NOAA Technical Memorandum NMFS-AFSC-339
doi:10.7289/V5/TM-AFSC-339

Results of the 2016 Eastern Bering Sea Upper Continental Slope Survey of Groundfish and Invertebrate Resources

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center

December 2016

NOAA Technical Memorandum NMFS

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This document should be cited as follows:

> Hoff, G. R. 2016. Results of the 2016 eastern Bering Sea upper continental slope survey of groundfish and invertebrate resources. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-339, 272 p.

Document available: http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-339.pdf

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December 2016

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ABSTRACT

The results of the 2016 Alaska Fisheries Science Center's (AFSC) bottom trawl survey of the groundfish and invertebrate resources of the eastern Bering Sea upper continental slope (EBSS) are presented. The 2016 EBSS survey is the sixth standardized biennial groundfish bottom trawl survey of this region. One-hundred eighty-nine successful survey bottom trawls were conducted between 200 and 1,200 m depth on the eastern Bering Sea slope. The survey area extended from Unalaska and Akutan Island in Alaska (54° N) to the U.S-Russian maritime boundary at 61° N. Sampling was stratified by six subareas running south to north and by five depth strata within each subarea. Stations were chosen randomly and target sampling density was proportional to the area in each stratum. Mean sampling density was approximately one tow per 173 km^2. This report provides estimates of biomass in metric tons (t), population number, and catch per unit effort (CPUE; no./ha and kg/ha) for all taxa identified on the survey. Size frequencies (42 species) and CPUE distribution plots (41 species) are presented for the most abundant species or species of commercial interest. The five fish species with the greatest estimated survey biomass were giant grenadier (*Albatrossia pectoralis*), Pacific ocean perch (*Sebastes alutus*), popeye grenadier (*Coryphaenoides cinereus*), walleye pollock (*Gadus chalcogramma*) and arrowtooth flounder (*Atheresthes stomias*).

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INTRODUCTION

The Alaska Fisheries Science Center's (AFSC) Resource Assessment and Conservation Engineering Division (RACE) conducted a bottom trawl survey from 31 May to 10 August 2016 to assess the groundfish and invertebrate resources on the eastern Bering Sea upper continental slope (EBSS). The survey area extended from Unalaska and Akutan Islands to the U.S.-Russian Maritime Boundary near the International Date Line (166° E to 180° W) at depths from 200 to 1,200 m.

The 2016 EBSS trawl survey is the sixth in this series of biennial groundfish surveys that incorporate the AFSC's latest sampling technologies and protocols for survey design, catch data gathering, species identification, and net mensuration monitoring. Eastern Bering Sea Slope surveys were conducted in 2002, 2004, 2008, 2010 and 2012 and the results are detailed in NOAA Technical Memoranda (Hoff and Britt 2003, 2005, 2009, 2011, Hoff 2013). The slope survey was not conducted in 2006 and 2014 due to budget limitations and contracting issues. Prior to the current standardized EBSS biennial surveys a pilot survey was conducted in 2000 which tested two versions of the Poly Nor'eastern bottom trawl gear (mud-sweep and rockhopper footropes). The pilot study showed that the Poly Nor'eastern net with mud sweep gear was more efficient and robust for sampling the EBSS survey area bottom than the rockhopper gear (Mark Wilkins, AFSC, retired pers. comm.).

Triennial EBSS bottom trawl surveys were conducted from 1979 to 1991, but were not standardized surveys and did not use consistent sampling gears, methodologies, and designs. The results from these surveys have been summarized in numerous data reports (Bakkala et al. 1985a, Bakkala et al. 1985b, Sample et al. 1985, Walters et al. 1988, Bakkala et al. 1992, Goddard and Zimmermann 1993). The surveys conducted from 1979 to 1991 are not directly comparable to the current AFSC EBSS survey time series.

This report summarizes the 2016 EBSS survey design, sampling gear, survey logistics, and personnel participating in this survey. Estimates of abundance, distribution, and size composition are presented for abundant and commercially important species. The purpose of this report is to provide information on the biological resources encountered to the scientific community, the fishing industry, and the general public. The results presented herein represent a comprehensive report prepared from the EBSS survey conducted in 2016. For additional information from this survey please contact the author (G.R. Hoff email: jerry.hoff@noaa.gov or B. Lauth email: bob.lauth@noaa.gov).

METHODS

Survey Area and Sampling Design

The EBSS survey area was divided into six geographic subareas (1-6) running south to north along the upper continental slope (Fig. 1) based on distinct bathymetric types and underwater features: broad low slope areas, canyon areas, and steep slope inter-canyon faces. Subareas 1 and 6 consist of broad low slope areas with wide bathymetric contours in the 200-600 m depth range and a gradual slope to 1,200 m. Subareas 2 and 4 consist of Pribilof and Zhemchug canyons, respectively, which are characterized by semi-enclosed basins with steep walls and narrow bathymetric contours below 600 m. Subareas 3 and 5 are steep slope inter-canyon "faces" with narrow bathymetric contours throughout most depths.

Geographic subareas were stratified by depth every 200 m from 200 to 1,200 m, resulting in five depth strata for each geographic subarea (200-400 m; 400-600 m; 600-800 m; 800-1,000 m; 1,000-1,200 m). The total area of each depth stratum (km^2) was calculated using known bathymetry contour lines (Table 1) and stratum area was used to determine sampling density. Two-hundred survey stations were selected using a stratified random sampling design from a

pool of over 400 successful stations completed between 2000 and 2012 as well as additional stations added randomly in most strata. Stratum sampling densities ranged from one haul per 110.55 km^2 to one haul per 285.07 km^2, with a mean sampling density of one haul per 172.88 km^2 (Table 1). Sampling densities varied due to difficulties in successfully completing all planned stations in some deep strata with large areas of untrawlable bottom. For the EBSS survey untrawlable bottom appeared to have high bottom relief of rock or other bottom materials resulting in damaged nets or poor bottom contact if tows were attempted.

Survey Itinerary and Personnel

The EBSS survey began on 31 May 2016 in Bering Canyon and concluded on 10 August 2016 in Pribilof Canyon. Mobilization and demobilization of the survey took place in Dutch Harbor, Alaska. Crew exchanges of scientific personnel were conducted in St. Paul Island, AK, and Dutch Harbor, AK. Research personnel for the survey consisted primarily of AFSC staff and graduate students (Table 2).

Vessel, Scientific Gear, and Procedures

The FV *Cape Flattery*, a 55-m trawler powered by twin engines with 1,250 continuous horsepower, was chartered for the survey. Electronic navigation and fishing equipment on the vessel included global positioning system (GPS) receivers, video position plotters, radar, single sideband and VHF transmitter-receivers, an EC-150 color video depth sounder, and auto-pilots. The vessel was operated by Captain Per Ostegard during the entire slope survey. A four-member crew aided in the operation of the vessel and in the use of the survey fishing gear.

The standard RACE Division fishing gear included trawls, bridles, and trawl doors. A Poly Nor'eastern high-opening bottom trawl equipped with mud-sweep roller gear was used to

sample all stations (Fig. 2). This sampling trawl had a 27.2 m headrope with twenty-one 30 cm floats and a 24.3 m long-link chain fishing line attached to a 24.9 m footrope. The body of the net was constructed of 127 mm stretched-mesh polyethylene netting, with 89 mm stretched-mesh polyethylene netting in the codend, and a 32 mm stretched-mesh nylon codend liner. The mud-sweep roller gear was constructed of 203 mm solid rubber disks strung over 16 mm high-tensile chain. The net was fished with 1.83 m × 2.75 m (6 ft × 9 ft; 1,000 kg) steel V-doors rigged with four-point bridles to enhance their stability at slow towing speeds and 55 m bridles between the doors and wingtips. This trawl is identical to the standard trawl used for the RACE Division's West Coast Upper Continental Slope survey (Lauth 2000). During fishing, the height and width of the trawl were measured using a Marport (Deep Sea Technologies, Inc) net measurement system. The GPS system recorded positional information that was used to estimate tow duration and distance fished. A tilt sensor (bottom contact sensor) attached to the footrope was used to estimate when the trawl footrope was in contact with the sea floor and the precise beginning and end of the tow. Depth and water temperature were continuously recorded using a Sea-Bird SBE-39 microbathythermograph (Sea-Bird Electronics Inc., Bellevue, WA). All net configuration measurements were recorded electronically as well as on paper. Appendices A (warp scope ratios), B (haul performance codes and descriptions), and C (haul log) provide details for the survey results and specifics for each haul. Table 3 lists the specific models, versions, serial numbers, and RACE numbers for most sampling tools used for this survey.

Each station was surveyed with an echosounder over a 1.5-2.0 nautical mile (nmi) horizontal distance. A site was considered trawlable when the depth changed less than 50 m over the 2-nmi transect and there were no detectable obstacles in the trawl path. Trawl operations followed those outlined in the NOAA survey protocols document (Stauffer 2004). The targets for standard tow speed and tow duration were 2.5 knots and 30 minutes at all depths. For each tow

the following data were recorded: date, time, latitude, longitude, gear depth, surface temperature, bottom temperature, water column temperature profile, net spread, net height, and bottom contact. At the end of each tow, haul data were plotted and examined for appropriate distance, bottom contact, and depth range. Performance for each tow was given a numerical code: successful tows received a positive code, whereas unsuccessful tows received a negative code. In general, zero or a positively coded tow was considered valid and used for survey abundance estimates, while a negatively coded tow was not used in the analysis.

Catch Processing and Collection of Biological Data

Catches were sorted, weighed, and enumerated for all species of fishes and invertebrates. The catch was processed in one of two ways: either by sorting the entire catch and weighing each species in aggregate or by weighing the net codend and discarding the predominant species (except for a weighed and sexed random length frequency sample) and the rest of the catch sorted and weighed by species. Random samples of species that were designated for biological data collection were set aside after weighing. Total weight and numbers for each species were recorded onto a paper on-deck catch form. In cases where individuals could not be reasonably enumerated (i.e., corals, sponges, bryozoans, ascidians), only total weight was recorded. For large numbers of an individual species in a single haul, the total number was extrapolated from subsample weight and count of 50-200 individuals. In most cases fish length frequency subsamples were used for extrapolation of the total haul count for individual species.

A random subsample of 100-150 fish, depending on the size range for the species, was selected for length frequency measurements. The sex of each individual was determined by internal examination of the gonads or by external characters (e.g., claspers for elasmobranchs), and specimens were sorted into baskets of males, females, or undetermined sex. Fork length (FL)

was measured for most fishes, except for elasmobranchs which were measured to total length (TL) and macrourids to preanal-fin length (PAFL). Fishes and cephalopods were measured to the nearest centimeter on an in-line bar-coded length board using a Nexus Android tablet with an in-house developed application, which uses a bar-code reader wand and species-specific numerical codes. Length data were downloaded into a database, examined for accuracy, and paper copies printed. All crab species were measured to the nearest 1.0 mm using vernier calipers and recorded to a Logic Instrument Android tablet and an in-house developed application program.

Otoliths (age structures) were collected from commercially and ecologically important fish species utilizing a stratified sampling regime based on geographic subarea and length. Otoliths of each species were collected from 1 to 3 specimens/cm/sex/subarea with the exception of rougheye rockfish (*S. aleutianus*) and blackspotted rockfish (*S. melanostictus*), for which there was an attempt to collect otoliths from all fish encountered. At the time of otolith collection, the sex, fork length (cm) or pre-anal fin length (PAFL), and weight (kg) of each specimen were recorded on paper forms.

Stomach samples were collected from selected fish species for the AFSC's Resource Ecology and Ecosystem Modeling Program. Many commercial and ecologically important species were targeted for stomach sampling, including walleye pollock (*Gadus chalcogramma*), sablefish (*Anoplopoma fimbria*), Kamchatka flounder (*Atheresthes evermanni*), arrowtooth flounder (*Atheresthes stomias*), Greenland turbot (*Reinhardtius hippoglossoides*), and Pacific cod (*Gadus macrocephalus*). Specimens were chosen at random and only intact stomachs (non-regurgitated) were chosen for collection or onboard scans. Stomachs were excised and preserved in 10% buffered formalin at sea for later examination or examined in the field with numbers and weights of prey items recorded and samples discarded. Species, haul number, fish length, weight, and sex were recorded on paper forms at the time of collection for all specimens.

Voucher specimens were collected from species that are rare, of taxonomic interest, or were unidentifiable at the time of encounter. Collections were labeled with a cruise number, vessel number, haul number, species, voucher number, preservative, and collector's name or initials. Voucher specimens were preserved in 10% buffered formalin (most fishes and non-calcareous invertebrates) or 95% ethanol (calcareous invertebrates). A few specimens were stored frozen and returned to Seattle, Washington. Additional biological samples were collected for study per investigators' requests. Table 4 details the investigators, samples collected, and study purposes.

Abundance Estimates

Catch per unit effort (CPUE) was calculated by dividing catch weight or number for each species by the estimated area swept of the trawl (distance fished x mean net spread). CPUE is expressed in kilograms per hectare (kg/ha) and number of individuals per hectare (no./ha). Population and biomass (metric tons) estimates were calculated using mean CPUE and extrapolated into the area for each stratum and subsequently summed for all strata. Fish length frequencies were used to estimate the proportion of fish at each length interval weighted by the CPUE (no./ha) and then expanded to the depth strata population. For details on these methods see Wakabayashi (et al. 1985) and Alverson and Pereyra (1969).

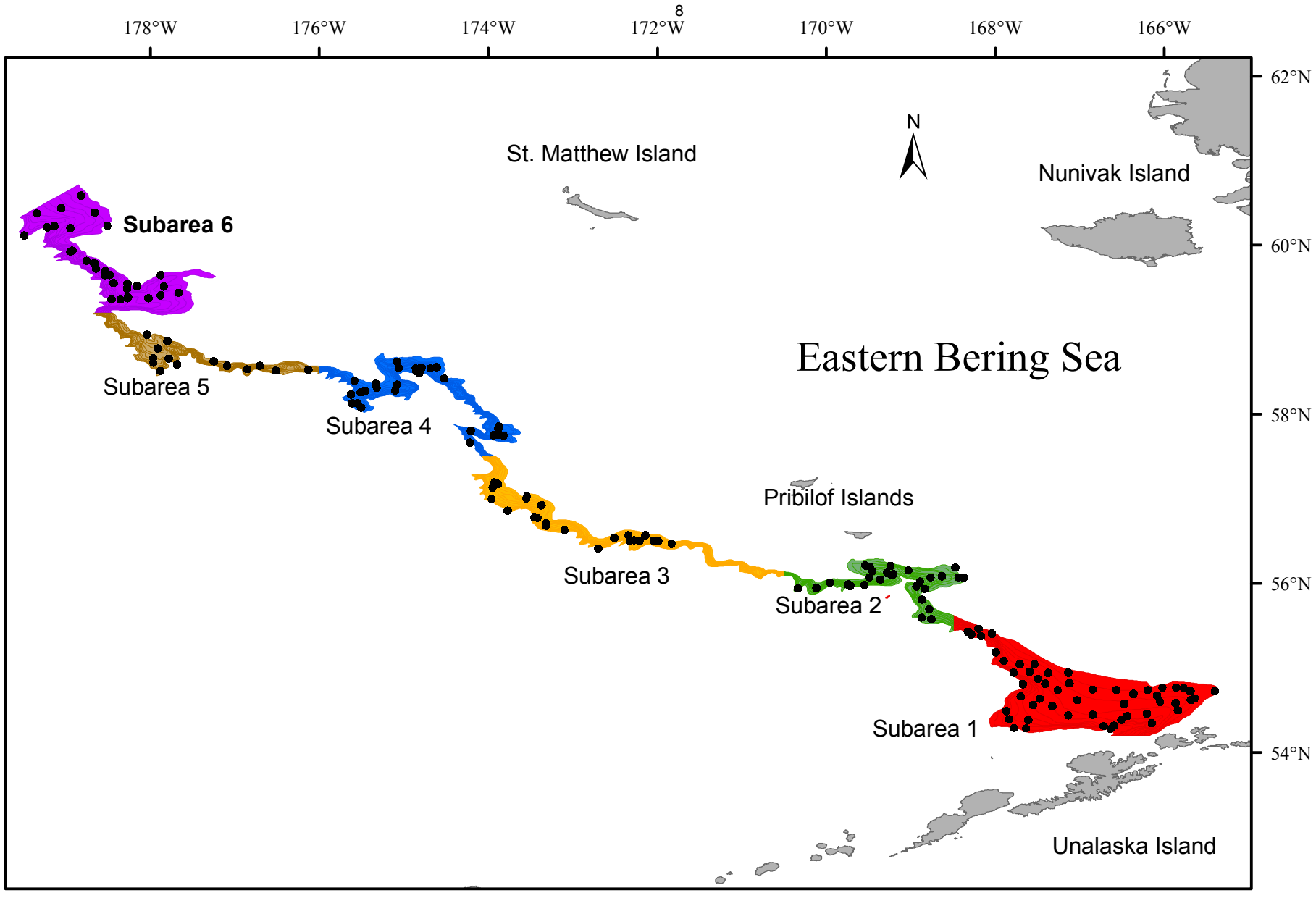

Figure 1. - - Map of standard survey area and the six subareas. Indicated are the 175 successful trawl stations (black dots) completed during the 2016 EBSS survey.

