.5	153 18.3	153 29.1	153 20.1	152 43.1	152 42.3	152 43.4	152 43.0
LATITUDE END	56 4.1	56 7.9	56 10.7	56 11.1	56 13.5	56 9.6	56 10.9	57 9.6	57 8.3	57 8.6	57 8.0
LONGITUDE END	153 33.7	153 42.7	153 47.7	153 25.4	153 20.4	153 26.2	153 22.0	152 42.7	152 41.6	152 42.0	152 42.1
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	103	160	115	87	104	125	150	78	82	79	82
DURATION IN HOURS	0.25	0.50	0.16	0.63	0.50	0.50	0.50	0.25	0.25	0.25	0.25
DISTANCE FISHED	1.10	1.90	0.50	1.95	1.90	1.68	1.80	0.90	1.00	0.90	0.90
PERFORMANCE / GEAR	1 /795	0 /795	5 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	3.9	6.8	16.8	148.1	123.6	4.8	3.8	152.0	118.2	233.7	133.1
PACIFIC COD	0.0	0.0	64.4	525.1	0.0	32.9	0.0	30.6	0.0	93.9	52.5
SABLEFISH	16.3	175.9	6.6	267.5	112.5	95.3	555.0	0.0	0.0	5.4	2.7
ARROWTOOTH FL.	0.0	12.5	131.6	112.5	216.9	361.7	47.9	180.5	102.5	243.4	209.3
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	0.0	0.0	18.6	7.8	154.8	116.2	0.0	0.0	26.4	14.4
FLATHEAD SOLE	0.0	2.2	0.0	2.0	41.3	16.1	0.7	62.8	17.9	145.6	82.1
DOVER SOLE	0.0	67.8	5.7	1.4	24.3	75.1	20.5	0.8	0.0	0.0	0.0
REX SOLE	0.0	33.3	40.1	3.9	108.2	112.8	22.7	1.6	0.0	0.0	1.5
ROCK SOLE	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0
PAC OC PERCH	114.2	8.8	1.1	0.0	14.7	57.7	4.2	0.0	0.0	0.0	0.0
ROUGHEYE RKFH	0.0	9.4	0.0	0.0	0.0	0.0	10.6	0.0	0.0	1.8	0.0
THORNYHEADS	0.0	37.2	0.0	0.0	165.8	126.6	21.8	0.0	0.0	0.0	0.0
NORTHERN RKFH	0.0	0.0	1.5	0.7	40.4	0.9	0.0	0.0	0.0	0.0	0.0
DUSKY RCKFISH	0.0	0.0	0.0	1.4	8.2	0.0	0.0	0.0	0.0	2.2	0.0
SHORTRAKER RF	0.0	4.4	3.6	0.0	0.0	0.0	96.6	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	99.0	4.5	0.0	0.0	0.0	141.8	0.0	0.0	0.0	0.0
SCULPINS	0.0	3.8	9.3	7.2	7.9	0.0	0.0	0.0	0.0	0.4	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
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	3.6	6.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	0.0	18.7	13.6	0.0	0.9	11.3	7.7	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 STRIPE SHRIMP	0.0	0.7	1.0	0.0	2.0	0.0	1.5	0.0	0.0	0.0	0.0

KILOGRAMS OF CATCH TAKEN BY THE BARAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	196	197	198	199	200	201	202	203	204	205	206
MONTH/DAY/YEAR	7/ 1/87	7/ 1/87	7/ 1/87	7/ 1/87	7/ 2/87	7/ 2/87	7/ 2/87	7/ 2/87	7/ 2/87	7/ 2/87	7/ 2/87
LATITUDE START	57 7.2	57 7.8	57 7.9	57 8.0	56 50.7	56 50.2	56 49.8	56 50.5	56 49.7	56 50.2	56 50.4
LONGITUDE START	152 44.8	152 43.4	152 44.6	152 44.0	152 9.4	152 6.6	152 5.2	152 8.8	152 8.2	152 10.3	152 7.0
LATITUDE END	57 8.1	57 8.5	57 8.6	57 8.8	56 51.5	56 50.5	56 50.1	56 50.8	56 50.5	56 50.4	56 50.7
LONGITUDE END	152 44.1	152 42.6	152 44.0	152 43.5	152 8.5	152 8.3	152 6.8	152 10.2	152 9.6	152 11.7	152 8.4
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	79	82	80	80	52	52	52	52	52	52	52
DURATION IN HOURS	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
DISTANCE FISHED	0.90	0.80	1.00	0.90	1.00	0.90	0.90	0.90	1.00	0.70	0.80
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	315.0	475.5	281.2	308.3	0.0	0.0	2.3	0.0	1.1	3.3	0.0
PACIFIC COD	34.9	39.0	11.3	82.5	4.5	17.0	160.8	34.5	52.2	85.6	1575.8
SABLEFISH	1.8	1.8	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARROWTOOTH FL.	87.3	244.3	53.3	218.0	30.9	75.5	50.6	71.2	77.2	68.9	102.1
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	1.3	5.7	9.7	13.2	8.3	0.0	0.8	0.0	3.6	36.7	61.5
FLATHEAD SOLE	104.8	67.9	34.8	98.5	0.5	1.5	0.5	0.3	1.0	1.5	0.5
DOVER SOLE	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REX SOLE	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.2	0.7	3.6	0.0
ROCK SOLE	0.0	0.0	0.0	0.0	5.9	10.1	5.0	8.8	10.9	6.4	21.1
PAC OC PERCH	0.0	0.0	0.0	0.0	0.0	1.1	0.1	1.1	1.3	0.1	0.6
ROUGHEYE RKFH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORNYHEADS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.0	0.0	0.0	11.8	2.0	0.0	6.8	0.7	65.3
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
SHORTRAKER RKF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
GRENADIERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	0.0	0.0	0.0	0.2	0.5	0.5	0.0	0.2	0.0	0.0	0.0
SALMON	0.0	0.7	0.0	0.0	15.4	0.0	15.8	26.6	24.5	0.0	28.7
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	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	2.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIDE STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## KILOGRAMS OF CATCH TAKEN BY THE BADAJEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	207	208	209	210	211	212	213	214	215	216	217
MONTH/DAY/YEAR	7/ 2/87	7/ 2/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87	7/ 5/87
LATITUDE START	56 50.3	56 50.6	57 22.5	57 20.2	57 33.0	57 32.3	57 33.9	57 41.5	57 31.1	57 23.3	57 18.5
LONGITUDE START	152 9.4	152 8.0	150 18.5	150 17.1	150 18.3	150 15.3	150 17.8	150 16.8	150 32.6	150 35.5	150 44.3
LATITUDE END	56 50.8	56 50.8	57 21.5	57 19.5	57 34.0	57 34.0	57 35.5	57 39.9	57 29.7	57 22.0	57 16.9
LONGITUDE END	152 10.8	152 9.7	150 21.1	150 20.3	150 16.0	150 12.8	150 15.8	150 17.6	150 34.8	150 38.0	150 45.6
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	52	52	277	364	115	130	89	69	60	96	123
DURATION IN HOURS	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.58
DISTANCE FISHED	1.00	1.00	1.80	1.80	1.60	1.80	1.80	1.70	1.80	1.80	1.70
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	2.0	4.5	0.0	0.0	149.0	23.0	577.1	5.7	0.0	340.8	279.9
PACIFIC COD	2122.2	1080.7	0.0	0.0	7.7	7.9	18.3	2.1	14.7	18.3	9.8
SABLEFISH	0.0	0.0	205.5	50.3	24.0	323.5	148.2	0.0	0.0	26.4	788.4
ARROWTOOTH FL	99.7	132.7	0.0	0.0	72.1	38.6	101.4	221.6	785.8	39.6	96.2
GREENLAND TURB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	11.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	3.1	6.4	0.0
FLATHEAD SOLE	0.4	1.5	0.0	0.0	7.0	1.1	3.9	0.0	4.2	6.0	0.7
DOVER SOLE	0.0	0.0	9.1	13.6	45.8	57.4	18.3	0.0	0.0	31.9	72.6
REX SOLE	0.5	0.9	0.4	0.0	29.5	34.2	54.7	8.2	5.4	81.1	24.8
ROCK SOLE	9.5	12.4	0.0	0.0	0.0	0.0	0.0	0.0	104.6	1.5	0.0
PAC OC PERCH	0.0	0.2	0.0	0.0	4.1	40.1	177.5	2.2	0.0	0.0	499.2
ROUGHEYE RKFH	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0
THORNYHEADS	0.0	0.0	10.9	9.8	7.7	100.5	0.0	0.0	0.0	0.0	7.7
NORTHERN RKFH	0.6	7.6	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	5.4
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
SHORTRAKER RF	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.7
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	0.0	71.8	107.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	4.0	0.6	0.0	0.0	11.3	0.8	0.0	0.0	0.0	0.0	10.7
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	0.0	0.0	0.0	0.0	0.0	36.0	2.5	3.0	0.0	2.0	63.0
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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	3.0

KILOGRAMS OF CATCH TAKEN BY THE BABAIEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	218	219	220	221	222	223	224	225	226	227	228
MONTH/DAY/YEAR	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 6/87	7/ 7/87	7/ 7/87
LATITUDE START	57 31.3	57 33.2	57 30.8	57 33.0	57 32.7	57 33.7	57 33.7	57 33.9	57 29.7	57 30.7	57 29.3
LONGITUDE START	150 18.6	150 17.1	150 17.3	150 16.3	150 16.0	150 16.8	150 15.3	150 13.6	150 17.0	150 19.3	150 17.3
LATITUDE END	57 30.7	57 32.4	57 30.0	57 32.3	57 32.1	57 32.1	57 32.3	57 32.6	57 29.2	57 29.9	57 28.6
LONGITUDE END	150 19.6	150 18.1	150 17.8	150 17.6	150 16.5	150 19.6	150 18.2	150 15.8	150 15.8	150 17.6	150 15.3
LORAN START											
LORAN END											
GEAR DEPTH	126	126	131	139	142	120	126	134	183	164	164
DURATION IN HOURS	0.25	0.25	0.25	0.25	0.25	0.50	0.50	0.50	0.25	0.33	0.33
DISTANCE FISHED	0.80	0.97	0.80	0.95	0.70	1.80	1.70	1.70	0.70	1.30	1.20
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	36.9	171.2	46.6	99.7	83.0	213.3	191.5	228.8	1.0	29.5	7.3
PACIFIC COD	2.4	4.1	11.3	21.3	11.5	27.1	23.8	24.9	0.0	2.0	0.0
SABLEFISH	234.1	28.3	45.8	44.0	28.7	28.3	55.8	37.6	297.8	183.5	247.2
ARROWTOOTH FL.	22.7	66.9	38.1	36.1	14.2	135.9	81.5	67.6	9.0	39.5	24.5
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	29.1	24.9	39.9	7.2	11.4	42.1	27.5	21.0	11.8	0.0
FLATHEAD SOLE	0.0	6.8	4.1	1.9	0.1	9.3	4.2	5.1	0.0	0.0	0.0
DOVER SOLE	8.2	24.3	18.6	6.1	9.7	29.9	11.1	11.3	19.1	36.7	33.1
REX SOLE	5.7	29.9	43.3	18.6	3.3	46.8	23.7	28.5	7.2	14.5	9.3
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAC OC PERCH	46.3	22.9	31.8	45.4	169.8	87.8	99.2	150.0	9.0	74.6	33.1
ROUGHEYE RKFH	2.3	0.0	0.0	0.0	0.0	0.0	0.0	5.6	5.2	5.9	29.0
THORNYHEADS	22.2	22.4	50.8	37.6	18.1	22.7	38.5	41.5	13.5	49.0	37.6
NORTHERN RKFH	0.5	2.3	5.7	2.0	1.9	2.0	5.2	0.9	0.0	0.5	0.0
DUSKY RCKFISH	0.0	2.7	0.0	0.0	0.0	0.0	0.0	1.5	1.1	2.5	0.0
SHORTRAKER RF	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	5.9	41.5	29.7
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4	0.0	0.0
SCULPINS	0.0	0.0	0.0	0.0	0.1	6.1	6.7	3.8	0.0	10.9	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
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	84.4	31.3	3.6	1.5	38.0	12.6	14.0	20.0	1.4	0.0	12.5
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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	0.1	0.0	0.0



KILLOGRAMS OF CATCH TAKEN BY THE BABAIEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	229	230	231	232	233	234	235	236	237	238	239
MONTH/DAY/YEAR	7/ 7/87	7/ 7/87	7/ 7/87	7/ 7/87	7/ 7/87	7/ 7/87	7/ 8/87	7/ 8/87	7/ 8/87	7/ 8/87	7/ 8/87
LATITUDE START	57 30.0	57 30.8	57 30.3	57 31.1	57 31.3	57 22.7	57 20.5	57 16.6	57 12.2	57 11.3	57 10.6
LONGITUDE START	150 19.6	150 20.6	150 18.1	150 19.5	150 19.0	150 32.5	150 37.5	150 36.3	151 7.1	151 4.8	151 6.1
LATITUDE END	57 29.4	57 29.5	57 29.5	57 30.0	57 30.0	57 22.3	57 19.6	57 15.0	57 9.8	57 11.9	57 12.2
LONGITUDE END	150 17.8	150 18.8	150 17.0	150 17.5	150 18.6	150 35.3	150 40.6	150 37.5	151 9.1	151 4.1	151 4.0
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	161	159	165	163	163	150	202	361	65	115	145
DURATION IN HOURS	0.33	0.33	0.33	0.33	0.33	0.50	0.50	0.50	0.50	0.25	0.50
DISTANCE FISHED	1.30	1.20	1.00	1.10	1.20	1.60	1.80	1.70	2.30	0.70	1.70
PERFORMANCE / GEAR	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795
POLLOCK	63.7	347.5	10.7	34.2	65.3	0.0	11.8	0.0	0.0	232.2	801.5
PACIFIC COD	0.0	8.1	2.1	0.0	7.0	3.0	0.0	0.0	0.0	2.3	2.5
SABLEFISH	118.6	100.9	289.2	236.5	71.2	462.1	380.3	633.9	0.0	73.3	668.0
ARROWTOOTH FL.	47.6	71.9	33.9	17.8	77.2	5.6	3.2	0.0	0.5	16.3	88.1
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	13.3	13.1	0.0	13.5	8.3	0.0	0.0	182.7	0.0	0.0
FLATHEAD SOLE	0.4	1.0	0.0	0.1	2.5	0.0	0.0	0.0	0.0	0.1	3.0
DOVER SOLE	34.2	20.2	6.2	6.0	35.3	38.8	4.2	33.3	0.0	4.8	77.9
REX SOLE	12.5	18.4	9.3	12.5	23.6	20.9	0.0	0.5	0.0	0.0	15.9
ROCK SOLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0
PAC OC PERCH	89.1	109.7	28.3	8.3	133.6	15.4	0.0	0.0	0.6	42.6	400.1
ROUGHEYE RKFH	52.6	24.9	53.3	29.2	10.4	45.1	14.5	0.0	0.0	0.0	1.5
THORNYHEADS	51.7	61.9	53.2	17.6	35.8	47.3	9.1	36.4	0.0	0.0	0.0
NORTHERN RKFH	0.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
DUSKY RCKFISH	2.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
SHORTTRAKER RF	8.7	0.0	30.5	8.6	14.1	51.4	222.9	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	0.0	0.0	0.0	0.0	0.0	0.0	23.0	172.6	0.0	0.0	0.0
SCULPINS	0.0	8.5	0.0	0.0	1.6	0.1	0.0	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	8.4	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	50.3	23.6	14.2	29.5	9.5	11.3	2.7	0.5	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 STRIPE SHRIMP	0.0	0.0	0.1	0.2	0.1	1.0	0.0	0.0	0.0	0.0	0.1

## KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	240	241	242	243	244	245	246	247	248	249	250
MONTH/DAY/YEAR	7/ 8/87	7/ 8/87	7/ 9/87	7/ 9/87	7/ 9/87	7/ 9/87	7/ 9/87	7/ 9/87	7/10/87	7/10/87	7/10/87
LATITUDE START	57 7.0	57 2.9	56 58.0	56 53.2	56 53.6	56 46.2	56 54.1	56 49.5	56 30.9	56 33.0	56 32.2
LONGITUDE START	151 7.6	151 12.3	151 37.1	151 41.1	151 37.6	151 43.6	151 30.3	151 37.3	152 9.2	152 18.3	152 21.1
LATITUDE END	57 8.6	57 2.9	56 56.7	56 51.8	56 52.4	56 47.8	56 55.8	56 48.0	56 32.0	56 32.2	56 32.2
LONGITUDE END	151 5.2	151 18.3	151 39.8	151 41.8	151 40.3	151 42.0	151 29.1	151 38.3	152 6.9	152 15.9	152 18.1
LORAN START											
LORAN START											
LORAN END											
LORAN END											
GEAR DEPTH	205	301	63	97	125	161	205	287	69	70	149
DURATION IN HOURS	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.80	3.80	1.90	1.90	1.90	1.80	1.60	1.50	1.80	1.50	1.70
PERFORMANCE / GEAR	1 /795	0 /794	0 /795	0 /795	0 /795	0 /795	0 /795	0 /795	7 /795	1 /794	0 /794
POLLOCK	0.0	0.0	0.1	0.2	190.2	2.4	0.0	0.0	0.0	0.0	88.9
PACIFIC COD	0.0	0.0	0.0	61.9	7.5	0.0	0.0	0.0	0.0	861.8	0.0
SABLEFISH	501.8	365.3	0.0	43.0	86.9	673.8	680.4	338.8	0.0	748.9	1269.1
ARROWTOOTH FL.	25.8	0.0	1.6	1692.5	210.9	60.9	10.6	0.0	3.9	445.4	93.8
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	0.0	22.7	7.6	42.4	0.0	0.0	0.0	0.0	26.0	18.2
FLATHEAD SOLE	0.1	0.0	0.0	5.3	0.6	0.0	0.0	0.0	0.0	52.6	4.5
DOVER SOLE	77.5	30.4	0.0	0.7	687.2	48.1	51.1	142.6	2.9	1.9	61.2
REX SOLE	10.9	3.9	0.0	6.2	294.5	24.9	9.1	0.7	1.5	23.6	26.0
ROCK SOLE	0.0	0.0	0.1	3.0	0.0	0.0	0.0	0.0	0.5	27.2	0.0
PAC OC PERCH	11.0	0.0	0.1	0.0	33.7	9.9	0.0	0.0	0.4	2.7	5.0
ROUGHEYE RKFH	71.1	0.0	0.0	0.0	0.0	25.6	26.7	0.0	0.0	0.0	153.9
THORNYHEADS	126.1	40.4	0.0	0.0	0.0	67.9	65.9	146.0	0.0	0.0	15.9
NORTHERN RKFH	0.0	0.0	0.0	0.0	6.8	0.0	0.0	0.0	1.9	41.7	0.0
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	100.7	0.0
SHORTRAKER RF	332.1	4.0	0.0	0.0	0.0	47.0	80.7	18.7	0.0	0.0	47.6
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	46.4	1371.8	0.0	0.0	0.0	0.0	96.3	262.9	0.0	0.0	0.0
SCULPINS	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.6	0.0
SALMON	0.0	0.0	4.7	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.6	0.0
SKATES	0.0	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	5.2	4.5	0.0	0.0	0.0	128.0	44.7	18.0	0.0	0.0	5.9
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 STRIPE SHRIMP	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	1.5