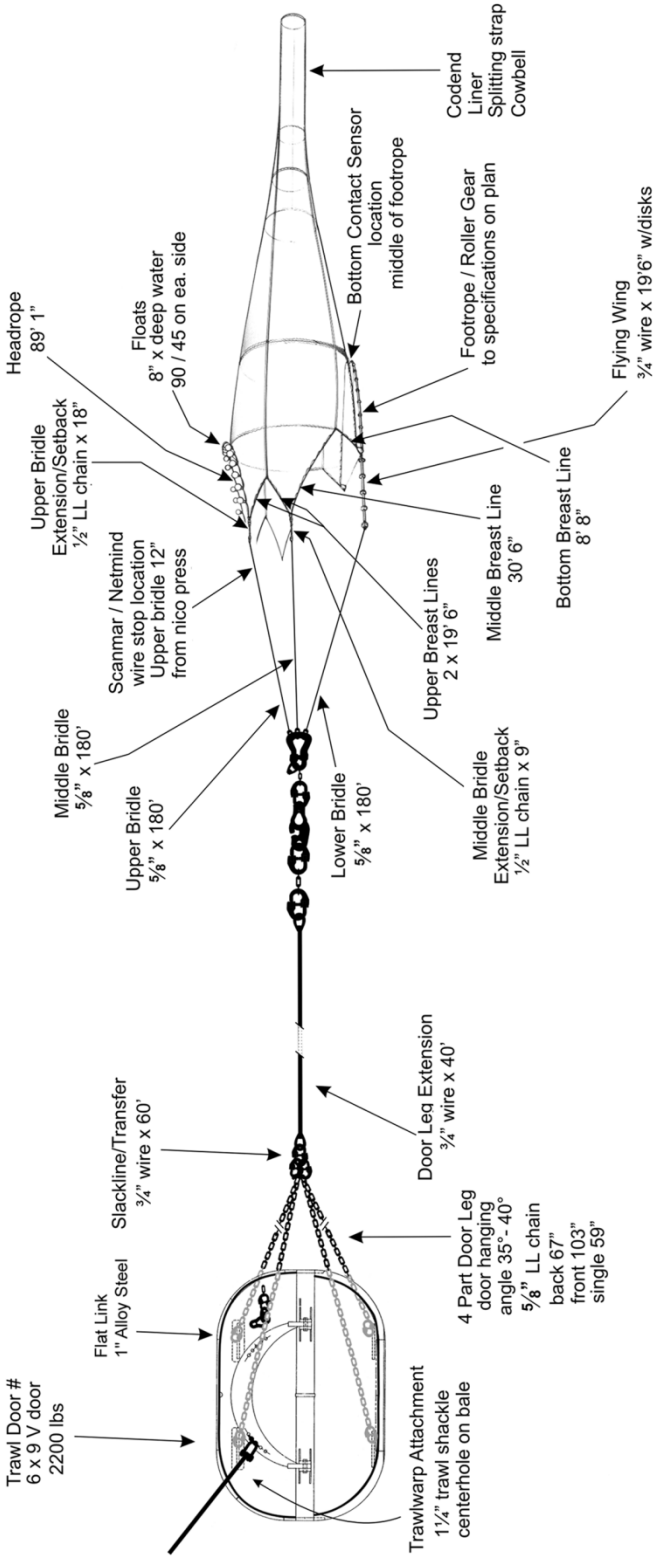

Figure 2a. - - Diagram of the Poly Nor'eastern high-rise opening bottom trawl net used during the 2016 EBSS survey. Diagram includes a general schematic of the trawl doors, rigging, and trawl configuration.

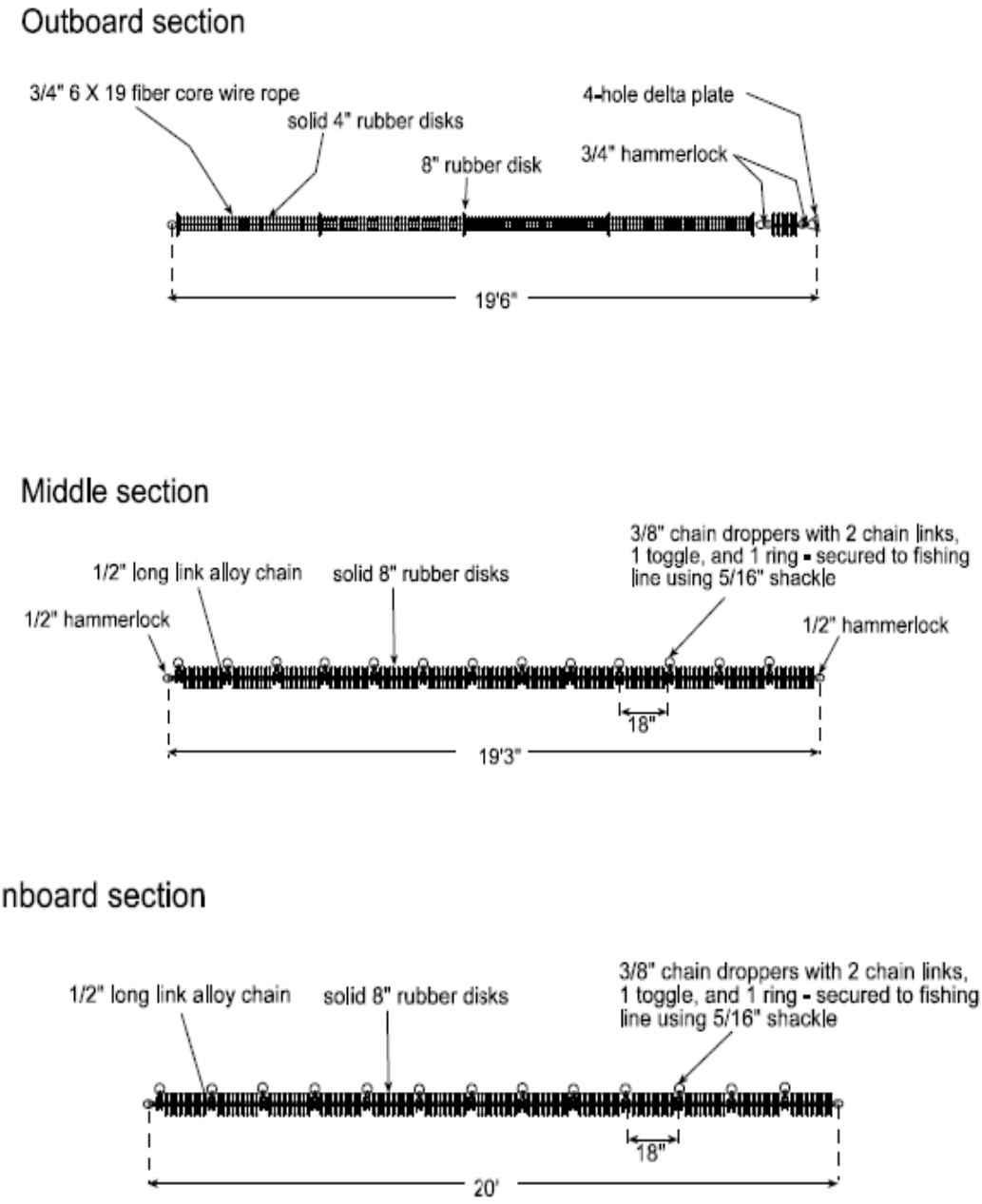

Figure 2b. - - Detailed diagram of the ground sections of the Poly Nor'eastern net used during the 2016 EBSS survey.

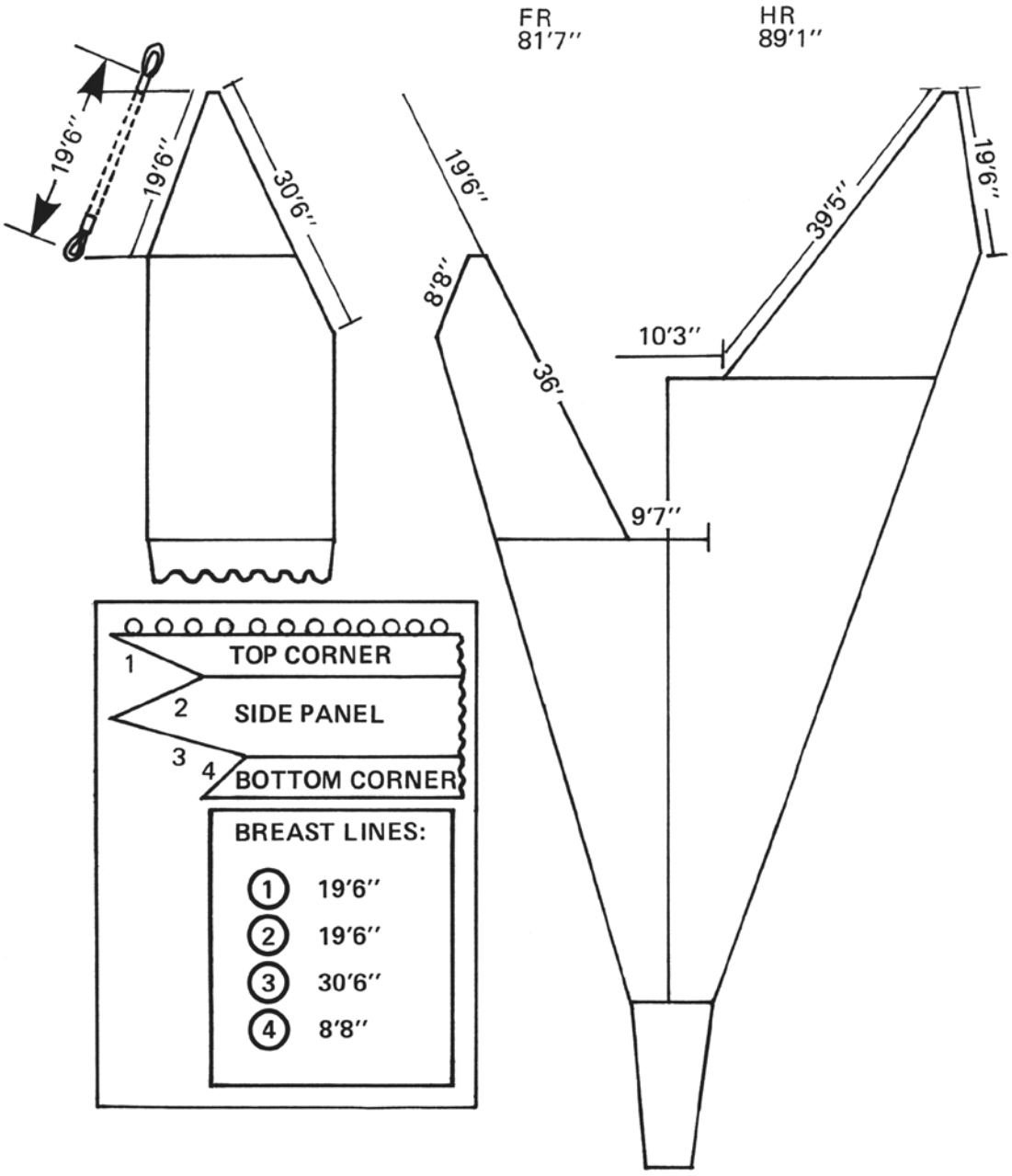

Figure 2c. - - Detailed diagram and dimensions of the Poly Nor'eastern net use during the 2016 EBSS survey.

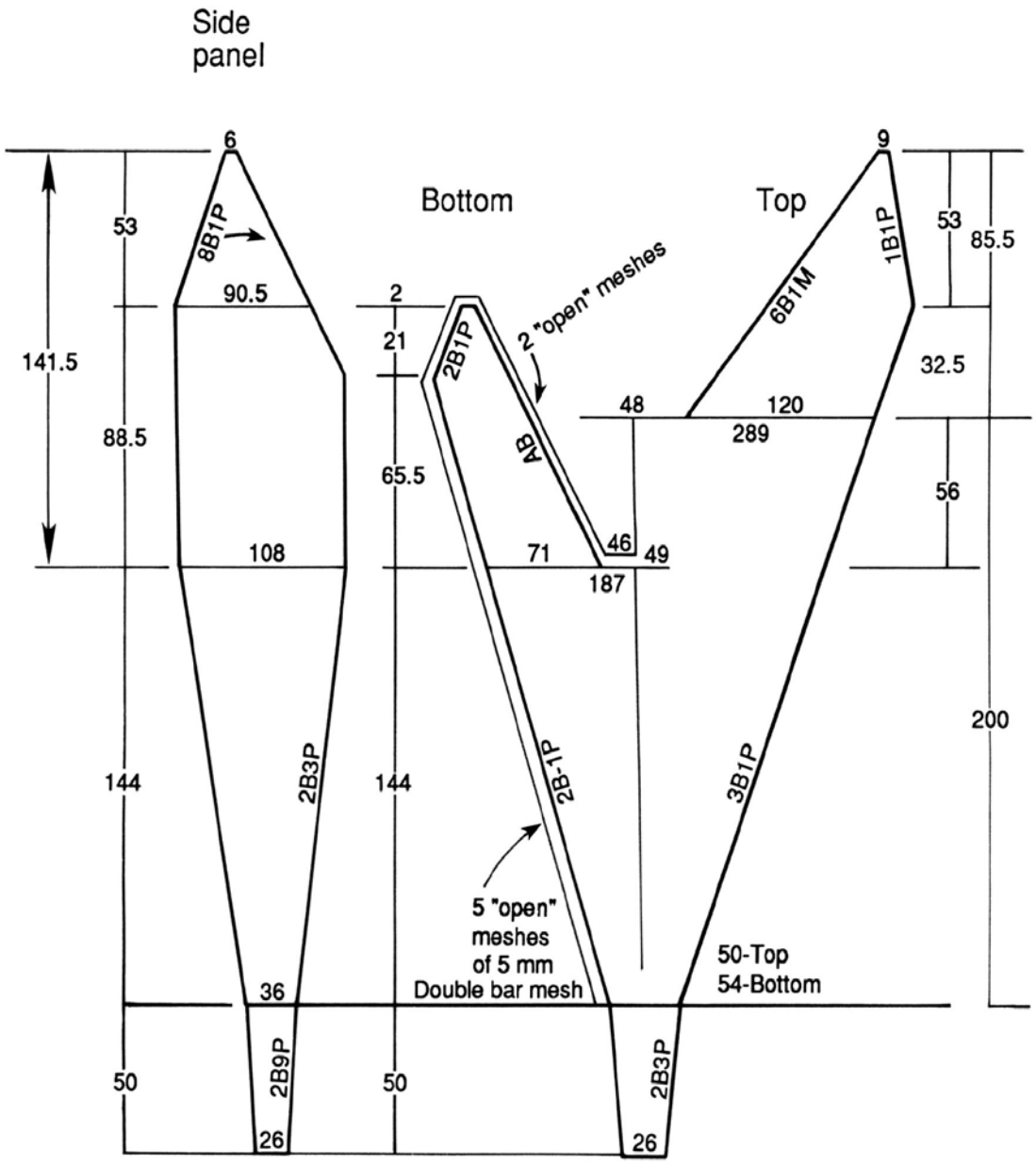

Figure 2d. - - Detailed diagram and dimensions of the Poly Nor'eastern net used during the 2016 EBSS survey.

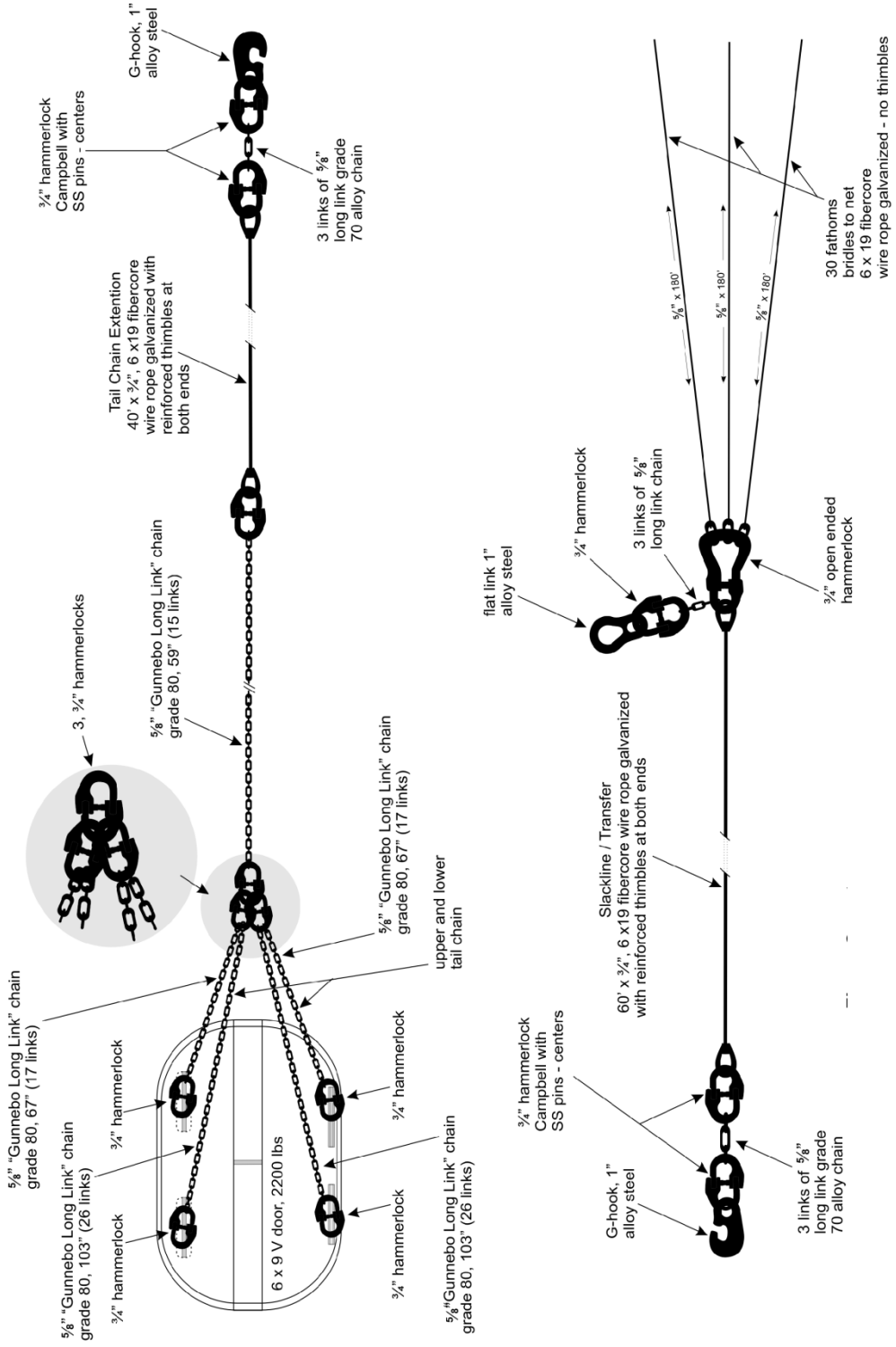

Figure 2e.- - Detailed diagram of the door rigging, tail chain slackline and bridle configuration of the Poly Nor'eastern net used during the 2016 EBSS survey.

Figure 2f. - - The bottom contact sensor and its footrope attachment configuration to the ground gear used during the 2016 EBSS survey.

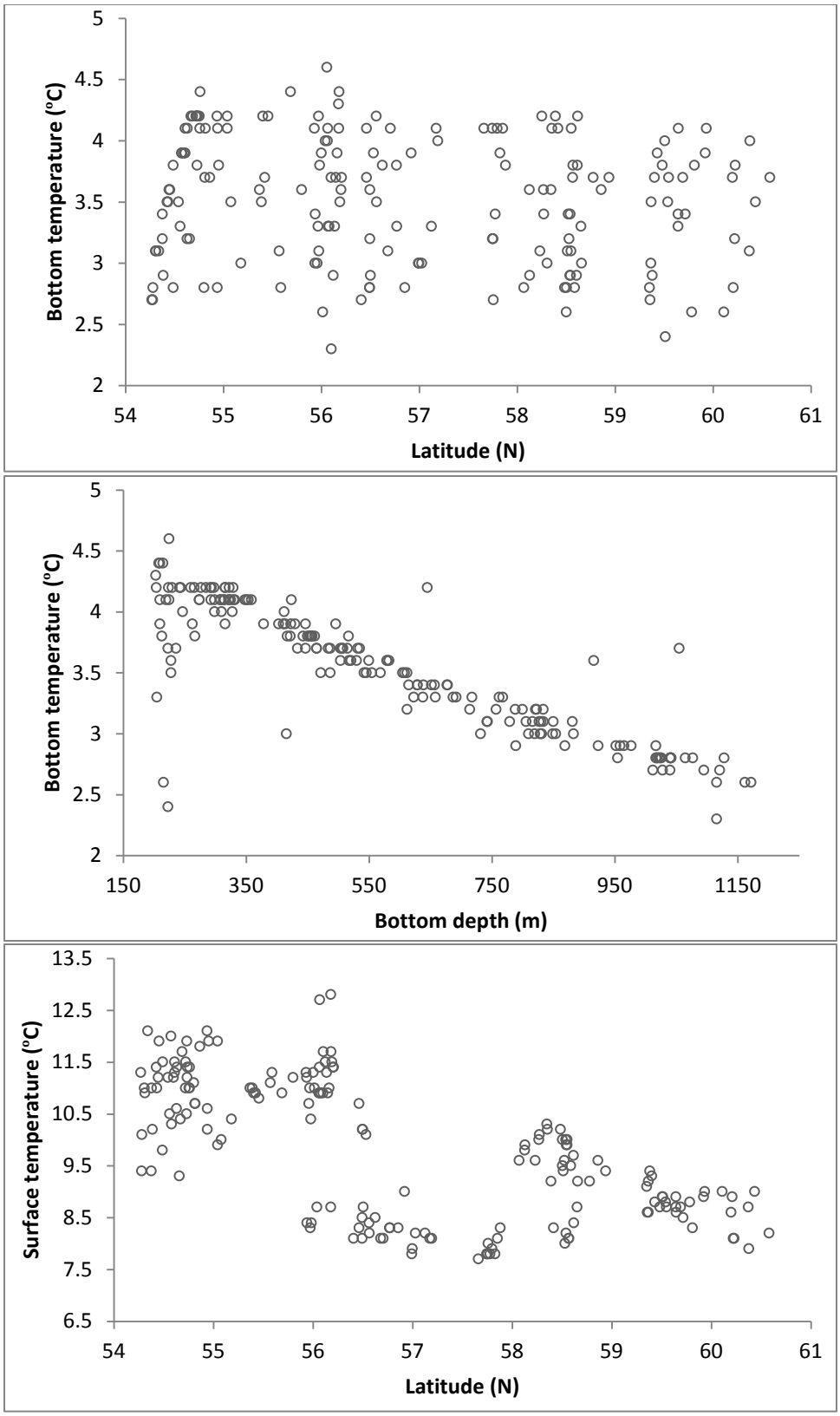

Figure 3. - - Relationship between temperature, latitude (°N), and bottom depth collected from trawl stations during the 2016 EBSS survey.

Table 1. - - Sampling effort and density for each subarea and depth stratum completed during the 2016 EBSS survey.

Subarea	Depth stratum (m)	Stratum area estimate (km^2)	Effort target (%)	Hauls completed (n)	Effort achieved (%)	Sampling density (km^2/haul)
1	200-400	4,012.41	12.26	18	9.52	222.91
	400-600	4,062.77	12.42	17	8.99	238.99
	600-800	1,741.66	5.32	7	3.70	248.81
	800-1,000	1,354.74	4.14	5	2.65	270.95
	1,000-1,200	1,106.89	3.38	6	3.17	184.48
2	200-400	1,157.64	3.54	8	4.23	144.70
	400-600	705.08	2.15	6	3.17	117.51
	600-800	591.27	1.81	5	2.65	118.25
	800-1,000	552.73	1.69	5	2.65	110.55
	1,000-1,200	535.67	1.64	4	2.12	133.92
3	200-400	903.78	2.76	5	2.65	180.76
	400-600	886.11	2.71	5	2.65	177.22
	600-800	910.26	2.78	5	2.65	182.05
	800-1,000	732.35	2.24	4	2.12	183.09
	1,000-1,200	675.52	2.06	4	2.12	168.88
4	200-400	1,236.27	3.78	8	4.23	154.53
	400-600	730.35	2.23	5	2.65	146.07
	600-800	693.95	2.12	5	2.65	138.79
	800-1,000	707.59	2.16	5	2.65	141.52
	1,000-1,200	662.42	2.02	4	2.12	165.60
5	200-400	423.71	1.29	3	1.59	141.24
	400-600	425.73	1.30	3	1.59	141.91
	600-800	431.83	1.32	3	1.59	143.94
	800-1,000	551.99	1.69	3	1.59	184.00
	1,000-1,200	570.14	1.74	2	1.06	285.07
6	200-400	2,595.79	7.93	12	6.35	216.32
	400-600	1,705.76	5.21	8	4.23	213.22
	600-800	917.49	2.80	4	2.12	229.37
	800-1,000	645.17	1.97	3	1.59	215.06
	1,000-1,200	496.42	1.52	3	1.59	165.47
Totals	**All subarea & depths**	**32,723.49**	**100**	**175**	**93**	**mean 172.88**

Table 2. - - Vessel itinerary and scientists participating in the 2016 AFSC EBSS survey of fish and invertebrate resources.

Name	Survey Position	Affiliation
Leg 1: 5/31 – 6/24		
Gerald Hoff	Chief Scientist	AFSC
Duane Stevenson	Deck Lead	AFSC
Gordon Alford	Fishery Biologist	AFSC
Elaina Jorgensen	Fishery Biologist	AFSC
Caroline Robinson	Fishery Biologist	AFSC
Ethan Beyer	Fishery Biologist	AIS
Leg 2: 6/25- 7/14		
Gerald Hoff	Chief Scientist	AFSC
Heather Kenney	Deck Lead	AFSC
Alison Vijgen	Fishery Biologist	AFSC
Claire Armistead	Fishery Biologist	AFSC
Kim Sawyer	Fishery Biologist	AFSC
Ethan Beyer	Fishery Biologist	AIS
Leg 3: 7/15- 8/1		
Gerald Hoff	Chief Scientist	AFSC
Nancy Roberson	Deck Lead	AFSC
Cynthia Yeung	Fishery Biologist	AFSC
Katie Shink	Fishery Biologist	UAF
Rick Hibpshman	Fishery Biologist	AFSC
Ethan Beyer	Fishery Biologist	AIS
Leg 4: 8/2- 8/10		
Elaina Jorgenson	Chief Scientist	AFSC
Duane Stevenson	Deck Lead	AFSC
Peter Munro	Fishery Biologist	AFSC
Dennis Benjamin	Fishery Biologist	AFSC
Bethany Riggle	Fishery Biologist	AIS
Ethan Beyer	Fishery Biologist	AIS

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*UAF-University of Alaska, Fairbanks AK.
*AIS-A.I.S. Inc-Observer Company

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RESULTS

Haul, Catch, and Biological Data

During the 2016 EBSS survey, 175 successful tows were completed and used for abundance estimates (Fig. 1). Seven tows were considered unsatisfactory in meeting survey standards and in most cases the location was resampled to obtain a successful tow at that station (see Appendix B).

The EBSS survey sampling was designed to distribute trawling effort in proportion to the total area (km^2) of each stratum. A comparison of the planned total effort distribution by stratum to that actually achieved is shown in Table 1. In general, sampling effort in the deepest strata (1,000-1,200 m) was under-represented due to the difficulty in finding trawlable grounds. Shallow strata more commonly received the approximate prescribed survey sampling density, where on average each tow represented 172.88 km^2 of area. The Haul Log (Appendix C) details date, exact location, depth of all hauls attempted, net parameters during the tow, environmental conditions, and catch weights for all hauls attempted.

Bottom temperatures recorded during the survey ranged from 2.3 ºC to 4.4 ºC and increased with depth from 200 m to 400 m depth, and decreased from 400 m to 1,200 m depth (Fig. 3). Surface temperatures ranged from 7.7 ºC to 12.8 ºC, and were negatively correlated with latitude, (Fig. 3). Bottom temperatures showed no relationship with latitude (Fig. 3).

Approximately 142 fish species and 240 invertebrate species were identified during the 2016 EBSS survey. The actual number of species encountered may be slightly higher or lower given inadequate field identification characteristics for some species. Tables 5a and 5b list all species of fishes and invertebrates encountered and identified on the 2016 EBSS survey alphabetized by common name and scientific name, respectively.

Giant grenadier (*Albatrossia pectoralis*) represented the largest estimated biomass on the 2016 EBSS survey followed by Pacific ocean perch (*Sebastes alutus*), and the popeye grenadier (*Coryphaenoides cinereus*). The most abundant fish species was the popeye grenadier (*C. cinereus*). An identified crinoid (Crinoidea) had the largest estimated biomass for invertebrates and was the most abundant. Table 6 lists all species encountered during the survey in descending order of total weight, with details on the depth distribution and the frequency of occurrence for each species. Tables 7 and 8 detail the biological data collected for selected species.

Population, biomass, and CPUE estimates and variance of the estimates were calculated for every species encountered on the 2016 EBSS survey and are presented in Table 9. The estimates are reported by: shallow strata (200-600 m), deep strata (600-1,200 m), and all strata combined.

Distributions, Size Compositions, and Abundance Estimates

Abundance estimates, population size estimates, CPUE distribution plots, and estimates of population length frequencies are presented in Tables 10-52 and Figures 4-89 for 43 of the most abundant and commercially important fish and invertebrate species. Abundance estimates were calculated for each subarea and each 200-m stratum within each subarea, and all subareas and strata combined. CPUE distribution plots represent the abundance of the species for each haul. Fishes and invertebrates are presented in phylogenetic order (Nelson 1994).

Table 3. - - Details of sampling and data recording gear used during the 2016 EBSS survey.

Net & mensuration gear	Data type/function	Model/version/serial #
Poly Nor'Eastern trawl	research sampling tool	net-15 hauls 1-2, 5-16, 20-49, 51-59, 62 net-19 hauls 122-125 net-25 hauls 63-92, 95-98, 101-121, 129 net-16 hauls 3-4, 17-19, 50, 60-61, 93-94, 99-100, 126-128, 130-183
Doors	spread the net	Doors # 885 Hauls 1-183
Vessel skipper and trawl master	conduct trawling operations	Per Ostegard Hauls 1-181, Lou Laferriere 182-183
Marport height sensor	measure net height	Serial #'s 1317020, 1323009
Marport slave spread sensor	measure net spread	Serial # 3266533-144, 3251852-150, 1137008-134
Marport master spread sensor	measure net spread	Serial # 1137009-121, 1327005-125, 1137009-120
Marport program	records data input from net mensuration gear	Marport Commander 3.51 (0.9.55.0) Marport Commandview (Commandview3 3.3.15.0)
Vessel depth sounder	record depth soundings	Simrad AS ES60 software 1.5.2.77 1998-2006
Globe	record track line, depth	3.7 #835-2010
Calypso (RACE)	process haul data	9.0.lfl, labview 2009
Wheelhouse (RACE)	process haul data	2015.1, labview
SeaBird SBE-39	depth (m) and water temperature	Software version & serial # 2.2-1396, 1.7a-859, 3.1b-996
Bottom contact sensor (HOBO Pendandt tilt sensor)	record footrope bottom contact	Serial # 10135192
Hoboware Software	process tilt sensor data	Hoboware V-3.7.8
Olympic wire counter	measure trawl cable	Olympic wire counter 750-N cable meter #516, 510
Wildlife Computer light meter	measurewater column light	Mk9 tags 1.03-1490360, 1.03-490939
Seaguard CTD	measure bottom depth, temperature, oxygen, pH, turbidity & conductivity	Model # 956, 955

Catch processing	Data type/function	Model/version/serial #
Marel basket scale	weigh baskets of catch	Model PL4022 A008062
Marel specimen scale	weigh individual specimens	Model 2000 Type M60, A005844; Model 1100 A08463
Measurement Systems International (MSI) load cell	weigh cod end with catch	Models 71077/63553
Catch data entry program	onboard catch database	Written in Access 2003 AFSC V-20160418
Nexus 7" tablets	length data-bar codes	Android 5.1.1 & 6.0.1 -RACE V-1.0
Galaxy S2 8" tablets	specimen data-voice	Android 5.1.1 RACE V-1.0
Nexus 7" tablets	specimen data-bar codes	Android 5.1.1 RACE-V 1.0
Bluetooth Headsets	length and specimen data recording	Kinivo-BTH240, Beyution-BT513, Blue Tiger Dual Elite 4.0
Dell computer	data recording	Dell windows 7
Laser printers	produce hard copy of data	HP P1-006
Digital camera	photograph specimens	Olympus-TOUGH JR8220393
Federal Scientific Research Permit	allows research sampling	SRP # 2016-3
State of Alaska Research Permit	allows research sampling	CF-16-010(1)

Species identification guides

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Orr, JW, MA Brown and D Baker 2000. *Guide to rockfishes (Scorpaenidae) of the genera Sebastes, Sebastolobus, and Adelosebastes of the Northeast Pacific Ocean,* 2nd Edition NOAA Tech. Memo. NMFS-AFSC-117, 47 p.

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Table 4. - - Projects and collections completed during the 2016 EBSS survey.

Project title	Project description	Investigator (affiliation)	Number of samples collected
Age structures for Critical Species	Collection of otoliths from selected fish species for stock assessment models	A. Hollowed (AFSC)	See Table 7 for details
New Sablefish Otolith Collection	Collection of otoliths from sablefish for future stock assessment models	D. Hanselman (AFSC)	See Table 7 for details
Size, Egg and Shell Condition Data of King and Tanner Crab Species Collected During the Bering Sea Slope Survey	Collection of carapace size, weight, and shell condition on selected crab species	R. Foy (AFSC-Kodiak)	See Table 7 for details
Bitter Crab Syndrome in the North Pacific	Collection of size, sex, shell condition, and blood sample on selected crab species	P. Jensen (AFSC)	Approximately 302 samples of crab blood were collected
Assessing the Effect of Light Intensity and Light Penetration on the Distribution and Behavior of Walleye Pollock in the Eastern Bering Sea	Collection of light profiles with light meter to study influence of light on pollock distribution	S. Kotwicki (AFSC)	Light, depth, temperature, conductivity profiles from 183 bottom trawls
Seaguard Environmental Data Logger	Oceanographic data from bottom trawl	G. Hoff (AFSC)	Salinity, pH, temperature, depth, turbidity, oxygen collected approximately 150 hauls
Mini Data Loggers	Mini loggers attached to the survey nets to test the accuracy of the the environmental measurements already taken at each survey haul site.	C. McGilliard (AFSC)	Salinity, temperature, depth, collected on all trawls (data logger lost at sea)
Sleeper shark tagging	Tag and release of sleeper shark for life history information, growth and movement	G. Hoff (AFSC)	Spaghetti tags and tissue samples (n=5)
Population Structure in *Aptocyclus ventricosus*	Collection of tissues and whole specimen for genetic comparisons	D. Stevenson (AFSC)	5 Tissue collected in 95% ETOH specimen in 10% formalin
Bering Sea Pribilof Islands Science Education	Collection of fish and invertebrates for school outreach	L. Divine (SPMS)	Assorted species were collected frozen
Live Skate Eggs	Collect live skate eggs for development study	G. Hoff (AFSC), J. Guthridge (ASLC)	Approximatley 30 live skate eggs transported to the Alaska Sealife Center
Skate Nursery Study	Collect eggs/embryos from each of 15 nursery sites for genetic analysis	G. Hoff (AFSC)	50-150 embryos were preserved in 95% ethanol from each of 5 skate nurseries for the Alaska skate
Measurement of Skate Juveniles	Measurement of juvenile skates and tail filaments for determination of hatching size	G. Hoff (AFSC)	Data collected on 48 juveniles of skate species
Dragonfishes and Mesopelagic	Collect mesopelagic fish that appear to posses red photophores	L.Britt (AFSC)	Approximately 6 specimens of midwater fishes were collected
DNA Barcodes to Identify Early Life History of Macrourids in the Eastern North Pacific	Collect adult specimens of six species of grenadiers	M. Paquin (AFSC)	*C. cinereus* (n=5), *Antimorra microlepis* (n=1), C. *longifilis* (n=5)

Table 4. - - continued.