KILOGRAMS OF CATCH TAKEN BY THE BABAEVSK DURING THE 1987 GULF OF ALASKA BOTTOM TRAWL SURVEY

HAUL #	251	252	253	254	255	256	257	258	259
MONTH/DAY/YEAR	7/10/87	7/11/87	7/11/87	7/11/87	7/11/87	7/12/87	7/12/87	7/12/87	7/12/87
LATITUDE START	56 28.3	56 31.0	56 30.7	56 30.5	56 27.6	57 53.5	57 56.3	58 0.8	57 48.6
LONGITUDE START	152 19.2	152 31.7	152 34.7	152 36.1	152 33.7	149 51.8	149 44.8	149 43.8	149 47.1
LATITUDE END	56 28.6	56 29.4	56 32.2	56 28.8	56 29.3	57 55.5	57 58.0	57 59.2	57 47.4
LONGITUDE END	152 17.3	152 31.9	152 32.8	152 35.9	152 33.7	149 53.0	149 45.6	149 41.5	149 49.5
LORAN START									
LORAN START									
LORAN END									
LORAN END									
GEAR DEPTH	194	155	126	82	104	137	106	71	109
DURATION IN HOURS	0.33	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
DISTANCE FISHED	1.10	1.80	1.80	1.80	1.80	1.50	1.80	1.90	1.70
PERFORMANCE / GEAR	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	0 /794	7 /794
POLLOCK	0.0	6.8	16.3	0.5	22.9	83.0	0.4	0.0	0.0
PACIFIC COD	0.0	2.2	43.5	171.9	31.4	13.6	29.5	5.2	0.0
SABLEFISH	159.7	750.1	1280.0	7.8	55.1	428.2	5.7	0.0	0.0
ARROWTOOTH FL.	0.0	251.2	90.3	907.4	69.6	98.2	40.1	11.1	0.0
GREENLAND TURB.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALIBUT	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0
FLATHEAD SOLE	0.0	1.4	0.9	0.0	0.0	1.9	2.9	0.7	0.0
DOVER SOLE	24.0	36.5	15.4	0.0	20.9	5.4	17.2	0.0	0.0
REX SOLE	13.3	75.5	15.0	1.1	49.7	32.7	37.6	0.0	0.0
ROCK SOLE	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.6	0.0
PAC OC PERCH	0.0	8.8	18.4	9.5	0.7	19.2	123.4	26.1	0.0
ROUGHEYE RKFH	70.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
THORNYHEADS	32.5	15.4	0.0	0.0	0.0	29.5	3.9	0.0	0.0
NORTHERN RKFH	0.0	0.0	0.0	0.9	0.0	1.7	2.7	0.0	0.0
DUSKY RCKFISH	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
SHORTRAKER RF	190.1	120.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HARLEQUIN RF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ATKA MACKEREL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRENADIERS	44.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCULPINS	5.1	0.1	0.5	0.0	5.6	0.0	0.0	0.0	0.0
SALMON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
SMELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKATES	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINY DOGFISH	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0
SLEEPER SHARK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RED SQUID	14.4	9.5	0.0	0.9	0.0	0.0	0.9	0.0	0.0
PINK SHRIMP	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
SIDE STRIPE SHRIMP	0.5	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0

Section 2.3

Fishing log for the 1987 U.S.- U.S.S.R. cooperative survey

Summary listings of catch rates in descending order of magnitude for principal species of commercial interest

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES ARROWTOOTH FLOUNDER

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
159	1747.6	0.9	85
156	1101.2	0.5	73
129	962.0	1.5	96
243	890.8	0.9	97
118	628.8	1.1	101
254	504.1	1.1	82
215	436.6	0.4	60
115	405.1	0.9	98
145	371.9	0.6	72
165	315.7	1.2	77
197	305.3	1.2	82
249	297.0	1.0	70
194	270.4	0.7	79
187	263.2	1.2	115
171	246.4	0.9	73
199	242.2	0.8	80
195	232.5	1.0	82
134	230.0	0.8	87
116	229.9	0.5	67
190	215.3	1.9	125
140	208.0	0.8	71
192	200.6	0.9	78
101	200.1	1.5	69
126	189.7	0.4	73
168	169.0	0.7	93
117	161.2	0.5	71
252	139.6	2.6	155
72	136.9	1.2	175
183	135.3	0.7	81
208	132.7	0.4	52
214	130.4	0.8	69
206	127.6	1.3	52
189	114.1	2.0	104
244	111.0	1.7	125
120	108.3	1.2	79
81	107.5	1.1	144
193	102.5	1.6	82
207	99.7	0.4	52
205	98.5	0.3	52
196	97.0	0.8	79
94	95.1	1.0	68
151	90.3	1.0	71
201	83.9	0.2	52
152	80.6	1.3	92
203	79.1	0.4	52
92	77.7	0.6	98
204	77.2	0.5	52
223	75.5	2.1	120

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES ARROWTOOTH FLOUNDER

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
119	70.0	1.2	126
160	69.0	0.9	155
219	69.0	2.3	126
161	67.7	1.8	102
256	65.5	1.1	137
233	64.4	1.8	163
84	62.5	0.3	68
170	62.1	0.6	77
139	61.2	0.7	95
230	59.9	1.8	159
82	58.5	1.2	126
163	57.9	1.0	93
132	57.8	0.8	96
188	57.7	1.1	87
217	56.6	1.4	123
213	56.3	0.9	89
202	56.2	0.3	52
75	55.9	1.3	118
250	55.2	2.5	149
164	54.8	0.7	114
157	53.7	1.0	120
198	53.3	0.5	80
239	51.8	1.9	145
153	51.8	1.5	97
253	50.1	2.1	126
130	50.1	0.7	160
224	47.9	2.0	126
220	47.6	1.7	131
167	45.4	1.2	142
86	45.2	1.3	162
211	45.1	2.3	115
147	40.7	1.2	141
225	39.8	1.7	134
85	39.6	1.3	134
113	38.7	1.6	155
255	38.7	1.3	104
221	38.0	2.0	139
229	36.6	1.9	161
107	35.5	0.6	74
179	35.5	1.8	149
95	35.2	0.6	159
172	35.2	1.7	97
231	33.9	1.3	165
245	33.8	1.8	161
122	33.3	0.5	119
114	32.7	1.4	127
112	31.2	1.9	196
200	30.9	0.5	52

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES ARROWTOOTH FLOUNDER

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
227	30.4	2.0	164
218	28.3	1.9	126
154	28.1	1.4	149
191	26.6	1.7	150
109	26.6	1.8	215
99	26.3	1.2	159
83	26.2	0.4	71
102	26.0	0.8	96
125	25.6	2.3	159
124	24.8	1.1	211
141	24.6	2.1	136
177	23.5	1.8	68
238	23.3	2.0	115
149	22.7	0.8	114
257	22.3	0.9	106
216	22.0	0.8	96
212	21.4	2.0	150
166	21.3	0.6	205
105	21.1	0.6	96
228	20.4	1.6	164
222	20.3	1.8	142
108	20.2	1.1	150
146	20.1	1.3	98
103	19.5	0.7	130
77	18.5	1.1	108
96	18.2	1.2	195
106	17.4	0.5	74
137	16.9	1.5	145
127	16.9	0.7	202
232	16.2	1.6	163
104	15.2	1.5	139
142	14.8	1.3	193
73	14.7	0.4	77
148	14.5	1.3	185
78	14.4	0.5	91
240	14.3	2.0	205
70	13.6	1.2	217
162	13.3	1.8	134
178	13.1	1.2	89
226	12.8	1.3	183
100	12.2	2.2	208
135	11.8	1.0	98
136	11.6	0.9	98
181	11.3	2.3	195
174	11.2	2.0	150
155	10.6	1.2	208
79	10.5	0.5	106
93	10.4	0.6	131

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES PACIFIC HALIBUT

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
75	130.9	2.8	118
74	99.3	2.1	100
190	92.1	11.9	125
165	86.6	34.7	77
237	79.4	45.7	65
206	76.8	30.7	52
191	64.5	12.9	150
164	59.3	15.2	114
205	52.4	12.2	52
124	46.2	10.6	211
221	42.0	13.3	139
82	41.9	4.9	126
152	41.8	25.1	92
178	35.8	32.3	89
109	31.1	8.7	215
220	31.1	12.5	131
154	30.6	6.8	149
226	30.0	21.0	183
219	30.0	14.5	126
194	29.3	6.6	79
81	27.9	7.0	144
142	26.5	15.0	193
149	26.5	14.1	114
122	25.0	10.0	119
123	25.0	24.7	60
224	24.8	10.5	126
64	22.8	20.5	139
96	22.4	9.0	195
244	22.3	10.6	125
146	20.5	10.9	98
77	20.2	5.7	108
113	19.7	4.8	155
148	18.5	12.0	185
65	17.7	31.8	234
116	17.5	5.0	67
249	17.4	26.0	70
157	17.2	10.9	120
92	16.5	2.2	98
101	16.4	9.3	69
71	16.2	5.3	132
225	16.2	9.2	134
195	16.0	4.8	82
86	15.2	6.1	162
114	14.8	7.4	127
103	14.8	3.6	130
199	14.7	6.6	80
168	14.6	7.3	93
166	14.4	21.6	205

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES PACIFIC HALIBUT

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
160	14.2	8.5	155
84	13.4	4.5	68
108	13.1	4.6	150
231	13.1	13.1	165
106	13.1	2.9	74
138	13.0	9.1	224
141	12.0	22.8	136
242	11.9	5.7	63
170	11.9	9.5	77
156	11.7	7.0	73
121	11.7	21.0	55
76	11.6	9.6	154
233	11.2	13.5	163
230	11.1	13.3	159
207	11.0	5.5	52
107	10.9	2.8	74
250	10.7	18.2	149
87	10.6	6.4	191
104	10.4	6.6	139
222	10.2	7.2	142
102	10.0	6.0	96
134	9.8	8.3	87
155	9.7	10.0	208
198	9.7	9.7	80
119	9.6	6.4	126
188	9.6	6.2	87
163	9.2	5.8	93
227	9.1	11.8	164
200	8.3	2.1	52
136	8.2	14.8	98
105	8.0	4.0	96
95	7.8	3.5	159
94	7.2	2.5	68
197	7.1	2.9	82
83	6.9	2.3	71
159	6.7	6.4	85
223	6.4	11.4	120
117	6.1	3.5	71
208	5.4	2.7	52
234	5.2	8.3	150
97	5.1	6.6	314
126	4.9	3.9	73
189	4.1	3.9	104
145	4.1	7.7	72
243	4.0	3.8	97
73	3.9	2.1	77
78	3.8	2.2	91
100	3.8	6.1	208