Project title	Project description	Investigator (affiliation)	Number of samples collected
Small Octopus Collection	Collection of small octopus species	L. Conners (AFSC)	Approximately 27 octopus specimens were collected frozen
NWFSC Forensic Voucher Collection	Genetic samples of a variety of common slope fish species	L. Park (NWFSC)	A large assortment of requested fish were frozen
Outreach/Fishermans Festival	Collection of selected fish and invertebrate specimens used for public outreach and teaching and display at Fishermans Festival	J. Connor (AFSC)	Two specimens each of a variety of commercial and unusual fish and invertebrate species were frozen
Specimens for Observer Training	Collection of selected fish specimens to use for teaching and training Observers	D. Stevenson (AFSC)	*S. alascanus* (n=5) *S. macrochir* (n=2), *S.alutus* (n=2), *A.pectoralis* (n=2), *C. longifilis* (n=2), *C. acrolepis* (n=2), *C. cinereus* (n=2), *G. zachirus* (n=2), *E. bathybius* (n=2), *B. zestum* (n=2), *Lycodes* sp. (n=2), *H. elassodon* (n=2), *A. stomias* (n=2), *A. evermanni* (n=2)
Lamprey distribution and abundance in the North Pacific	Collection of lamprey (frozen) whenever encountered	K. Shink (UAF)	Approximately 65 *Lampetra tridentata* were collected frozen
Frozen Specimens for Arrowtooth and Kamchatka Flounder Genetic Reference	Frozen collection of arrowtooth and Kamchatka flounder used for genetic and taxonomic study	M. Paquin (AFSC)	Approximatley 18 arrowtooth and Kamchatka flounder were collected frozen
Sponge Collections	Collect sample of sponge and coral types from each tow for identification	G. Hoff (AFSC)	Approximately 100 sponges and corals were collected frozen
Trophic Interactions Feeding Ecology	Scans and collections of stomach contents of selected fish species and preserved at sea for later analysis	K. Aydin, T. Buckley (AFSC)	See Table 7 for details
Hydroacoustic data	Used to estimate biomass of pelagic fishes	P. Ressler, T. Honkalehto (AFSC)	ES60 Hydroacoustic data was collected during 183 hauls and transits
Snailfish Taxonomy and Systematics	Collect snailfish for taxonomic studies	J. Orr (AFSC)	Approximately 100 undientified snailfish were collectd in 10% formalin
Molecular Species Identification of Deepwater Corals	Frozen collection of coral specimens targeting	E. Bernston (NWFSC)	Aproximately 15 coral species collected in 95% ethanol
MML Food Habits Reference Collection	Collect and freeze *Gonatopsis borealis* and *Berryteuthis magister*	J. Thomason (AFSC)	*B. magister* n=20-30, *B. borealis* n=7

AFSC-Alaska Fisheries Science Center, Seattle W.A. / **UW**-University of Washington, Seattle / **NWFSC**-Northwest Fisheries Science Center, Seattle / **UAF**-University of Fairbanks, Fairbanks AK / **SPMS**-St. Paul Middle School.

Table 5a. - - Alphabetical list by common name of all fishes and invertebrates encountered on the 2016 EBSS survey.

Common name	Species/Taxon
Alaska eelpout	*Bothrocara pusillum*
Alaska skate	*Bathyraja parmifera*
Alaska skate egg case	*Bathyraja parmifera* egg case
Alaska snailfish	*Careproctus colletti*
Alaska volute	*Arctomelon stearnsii*
Alaska volute species	*Arctomelon* species
Alaskan pink shrimp	*Pandalus eous*
Aleutian hermit	*Pagurus aleuticus*
Aleutian skate	*Bathyraja aleutica*
Aleutian skate egg case	*Bathyraja aleutica* egg case
arrowtooth flounder	*Atheresthes stomias*
articulated bamboo coral	*Isidella* species
Atka mackerel	*Pleurogrammus monopterygius*
barnacle species	Thoracica
barracudina species	Paralepididae
barreleye	*Macropinna microstoma*
basketstar	*Gorgonocephalus eucnemis*
bat sea star species	*Ceramaster* species
Bering eelpout	*Lycodes beringi*
Bering skate	*Bathyraja interrupta*
Bering skate egg case	*Bathyraja interrupta* egg case
Berry armhook squid	*Gonatus berryi*
bigmouth sculpin	*Hemitripterus bolini*
bigmouth sculpin eggs	*Hemitripterus bolini* eggs
black coral	Antipatharia
blackfin poacher	*Bathyagonus nigripinnis*
blackfin snailfish	*Careproctus cypselurus*
blacklip snailfish	*Elassodiscus tremebundus*
blacknose sculpin	*Icelus canaliculatus*
blacksmelt species	*Bathylagus* species
blackspined sea star	*Lethasterias nanimensis*
blackspotted rockfish	*Sebastes melanostictus*
blacktail snailfish	*Careproctus melanurus*
blob sculpin	*Psychrolutes phrictus*
boreopacific armhook squid	*Gonatopsis borealis*
Bowers Bank snailfish	*Careproctus bowersianus*
brachiopod species	*Frieleia halli*
brisingid sea star	Brisingidae
bristlemouth species	*Cyclothone* species
brittle star species	*Ophiura* species
brittle star species	Ophiuridae
brittlestar species	*Astrochele* species
brittlestar species	Ophiuroidea
brittlestar species	*Stegophiura ponderosa*
broadfin snailfish	*Paraliparis ulochir*
broadfin thornyhead	*Sebastolobus macrochir*
brokenline lampfish	*Lampanyctus jordani*
bryozoan species	Bryozoa
California headlightfish	*Diaphus theta*
cannonball sun star	*Heterozonias alternatus*
Chrysaora jellyfish	*Chrysaora melanaster*
chum salmon	*Oncorhynchus keta*
clam species	*Acharax johnsoni*
clam species	*Chlamys* species
clam species	*Macoma* species
clam species	*Serripes* species
clawed armhook squid	*Gonatus onyx*
clay pipe sponge	*Aphrocallistes vastus*
comb jelly species	Ctenophora

Table 5a. - - continued.

Common name	Species/Taxon
Commander skate	*Bathyraja lindbergi*
Commander skate egg case	*Bathyraja lindbergi* egg case
common mud star	*Ctenodiscus crispatus*
coral bryozoan	*Celleporina ventricosa*
coral eelpout	*Puzanovia rubra*
coral species	*Anthomastus* species
coral species	Anthozoa
coral species	*Fanellia* species
coral species	*Plumarella* species
coral species	*Primnoa* species
costate whelk	*Buccinum costatum*
crab species	*Oregonia bifurca*
crangonid shrimp species	*Crangon* species
crested bigscale	*Poromitra curilensis*
crested sea star	*Lophaster furcilliger*
crimson pasiphaeid	*Pasiphaea tarda*
crinoid species	Crinoidea
cup coral	*Crispatotrochus foxi*
darkfin sculpin	*Malacocottus zonurus*
deep sea papillate cucumber	*Pannychia moseleyi*
deepsea eualid	*Eualus biunguis*
deepsea skate	*Bathyraja abyssicola*
deepsea skate egg case	*Bathyraja abyssicola* egg case
deepsea sole	*Embassichthys bathybius*
depressed scale worm	*Eunoe depressa*
divaricate nutclam	*Acila castrensis*
dominator snailfish	*Careproctus* species cf. *gilberti*
Dover sole	*Microstomus pacificus*
dreamer species	*Oneirodes* species
dreamer species	*Oneirodes thompsoni*
dreamer species	Oneirodidae
eastern Pacific bobtail	*Rossia pacifica*
ebony eelpout	*Lycodes concolor*
eelpout species	*Bothrocara* species
eelpout species	*Lycenchelys* species
eelpout species	*Lycodapus* species
eelpout species	*Lycodes* species
egg yolk jelly	*Phacellophora camtschatica*
emarginate snailfish	*Careproctus furcellus*
empty barnacle shells	Cirrepedia
empty bivalve shells	Bivalvia
empty gastropod shells	Gastropoda
eualid shrimp species	*Eualus* species
eulachon	*Thaleichthys pacificus*
Evermann's seastar	*Zoroaster evermanni*
featherstar crinoid	*Florometra serratissima*
fiery armhook squid	*Gonatus pyros*
flabby sculpin	*Zesticelus profundorum*
flapjack devilfish	*Opisthoteuthis californiana*
flathead sole	*Hippoglossoides elassodon*
fragile moonsnail	*Bulbus fragilis*
fuzzy hermit crab	*Pagurus trigonocheirus*
gammarid amphipod species	Gammaridae
garnet lampfish	*Stenobrachius nannochir*
giant barnacle	*Balanus evermanni*
giant grenadier	*Albatrossia pectoralis*
giant octopus	*Enteroctopus dofleini*
giant scale worm	*Eunoe nodosa*
gigantic anemone	*Metridium farcimen*
glass shrimp species	*Parapasiphaea sulcatifrons*
golden king crab	*Lithodes aequispinus*
gorgonian coral species	Gorgonacea
grand snailfish	*Paraliparis grandis*
green sea urchin	*Strongylocentrotus droebachiensis*
Greenland turbot	*Reinhardtius hippoglossoides*

Table 5a. - - continued.

Common name	Species/Taxon
grooved sea star	*Crossaster borealis*
grooved Tanner crab	*Chionoecetes tanneri*
hairy-lure dreamer	*Oneirodes bulbosus*
harlequin rockfish	*Sebastes variegatus*
heart urchin	*Brisaster latifrons*
heart urchin species	*Brisaster* species
helmet jelly	*Periphylla periphylla*
hermit species	*Pagurus* species
highfin dragonfish	*Bathophilus flemingi*
highsnout bigscale	*Melamphaes lugubris*
hornyhand hermit	*Pagurus cornutus*
horsehair crab	*Erimacrus isenbeckii*
horsehair crab species	*Erimacrus* species
hot dog zoanthid	Zoanthidae species A
humpback snailfish	*Elassodiscus caudatus*
hybrid Tanner crab	*Chionoecetes* hybrid
hydrocoral species	Stylasterina
hydroid species	*Hydroidolina*
isopod species	*Anuropus bathypelagica*
isopod species	Isopoda
jellyfish species	*Atolla* species
jellyfish species	*Aurelia labiata*
jellyfish species	*Aurelia* species
jellyfish species	Scyphozoa
Kamchatka coral	*Paragorgia arborea*
Kamchatka eelpout	*Lycenchelys camchatica*
Kamchatka flounder	*Atheresthes evermanni*
king crab species	*Paralomis multispina*
king crab species	*Paralomis* species
king crab species	*Paralomis* species A
knobbyhand hermit	*Pagurus confragosus*
ladder whelk	*Buccinum scalariforme*
lampfish species	*Stenobrachius* species
lampshell species	Brachiopoda
lanternfish species	Myctophidae
lebbeid shrimp species	*Lebbeus* species
lion's mane	*Cyanea capillata*
longfin dragonfish	*Tactostoma macropus*
longfin grenadier	*Coryphaenoides longifilis*
longfinger hermit	*Pagurus rathbuni*
longhand hermit	*Pagurus tanneri*
longhorned decorator crab	*Chorilia longipes*
longnose lancetfish	*Alepisaurus ferox*
longsnout prickleback	*Lumpenella longirostris*
longspine thornyhead	*Sebastolobus altivelis*
lyre whelk	*Neptunea lyrata*
magistrate armhook squid	*Berryteuthis magister*
majestic sea star	*Pedicellaster magister*
mollusk species	*Neomenia* species
moonsnails	Naticidae
mud skate	*Bathyraja taranetzi*
mud skate egg case	*Bathyraja taranetzi* egg case
Murray sea pen	*Anthoptilum murrayi*
mussel species	Mytilidae
mysid species	Mysidae
mysid species	*Neognathophausia* species
northern horsemussel	*Modiolus modiolus*
northern lampfish	*Stenobrachius leucopsarus*
northern pearleye	*Benthalbella dentata*
northern rock sole	*Lepidopsetta polyxystra*
northern rockfish	*Sebastes polyspinis*
northern sea star	*Dipsacaster borealis*
northern smoothtongue	*Leuroglossus schmidti*
notched brittlestar	*Ophiura sarsi*
nudibranch species	Nudibranchia

Table 5a. - - continued.

Common name	Species/Taxon
octopus species	*Benthoctopus oregonensis*
octopus species	*Graneledone boreopacifica*
octopus species	*Japetella diaphana*
octopus species	Octopodidae
onchidoridid nudibranchs	Onchidorididae
oplophorid shrimps	Oplophoridae
orange-pink sea urchin	*Allocentrotus fragilis*
Oregon triton	*Fusitriton oregonensis*
Pacific ambereye	*Hymenodora frontalis*
Pacific blacksmelt	*Bathylagus pacificus*
Pacific cod	*Gadus macrocephalus*
Pacific flatnose	*Antimora microlepis*
Pacific glass shrimp	*Pasiphaea pacifica*
Pacific grenadier	*Coryphaenoides acrolepis*
Pacific halibut	*Hippoglossus stenolepis*
Pacific herring	*Clupea pallasi*
Pacific lamprey	*Lampetra tridentata*
Pacific lyre crab	*Hyas lyratus*
Pacific ocean perch	*Sebastes alutus*
Pacific red hermit	*Elassochirus gilli*
Pacific sleeper shark	*Somniosus pacificus*
Pacific viperfish	*Chauliodus macouni*
pale moonsnail	*Euspira pallida*
pandalid shrimp species	Pandalidae
pasiphaeid shrimp species	Pasiphaeidae
peachskin snailfish	*Careproctus scottae*
peanut worm species	Sipuncula
pincushion sea star	*Diplopteraster multipes*
pink salmon	*Oncorhynchus gorbuscha*
pinpoint lampfish	*Nannobrachium regale*
polychaete worm species	Polychaeta
polychaete worm tube	Polychaete tubes
popeye blacksmelt	*Bathylagus ochotensis*
popeye grenadier	*Coryphaenoides cinereus*
Pribilof whelk	*Neptunea pribiloffensis*
proboscis snailfish	*Careproctus simus*
prowfish	*Zaprora silenus*
purple hermit	*Elassochirus cavimanus*
pygmy benthoctopus	*Sasakiopus salebrosus*
Quayle's spinytail	*Systellaspis braueri*
ragfish	*Icosteus aenigmaticus*
red mysid	*Neognathophausia ingens*
reticulate anemone	*Actinauge verrilli*
rex sole	*Glyptocephalus zachirus*
robust blacksmelt	*Bathylagus milleri*
rockfish species	Sebastes species
rose sea star	*Crossaster papposus*
rough purple sea anemone	*Actinostola faeculenta*
rougheye rockfish	*Sebastes aleutianus*
roughskin sculpin	*Rastrinus scutiger*
roughtail skate	*Bathyraja trachura*
roughtail skate egg case	*Bathyraja trachura* egg case
sablefish	*Anoplopoma fimbria*
salmon snailfish	*Careproctus rastrinus*
salp species	Thaliacea
sawback poacher	*Leptagonus frenatus*
scaly paperbone	*Scopelosaurus harryi*
scarlet king crab	*Lithodes couesi*
scarlet sea star	*Pseudarchaster parelii*
sea anemone species	Actiniaria
sea anemone species	*Actinoscyphia* species
sea anemone species	*Actinostola* species
sea anemone species	Actinostolidae
sea anemone species	*Stomphia* species
sea cucumber species	*Bathyplotes* species

Table 5a. - - continued.

Common name	Species/Taxon
sea cucumber species	Holothuroidea
sea cucumber species	*Molpadia* species
sea cucumber species	*Psolus* species
sea grape	*Molgula griffithsii*
sea leech species	*Notostomobdella* species
sea mouse species	Aphroditidae
sea mouse species	*Aphrodita negligens*
sea mouse species	*Aphrodita* species
sea pen or sea whip species	Pennatulacea
sea spider species	Pycnogonida
sea star species	*Crossaster* species
sea star species	*Dipsacaster* species
sea star species	*Henricia* species
sea star species	*Leptasterias* species
sea star species	*Lophaster* species
sea star species	*Mediaster* species
sea star species	*Mediaster tenellus*
sea star species	*Myxoderma sacculatum*
sea star species	*Nearchaster aciculosus*
sea star species	*Nearchaster* species
sea star species	*Nearchaster variabilis*
sea star species	*Pseudarchaster* species
sea star species	*Pteraster jordani*
sea star species	Pteraster species
sea star species	*Pteraster tesselatus*
sea star species	*Solaster* species
sea star species	*Solaster* species A
sea urchin species	Echinacea
sea urchin species	Strongylocentrotus species
sea whip species	*Halipteris willemoesi*
sea whip species	Virgulariidae
searcher	*Bathymaster signatus*
serpent sea star	*Asteronyx loveni*
shadow eelpout	*Bothrocara nyx*
shortfin eelpout	*Lycodes brevipes*
shortraker rockfish	*Sebastes borealis*
shortspine thornyhead	*Sebastolobus alascanus*
shrimp species	*Argis* species
shrimp species	*Bentheogennema borealis*
shrimp species	*Pandalopsis ampla*
shrimp species	*Pandalopsis longirostris*
shrimp species	*Pandalopsis* species
shrimp species	*Pandalus* species
shrimp species	Penaeidea
sidestripe shrimp	*Pandalopsis dispar*
skate egg case species	Rajidae egg case
skate species	Rajidae
skate species	*Bathyraja* species
skate species egg case	*Bathyraja species* egg case
slender codling	*Halargyreus johnsonii*
slender fangjaw	*Sigmops gracilis*
slender sole	*Lyopsetta exilis*
slim snailfish	*Rhinoliparis attenuatus*
smooth lumpsucker	*Aptocyclus ventricosus*
smoothskin octopus	*Benthoctopus leioderma*
smoothtongue species	*Leuroglossus* species
snail eggs	gastropod eggs
snail species	*Arctomelon borealis*
snail species	*Beringius frielei*
snail species	*Buccinum* species
snail species	*Colus* species
snail species	Gastropoda
snail species	*Otukaia kiheiziebisu*
snail species	*Scabrotrophon* species
snail speices	*Volutopsius* species

Table 5a. - - continued.

Common name	Species/Taxon
snailfish species	*Careproctus* species
snailfish species	*Elassodiscus* species
snailfish species	Liparidae
snailfish species	*Paraliparis* species
snailfish species	*Rhinoliparis* species
snakehead eelpout	*Lycenchelys crotalinus*
snow crab	*Chionoecetes opilio*
sockeye salmon	*Oncorhynchus nerka*
spectacled sculpin	*Triglops scepticus*
spiny lebbeid	*Lebbeus groenlandicus*
spiny sea star species	*Hippasteria heathi*
spiny sea star species	Hippasteria species
spinyhead sculpin	*Dasycottus setiger*
spinyridge shrimp	*Notostomus japonicus*
splendid hermit	*Labidochirus splendescens*
sponge hermit	*Pagurus brandti*
sponge species	*Neoesperiopsis* species
sponge species	Porifera
sponge species	*Swiftia pacifica*
squid species	*Belonella borealis*
squid species	*Chiroteuthis calyx*
squid species	Decapodiformes
squid species	*Eogonatus tinro*
squid species	*Galiteuthis phyllura*
squid species	Gonatidae
squid species	*Gonatopsis* species
squid species	*Gonatus* species
stone crab species	Lithodidae
sun sea star species	*Heterozonias* species
swellhead snailfish	*Paraliparis cephalus*
Swift's sea star	*Gephyreaster swifti*
swimming sea cucumber	*Paelopatides confundens*
swollen whelk	*Buccinum oedematum*
Tanner crab	*Chionoecetes bairdi*
tentacle-shedding anemone	*Liponema brevicorne*
thorny sculpin	*Icelus spiniger*
thorny sea star	*Poraniopsis inflata*
tomato snailfish	*Careproctus lycopersicus*
Townsend hermit crab	*Pagurus townsendi*
tree sponge	*Mycale loveni*
triangle Tanner crab	*Chionoecetes angulatus*
tunicate species	Ascidiacea
twoline eelpout	*Bothrocara brunneum*
ubiquitous brittle star	*Ophiopholis aculeata*
Vancouver scallop	*Delectopecten vancouverensis*
vermilion sea star	*Mediaster aequalis*
walleye pollock	*Gadus chalcogrammus*
warped whelk	*Pyrulofusus deformis*
western eelpout	*Bothrocara zestum*
whelk species	*Neptunea* species
whelk species	*Pyrulofusus melonis*
white neptune	*Neptunea amianta*
whiteblotched skate	*Bathyraja maculata*
whiteblotched skate egg case	*Bathyraja maculata* egg case
whitebrow skate	*Bathyraja minispinosa*
whitebrow skate egg case	*Bathyraja minispinosa* egg case
wide-eye sculpin	*Icelus euryops*
worm species	Annelida
wrinkled star	*Pteraster militaris*
yellow Irish lord	*Hemilepidotus jordani*
yellowleg pandalid	*Pandalus tridens*

Table 5b. - - Alphabetical list by scientific name of all fishes and invertebrate encountered on the 2016 EBSS survey.

Species/Taxon	Common name
Acharax johnsoni	clam species
Acila castrensis	divaricate nutclam
Actinauge verrilli	reticulate anemone
Actiniaria	sea anemone species
Actinoscyphia species	sea anemone species
Actinostola faeculenta	rough purple sea anemone
Actinostola species	sea anemone species
Actinostolidae	sea anemone species
Albatrossia pectoralis	giant grenadier
Alepisaurus ferox	longnose lancetfish
Allocentrotus fragilis	orange-pink sea urchin
Annelida	worm species
Anoplopoma fimbria	sablefish
Anthomastus species	coral species
Anthoptilum murrayi	Murray sea pen
Anthozoa	coral species
Antimora microlepis	Pacific flatnose
Antipatharia	black coral
Anuropus bathypelagica	isopod species
Aphrocallistes vastus	clay pipe sponge
Aphrodita negligens	sea mouse species
Aphrodita species	sea mouse species
Aphroditidae	sea mouse species
Aptocyclus ventricosus	smooth lumpsucker
Arctomelon borealis	snail species
Arctomelon species	Alaska volute species
Arctomelon stearnsii	Alaska volute
Argis species	shrimp species
Ascidiacea	tunicate species
Asteronyx loveni	serpent sea star
Astrochele species	brittlestar species
Atheresthes evermanni	Kamchatka flounder
Atheresthes stomias	arrowtooth flounder
Atolla species	jellyfish species
Aurelia labiata	jellyfish species
Aurelia species	jellyfish species
Balanus evermanni	giant barnacle
Bathophilus flemingi	highfin dragonfish
Bathyagonus nigripinnis	blackfin poacher
Bathylagus milleri	robust blacksmelt
Bathylagus ochotensis	popeye blacksmelt
Bathylagus pacificus	Pacific blacksmelt
Bathylagus species	blacksmelt species
Bathymaster signatus	searcher
Bathyplotes species	sea cucumber species
Bathyraja abyssicola	deepsea skate
Bathyraja abyssicola egg case	deepsea skate egg case
Bathyraja aleutica	Aleutian skate
Bathyraja aleutica egg case	Aleutian skate egg case
Bathyraja interrupta	Bering skate
Bathyraja interrupta egg case	Bering skate egg case
Bathyraja lindbergi	Commander skate
Bathyraja lindbergi egg case	Commander skate egg case
Bathyraja maculata	whiteblotched skate
Bathyraja maculata egg case	whiteblotched skate egg case
Bathyraja minispinosa	whitebrow skate
Bathyraja minispinosa egg case	whitebrow skate egg case
Bathyraja parmifera	Alaska skate
Bathyraja parmifera egg case	Alaska skate egg case

Table 5b. - - continued.

Species/Taxon	Common name
Bathyraja species	skate species
Bathyraja species egg case	skate species egg case
Bathyraja taranetzi	mud skate
Bathyraja taranetzi egg case	mud skate egg case
Bathyraja trachura	roughtail skate
Bathyraja trachura egg case	roughtail skate egg case
Belonella borealis	squid species
Benthalbella dentata	northern pearleye
Bentheogennema borealis	shrimp species
Benthoctopus leioderma	smoothskin octopus
Benthoctopus oregonensis	octopus species
Beringius frielei	snail species
Berryteuthis magister	magistrate armhook squid
Bivalvia	empty bivalve shells
Bothrocara brunneum	twoline eelpout
Bothrocara nyx	shadow eelpout
Bothrocara pusillum	Alaska eelpout
Bothrocara species	eelpout species
Bothrocara zestum	western eelpout
Brachiopoda	lampshell species
Brisaster latifrons	heart urchin
Brisaster species	heart urchin species
Brisingidae	brisingid sea star
Bryozoa	bryozoan species
Buccinum costatum	costate whelk
Buccinum oedematum	swollen whelk
Buccinum scalariforme	ladder whelk
Buccinum species	snail species
Bulbus fragilis	fragile moonsnail
Careproctus bowersianus	Bowers Bank snailfish
Careproctus colletti	Alaska snailfish
Careproctus cypselurus	blackfin snailfish
Careproctus furcellus	emarginate snailfish
Careproctus lycopersicus	tomato snailfish
Careproctus melanurus	blacktail snailfish
Careproctus rastrinus	salmon snailfish
Careproctus scottae	peachskin snailfish
Careproctus simus	proboscis snailfish
Careproctus species	snailfish species
Careproctus species cf. *gilberti*	dominator snailfish
Celleporina ventricosa	coral bryozoan
Ceramaster species	bat sea star species
Chauliodus macouni	Pacific viperfish
Chionoecetes angulatus	triangle Tanner crab
Chionoecetes bairdi	Tanner crab
Chionoecetes hybrid	hybrid Tanner crab
Chionoecetes opilio	snow crab
Chionoecetes tanneri	grooved Tanner crab
Chiroteuthis calyx	squid species
Chlamys species	clam species
Chorilia longipes	longhorned decorator crab
Chrysaora melanaster	Chrysaora jellyfish
Cirrepedia	empty barnacle shells
Clupea pallasi	Pacific herring
Colus species	snail species
Coryphaenoides acrolepis	Pacific grenadier
Coryphaenoides cinereus	popeye grenadier
Coryphaenoides longifilis	longfin grenadier
Crangon species	crangonid shrimp species
Crinoidea	crinoid species
Crispatotrochus foxi	cup coral
Crossaster borealis	grooved sea star
Crossaster papposus	rose sea star
Crossaster species	sea star species
Ctenodiscus crispatus	common mud star
Ctenophora	comb jelly species
Cyanea capillata	lion's mane
Cyclothone species	bristlemouth species
Dasycottus setiger	spinyhead sculpin

Table 5b. - - continued.

Species/Taxon	Common name
Decapodiformes	squid species
Delectopecten vancouverensis	Vancouver scallop
Diaphus theta	California headlightfish
Diplopteraster multipes	pincushion sea star
Dipsacaster borealis	northern sea star
Dipsacaster species	sea star species
Echinacea	sea urchin species
Elassochirus cavimanus	purple hermit
Elassochirus gilli	Pacific red hermit
Elassodiscus caudatus	humpback snailfish
Elassodiscus species	snailfish species
Elassodiscus tremebundus	blacklip snailfish
Embassichthys bathybius	deepsea sole
Enteroctopus dofleini	giant octopus
Eogonatus tinro	squid species
Erimacrus isenbeckii	horsehair crab
Erimacrus species	horsehair crab species
Eualus biunguis	deepsea eualid
Eualus species	eualid shrimp species
Eunoe depressa	depressed scale worm
Eunoe nodosa	giant scale worm
Euspira pallida	pale moonsnail
Fanellia species	coral species
Florometra serratissima	featherstar crinoid
Frieleia halli	brachiopod species
Fusitriton oregonensis	Oregon triton
Gadus chalcogrammus	walleye pollock
Gadus macrocephalus	Pacific cod
Galiteuthis phyllura	squid species
Gammaridae	gammarid amphipod species
gastropod eggs	snail eggs
Gastropoda	empty gastropod shells
Gastropoda	snail species
Gephyreaster swifti	Swift's sea star
Glyptocephalus zachirus	rex sole
Gonatidae	squid species
Gonatopsis borealis	boreopacific armhook squid
Gonatopsis species	squid species
Gonatus berryi	Berry armhook squid
Gonatus onyx	clawed armhook squid
Gonatus pyros	fiery armhook squid
Gonatus species	squid species
Gorgonacea	gorgonian coral species
Gorgonocephalus eucnemis	basketstar
Graneledone boreopacifica	octopus species
Halargyreus johnsonii	slender codling
Halipteris willemoesi	sea whip species
Hemilepidotus jordani	yellow Irish lord
Hemitripterus bolini	bigmouth sculpin
Hemitripterus bolini eggs	bigmouth sculpin eggs
Henricia species	sea star species
Heterozonias alternatus	cannonball sun star
Heterozonias species	sun sea star species
Hippasteria heathi	spiny sea star species
Hippasteria species	spiny sea star species
Hippoglossoides elassodon	flathead sole
Hippoglossus stenolepis	Pacific halibut
Holothuroidea	sea cucumber species
Hyas lyratus	Pacific lyre crab
Hydroidolina	hydroid species
Hymenodora frontalis	Pacific ambereye
Icelus canaliculatus	blacknose sculpin
Icelus euryops	wide-eye sculpin
Icelus spiniger	thorny sculpin
Icosteus aenigmaticus	ragfish
Isidella species	articulated bamboo coral
Isopoda	isopod species
Japetella diaphana	octopus species
Labidochirus splendescens	splendid hermit

Table 5b. - - continued.

Species/Taxon	Common name
Lampanyctus jordani	brokenline lampfish
Lampetra tridentata	Pacific lamprey
Lebbeus groenlandicus	spiny lebbeid
Lebbeus species	lebbeid shrimp species
Lepidopsetta polyxystra	northern rock sole
Leptagonus frenatus	sawback poacher
Leptasterias species	sea star species
Lethasterias nanimensis	blackspined sea star
Leuroglossus schmidti	northern smoothtongue
Leuroglossus species	smoothtongue species
Liparidae	snailfish species
Liponema brevicorne	tentacle-shedding anemone
Lithodes aequispinus	golden king crab
Lithodes couesi	scarlet king crab
Lithodidae	stone crab species
Lophaster furcilliger	crested sea star
Lophaster species	sea star species
Lumpenella longirostris	longsnout prickleback
Lycenchelys camchatica	Kamchatka eelpout
Lycenchelys crotalinus	snakehead eelpout
Lycenchelys species	eelpout species
Lycodapus species	eelpout species
Lycodes beringi	Bering eelpout
Lycodes brevipes	shortfin eelpout
Lycodes concolor	ebony eelpout
Lycodes species	eelpout species
Lyopsetta exilis	slender sole
Macoma species	clam species
Macropinna microstoma	barreleye
Malacocottus zonurus	darkfin sculpin
Mediaster aequalis	vermilion sea star
Mediaster species	sea star species
Mediaster tenellus	sea star species
Melamphaes lugubris	highsnout bigscale
Metridium farcimen	gigantic anemone
Microstomus pacificus	Dover sole
Modiolus modiolus	northern horsemussel
Molgula griffithsii	sea grape
Molpadia species	sea cucumber species
Mycale loveni	tree sponge
Myctophidae	lanternfish species
Mysidae	mysid species
Mytilidae	mussel species
Myxoderma sacculatum	sea star species
Nannobrachium regale	pinpoint lampfish
Naticidae	moonsnails
Nearchaster aciculosus	sea star species
Nearchaster species	sea star species
Nearchaster variabilis	sea star species
Neoesperiopsis species	sponge species
Neognathophausia ingens	red mysid
Neognathophausia species	mysid species
Neomenia species	mollusk species
Neptunea amianta	white neptune
Neptunea lyrata	lyre whelk
Neptunea pribiloffensis	Pribilof whelk
Neptunea species	whelk species
Notostomobdella species	sea leech species
Notostomus japonicus	spinyridge shrimp
Nudibranchia	nudibranch species
Octopodidae	octopus species
Onchidorididae	onchidoridid nudibranchs
Oncorhynchus gorbuscha	pink salmon
Oncorhynchus keta	chum salmon
Oncorhynchus nerka	sockeye salmon
Oneirodes bulbosus	hairy-lure dreamer
Oneirodes species	dreamer species
Oneirodes thompsoni	dreamer species
Oneirodidae	dreamer species

Table 5b. - - continued.

Species/Taxon	Common name
Ophiopholis aculeata	ubiquitous brittle star
Ophiura sarsi	notched brittlestar
Ophiura species	brittle star species
Ophiuridae	brittle star species
Ophiuroidea	brittlestar species
Opisthoteuthis californiana	flapjack devilfish
Oplophoridae	oplophorid shrimps
Oregonia bifurca	crab species
Otukaia kiheiziebisu	snail species
Paelopatides confundens	swimming sea cucumber
Pagurus aleuticus	Aleutian hermit
Pagurus brandti	sponge hermit
Pagurus confragosus	knobbyhand hermit
Pagurus cornutus	hornyhand hermit
Pagurus rathbuni	longfinger hermit
Pagurus species	hermit species
Pagurus tanneri	longhand hermit
Pagurus townsendi	Townsend hermit crab
Pagurus trigonocheirus	fuzzy hermit crab
Pandalidae	pandalid shrimp species
Pandalopsis ampla	shrimp species
Pandalopsis dispar	sidestripe shrimp
Pandalopsis longirostris	shrimp species
Pandalopsis species	shrimp species
Pandalus eous	Alaskan pink shrimp
Pandalus species	shrimp species
Pandalus tridens	yellowleg pandalid
Pannychia moseleyi	deep sea papillate cucumber
Paragorgia arborea	Kamchatka coral
Paralepididae	barracudina species
Paraliparis cephalus	swellhead snailfish
Paraliparis grandis	grand snailfish
Paraliparis species	snailfish species
Paraliparis ulochir	broadfin snailfish
Paralomis multispina	king crab species
Paralomis species	king crab species
Paralomis species A	king crab species
Parapasiphae sulcatifrons	glass shrimp species
Pasiphaea pacifica	Pacific glass shrimp
Pasiphaea tarda	crimson pasiphaeid
Pasiphaeidae	pasiphaeid shrimp species
Penaeidea	shrimp species
Pedicellaster magister	majestic sea star
Pennatulacea	sea pen or sea whip species
Periphylla periphylla	helmet jelly
Phacellophora camtschatica	egg yolk jelly
Pleurogrammus monopterygius	Atka mackerel
Plumarella species	coral species
Polychaeta	polychaete worm species
Polychaete tubes	polychaete worm tube
Poraniopsis inflata	thorny sea star
Porifera	sponge species
Poromitra curilensis	crested bigscale
Primnoa species	coral species
Pseudarchaster parelii	scarlet sea star
Pseudarchaster species	sea star species
Psolus species	sea cucumber species
Psychrolutes phrictus	blob sculpin
Pteraster jordani	sea star species
Pteraster militaris	wrinkled star
Pteraster species	sea star species
Pteraster tesselatus	sea star species
Puzanovia rubra	coral eelpout
Pycnogonida	sea spider species
Pyrulofusus deformis	warped whelk
Pyrulofusus melonis	whelk species
Rajidae	skate species
Rastrinus scutiger	roughskin sculpin
Reinhardtius hippoglossoides	Greenland turbot

Table 5b. - - continued.

Species/Taxon	Common name
Rhinoliparis attenuatus	slim snailfish
Rhinoliparis species	snailfish species
Rossia pacifica	eastern Pacific bobtail
Sasakiopus salebrosus	pygmy benthoctopus
Scabrotrophon species	snail species
Scopelosaurus harryi	scaly paperbone
Scyphozoa	jellyfish species
Sebastes aleutianus	rougheye rockfish
Sebastes alutus	Pacific ocean perch
Sebastes borealis	shortraker rockfish
Sebastes melanostictus	blackspotted rockfish
Sebastes polyspinis	northern rockfish
Sebastes species	rockfish species
Sebastes variegatus	harlequin rockfish
Sebastolobus alascanus	shortspine thornyhead
Sebastolobus altivelis	longspine thornyhead
Sebastolobus macrochir	broadfin thornyhead
Serripes species	clam species
Sigmops gracilis	slender fangjaw
Sipuncula	peanut worm species
Solaster species	sea star species
Solaster species A	sea star species
Somniosus pacificus	Pacific sleeper shark
Stegophiura ponderosa	brittlestar species
Stenobrachius leucopsarus	northern lampfish
Stenobrachius nannochir	garnet lampfish
Stenobrachius species	lampfish species
Stomphia species	sea anemone species
Strongylocentrotus droebachiensis	green sea urchin
Strongylocentrotus species	sea urchin species
Stylasterina	hydrocoral species
Swiftia pacifica	sponge species
Systellaspis braueri	Quayle's spinytail
Tactostoma macropus	longfin dragonfish
Thaleichthys pacificus	eulachon
Thaliacea	salp species
Thoracica	barnacle species
Triglops scepticus	spectacled sculpin
Virgulariidae	sea whip species
Volutopsius species	snail speices
Zaprora silenus	prowfish
Zesticelus profundorum	flabby sculpin
Zoanthidae species A	hot dog zoanthid
Zoroaster evermanni	Evermann's seastar
Rajidae egg case	skate egg case species

Table 6. - - All taxa encountered on the 2016 EBSS survey with depth range and frequency of occurrence. Taxa are listed in descending order by total catch weight.