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES PACIFIC HALIBUT

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
115	3.8	3.4	98
204	3.6	1.8	52
216	3.5	6.4	96
110	3.4	7.8	302
173	3.3	5.7	137
91	2.9	2.0	93
99	2.8	4.2	159
183	2.6	4.2	81
93	2.5	3.8	131
112	2.3	4.0	196
79	1.8	1.5	106
215	1.7	1.0	60
196	1.5	1.3	79
256	1.2	1.8	137
202	0.9	0.8	52

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES FLATHEAD SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
194	161.8	0.3	79
196	116.4	0.3	79
199	109.5	0.5	80
195	91.2	0.2	82
197	84.9	0.3	82
192	69.8	0.3	78
249	35.1	0.5	70
198	34.8	0.3	80
189	21.7	0.2	104
193	17.9	0.3	82
117	16.8	0.7	71
164	16.4	0.3	114
116	11.6	0.7	67
190	9.6	0.1	125
219	7.0	0.2	126
93	6.8	0.3	131
168	6.5	0.6	93
118	6.0	0.7	101
78	5.2	1.0	91
223	5.2	0.2	120
220	5.1	0.2	131
103	4.9	0.2	130
211	4.4	0.2	115
79	3.6	0.9	106
216	3.3	0.2	96
102	3.2	0.6	96
104	3.0	0.2	139
225	3.0	0.2	134
149	2.8	0.4	114
243	2.8	0.3	97
250	2.7	0.3	149
224	2.5	0.3	126
215	2.3	0.4	60
115	2.2	0.8	98
213	2.2	0.3	89
205	2.1	0.4	52
233	2.1	0.1	163
221	2.0	0.2	139
105	1.9	0.1	96
239	1.8	0.2	145
114	1.7	0.2	127
201	1.7	0.5	52
257	1.6	0.6	106
119	1.5	0.3	126
208	1.5	0.4	52
95	1.4	0.8	159
256	1.3	0.4	137
126	1.2	1.0	73

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES FLATHEAD SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
186	1.2	0.4	160
75	1.1	0.4	118
99	1.1	0.3	159
204	1.0	0.3	52
188	1.0	0.3	87
82	1.0	0.2	126
92	0.9	0.5	98
230	0.8	0.2	159
94	0.8	0.3	68
252	0.8	0.5	155
74	0.7	0.6	100
129	0.6	0.7	96
107	0.6	0.1	74
212	0.6	0.1	150
202	0.6	0.3	52
134	0.6	0.5	87
206	0.6	0.5	52
91	0.5	0.6	93
113	0.5	0.3	155
160	0.5	0.5	155
253	0.5	0.9	126
200	0.5	0.2	52
217	0.4	0.1	123
100	0.4	0.7	208
106	0.4	0.1	74
191	0.4	0.1	150
207	0.4	0.4	52
258	0.4	0.7	71
203	0.4	0.3	52
165	0.3	0.2	77
244	0.3	0.1	125
150	0.3	0.3	96
229	0.3	0.2	161
139	0.3	0.5	95
108	0.3	0.2	150
154	0.2	0.5	149
73	0.2	0.4	77
77	0.2	0.4	108
167	0.2	0.2	142
222	0.1	0.1	142
238	0.1	0.1	115
232	0.1	0.1	163
240	0.1	0.1	205

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES DOVER SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
244	361.7	0.6	125
72	116.8	1.3	175
247	95.0	0.5	287
155	55.5	0.6	208
239	45.8	0.6	145
190	44.7	1.0	125
124	43.3	0.9	211
240	43.1	0.5	205
217	42.7	0.5	123
138	41.4	0.6	224
142	38.3	0.8	193
158	36.2	0.5	225
250	36.0	0.5	149
186	35.7	0.9	160
175	35.1	0.7	215
246	31.9	0.6	205
212	31.9	0.4	150
147	31.8	0.8	141
233	29.4	0.4	163
211	28.6	0.5	115
227	28.3	0.4	164
228	27.6	0.4	164
226	27.3	0.4	183
245	26.7	0.5	161
229	26.3	0.4	161
219	25.1	0.4	126
234	24.2	0.4	150
125	23.8	0.8	159
220	23.2	0.6	131
130	23.2	0.8	160
251	21.8	0.7	194
148	21.3	0.8	185
131	20.9	0.6	257
252	20.3	0.8	155
111	20.2	1.3	270
236	19.6	0.6	361
216	17.7	0.4	96
230	16.8	0.4	159
182	16.6	0.6	383
223	16.6	0.4	120
159	14.6	1.0	85
222	13.9	0.5	142
189	12.8	0.9	104
68	12.3	1.1	336
255	11.6	1.1	104
187	11.4	1.0	115
191	11.4	0.9	150
129	11.3	1.0	96

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES DOVER SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
66	10.6	1.2	223
149	10.5	0.9	114
154	10.4	0.6	149
218	10.3	0.4	126
213	10.2	0.6	89
164	10.0	0.6	114
257	9.6	0.6	106
89	9.5	1.1	288
180	9.3	0.7	148
181	9.2	0.9	195
253	8.6	1.0	126
241	8.0	0.5	301
160	7.9	0.6	155
166	7.9	0.5	205
167	7.8	0.5	142
210	7.6	0.5	364
127	7.3	0.8	202
238	6.9	0.5	115
197	6.8	1.4	82
225	6.6	0.5	134
224	6.5	0.5	126
134	6.5	0.8	87
221	6.4	0.6	139
176	6.2	0.6	294
231	6.2	0.4	165
98	6.1	1.3	281
232	5.4	0.5	163
137	5.2	0.8	145
209	5.1	0.5	277
141	5.0	0.9	136
126	4.3	1.1	73
88	3.7	1.1	377
256	3.6	0.5	137
87	3.6	1.1	191
168	3.1	0.8	93
70	3.1	1.0	217
171	3.0	1.0	73
161	2.8	0.9	102
136	2.8	0.7	98
139	2.4	0.7	95
108	2.3	0.6	150
235	2.3	0.5	202
90	2.1	1.4	254
100	1.8	1.5	208
145	1.7	1.1	72
135	1.6	1.5	98
248	1.6	0.7	69
143	1.6	1.1	149

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES DOVER SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
73	1.6	0.3	77
76	1.4	0.4	154
172	1.3	0.8	97
249	1.3	0.5	70
177	1.3	1.2	68
146	1.1	0.9	98
119	1.1	1.4	126
192	0.9	0.8	78
174	0.9	0.8	150
157	0.8	0.5	120
152	0.8	0.7	92
188	0.7	1.4	87
103	0.7	1.1	130
132	0.6	1.1	96
163	0.6	1.1	93
86	0.4	0.3	162
243	0.4	0.7	97
162	0.3	0.5	134
113	0.3	0.5	155
173	0.3	0.5	137



KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES REX SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
244	155.0	0.4	125
107	135.8	0.7	74
106	121.2	0.5	74
164	80.3	0.4	114
187	80.1	0.5	115
118	71.5	0.3	101
190	67.1	0.4	125
175	62.4	0.4	215
189	56.9	0.3	104
220	54.1	0.3	131
171	50.6	0.5	73
168	48.8	0.6	93
134	48.1	0.7	87
113	47.2	0.4	155
108	45.8	0.4	150
109	45.4	0.4	215
216	45.1	0.3	96
252	41.9	0.4	155
115	41.1	0.4	98
96	31.9	0.7	195
219	30.9	0.3	124
213	30.4	0.3	89
114	29.1	0.3	127
95	29.0	0.4	159
149	29.0	0.5	114
255	27.6	0.4	104
112	26.8	0.4	196
223	26.0	0.3	120
99	24.1	0.4	159
130	23.5	0.4	160
256	21.8	0.3	137
147	21.6	0.4	141
86	21.0	0.5	162
257	20.9	0.4	106
126	20.8	0.4	73
129	20.6	0.5	96
125	20.1	0.4	159
233	19.7	0.3	163
221	19.6	0.3	139
212	19.0	0.3	150
105	18.6	0.3	96
211	18.4	0.3	115
70	17.6	0.5	217
186	17.5	0.4	160
225	16.8	0.3	134
104	16.2	0.3	139
180	16.1	0.4	148
249	15.7	0.5	70

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES REX SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
230	15.3	0.4	159
250	15.3	0.3	149
167	15.0	0.3	142
116	14.9	0.5	67
72	14.9	0.6	175
217	14.6	0.3	123
224	13.9	0.3	126
245	13.8	0.3	161
234	13.1	0.3	150
138	13.0	0.4	224
103	12.8	0.3	130
191	12.6	0.4	150
251	12.1	0.4	194
93	11.5	0.4	131
232	11.4	0.3	163
227	11.2	0.3	164
131	11.2	0.4	257
92	11.1	0.5	98
66	10.8	0.6	223
119	10.8	0.4	126
139	10.3	0.5	95
226	10.3	0.3	183
152	9.8	0.6	92
153	9.7	0.6	97
229	9.6	0.3	161
239	9.4	0.4	145
231	9.3	0.3	165
176	8.9	0.4	294
100	8.8	0.4	208
160	8.7	0.4	155
253	8.3	0.4	126
148	8.2	0.4	185
183	7.9	0.5	81
228	7.7	0.3	164
85	7.7	0.6	134
75	7.5	0.6	118
170	7.3	0.7	77
158	7.2	0.3	225
179	7.2	0.4	149
218	7.1	0.3	126
142	7.1	0.4	193
64	7.1	0.7	139
141	6.5	0.4	136
82	6.5	0.4	126
178	6.2	0.4	89
240	6.0	0.4	205
166	5.9	0.3	205
159	5.7	0.5	85