Species name	Total weight (kg)	Total number	Min depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Albatrossia pectoralis	103,822.39	30,696	328	1172	727	121
Sebastes alutus	25,116.27	32,005	204	457	306	57
Coryphaenoides cinereus	15,759.18	103,809	487	1172	807	93
Gadus chalcogrammus	12,361.49	14,478	204	1116	436	94
Atheresthes stomias	7,394.28	5,966	204	806	379	100
Sebastolobus alascanus	7,082.11	10,502	208	1116	604	120
Reinhardtius hippoglossoides	4,689.81	1,763	213	1172	652	127
Bathyraja aleutica	4,563.91	1,538	204	1172	568	147
Atheresthes evermanni	4,221.99	2,989	204	1116	513	147
Hippoglossoides elassodon	3,181.76	8,439	204	532	332	78
Crinoidea	2,532.11	895,693	274	1162	784	12
Glyptocephalus zachirus	2,088.87	2,790	204	623	348	79
Porifera	2,053.83		208	1172	562	88
Pannychia moseleyi	2,049.73	34,755	244	1162	628	51
Bothrocara zestum	1,894.85	4,825	403	1172	706	67
Gorgonocephalus eucnemis	1,738.81	3,874	205	959	470	21
Coryphaenoides acrolepis	1,557.97	5,052	677	1172	954	45
Chionoecetes angulatus	1,385.93	10,342	247	1172	781	87
Bathyraja lindbergi	1,305.83	707	294	1172	696	68
Bathyraja parmifera	1,272.42	199	204	414	253	27
Actinostola faeculenta	1,255.21	4,498	213	1128	616	36
Ophiuroidea	1,130.52	890,684	208	1116	707	35
Sebastes borealis	1,043.36	346	263	1162	438	29
Bathyraja maculata	1,024.16	306	213	1055	419	47
Anoplopoma fimbria	983.71	637	210	1116	583	81
Gadus macrocephalus	953.37	353	204	328	255	37
Polychaete tubes	820.01		645	1162	932	8
Hippoglossus stenolepis	767.46	101	204	530	325	39
Ceramaster species	749.20	7,583	204	1128	547	126
Aphrocallistes vastus	572.74		208	1121	631	42
Liponema brevicorne	521.02	4,693	204	1162	431	96
Asteronyx loveni	509.99	5,911	205	1162	455	26
Lithodes aequispinus	501.48	751	208	1055	453	67
Bathyraja trachura	468.90	232	742	1162	930	43
Nearchaster aciculosus	415.49	12,322	223	1162	741	53
Psychrolutes phrictus	399.24	243	732	1172	970	38
Chionoecetes tanneri	370.06	1,642	443	1172	726	72
Dipsacaster borealis	342.26	2,320	205	1095	448	47
Hemitripterus bolini	315.44	82	205	550	334	46
Bathyraja interrupta	295.89	267	204	743	340	51
Crossaster borealis	293.32	2,613	204	1162	543	123
Bathyraja minispinosa	276.20	214	213	1172	645	79
Lycodes concolor	265.43	354	403	1172	647	46
Bathyplotes species	247.37	10,185	208	1172	645	54
Echinacea	240.92	10,041	228	639	376	10
Bothrocara brunneum	219.47	177	414	1172	769	41
Brisaster species	213.02	11,225	465	615	540	2
Opisthoteuthis californiana	203.38	180	213	830	491	40
Berryteuthis magister	202.11	560	210	1022	481	99
Malacocottus zonurus	191.23	1,741	205	959	385	69
Enteroctopus dofleini	153.59	94	205	827	379	41
Neptunea amianta	150.04	2,363	213	1128	674	86
Brisaster latifrons	144.35	6,743	223	1128	551	15
Careproctus melanurus	139.36	257	316	1172	693	72
Pandalus eous	129.62	19,830	204	354	268	47
Chrysaora melanaster	125.01	200	204	1172	561	62

Table 6. - - continued.

Species name	Total weight (kg)	Total number	Min-depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Bathyraja taranetzi	112.42	118	204	1116	420	33
Myxoderma sacculatum	112.08	1,068	294	1162	812	40
Lithodes couesi	111.66	228	450	1162	853	37
Microstomus pacificus	103.61	62	299	530	425	16
Chionoecetes bairdi	95.76	804	204	743	296	32
Embassichthys bathybius	92.85	78	532	881	730	23
Sebastes melanostictus	82.09	138	204	515	321	16
Isidella species	82.04		834	1128	939	3
Actinauge verrilli	78.97	10,152	210	1116	535	39
Paralomis multispina	73.01	164	768	1172	981	15
Bathyraja abyssicola	72.06	4	1028	1116	1066	3
Aptocyclus ventricosus	68.45	105	216	1172	712	57
Phacellophora camtschatica	67.67	131	208	1172	554	62
Dasycottus setiger	66.64	458	204	518	320	45
Lepidopsetta polyxystra	62.93	85	204	213	209	2
Somniosus pacificus	61.95	5	359	1042	696	5
Scyphozoa	58.08	59	204	1172	647	53
Buccinum oedematum	55.51	1,960	224	1172	696	98
Aphrodita negligens	55.30	4,323	210	1026	539	32
Pagurus cornutus	54.44	979	216	629	394	47
Neptunea pribiloffensis	51.93	441	205	965	381	22
Leptagonus frenatus	51.52	1,101	204	831	302	50
Hippasteria species	49.15	96	205	1172	588	31
Fusitriton oregonensis	45.94	691	204	1017	318	50
Thaliacea	45.76	29	205	1162	616	84
Lycodes beringi	44.96	832	210	1026	542	83
Paragorgia arborea	44.60		213	1128	808	8
Balanus evermanni	43.40		328	328	328	1
Careproctus furcellus	40.80	47	293	1022	497	21
Neomenia species	40.60	546	322	1128	802	16
Bathyraja parmifera egg case	36.52	759	208	1116	415	32
Lophaster species	36.42	1,060	220	1162	709	34
Bathylagus species	36.17	1,097	550	1172	888	51
Anthoptilum murrayi	34.05	5,469	210	1162	544	11
Sebastes aleutianus	33.53	24	244	359	308	8
Strongylocentrotus species	33.40	849	204	487	280	19
Zaprora silenus	32.68	11	210	1095	372	6
Benthoctopus oregonensis	30.45	40	316	1065	843	18
Elassodiscus caudatus	29.28	597	424	1172	805	57
Graneledone boreopacifica	26.53	64	583	1162	1020	11
Careproctus rastrinus	25.51	86	210	330	262	19
Lampetra tridentata	25.16	65	274	1095	577	43
Pandalopsis dispar	24.43	1,657	292	506	370	37
Diplopteraster multipes	24.20	119	204	1024	376	30
Actinostolidae	23.57	2,613	506	1128	802	4
Holothuroidea	23.39	9	274	1026	513	5
empty Gastropoda	22.86	15	204	1116	491	72
Coryphaenoides longifilis	22.53	127	1012	1022	1018	3
Elassodiscus tremebundus	21.88	173	223	1128	891	31
Aphroditidae	20.97	1,301	205	1128	493	34
Bathyraja aleutica egg case	20.95	193	210	1172	556	19
Careproctus cypselurus	20.49	225	403	1172	899	42
Solaster species	20.32	140	208	1116	521	33
Benthoctopus leioderma	20.30	56	242	1095	642	27
Pyrulofusus melonis	18.92	161	208	615	404	28
Ophiura sarsi	18.12	8,734	504	743	629	4
Careproctus colletti	17.35	65	424	1077	727	17
Beringius frielei	16.68	192	220	1095	526	41
Hemilepidotus jordani	16.34	22	204	224	214	2
Ophiuridae	15.41	5,993	827	827	827	1
Pagurus tanneri	15.20	568	263	1116	752	52
Pteraster species	15.16	203	204	1162	595	48
Aurelia labiata	14.32	39	204	1055	452	9
Nearchaster species	13.87	877	623	1040	816	6
Pandalopsis longirostris	13.76	1,039	316	1041	869	9

Table 6. - - continued.

Species name	Total weight (kg)	Total number	Min-depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Triglops scepticus	13.57	363	205	314	239	17
Leuroglossus schmidti	12.87	1,665	277	1121	676	92
Psolus species	12.82	519	823	1121	1007	9
Actiniaria	11.74	391	205	1121	439	33
Actinostola species	11.71	1,445	205	1172	675	27
Pandalopsis ampla	11.52	734	638	1095	891	15
gastropod eggs	11.51		220	1116	624	52
Halipteris willemoesi	11.30	343	205	310	244	7
Icelus canaliculatus	11.08	694	443	959	647	29
Bathyagonus nigripinnis	10.99	834	210	1095	572	86
Oncorhynchus nerka	10.70	5	732	732	732	1
Oncorhynchus keta	10.65	10	215	1077	623	10
Heterozonias alternatus	9.92	52	310	952	664	5
Sasakiopus salebrosus	9.45	90	228	1116	559	47
Bathymaster signatus	8.95	38	210	247	226	5
Nearchaster variabilis	8.85	237	210	1077	660	15
Brisingidae	8.47	100	484	1041	647	9
Alepisaurus ferox	7.80	1	453	453	453	1
Nudibranchia	7.21	361	210	1162	483	40
Eualus biunguis	6.97	3,702	487	1172	866	43
Gonatidae	6.48	56	329	1121	779	33
Myctophidae	6.26	902	266	1172	752	56
Pyrulofusus deformis	6.08	34	205	465	308	12
Pagurus aleuticus	5.35	65	210	329	264	9
Allocentrotus fragilis	5.22	23	210	487	315	7
Sebastolobus altivelis	4.89	10	806	1017	892	6
Gephyreaster swifti	4.86	3	314	314	314	1
Stenobrachius species	4.46	634	328	1095	717	47
Rossia pacifica	4.38	50	205	827	275	20
Crossaster species	4.18	57	215	1172	791	12
Bathophilus flemingi	4.15	106	267	1162	824	24
Thaleichthys pacificus	3.73	67	210	403	300	7
Antimora microlepis	3.41	8	1019	1172	1074	7
Icelus spiniger	3.40	115	205	323	262	22
Pseudarchaster species	3.38	127	205	1172	670	26
Buccinum costatum	3.20	101	487	1116	926	14
Bathyraja trachura egg case	3.18	214	450	1116	824	34
Henricia species	3.18	153	204	1172	443	56
Lycenchelys crotalinus	3.04	32	629	955	747	10
Oneirodidae	2.99	18	829	1128	969	13
Pagurus townsendi	2.98	101	496	1065	768	16
Pleurogrammus monopterygius	2.87	3	443	1022	751	3
Liparidae	2.76	219	274	1116	794	50
Bathylagus pacificus	2.59	100	692	1121	955	10
Chionoecetes hybrid	2.46	23	205	450	324	8
Halargyreus johnsonii	2.27	5	743	1065	950	4
empty Bivalvia	2.18	1	205	1116	470	13
Bothrocara species	2.15	17	1041	1172	1089	3
Periphylla periphylla	2.14	185	517	1172	852	54
Aphrodita species	2.13	148	224	1042	512	21
Penaeidea	2.11	2,492	652	1019	827	4
Buccinum species	2.09	75	210	1128	812	14
Chionoecetes opilio	2.07	35	205	447	315	9
Crossaster papposus	2.04	226	225	959	615	8
Heterozonias species	2.00	14	687	1055	882	6
Arctomelon species	1.92	32	230	608	478	8
Icelus euryops	1.89	158	299	487	394	11
Zoroaster evermanni	1.87	15	834	1077	980	6
Lampanyctus jordani	1.85	48	266	1019	665	10
Cyanea capillata	1.83	11	329	535	456	6
Icosteus aenigmaticus	1.81	1	1116	1116	1116	1
Mycale loveni	1.75		210	299	255	2
Oncorhynchus gorbuscha	1.74	2	657	965	811	2
Plumarella species	1.68		316	328	322	2
Bathyraja interrupta egg case	1.62	78	210	1040	399	25

Table 6. - - continued.

Species name	Total weight (kg)	Total number	Min-depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Pteraster jordani	1.62	26	1116	1116	1116	1
Pagurus trigonocheirus	1.59	45	205	580	277	9
Sebastolobus macrochir	1.58	2	629	854	742	2
Octopodidae	1.54	5	213	834	487	4
Molpadia species	1.54	30	506	506	506	1
Belonella borealis	1.49	6	816	1128	1007	5
Pteraster militaris	1.46	26	247	959	589	6
Thoracica	1.46		430	430	430	1
Paralomis species	1.42	1	810	810	810	1
Ophiura species	1.41	967	638	1128	883	2
Pseudarchaster parelii	1.40	26	330	1095	616	9
Gonatus species	1.36	14	743	1116	893	6
Oneirodes species	1.30	10	768	1116	884	8
Bathyraja minispinosa egg case	1.29	90	323	1116	630	12
Lumpenella longirostris	1.29	23	458	639	534	3
Gonatopsis borealis	1.27	16	422	1026	643	11
Oneirodes thompsoni	1.27	3	965	1042	1010	3
Atolla species	1.26	66	423	1121	857	25
Strongylocentrotus droebachiensis	1.20	34	215	215	215	1
Japetella diaphana	1.18	6	806	1026	921	5
Bathylagus milleri	1.16	35	657	1121	944	9
Chauliodus macouni	1.14	39	403	1121	813	23
Pagurus confragosus	1.11	24	210	1172	454	9
Elassochirus gilli	1.10	26	213	323	256	4
Fanellia species	1.09		434	854	633	6
Pteraster tesselatus	1.06	5	208	210	209	2
Metridium farcimen	1.03	8	351	351	351	1
Arctomelon stearnsii	1.00	13	224	657	430	6
Elassodiscus species	0.99	5	1012	1012	1012	1
Paralomis species A	0.96	1	762	762	762	1
Neptunea species	0.93	21	580	1041	871	7
Elassochirus cavimanus	0.92	19	204	434	267	11
Pasiphaea pacifica	0.88	292	329	965	567	14
Sebastes variegatus	0.84	2	223	308	266	2
Paraliparis grandis	0.81	1	504	504	504	1
Hyas lyratus	0.81	45	205	487	295	21
Virgulariidae	0.77	20	210	1116	621	5
Lophaster furcilliger	0.76	37	210	827	504	8
Buccinum scalariforme	0.76	22	205	657	326	5
Solaster species A	0.73	8	208	316	241	5
Polychaeta	0.70	57	267	762	513	6
Sipuncula	0.67	49	298	1116	722	9
Pasiphaea tarda	0.62	17	657	1077	923	14
Mediaster tenellus	0.62	24	285	1024	641	10
Bathyraja abyssicola egg case	0.61	26	658	1041	868	5
Neoesperiopsis species	0.61		1055	1055	1055	1
Clupea pallasi	0.58	2	204	266	235	2
Volutopsius species	0.58	8	205	506	316	4
Careproctus simus	0.57	34	447	762	603	7
Actinoscyphia species	0.55	96	854	869	862	2
Rajidae	0.55	1	638	638	638	1
Mediaster species	0.51	21	263	1116	738	6
Decapodiformes	0.50	10	260	742	484	5
Modiolus modiolus	0.48	1	521	521	521	1
Sebastes polyspinis	0.47	1	220	220	220	1
Gastropoda	0.45	18	204	959	495	4
Gorgonacea	0.42		1077	1077	1077	1
Labidochirus splendescens	0.41	29	205	458	291	15
Leptasterias species	0.39	1	1162	1162	1162	1
Brachiopoda	0.38	35	208	1055	580	9
Pagurus rathbuni	0.38	19	205	316	240	5
Stenobrachius leucopsarus	0.38	54	359	1121	581	9
Swiftia pacifica	0.37		487	1121	837	5
Lycodapus species	0.34	83	411	1116	784	30
Oneirodes bulbosus	0.32	2	1024	1121	1073	2

Table 6. - - continued.

Species name	Total weight (kg)	Total number	Min-depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Stomphia species	0.30	3	244	263	254	2
Bryozoa	0.29		277	423	350	2
Paelopatides confundens	0.28	2	1055	1116	1086	2
Argis species	0.28	70	223	496	344	22
Pagurus species	0.27	9	210	629	378	6
Gonatus onyx	0.25	3	743	1162	912	3
Ctenodiscus crispatus	0.25	13	223	323	258	3
Arctomelon borealis	0.24	4	542	542	542	1
Neptunea lyrata	0.24	3	228	228	228	1
Benthalbella dentata	0.24	4	757	816	784	3
Dipsacaster species	0.22	3	215	854	566	3
Ctenophora	0.22	10	220	881	594	8
Chiroteuthis calyx	0.21	2	213	823	518	2
Gonatopsis species	0.20	2	309	881	595	2
Gonatus berryi	0.20	2	834	965	900	2
Pagurus brandti	0.20	8	213	789	346	5
Lycodes brevipes	0.20	3	205	236	221	3
Lebbeus species	0.19	33	487	959	704	4
Lyopsetta exilis	0.19	1	230	230	230	1
Hydroidolina	0.19		314	1121	718	2
Rastrinus scutiger	0.19	28	263	354	311	3
Florometra serratissima	0.18	26	542	542	542	1
Erimacrus isenbeckii	0.18	2	225	247	236	2
Frieleia halli	0.18	16	316	328	322	2
Careproctus species	0.17	12	965	1172	1057	5
Ophiopholis aculeata	0.17	43	308	518	357	5
Lebbeus groenlandicus	0.17	25	762	820	791	2
Lethasterias nanimensis	0.16	1	208	208	208	1
Stenobrachius nannochir	0.16	25	831	1121	976	2
Bathylagus ochotensis	0.16	6	829	1019	913	5
Cirrepedia	0.15	1	223	223	223	1
Ascidiacea	0.15	7	354	1041	862	5
Sebastes species	0.15	15	316	316	316	1
Aurelia species	0.14	1	714	714	714	1
Primnoa species	0.14		314	314	314	1
Erimacrus species	0.13	1	225	225	225	1
Leuroglossus species	0.13	18	462	462	462	1
Pennatulacea	0.13	2	465	955	710	2
Rhinoliparis species	0.13	12	718	1012	898	3
Mediaster aequalis	0.12	6	472	789	673	3
Annelida	0.11	16	205	615	403	6
Nannobrachium regale	0.11	2	834	1024	929	2
Stylasterina	0.11		1055	1055	1055	1
Anthomastus species	0.10		762	1077	898	3
Zesticelus profundorum	0.10	17	658	1065	894	14
Hippasteria heathi	0.10	1	827	827	827	1
Pedicellaster magister	0.10	8	205	583	349	3
Crangon species	0.10	51	210	403	308	9
Stegophiura ponderosa	0.09	7	487	487	487	1
Careproctus scottae	0.09	2	205	299	252	2
Bothrocara nyx	0.09	10	820	1065	988	4
Poromitra curilensis	0.09	4	542	1019	823	4
Anuropus bathypelagica	0.09	1	883	883	883	1
Chorilia longipes	0.08	6	263	496	399	4
Galiteuthis phyllura	0.08	1	881	881	881	1
Puzanovia rubra	0.08	1	854	854	854	1
Serripes species	0.08	1	228	228	228	1
Pandalus species	0.07	23	434	530	484	3
Poraniopsis inflata	0.07	1	854	854	854	1
Acharax johnsoni	0.07	2	827	977	902	2
Otukaia kiheiziebisu	0.07	5	869	1040	955	2
Pandalidae	0.07	12	869	1162	1016	2
Paralepididae	0.07	2	742	1041	892	2
Antipatharia	0.06		977	977	977	1
Macropinna microstoma	0.06	2	923	1022	973	2

Table 6. - - continued.