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES REX SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
246	5.7	0.3	205
127	5.7	0.7	202
136	5.5	0.6	98
81	5.3	0.6	144
154	5.2	0.4	149
205	5.2	0.4	52
214	4.8	0.4	69
222	4.7	0.3	142
155	4.7	0.4	208
117	4.6	0.4	71
102	4.2	0.3	96
181	3.7	0.4	195
161	3.5	0.4	102
243	3.3	0.4	97
157	3.0	0.3	120
163	3.0	0.6	93
215	3.0	0.4	60
120	2.9	0.6	79
165	2.8	0.3	77
173	2.8	0.4	137
137	2.7	0.4	145
172	2.5	0.5	97
174	2.3	0.5	150
188	2.0	0.5	87
87	1.9	0.6	191
192	1.8	0.4	78
135	1.7	0.4	98
195	1.6	0.5	82
124	1.4	0.3	211
76	1.4	0.4	154
177	1.4	0.5	68
74	1.3	0.3	100
101	1.2	0.3	69
132	1.2	0.4	96
97	1.2	0.2	314
241	1.0	0.3	301
208	0.9	0.5	52
122	0.9	0.5	119
248	0.8	0.5	69
78	0.8	0.2	91
204	0.7	0.3	52
146	0.7	0.4	98
145	0.6	1.2	72
254	0.6	0.4	82
196	0.6	0.3	79
201	0.5	0.2	52
207	0.5	0.5	52
247	0.5	0.3	287

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES ROCK SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
94	75.3	0.8	68
117	64.3	0.7	71
116	60.4	0.7	67
215	58.1	0.4	60
83	49.0	0.4	71
73	33.5	0.4	77
78	28.7	0.4	91
206	26.4	0.4	52
92	25.4	0.7	98
115	18.2	0.7	98
249	18.1	0.5	70
74	17.1	0.4	100
79	16.0	0.4	106
91	12.6	0.6	93
208	12.4	0.4	52
82	12.0	0.7	126
84	11.3	0.8	68
201	11.2	0.4	52
204	10.9	0.4	52
203	9.8	0.4	52
145	9.5	0.6	72
207	9.5	0.4	52
205	9.1	0.4	52
102	7.8	0.7	96
101	6.5	0.8	69
200	5.9	0.3	52
202	5.5	0.3	52
95	5.1	0.6	159
128	4.1	0.9	69
237	3.8	0.4	65
121	3.2	1.1	55
120	2.9	0.9	79
171	2.7	0.5	73
75	2.6	0.4	118
77	2.5	0.4	108
159	1.9	0.5	85
243	1.6	0.5	97
93	1.3	0.6	131
187	0.9	0.5	115
258	0.8	0.8	71
216	0.8	0.4	96
178	0.8	0.7	89
177	0.6	0.4	68
118	0.6	0.5	101
192	0.6	0.2	78
194	0.5	0.2	79
103	0.4	0.7	130
254	0.3	0.6	82

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES ROCK SOLE

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
183	0.3	0.5	81
156	0.3	0.5	73
248	0.3	0.5	69
172	0.2	0.5	97
189	0.2	0.5	104
242	0.1	0.1	63

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SABLEFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
160	1418.9	2.8	155
118	866.1	1.7	101
250	746.6	3.0	149
253	711.1	2.7	126
162	594.1	2.7	134
249	499.3	2.1	70
217	463.8	2.4	123
226	425.5	2.6	183
246	425.3	3.6	205
252	416.7	2.8	155
239	392.9	2.5	145
245	374.3	3.2	161
236	372.9	3.4	361
155	368.0	2.9	208
191	308.3	3.0	150
173	301.2	2.6	137
175	293.7	3.3	215
218	292.6	2.4	126
231	289.2	2.4	165
234	288.8	2.5	150
256	285.5	2.6	137
240	278.8	3.9	205
174	276.6	2.9	150
161	269.6	1.8	102
66	246.4	1.6	223
166	232.2	3.0	205
247	225.9	3.2	287
141	221.0	2.5	136
232	215.0	2.4	163
235	211.3	4.4	202
228	206.0	2.5	164
172	181.2	2.3	97
212	179.7	2.7	150
142	172.6	3.3	193
157	172.0	3.6	120
148	153.3	3.5	185
179	153.2	2.5	149
251	145.2	3.8	194
176	142.2	2.5	294
227	141.1	2.1	164
159	139.5	2.3	85
167	137.9	2.9	142
72	137.5	2.4	175
188	137.2	1.7	87
109	132.2	1.9	215
209	114.2	3.5	277
238	104.6	2.3	115
241	96.1	2.6	301

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SABLEFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
138	96.1	2.7	224
186	92.6	3.0	160
229	91.2	2.4	161
181	84.2	3.3	195
230	84.1	2.1	159
213	82.3	1.6	89
89	81.1	2.3	288
70	79.0	1.8	217
158	77.5	3.3	225
147	77.0	3.3	141
88	75.3	2.5	377
131	70.7	3.3	257
127	63.7	3.2	202
139	61.1	1.8	95
233	59.3	2.2	163
189	59.2	3.1	104
182	58.7	2.7	383
65	57.8	2.0	234
220	57.3	2.1	131
190	56.7	3.3	125
69	55.5	2.8	405
152	51.3	1.8	92
178	46.4	1.5	89
221	46.3	1.8	139
244	45.7	3.1	125
143	43.0	4.1	149
98	42.6	2.7	281
222	41.0	2.1	142
154	38.8	3.0	149
111	38.3	2.6	270
96	37.3	1.6	195
108	33.8	1.0	150
224	32.8	2.3	126
255	30.6	2.0	104
99	29.8	1.7	159
100	29.7	1.6	208
219	29.2	1.9	126
124	28.7	2.6	211
210	28.0	3.4	364
113	24.9	1.8	155
103	24.9	1.6	130
68	23.7	2.5	336
163	22.9	2.1	93
243	22.6	1.7	97
119	22.3	1.6	126
225	22.1	1.7	134
129	21.9	1.6	96
130	20.3	2.9	160

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SABLEFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
105	17.0	1.2	96
223	15.7	1.9	120
211	15.0	1.3	115
185	14.8	2.3	103
216	14.7	1.8	96
104	13.3	1.9	139
187	13.2	3.3	115
95	13.0	1.6	159
180	10.8	2.8	148
86	9.9	1.6	162
81	9.8	1.6	144
87	9.4	2.1	191
112	9.0	2.2	196
114	8.9	1.3	127
153	7.1	1.4	97
137	6.3	3.0	145
194	6.0	1.4	79
199	5.8	1.7	80
122	5.3	2.1	119
149	4.7	2.5	114
102	4.7	1.4	96
254	4.3	1.6	82
90	4.3	1.6	82
257	3.7	2.5	254
165	3.2	1.4	106
165	3.1	1.2	77
195	3.0	1.4	82
64	2.8	2.5	139
125	2.7	2.3	159
140	2.7	1.5	71
71	2.6	3.4	132
197	2.3	1.8	82
146	2.1	1.7	98
196	2.0	1.8	79
164	1.9	3.4	114
93	1.7	1.2	131
82	1.6	1.1	126
171	1.5	1.2	73
134	1.5	1.2	87
85	1.4	2.3	134
77	1.4	1.2	108
135	1.3	1.2	98
106	1.2	2.1	74
136	0.9	1.7	98
97	0.9	1.2	314
150	0.9	1.6	96
101	0.8	1.4	69
74	0.5	0.9	100
107	0.5	0.9	74

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC COD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
207	2122.2	2.0	52
206	1969.7	1.3	52
208	1080.7	2.0	52
249	574.5	2.2	70
122	404.6	2.4	119
188	269.3	3.3	87
149	221.3	2.2	114
170	220.0	1.4	77
202	178.7	2.1	52
134	152.4	2.1	87
171	148.0	2.2	73
187	128.8	2.1	115
152	125.7	2.4	92
205	122.3	1.3	52
107	117.2	3.6	74
101	112.2	2.2	69
145	111.6	1.7	72
168	105.0	2.5	93
194	104.3	3.0	79
129	104.0	1.6	96
254	95.5	2.5	82
199	91.6	2.3	80
92	89.4	3.0	98
159	62.5	2.5	85
103	61.4	3.2	130
153	59.3	3.2	97
195	58.3	2.9	82
204	52.2	1.6	52
84	50.3	3.9	68
156	50.0	1.2	73
197	48.8	3.5	82
116	43.4	4.1	67
117	42.1	2.9	71
161	41.1	3.3	102
71	40.0	2.6	132
75	39.9	3.2	118
83	39.6	2.0	71
102	39.4	4.2	96
196	38.8	3.2	79
203	38.4	1.2	52
154	37.2	2.4	149
105	36.2	1.9	96
73	35.7	5.2	77
192	34.0	2.4	78
106	33.3	3.3	74
243	32.6	1.3	97
178	29.2	1.7	89
118	28.9	2.9	101

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC COD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
253	24.2	2.7	126
165	23.9	2.9	77
221	22.4	1.8	139
86	22.4	3.3	162
115	20.7	2.5	98
121	20.7	1.9	55
190	19.6	2.7	125
157	19.0	3.0	120
201	18.9	1.4	52
77	18.0	3.4	108
255	17.4	1.8	104
104	17.4	3.0	139
222	16.5	0.9	142
257	16.4	1.4	106
85	16.2	3.2	134
172	15.6	2.5	97
82	15.6	2.2	126
94	15.5	2.6	68
223	15.0	1.9	120
120	14.9	1.8	79
225	14.6	1.9	134
132	14.3	2.5	96
220	14.2	1.6	131
224	14.0	2.2	126
114	13.9	2.1	127
78	13.5	7.6	91
99	13.5	3.4	159
198	11.3	2.8	80
164	10.9	2.5	114
81	10.4	2.6	144
213	10.2	1.1	89
216	10.2	1.2	96
91	9.6	5.0	93
119	9.3	2.0	126
256	9.1	1.9	137
215	8.2	1.3	60
93	7.9	3.9	131
79	7.1	2.4	106
230	6.8	2.0	159
64	6.1	2.2	139
233	5.8	1.7	163
217	5.8	1.6	123
74	5.2	2.2	100
180	5.2	2.3	148
211	4.8	2.6	115
146	4.6	2.4	98
200	4.5	0.9	52
212	4.4	2.0	150

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC COD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
183	4.3	1.4	81
219	4.2	2.0	126
244	3.9	1.9	125
130	3.5	2.0	160
139	3.3	3.0	95
238	3.2	1.1	115
218	3.0	2.4	126
258	2.7	1.7	71
141	2.6	2.4	136
231	2.1	2.1	165
95	1.9	1.7	159
234	1.9	3.0	150
227	1.5	2.0	164
147	1.5	1.8	141
239	1.5	2.5	145
252	1.2	2.2	155
214	1.2	1.0	69
177	1.1	2.0	68
137	1.0	1.9	145
113	0.9	1.6	155
140	0.1	0.1	71

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES WALLEYE POLLOCK

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
197	594.4	1.3	82
239	471.5	1.0	145
196	350.0	1.0	79
199	342.6	0.7	80
238	331.8	0.9	115
213	320.6	1.1	89
230	289.5	1.0	159
198	281.2	0.7	80
94	279.4	1.0	68
194	259.7	1.6	79
83	252.4	0.9	71
78	197.7	0.9	91
216	189.3	1.0	96
219	176.5	0.8	126
192	168.8	1.0	78
217	164.6	1.0	123
195	147.9	1.2	82
73	144.3	1.0	77
225	134.6	1.0	134
222	118.6	0.8	142
223	118.5	1.0	120
193	118.2	0.5	82
224	112.6	1.0	126
221	105.0	0.9	139
244	100.1	0.8	125
107	94.4	1.0	74
211	93.1	1.2	115
168	79.5	1.1	93
188	75.9	1.3	87
105	71.6	0.4	96
157	66.8	0.7	120
189	65.1	1.1	104
220	58.2	0.8	131
256	55.3	1.4	137
233	54.4	0.7	163
250	52.3	0.8	149
229	49.0	1.0	161
218	46.2	0.5	126
91	45.2	1.1	93
167	39.8	1.1	142
101	36.7	0.2	69
163	35.2	0.1	93
187	33.6	1.0	115
232	31.1	0.9	163
106	29.7	1.0	74
92	28.9	1.0	98
79	24.9	0.9	106
164	22.8	1.0	114

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES WALLEYE POLLOCK

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
227	22.7	0.9	164
119	21.8	0.9	126
113	21.2	0.9	155
93	18.3	1.2	131
172	18.1	1.1	97
71	17.9	0.8	132
125	17.5	0.8	159
102	17.5	1.2	96
114	17.4	1.0	127
179	13.6	0.8	149
212	12.8	0.3	150
255	12.7	0.8	104
160	12.3	0.3	155
181	12.1	0.6	195
231	10.7	0.8	165
74	10.7	1.1	100
77	10.1	1.1	108
141	9.9	1.1	136
154	9.8	1.0	149
162	9.4	0.6	134
253	9.0	0.4	126
76	8.2	1.1	154
75	7.9	1.5	118
149	7.0	1.0	114
235	6.6	0.5	202
147	6.1	0.9	141
228	6.1	1.2	164
180	5.3	0.7	148
205	4.7	1.1	52
173	4.6	1.0	137
104	4.6	1.3	139
208	4.5	0.9	52
103	3.9	1.1	130
82	3.9	1.4	126
252	3.8	1.0	155
108	3.6	1.1	150
186	3.6	1.0	160
185	3.5	1.3	103
214	3.3	1.1	69
155	3.0	1.0	208
136	2.9	1.0	98
190	2.9	0.8	125
178	2.8	0.7	89
64	2.7	1.0	139
202	2.5	1.1	52
118	2.3	0.9	101
174	2.3	1.4	150
191	2.1	1.0	150

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES WALLEYE POLLOCK

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
207	2.0	0.7	52
182	1.6	0.9	383
65	1.5	0.7	234
84	1.5	0.2	68
226	1.4	1.0	183
143	1.4	0.9	149
245	1.3	0.6	161
68	1.3	0.6	336
204	1.1	1.1	52
161	1.0	0.2	102
115	1.0	0.6	98
159	1.0	0.1	85
67	0.9	0.7	361
86	0.9	1.4	162
81	0.7	1.1	144
177	0.7	0.7	68
96	0.7	1.1	195
138	0.6	0.9	224
70	0.5	0.9	217
142	0.5	0.9	193
87	0.5	0.9	191
144	0.5	0.9	70
145	0.5	0.9	72
158	0.4	0.7	225
88	0.4	0.7	377
184	0.4	0.7	109
90	0.3	0.7	254
165	0.3	0.5	77
254	0.3	0.2	82
117	0.3	0.5	71
130	0.3	0.5	160
257	0.2	0.4	106
243	0.1	0.1	97
120	0.1	0.1	79
122	0.1	0.1	119
128	0.1	0.0	69
152	0.1	0.1	92
242	0.1	0.1	63
153	0.0	0.1	97

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC OCEAN PERCH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
85	862.2	0.5	134
122	829.2	0.8	119
92	751.0	0.5	98
77	563.7	0.9	108
217	293.7	0.6	123
222	242.6	0.6	142
239	235.4	0.6	145
119	234.1	0.5	126
159	130.2	0.6	85
233	111.4	0.9	163
185	103.8	0.5	103
213	98.6	0.8	89
230	91.4	0.6	159
225	88.2	0.6	134
99	86.2	0.6	159
114	76.7	0.4	127
93	71.7	0.5	131
229	68.6	0.6	161
257	68.5	0.6	106
238	60.9	0.6	115
224	58.4	0.6	126
218	57.9	0.7	126
227	57.4	0.6	164
178	57.3	0.4	89
103	55.4	0.6	130
223	48.8	0.7	120
221	47.7	0.6	139
104	46.4	0.6	139
71	40.3	0.4	132
220	39.7	0.7	131
180	38.8	0.6	148
190	34.3	0.6	125
113	32.9	0.7	155
82	31.3	0.7	126
231	28.3	0.8	165
95	27.6	0.5	159
228	27.6	0.6	164
179	25.5	0.5	149
86	25.1	0.5	162
219	23.6	0.8	126
167	22.5	0.6	142
118	22.4	0.6	101
212	22.3	0.6	150
173	20.9	0.6	137
123	20.4	0.3	60
108	20.3	0.7	150
81	18.1	0.7	144
244	17.7	0.6	125

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC OCEAN PERCH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
162	16.2	0.6	134
64	15.2	0.6	139
154	14.0	0.6	149
258	13.7	0.6	71
226	12.8	0.7	183
256	12.8	0.7	137
160	11.1	0.7	155
253	10.2	0.7	126
96	10.2	0.5	195
109	9.8	1.0	215
234	9.6	0.7	150
189	7.7	0.6	104
232	7.5	0.6	163
105	7.5	0.7	96
75	6.5	0.5	118
240	6.1	0.7	205
100	6.1	0.9	208
115	6.0	0.7	98
157	5.8	0.7	120
245	5.5	0.7	161
254	5.3	0.6	82
252	4.9	0.5	155
186	4.6	0.7	160
87	4.4	0.7	191
181	3.7	0.7	195
65	3.5	0.4	234
135	3.4	0.4	98
184	3.1	0.6	109
137	2.9	0.5	145
250	2.9	0.8	149
155	2.8	0.7	208
125	2.7	0.6	159
211	2.6	0.7	115
128	2.5	0.2	69
174	2.5	0.6	150
191	2.3	0.6	150
147	2.3	0.5	141
187	2.2	1.1	115
249	1.8	0.3	70
141	1.7	0.7	136
120	1.7	0.3	79
72	1.4	0.4	175
204	1.3	0.1	52
163	1.3	0.6	93
214	1.3	1.1	69
201	1.2	0.1	52
203	1.2	0.4	52
79	1.2	0.5	106

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES PACIFIC OCEAN PERCH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
117	1.2	0.4	71
168	1.1	0.5	93
161	0.9	0.5	102
136	0.9	0.5	98
206	0.8	0.1	52
148	0.7	0.7	185
149	0.7	1.1	114
97	0.6	0.4	314
146	0.6	0.5	98
106	0.5	0.9	74
255	0.4	0.2	104
172	0.4	0.7	97
177	0.3	0.1	68
237	0.3	0.1	65
208	0.2	0.1	52
248	0.2	0.1	69
74	0.2	0.3	100
205	0.1	0.1	52
170	0.1	0.2	77
140	0.1	0.2	71
164	0.1	0.2	114
202	0.1	0.1	52
78	0.1	0.1	91
242	0.1	0.1	63
153	0.0	0.1	97

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SHORTSPINE THORNYHEAD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
125	264.2	0.6	159
247	97.3	0.4	287
189	87.3	0.3	104
181	82.9	0.4	195
158	77.1	0.6	225
190	75.4	0.3	125
240	70.1	0.3	205
142	68.9	0.4	193
147	67.0	0.6	141
220	63.5	0.3	131
81	62.9	0.5	144
175	59.9	0.4	215
130	57.5	0.3	160
180	57.2	0.3	148
212	55.8	0.3	150
119	53.8	0.4	126
231	53.2	0.3	165
112	52.9	0.3	196
230	51.6	0.3	159
148	48.4	0.5	185
109	48.0	0.4	215
111	45.0	0.3	270
113	42.3	0.4	155
155	42.2	0.4	208
86	41.7	0.4	162
246	41.2	0.3	205
104	40.1	0.4	139
229	39.8	0.3	161
221	39.6	0.3	139
70	38.8	0.5	217
245	37.7	0.2	161
227	37.7	0.3	164
108	35.1	0.3	150
179	34.7	0.5	149
99	33.2	0.4	159
88	31.5	0.5	377
228	31.4	0.3	164
138	30.6	0.4	224
233	29.8	0.3	163
72	29.7	0.3	175
234	29.6	0.3	150
251	29.6	0.4	194
218	27.8	0.3	126
96	27.8	0.2	195
66	27.6	0.4	223
68	25.9	0.7	336
222	25.9	0.3	142
137	24.7	0.5	145