Species name	Total weight (kg)	Total number	Min-depth (m)	Max depth (m)	Mean depth (m)	Frequency (hauls)
Eogonatus tinro	0.06	3	453	1028	662	3
Bathyraja egg case	0.06	2	608	608	608	1
Bathyraja taranetzi egg case	0.06	3	504	1116	771	3
Paraliparis cephalus	0.06	5	517	1042	727	4
Arctomelon species cf. *stearnsii*	0.06	1	615	615	615	1
Mytilidae	0.05	1	827	827	827	1
Melamphaes lugubris	0.05	3	412	623	496	3
Isopoda	0.05	10	210	277	233	3
Bothrocara pusillum	0.05	6	504	1116	892	3
Gonatus pyros	0.05	2	453	453	453	1
Pandalus tridens	0.05	8	247	247	247	1
Scopelosaurus harryi	0.05	1	821	821	821	1
Notostomus japonicus	0.05	3	743	1065	904	2
Colus species	0.05	5	310	1116	557	4
Oregonia bifurca	0.05	6	1024	1042	1033	2
Lycodes species	0.04	9	487	1019	753	2
Cyclothone species	0.04	18	718	1116	910	6
Lithodidae	0.04	2	834	834	834	1
Rhinoliparis attenuatus	0.04	4	1024	1077	1048	3
Chlamys species	0.04	4	225	263	244	2
Bentheogennema borealis	0.04	14	718	1017	845	5
Acila castrensis	0.03	20	1095	1095	1095	1
Bathyraja lindbergi egg case	0.03	5	532	1055	814	3
Careproctus lycopersicus	0.03	1	1042	1042	1042	1
Diaphus theta	0.03	2	277	453	365	2
Zoanthidae species A	0.03	1	223	223	223	1
Bathyraja species	0.03	1	1024	1024	1024	1
Neognathophausia ingens	0.02	3	806	1022	947	3
Hymenodora frontalis	0.02	14	830	1077	978	5
Crispatotrochus foxi	0.02	2	434	487	461	2
Anthozoa	0.02		854	854	854	1
Notostomobdella species	0.02	3	225	504	365	2
Tactostoma macropus	0.02	2	1022	1022	1022	1
Pycnogonida	0.02	14	424	615	520	2
Onchidoridídae	0.02	3	225	225	225	1
Scabrotrophon species	0.02	6	310	1116	840	3
Naticidae	0.02	1	244	244	244	1
Bathyraja maculata egg case	0.02	1	506	506	506	1
Hemitripterus bolini eggs	0.02		583	583	583	1
Systellaspis braueri	0.02	10	789	789	789	1
Pasiphaeidae	0.02	5	779	1041	924	3
Bathyraja species egg case	0.02	1	285	285	285	1
Pandalopsis species	0.01	3	434	923	679	2
Parapasiphae sulcatifrons	0.01	4	742	1116	929	2
Careproctus species cf. *gilberti*	0.01	2	455	455	455	1
Lycenchelys camchatica	0.01	1	1012	1012	1012	1
Paraliparis ulochir	0.01	1	718	718	718	1
Bulbus fragilis	0.01	2	205	205	205	1
Paraliparis species	0.01	1	1121	1121	1121	1
Lycenchelys species	0.01	2	743	1095	919	2
Careproctus bowersianus	0.01	1	854	854	854	1
Molgula griffithsii	0.01	1	263	263	263	1
Gammaridae	0.01	1	1019	1019	1019	1
Sigmops gracilis	0.01	1	743	743	743	1
Astrochele species	0.01	1	223	223	223	1
Neognathophausia ingens	0.01	2	1019	1019	1019	1
Oplophoridae	0.01	1	1162	1162	1162	1
Eunoe depressa	0.01	1	267	267	267	1
Eunoe nodosa	0.01	2	267	267	267	1
Macoma species	0.004	2	430	430	430	1
Delectopecten vancouverensis	0.004	6	430	430	430	1
Eualus species	0.003	4	550	639	595	2
Mysidae	0.002	1	550	550	550	1
Euspira pallida	0.001	1	458	458	458	1
Celleporina ventricosa	0.001		472	472	472	1

Table 7. - - Summary of biological data collected during the 2016 EBSS survey.

Scientific name	Individuals measured	Otoliths collected	Individual weights	Stomach samples
Albatrossia pectoralis	8,731			605
Coryphaenoides cinereus	6,372			366
Sebastolobus alascanus	5,125			508
Hippoglossoides elassodon	4,885			
Gadus chalcogrammus	3,845			437
Atheresthes stomias	3,482	439	439	332
Sebastes alutus	3,398	404	404	249
Coryphaenoides acrolepis	3,140			
Atheresthes evermanni	2,719	701	701	334
Glyptocephalus zachirus	2,038			368
Bothrocara zestum	1,853			
Reinhardtius hippoglossoides	1,763	653	653	
Bathyraja aleutica	1,538			
Malacocottus zonurus	1,009			
Lycodes beringi	764			
Bathyraja lindbergi	706			
Anoplopoma fimbria	577	455	455	131
Berryteuthis magister	544			
Dasycottus setiger	423			
Lycodes concolor	354			
Gadus macrocephalus	353			197
Sebastes borealis	346	322	322	46
Bathyraja maculata	305			
Bathyraja interrupta	267			
Careproctus melanurus	257			
Psychrolutes phrictus	243			
Bathyraja trachura	232			
Bathyraja minispinosa	214			
Bathyraja parmifera	199			
Bothrocara brunneum	177			
Sebastes melanostictus	138	126	126	
Coryphaenoides longifilis	125			
Bathyraja taranetzi	118			
Hippoglossus stenolepis	101			86
Aptocyclus ventricosus	94			
Hemitripterus bolini	82			
Embassichthys bathybius	78			
Microstomus pacificus	62			
Bathymaster signatus	38			
Lepidopsetta polyxystra	29			
Sebastes aleutianus	24	24	24	
Hemilepidotus jordani	22			
Zaprora silenus	11			
Oncorhynchus keta	10			
Sebastolobus altivelis	9			
Antimora microlepis	7			
Somniosus pacificus	5			
Halargyreus johnsonii	5			
Oncorhynchus nerka	5			
Bathyraja abyssicola	4			
Pleurogrammus monopterygius	3			
Oncorhynchus gorbuscha	2			
Sebastolobus macrochir	2			
Lyopsetta exilis	1			
Sebastes polyspinis	1			

Table 8. - - Summary of vouchers specimens collected during the 2016 EBSS survey. One lot consists of an individual or group of individuals of a single species.

Scientific name	Common name	Lots
Lampetra tridentata	Pacific lamprey	16
Rajidae	skate species	1
Bathyraja species	skate species	1
Atheresthes evermanni	Kamchatka flounder	1
Lyopsetta exilis	slender sole	1
Zesticelus profundorum	flabby sculpin	1
Psychrolutes phrictus	blob sculpin	1
Antimora microlepis	Pacific flatnose	3
Aptocyclus ventricosus	smooth lumpsucker	5
Liparidae	snailfish species	48
Careproctus species	snailfish species	5
Careproctus melanurus	blacktail snailfish	1
Careproctus bowersianus	Bowers Bank snailfish	1
Careproctus simus	proboscis snailfish	2
Paraliparis ulochir	broadfin snailfish	1
Careproctus sp. cf. *gilberti*	dominator snailfish	1
Paraliparis cephalus	swellhead snailfish	1
Paraliparis species	snailfish species	1
Rhinoliparis species	snailfish species	2
Paraliparis grandis	grand snailfish	1
Paralepididae	barracudina species	2
Benthalbella dentata	northern pearleye	3
Scopelosaurus harryi	scaly paperbone	1
Zaprora silenus	prowfish	1
Lycodes species	eelpout species	2
Bothrocara species	eelpout speices	1
Lycodapus speices	eelpout species	14
Sebastolobus altivelis	longspine thornyhead	1
Sebastes variegatus	harlequin rockfish	2
Swiftia pacifica	coral species	1
Crispatotrochus foxi	cup coral	1
Isidella species	articulated bamboo coral	1
Eualus species	shrimp species	1
Pagurus species	shrimp species	1
Gastropoda	snail species	1
Buccinum species	snail species	1
Octopodidae	octopus species	1
Benthoctopus leioderma	smoothskin octopus	2
Opisthoteuthis californiana	flapjack devilfish	1
Graneledone boreopacifica	octopus species	4
Enteroctopus dofleini	giant octopus	6
Sasakiopus salebrosus	pygmy benthoctopus	7
Benthoctopus oregonensis	octopus species	6
Gonatus species	squid species	1
Berryteuthis magister	magistrate armhook squid	10
Gonatopsis borealis	boreopacific armhook squid	5
Chiroteuthis calyx	squid species	1
Belonella borealis	squid species	1
Heterozonias alternatus	cannonball sun star	1

Table 9. - - Biomass, population, CPUE and variance estimates of all fishes and invertebrates encountered during the 2016 EBSS survey. Species are listed alphabetically by scientific name.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acharax johnsoni	600-1,200	1.94E-01	2.47E-02	7.03E+03	2.60E+07	3.35E-03	7.86E-04	1.10E-01	6.12E-01
	All depths	1.94E-01	2.47E-02	7.03E+03	2.60E+07	3.35E-03	7.86E-04	1.10E-01	6.12E-01
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acila castrensis	600-1,200	2.76E-01	7.62E-02	1.62E+05	2.64E+10	2.49E-03	6.22E-04	1.47E+00	2.15E+02
	All depths	2.76E-01	7.62E-02	1.62E+05	2.64E+10	2.49E-03	6.22E-04	1.47E+00	2.15E+02
	200-600	1.28E+02	2.25E+03	1.55E+06	3.19E+11	6.62E-01	6.30E+00	8.48E+00	8.34E+02
Actinauge verrilli	600-1,200	2.01E+02	2.37E+04	3.37E+07	6.99E+14	2.90E+00	4.77E+02	4.85E+02	1.41E+07
	All depths	3.28E+02	2.60E+04	3.52E+07	6.99E+14	3.56E+00	4.84E+02	4.93E+02	1.41E+07
	200-600	6.32E+01	8.14E+02	2.43E+06	1.88E+12	3.23E-01	1.77E+00	7.52E+00	1.23E+03
Actiniaria	600-1,200	3.24E+00	7.09E+00	5.48E+04	5.69E+08	4.48E-02	1.32E-01	7.92E-01	1.13E+01
	All depths	6.65E+01	8.21E+02	2.48E+06	1.88E+12	3.68E-01	1.91E+00	8.32E+00	1.24E+03
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Actinoscyphia species	600-1,200	2.18E+00	3.45E+00	4.22E+05	1.78E+11	3.95E-02	1.13E-01	7.64E+00	5.84E+03
	All depths	2.18E+00	3.45E+00	4.22E+05	1.78E+11	3.95E-02	1.13E-01	7.64E+00	5.84E+03
	200-600	6.74E+03	2.69E+07	2.39E+07	3.78E+14	4.28E+01	9.24E+04	1.79E+02	1.49E+06
Actinostola faeculenta	600-1,200	1.14E+02	1.30E+03	7.00E+05	9.35E+10	1.82E+00	3.24E+01	1.13E+01	2.60E+03
	All depths	6.85E+03	2.69E+07	2.46E+07	3.78E+14	4.47E+01	9.24E+04	1.90E+02	1.50E+06
	200-600	2.08E+01	2.04E+02	5.19E+05	8.05E+10	9.06E-02	3.18E-01	2.65E+00	1.81E+02
Actinostola species	600-1,200	4.23E+01	2.67E+02	6.16E+06	9.91E+12	6.67E-01	6.88E+00	9.52E+01	2.31E+05
	All depths	6.31E+01	4.71E+02	6.68E+06	9.99E+12	7.58E-01	7.20E+00	9.79E+01	2.31E+05
	200-600	4.79E+00	1.94E+01	4.38E+05	1.74E+11	2.81E-02	6.68E-02	2.57E+00	5.97E+02
Actinostolidae	600-1,200	9.37E+01	8.55E+03	1.04E+07	1.08E+14	1.42E+00	1.95E+02	1.57E+02	2.47E+06
	All depths	9.85E+01	8.57E+03	1.09E+07	1.08E+14	1.45E+00	1.95E+02	1.60E+02	2.47E+06
	200-600	1.52E+05	1.13E+09	3.82E+07	6.65E+13	1.54E+03	9.13E+06	3.82E+02	5.75E+05
Albatrossia pectoralis	600-1,200	3.31E+05	1.05E+09	1.07E+08	1.15E+14	4.68E+03	2.20E+07	1.47E+03	2.27E+06
	All depths	4.83E+05	2.18E+09	1.45E+08	1.82E+14	6.22E+03	3.11E+07	1.85E+03	2.84E+06
	200-600	4.83E+01	2.33E+03	6.19E+03	3.83E+07	1.19E-01	1.41E+00	1.52E-02	2.32E-02
Alepisaurus ferox	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.83E+01	2.33E+03	6.19E+03	3.83E+07	1.19E-01	1.41E+00	1.52E-02	2.32E-02
	200-600	3.08E+01	3.00E+02	1.46E+05	4.24E+09	8.01E-02	1.88E-01	3.99E-01	2.81E+00
Allocentrotus fragilis	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.08E+01	3.00E+02	1.46E+05	4.24E+09	8.01E-02	1.88E-01	3.99E-01	2.81E+00
	200-600	6.15E-01	1.50E-01	7.31E+04	1.41E+09	1.81E-03	1.04E-04	2.33E-01	1.33E+00
Annelida	600-1,200	8.85E-02	7.84E-03	2.36E+04	5.57E+08	5.08E-04	2.58E-05	1.36E-01	1.84E+00
	All depths	7.03E-01	1.58E-01	9.68E+04	1.97E+09	2.32E-03	1.30E-04	3.68E-01	3.16E+00
	200-600	3.50E+03	7.98E+05	2.91E+06	7.79E+11	2.04E+01	1.75E+03	1.40E+01	9.82E+02
Anoplopoma fimbria	600-1,200	1.43E+03	7.24E+04	4.82E+05	1.04E+10	1.58E+01	7.17E+02	5.16E+00	1.06E+02
	All depths	4.93E+03	8.70E+05	3.39E+06	7.89E+11	3.62E+01	2.47E+03	1.91E+01	1.09E+03
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthomastus species	600-1,200	3.23E-01	3.69E-02	0.00E+00	0.00E+00	5.28E-03	9.53E-04	0.00E+00	0.00E+00
	All depths	3.23E-01	3.69E-02	0.00E+00	0.00E+00	5.28E-03	9.53E-04	0.00E+00	0.00E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Anthoptilum murrayi	200-600	3.12E+00	2.73E+00	1.60E+05	1.02E+10	7.69E-03	1.65E-03	3.95E-01	6.21E+00
	600-1,200	2.42E+02	5.82E+04	3.95E+07	1.55E+15	4.25E+00	1.79E+03	6.92E+02	4.78E+07
	All depths	2.45E+02	5.82E+04	3.96E+07	1.55E+15	4.26E+00	1.79E+03	6.92E+02	4.78E+07
Anthozoa	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.75E-02	3.30E-03	0.00E+00	0.00E+00	1.04E-03	1.08E-04	0.00E+00	0.00E+00
	All depths	5.75E-02	3.30E-03	0.00E+00	0.00E+00	1.04E-03	1.08E-04	0.00E+00	0.00E+00
Antimora microlepis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.00E+01	1.56E+02	4.65E+04	6.49E+07	3.66E-01	5.10E+00	8.29E-01	2.19E+00
	All depths	2.00E+01	1.56E+02	4.65E+04	6.49E+07	3.66E-01	5.10E+00	8.29E-01	2.19E+00
Antipatharia	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.59E-01	6.73E-02	0.00E+00	0.00E+00	3.67E-03	1.34E-03	0.00E+00	0.00E+00
	All depths	2.59E-01	6.73E-02	0.00E+00	0.00E+00	3.67E-03	1.34E-03	0.00E+00	0.00E+00
Anuropus bathypelagica	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	7.62E-01	5.81E-01	8.87E+03	7.86E+07	5.63E-03	3.17E-03	6.54E-02	4.28E-01
	All depths	7.62E-01	5.81E-01	8.87E+03	7.86E+07	5.63E-03	3.17E-03	6.54E-02	4.28E-01
Aphrocallistes vastus	200-600	3.37E+03	3.32E+06	0.00E+00	0.00E+00	9.02E+00	2.04E+03	0.00E+00	0.00E+00
	600-1,200	4.89E+02	1.51E+05	0.00E+00	0.00E+00	3.61E+00	5.19E+02	0.00E+00	0.00E+00
	All depths	3.86E+03	3.48E+06	0.00E+00	0.00E+00	1.26E+01	2.55E+03	0.00E+00	0.00E+00
Aphrodita negligens	200-600	6.52E+01	1.38E+03	4.83E+06	6.73E+12	1.62E-01	8.36E-01	1.20E+01	4.08E+03
	600-1,200	2.99E+02	6.71E+04	2.36E+07	4.28E+14	1.73E+00	2.21E+02	1.36E+02	1.41E+06
	All depths	3.64E+02	6.85E+04	2.84E+07	4.35E+14	1.89E+00	2.22E+02	1.48E+02	1.42E+06
Aphrodita species	200-600	1.13E+01	1.90E+01	8.94E+05	8.81E+10	4.60E-02	3.18E-02	3.93E+00	2.17E+02
	600-1,200	2.34E+00	1.56E+00	1.02E+05	2.38E+09	2.92E-02	2.73E-02	1.30E+00	4.15E+01
	All depths	1.36E+01	2.06E+01	9.96E+05	9.05E+10	7.52E-02	5.91E-02	5.22E+00	2.59E+02
Aphroditidae	200-600	8.33E+01	4.41E+02	3.43E+06	1.04E+12	3.96E-01	1.10E+00	1.75E+01	3.04E+03
	600-1,200	3.44E+01	3.30E+02	2.92E+06	2.92E+12	4.94E-01	7.31E+00	4.26E+01	6.22E+04
	All depths	1.18E+02	7.71E+02	6.35E+06	3.95E+12	8.91E-01	8.41E+00	6.01E+01	6.53E+04
Aptocyclus ventricosus	200-600	2.01E+02	2.73E+03	1.75E+05	1.31E+09	9.71E-01	5.59E+00	1.10E+00	6.91E+00
	600-1,200	1.77E+02	1.34E+03	3.57E+05	3.12E+09	2.33E+00	2.51E+01	5.26E+00	7.20E+01
	All depths	3.78E+02	4.07E+03	5.32E+05	4.43E+09	3.30E+00	3.06E+01	6.36E+00	7.89E+01
Arctomelon borealis	200-600	1.64E+00	2.70E+00	2.74E+04	7.50E+08	4.04E-03	1.64E-03	6.74E-02	4.54E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.64E+00	2.70E+00	2.74E+04	7.50E+08	4.04E-03	1.64E-03	6.74E-02	4.54E-01
Arctomelon species	200-600	1.17E+01	3.81E+01	2.04E+05	1.81E+10	3.75E-02	3.39E-02	5.81E-01	1.18E+01
	600-1,200	3.60E-01	1.30E-01	6.43E+03	4.13E+07	2.07E-03	4.27E-04	3.69E-02	1.36E-01
	All depths	1.21E+01	3.82E+01	2.11E+05	1.81E+10	3.95E-02	3.43E-02	6.18E-01	1.20E+01
Arctomelon species cf. *stearnsii*	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.25E-01	1.05E-01	5.90E+03	3.48E+07	1.86E-03	3.47E-04	3.39E-02	1.15E-01
	All depths	3.25E-01	1.05E-01	5.90E+03	3.48E+07	1.86E-03	3.47E-04	3.39E-02	1.15E-01
Arctomelon stearnsii	200-600	6.19E+00	1.07E+01	7.81E+04	1.75E+09	2.78E-02	1.88E-02	3.24E-01	2.26E+00
	600-1,200	1.01E-01	1.02E-02	3.37E+03	1.14E+07	1.71E-03	2.93E-04	5.70E-02	3.25E-01
	All depths	6.29E+00	1.08E+01	8.15E+04	1.76E+09	2.95E-02	1.91E-02	3.81E-01	2.58E+00
Argis species	200-600	1.74E+00	2.92E-01	3.91E+05	1.19E+10	9.07E-03	1.32E-03	1.66E+00	1.60E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.74E+00	2.92E-01	3.91E+05	1.19E+10	9.07E-03	1.32E-03	1.66E+00	1.60E+01