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SHORTSPINE THORNYHEAD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
225	24.4	0.3	134
95	24.2	0.6	159
127	24.2	0.3	202
124	23.2	0.1	211
219	23.1	0.3	126
224	22.7	0.3	126
131	22.6	0.4	257
167	21.6	0.3	142
103	21.5	0.3	130
236	21.4	0.4	361
98	21.3	0.4	281
85	20.0	0.4	134
256	19.7	0.5	137
186	19.6	0.4	160
226	19.3	0.3	183
100	18.7	0.3	208
82	18.1	0.4	126
114	17.5	0.4	127
89	17.3	0.3	288
141	16.6	0.5	136
232	16.0	0.3	163
65	13.9	1.2	234
176	13.5	0.4	294
93	13.1	0.5	131
154	13.1	0.4	149
160	12.6	0.3	155
223	12.6	0.3	120
87	12.2	0.3	191
191	12.1	0.2	150
76	11.5	0.5	154
241	10.6	0.3	301
64	9.7	0.8	139
250	9.4	0.3	149
71	9.2	1.2	132
252	8.6	0.4	155
173	7.2	0.5	137
69	6.7	0.7	405
182	6.2	0.4	383
209	6.0	0.3	277
210	5.4	0.2	364
105	5.1	0.3	96
235	5.1	0.4	202
211	4.8	0.3	115
217	4.5	0.4	123
122	4.4	0.4	119
67	4.3	0.6	361
174	4.2	0.4	150
166	3.9	0.3	205

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES SHORTSPINE THORNYHEAD

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
162	2.8	0.4	134
90	2.5	0.3	254
143	2.2	0.4	149
257	2.2	0.5	106
97	1.5	0.2	314
149	1.1	0.3	114
102	1.1	0.4	96
77	1.0	0.3	108
128	0.5	0.5	69
161	0.3	0.6	102
144	0.3	0.5	70
84	0.1	0.1	68
73	0.1	0.1	77

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES NORTHERN ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
123	2421.2	0.6	60
177	971.9	0.4	68
121	95.6	0.6	55
206	81.6	0.5	52
178	81.2	0.6	89
77	42.2	0.5	108
168	40.3	0.7	93
249	27.8	0.8	70
189	21.3	0.5	104
159	14.3	0.8	85
117	13.3	0.8	71
201	13.1	0.5	52
82	12.8	0.5	126
128	12.8	0.8	69
165	11.2	0.6	77
118	10.4	0.6	101
208	7.6	0.5	52
220	7.1	0.6	131
204	6.8	0.4	52
163	6.4	0.7	93
179	5.8	0.6	149
85	5.7	0.5	134
166	5.6	0.6	205
120	3.6	0.9	79
244	3.6	0.6	125
217	3.2	0.5	123
224	3.1	0.5	126
187	3.0	0.5	115
103	2.9	0.5	130
81	2.8	0.5	144
222	2.7	0.6	142
219	2.4	0.5	126
202	2.2	0.5	52
221	2.1	0.5	139
257	1.5	0.5	106
92	1.4	0.6	98
93	1.4	0.5	131
102	1.3	0.6	96
171	1.2	0.7	73
119	1.2	0.5	126
256	1.1	0.4	137
223	1.1	0.5	120
248	1.1	0.5	69
104	1.0	0.5	139
205	1.0	0.3	52
230	0.9	0.5	159
146	0.9	0.7	98
164	0.8	0.7	114

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES NORTHERN ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
172	0.7	0.5	97
229	0.7	0.5	161
99	0.6	0.5	159
114	0.6	0.5	127
207	0.6	0.6	52
218	0.6	0.5	126
190	0.5	0.5	125
140	0.5	0.5	71
225	0.5	0.5	134
254	0.5	0.9	82
75	0.5	0.3	118
74	0.5	0.4	100
101	0.5	0.8	69
227	0.4	0.5	164
129	0.4	0.5	96
239	0.4	0.7	145
188	0.3	0.7	87
71	0.3	0.5	132
79	0.3	0.5	106
214	0.3	0.5	69
64	0.3	0.5	139
156	0.3	0.5	73
212	0.3	0.5	150
84	0.2	0.5	68
91	0.2	0.5	93
108	0.2	0.3	150



KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES ROUGHEYE ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
124	236.7	2.4	211
112	166.8	2.1	196
181	149.3	2.4	195
113	111.6	2.4	155
81	107.7	1.3	144
250	90.6	1.4	149
76	73.5	1.1	154
251	63.7	1.7	194
142	57.1	1.4	193
231	53.3	1.5	165
160	50.7	1.2	155
229	40.5	2.2	161
240	39.5	1.6	205
87	38.3	1.6	191
234	28.2	1.7	150
232	26.6	1.8	163
99	25.4	1.3	159
228	24.2	1.4	164
96	23.6	1.5	195
127	22.7	1.6	202
230	20.8	1.6	159
125	19.1	0.8	159
246	16.7	1.7	205
245	14.2	1.8	161
70	13.1	1.5	217
148	12.3	1.6	185
108	12.1	3.0	150
164	9.4	1.4	114
233	8.7	1.7	163
212	8.4	1.7	150
235	8.1	1.3	202
72	7.9	1.2	175
226	7.5	1.7	183
162	7.1	1.3	134
149	6.7	1.2	114
180	5.9	1.3	148
191	5.9	1.3	150
130	5.4	1.3	160
167	5.1	1.7	142
186	4.9	1.9	160
82	4.9	1.4	126
227	4.5	1.5	164
174	3.8	2.3	150
141	3.5	0.5	136
100	3.4	1.3	208
225	3.3	1.1	134
104	3.1	1.0	139
119	3.0	1.3	126

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES ROUGHEYE ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
218	2.9	1.2	126
147	2.8	0.5	141
86	2.8	0.9	162
122	2.6	0.6	119
182	2.6	1.5	383
97	2.4	1.0	314
71	2.1	0.5	132
194	2.0	0.9	79
154	1.9	1.3	149
137	1.8	0.4	145
155	1.4	1.4	208
138	1.4	1.0	224
165	1.1	0.9	77
95	1.1	0.4	159
66	0.9	1.6	223
175	0.9	0.9	215
239	0.9	1.5	145
64	0.8	1.4	139
143	0.7	1.4	149
166	0.7	1.0	205
256	0.5	0.8	137
85	0.3	0.5	134
146	0.3	0.5	98
158	0.3	0.2	225

KG PER NAUTICAL MILE FOR ALL  
BABAIEVSK SURVEY TOWS

SPECIES DUSKY ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
123	3847.4	1.4	60
159	1196.1	1.6	85
177	439.4	0.9	68
249	67.1	1.4	70
128	33.4	1.4	69
168	31.8	1.3	93
178	21.5	1.0	89
117	5.2	1.5	71
189	4.3	1.2	104
217	3.6	1.2	123
219	2.8	0.9	126
194	2.4	0.7	79
238	2.3	1.6	115
227	1.9	1.2	164
229	1.9	1.2	161
248	1.9	1.1	69
120	1.7	2.0	79
226	1.6	1.1	183
179	1.5	0.9	149
230	1.2	1.4	159
154	0.9	1.8	149
225	0.9	1.5	134
119	0.8	1.1	126
171	0.8	1.3	73
202	0.8	0.7	52
256	0.7	1.1	137
188	0.7	1.4	87
163	0.6	1.2	93
161	0.6	1.1	102

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES SHORTRAKER ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
181	188.0	4.4	195
240	184.5	4.0	205
251	172.9	4.3	194
87	142.9	2.0	191
235	123.9	4.1	202
252	67.0	3.5	155
191	53.7	3.9	150
246	50.5	3.7	205
81	45.7	4.0	144
142	42.3	2.9	193
72	39.2	1.7	175
76	34.7	2.4	154
234	32.1	4.0	150
227	31.9	2.6	164
148	30.5	2.5	185
231	30.5	3.0	165
250	28.0	5.3	149
245	26.1	3.6	161
228	24.8	3.0	164
155	17.6	2.0	208
182	13.2	5.7	383
175	13.2	2.3	215
247	12.5	3.7	287
138	11.9	5.5	224
233	11.8	3.5	163
124	10.8	2.9	211
82	10.5	4.9	126
112	9.8	2.8	196
176	8.5	4.8	294
180	8.5	7.6	148
226	8.4	2.9	183
232	7.8	4.3	163
70	7.6	1.3	217
166	7.6	2.8	205
127	7.3	2.8	202
187	7.3	3.6	115
71	7.2	2.3	132
109	7.1	10.0	215
108	7.0	6.1	150
113	6.8	3.9	155
229	6.7	4.4	161
212	6.1	5.5	150
160	5.3	4.8	155
158	5.2	1.8	225
97	3.8	2.5	314
99	2.9	2.2	159
111	2.9	2.6	270
149	2.6	4.1	114

KG PER NAUTICAL MILE FOR ALL  
BABAEVSK SURVEY TOWS

SPECIES SHORTRAKER ROCKFISH

HAUL	CATCH KG/1.0 NM	AV WGT (KG)	GEAR DEPTH (FM)
100	2.5	4.0	208
114	2.4	3.6	127
173	2.4	1.4	137
186	2.3	2.2	160
130	2.2	3.8	160
104	2.1	3.9	139
65	1.9	3.5	234
218	1.4	1.1	126
220	1.4	1.1	131
66	1.3	2.2	223
96	1.3	0.5	195
167	1.1	1.8	142
241	1.1	4.0	301
143	0.9	1.8	149
131	0.8	1.4	257



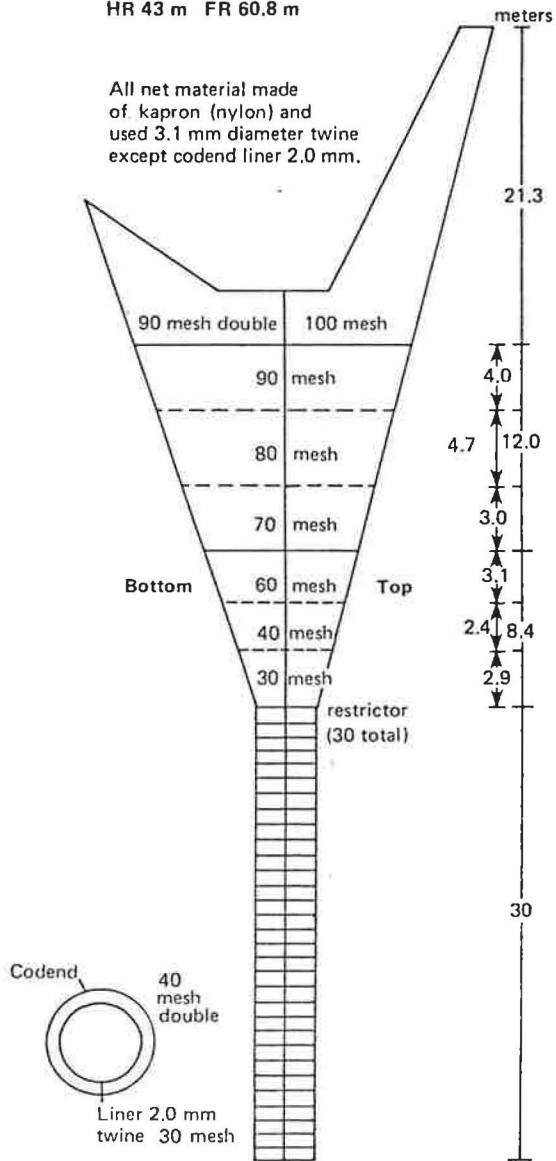


APPENDIX

Trawl specifications and diagrams

RACE Gear Code 794  
HR 43 m FR 60.8 m

All net material made of kapron (nylon) and used 3.1 mm diameter twine except codend liner 2.0 mm.



### SOVIET BOTTOM TRAWL WITH ROLLER GEAR

RACE Accessory Code 791

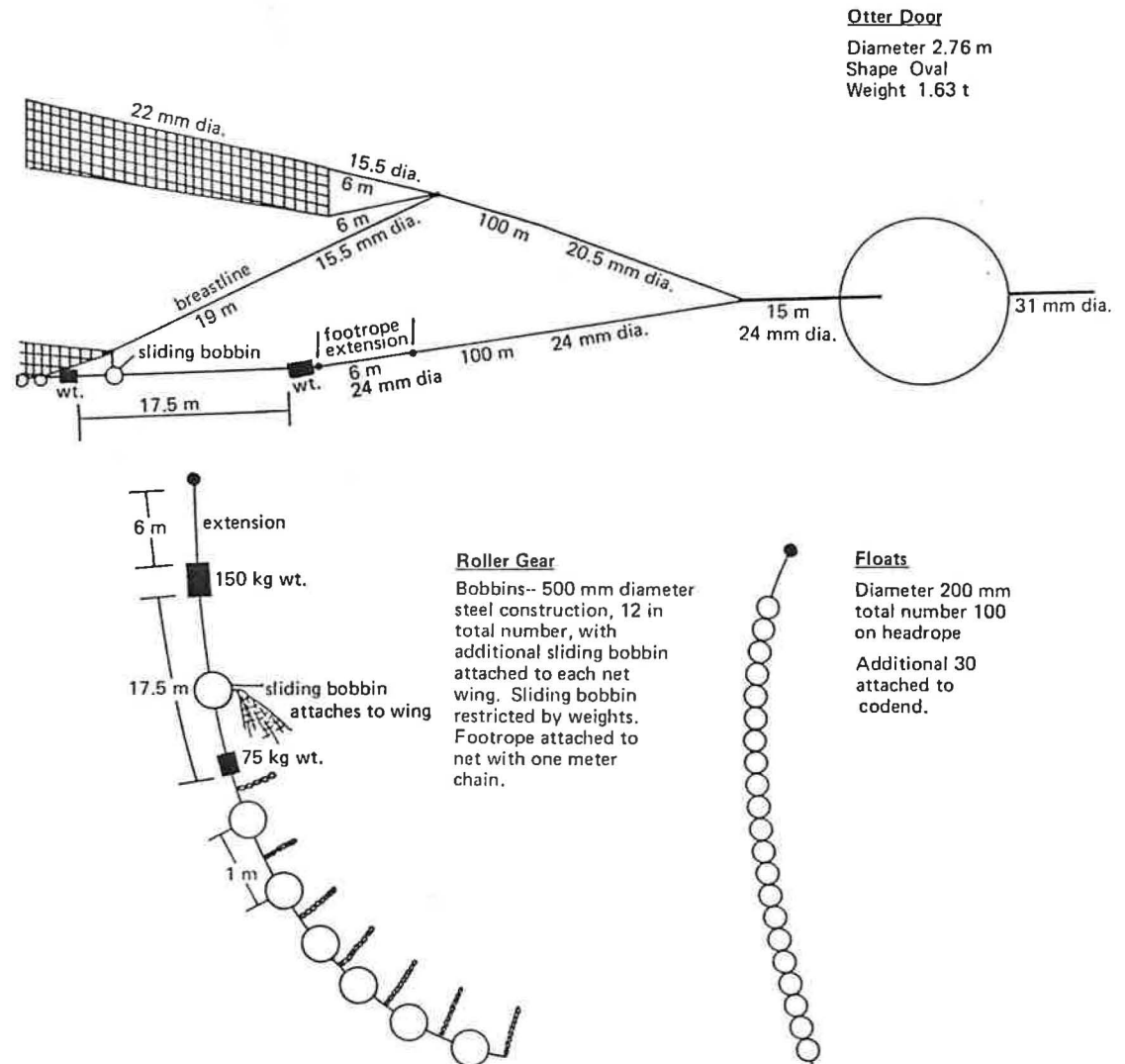


Figure A1.--Schematic diagram of the 43/61 bottom trawl, roller gear and accessory gear used by the Soviet research trawler Babaevsk during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.

RACE Gear Code 795  
 HR 50.8 m FR 67.8 m

SOVIET BOTTOM TRAWL WITH ROLLER GEAR

RACE Accessory Code 792

Otter Door

Diameter (dia.) 2.76 m  
 Shape Oval  
 Weight 1.63 t  
 Trawl cable  
 Diameter 31 mm

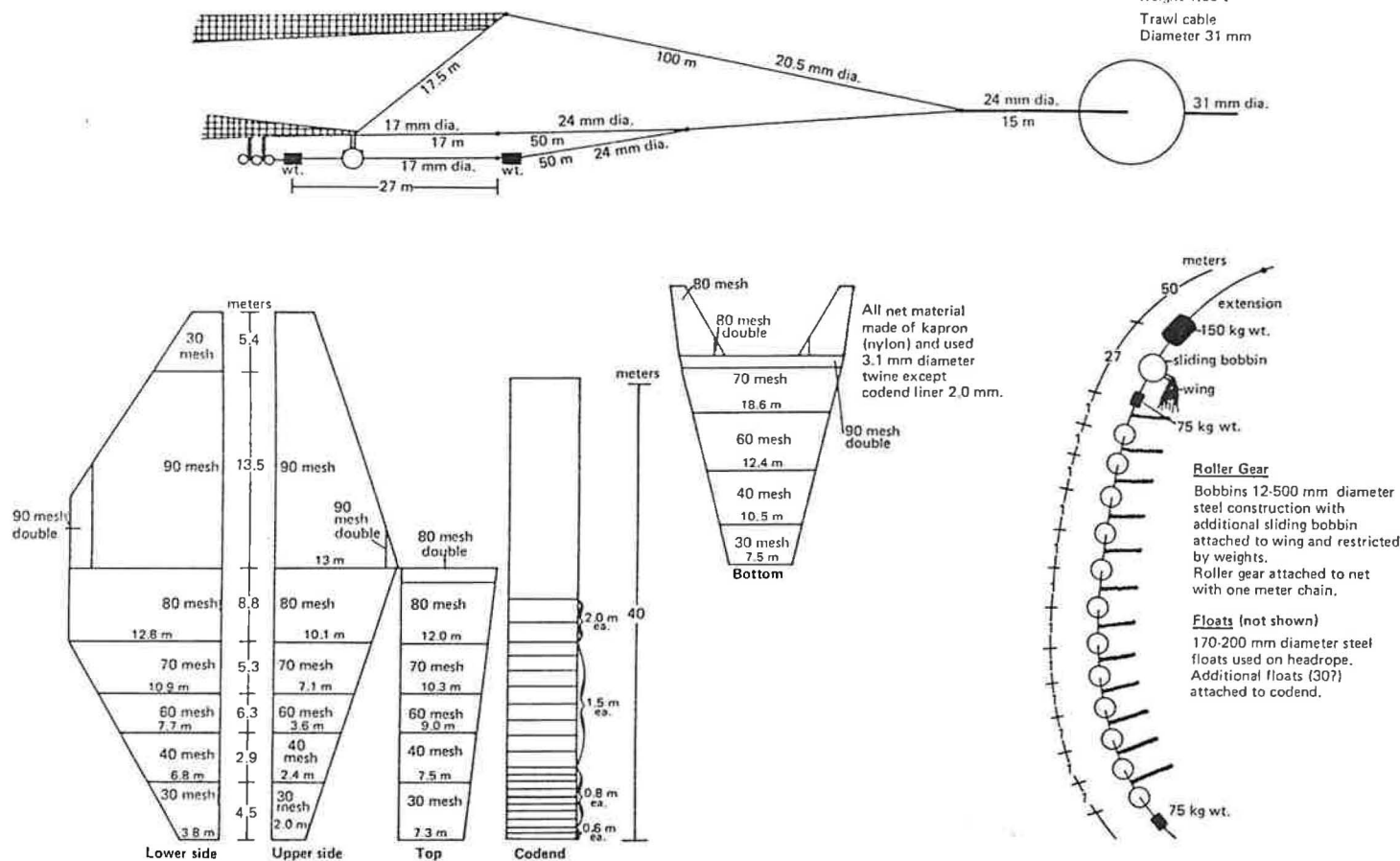


Figure A2.--Schematic diagram of the 51/68 bottom trawl, roller gear and accessory gear used by the Soviet research trawler Babaevsk during the 1987 U.S.-U.S.S.R. cooperative bottom trawl survey of the central and western Gulf of Alaska.