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Ascidiacea	200-600	3.76E-02	1.41E-03	6.26E+03	3.92E+07	9.36E-05	8.76E-07	1.56E-02	2.43E-02
	600-1,200	7.82E-01	1.64E-01	3.30E+04	3.36E+08	1.49E-02	5.82E-03	6.35E-01	1.23E+01
	All depths	8.20E-01	1.66E-01	3.93E+04	3.75E+08	1.50E-02	5.82E-03	6.50E-01	1.23E+01
Asteronyx loveni	200-600	5.53E+03	1.74E+07	6.36E+07	2.33E+15	3.76E+01	1.01E+05	4.36E+02	1.37E+07
	600-1,200	6.69E+00	1.11E+01	2.62E+05	1.58E+10	9.17E-02	2.24E-01	3.41E+00	2.28E+02
	All depths	5.54E+03	1.74E+07	6.39E+07	2.33E+15	3.77E+01	1.01E+05	4.39E+02	1.37E+07
Astrochele species	200-600	4.01E-02	1.61E-03	8.02E+03	6.44E+07	1.55E-04	2.39E-06	3.09E-02	9.55E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.01E-02	1.61E-03	8.02E+03	6.44E+07	1.55E-04	2.39E-06	3.09E-02	9.55E-02
Atheresthes evermanni	200-600	1.63E+04	3.33E+06	1.33E+07	1.44E+12	1.09E+02	1.32E+04	9.00E+01	6.43E+03
	600-1,200	5.06E+03	9.76E+05	2.41E+06	1.80E+11	5.26E+01	6.65E+03	2.60E+01	1.64E+03
	All depths	2.14E+04	4.31E+06	1.57E+07	1.62E+12	1.62E+02	1.99E+04	1.16E+02	8.07E+03
Atheresthes stomias	200-600	4.54E+04	2.90E+07	3.72E+07	2.98E+13	2.55E+02	7.70E+04	2.01E+02	1.15E+05
	600-1,200	1.49E+02	4.54E+03	6.54E+04	7.35E+08	1.01E+00	1.84E+01	4.81E-01	3.34E+00
	All depths	4.55E+04	2.90E+07	3.73E+07	2.98E+13	2.56E+02	7.70E+04	2.02E+02	1.15E+05
Atolla species	200-600	2.20E-01	1.79E-02	1.48E+04	7.50E+07	8.81E-04	2.73E-05	7.06E-02	2.10E-01
	600-1,200	6.42E+00	1.91E+00	3.24E+05	3.46E+09	6.10E-02	1.84E-02	3.24E+00	4.65E+01
	All depths	6.64E+00	1.93E+00	3.38E+05	3.54E+09	6.18E-02	1.84E-02	3.31E+00	4.67E+01
Aurelia labiata	200-600	8.89E+01	1.61E+03	2.31E+05	1.19E+10	2.21E-01	1.00E+00	5.75E-01	7.39E+00
	600-1,200	8.25E-01	4.78E-01	5.04E+03	1.28E+07	1.50E-02	1.57E-02	9.28E-02	4.37E-01
	All depths	8.98E+01	1.61E+03	2.36E+05	1.19E+10	2.36E-01	1.02E+00	6.68E-01	7.83E+00
Aurelia species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.30E-01	2.81E-01	3.79E+03	1.43E+07	7.64E-03	5.84E-03	5.46E-02	2.98E-01
	All depths	5.30E-01	2.81E-01	3.79E+03	1.43E+07	7.64E-03	5.84E-03	5.46E-02	2.98E-01
Balanus evermanni	200-600	1.91E+02	3.64E+04	0.00E+00	0.00E+00	1.65E+00	2.72E+02	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.91E+02	3.64E+04	0.00E+00	0.00E+00	1.65E+00	2.72E+02	0.00E+00	0.00E+00
Bathophilus flemingi	200-600	7.73E-01	1.72E-01	3.62E+04	2.86E+08	7.96E-03	2.19E-03	3.70E-01	3.69E+00
	600-1,200	1.73E+01	4.43E+01	4.97E+05	3.23E+10	2.90E-01	1.05E+00	8.56E+00	8.22E+02
	All depths	1.81E+01	4.44E+01	5.34E+05	3.26E+10	2.98E-01	1.05E+00	8.93E+00	8.26E+02
Bathyagonus nigripinnis	200-600	2.99E+01	5.31E+01	1.92E+06	1.28E+11	1.86E-01	1.49E-01	1.29E+01	5.93E+02
	600-1,200	2.60E+01	2.63E+01	2.30E+06	2.70E+11	3.11E-01	3.87E-01	2.77E+01	4.00E+03
	All depths	5.59E+01	7.94E+01	4.22E+06	3.98E+11	4.97E-01	5.36E-01	4.06E+01	4.59E+03
Bathylagus milleri	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.07E+00	2.21E+00	1.33E+05	2.50E+09	5.38E-02	3.49E-02	1.78E+00	4.36E+01
	All depths	4.07E+00	2.21E+00	1.33E+05	2.50E+09	5.38E-02	3.49E-02	1.78E+00	4.36E+01
Bathylagus ochotensis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	9.18E-01	2.05E-01	3.63E+04	2.99E+08	1.27E-02	3.54E-03	5.59E-01	7.79E+00
	All depths	9.18E-01	2.05E-01	3.63E+04	2.99E+08	1.27E-02	3.54E-03	5.59E-01	7.79E+00
Bathylagus pacificus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.17E+01	5.87E+01	4.34E+05	4.98E+10	1.26E-01	5.00E-01	4.99E+00	4.42E+02
	All depths	1.17E+01	5.87E+01	4.34E+05	4.98E+10	1.26E-01	5.00E-01	4.99E+00	4.42E+02
Bathylagus species	200-600	4.14E-01	1.02E-01	1.00E+04	5.88E+07	2.38E-03	3.26E-04	5.87E-02	2.00E-01
	600-1,200	1.94E+02	2.55E+03	5.83E+06	1.44E+12	1.91E+00	1.17E+01	6.24E+01	8.11E+03
	All depths	1.94E+02	2.55E+03	5.84E+06	1.44E+12	1.91E+00	1.17E+01	6.25E+01	8.11E+03

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Bathymaster signatus	200-600	4.35E+01	3.58E+02	1.89E+05	6.65E+09	7.90E-01	1.20E+01	3.29E+00	1.99E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.35E+01	3.58E+02	1.89E+05	6.65E+09	7.90E-01	1.20E+01	3.29E+00	1.99E+02
Bathyplotes species	200-600	1.13E+02	1.65E+03	2.60E+06	1.09E+12	8.75E-01	1.63E+01	2.33E+01	1.70E+04
	600-1,200	9.52E+02	9.61E+04	3.73E+07	2.13E+14	1.02E+01	1.06E+03	4.59E+02	3.87E+06
	All depths	1.06E+03	9.78E+04	3.99E+07	2.14E+14	1.11E+01	1.08E+03	4.82E+02	3.89E+06
Bathyraja abyssicola	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.23E+02	1.45E+04	1.25E+04	4.33E+07	3.94E+00	4.58E+02	2.20E-01	1.33E+00
	All depths	2.23E+02	1.45E+04	1.25E+04	4.33E+07	3.94E+00	4.58E+02	2.20E-01	1.33E+00
Bathyraja abyssicola egg case	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.65E+00	2.16E+00	1.01E+05	5.26E+09	4.03E-02	5.32E-02	1.63E+00	1.47E+02
	All depths	2.65E+00	2.16E+00	1.01E+05	5.26E+09	4.03E-02	5.32E-02	1.63E+00	1.47E+02
Bathyraja aleutica	200-600	2.01E+04	2.05E+07	3.57E+06	3.39E+11	1.12E+02	5.05E+04	2.18E+01	1.05E+03
	600-1,200	3.13E+03	1.75E+05	3.48E+06	2.46E+11	4.48E+01	4.02E+03	4.92E+01	6.28E+03
	All depths	2.32E+04	2.07E+07	7.06E+06	5.85E+11	1.57E+02	5.45E+04	7.09E+01	7.33E+03
Bathyraja aleutica egg case	200-600	1.13E+02	8.32E+03	1.03E+06	5.10E+11	3.04E-01	5.21E+00	3.05E+00	3.40E+02
	600-1,200	1.99E+00	7.11E-01	3.56E+04	1.30E+08	3.30E-02	1.76E-02	6.05E-01	3.49E+00
	All depths	1.15E+02	8.32E+03	1.07E+06	5.10E+11	3.37E-01	5.23E+00	3.66E+00	3.43E+02
Bathyraja interrupta	200-600	1.95E+03	1.47E+05	1.70E+06	1.15E+11	6.58E+00	1.93E+02	6.38E+00	1.66E+02
	600-1,200	1.62E+01	2.63E+02	1.20E+04	1.44E+08	9.31E-02	8.67E-01	6.90E-02	4.76E-01
	All depths	1.96E+03	1.47E+05	1.72E+06	1.15E+11	6.68E+00	1.94E+02	6.45E+00	1.67E+02
Bathyraja interrupta egg case	200-600	9.71E+00	1.03E+01	4.43E+05	2.29E+10	3.56E-02	1.16E-02	1.99E+00	4.63E+01
	600-1,200	4.66E-01	5.93E-02	4.28E+04	4.80E+08	5.76E-03	7.85E-04	5.39E-01	6.03E+00
	All depths	1.02E+01	1.03E+01	4.86E+05	2.34E+10	4.13E-02	1.23E-02	2.53E+00	5.23E+01
Bathyraja lindbergi	200-600	1.49E+03	1.04E+05	4.17E+05	7.09E+09	1.26E+01	8.00E+02	3.49E+00	5.53E+01
	600-1,200	4.02E+03	6.86E+05	2.65E+06	4.90E+11	5.88E+01	1.64E+04	3.86E+01	9.80E+03
	All depths	5.51E+03	7.90E+05	3.07E+06	4.97E+11	7.14E+01	1.72E+04	4.21E+01	9.85E+03
Bathyraja lindbergi egg case	200-600	5.66E-02	3.21E-03	1.13E+04	1.28E+08	3.32E-04	1.10E-05	6.64E-02	4.41E-01
	600-1,200	6.50E-02	2.19E-03	8.17E+03	3.77E+07	1.20E-03	7.50E-05	1.51E-01	1.30E+00
	All depths	1.22E-01	5.40E-03	1.95E+04	1.66E+08	1.53E-03	8.60E-05	2.17E-01	1.74E+00
Bathyraja maculata	200-600	4.34E+03	6.90E+05	1.13E+06	4.92E+10	2.85E+01	2.70E+03	7.45E+00	1.88E+02
	600-1,200	7.29E+02	4.72E+05	3.14E+05	6.75E+10	1.23E+01	1.35E+04	5.31E+00	1.93E+03
	All depths	5.06E+03	1.16E+06	1.44E+06	1.17E+11	4.09E+01	1.62E+04	1.28E+01	2.12E+03
Bathyraja maculata egg case	200-600	9.36E-02	8.76E-03	6.24E+03	3.90E+07	5.49E-04	3.01E-05	3.66E-02	1.34E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.36E-02	8.76E-03	6.24E+03	3.90E+07	5.49E-04	3.01E-05	3.66E-02	1.34E-01
Bathyraja minispinosa	200-600	9.77E+02	3.47E+04	5.10E+05	8.30E+09	6.20E+00	1.52E+02	3.21E+00	3.54E+01
	600-1,200	3.82E+02	6.35E+03	5.13E+05	7.70E+09	5.10E+00	8.30E+01	6.68E+00	1.01E+02
	All depths	1.36E+03	4.11E+04	1.02E+06	1.60E+10	1.13E+01	2.35E+02	9.90E+00	1.36E+02
Bathyraja minispinosa egg case	200-600	4.25E+00	5.16E+00	2.91E+05	3.02E+10	5.17E-02	9.49E-02	3.72E+00	5.81E+02
	600-1,200	3.95E-01	2.87E-02	2.59E+04	1.25E+08	6.35E-03	7.17E-04	4.30E-01	3.55E+00
	All depths	4.65E+00	5.19E+00	3.17E+05	3.03E+10	5.81E-02	9.56E-02	4.15E+00	5.84E+02
Bathyraja parmifera	200-600	8.96E+03	7.38E+06	1.43E+06	2.04E+11	4.05E+01	1.22E+04	6.14E+00	3.17E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	8.96E+03	7.38E+06	1.43E+06	2.04E+11	4.05E+01	1.22E+04	6.14E+00	3.17E+02

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Bathyraja parmifera egg case	200-600	1.83E+02	2.30E+04	3.72E+06	7.80E+12	1.88E+00	2.80E+02	3.71E+01	9.45E+04
	600-1,200	1.73E+00	8.84E-01	5.40E+04	5.91E+08	3.67E-02	4.43E-02	1.04E+00	2.12E+01
	All depths	1.85E+02	2.30E+04	3.78E+06	7.80E+12	1.92E+00	2.80E+02	3.81E+01	9.46E+04
Bathyraja species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.03E-01	1.06E-02	4.12E+03	1.70E+07	1.52E-03	2.32E-04	6.10E-02	3.72E-01
	All depths	1.03E-01	1.06E-02	4.12E+03	1.70E+07	1.52E-03	2.32E-04	6.10E-02	3.72E-01
Bathyraja species egg case	200-600	1.05E-01	1.11E-02	7.03E+03	4.94E+07	1.17E-03	1.36E-04	7.78E-02	6.05E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.05E-01	1.11E-02	7.03E+03	4.94E+07	1.17E-03	1.36E-04	7.78E-02	6.05E-01
Bathyraja taranetzi	200-600	5.31E+02	1.57E+04	5.58E+05	1.82E+10	3.91E+00	9.29E+01	3.89E+00	7.97E+01
	600-1,200	4.56E+01	9.95E+02	5.47E+04	1.12E+09	6.80E-01	2.67E+01	8.30E-01	3.07E+01
	All depths	5.77E+02	1.67E+04	6.13E+05	1.93E+10	4.59E+00	1.20E+02	4.72E+00	1.10E+02
Bathyraja taranetzi egg case	200-600	2.11E-01	4.47E-02	6.04E+03	3.65E+07	5.21E-04	2.71E-05	1.49E-02	2.21E-02
	600-1,200	7.73E-02	3.35E-03	8.30E+03	3.61E+07	1.25E-03	1.02E-04	1.16E-01	6.77E-01
	All depths	2.89E-01	4.81E-02	1.43E+04	7.26E+07	1.77E-03	1.29E-04	1.31E-01	6.99E-01
Bathyraja trachura	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.28E+03	1.09E+05	1.12E+06	3.06E+10	3.00E+01	2.39E+03	1.50E+01	7.04E+02
	All depths	2.28E+03	1.09E+05	1.12E+06	3.06E+10	3.00E+01	2.39E+03	1.50E+01	7.04E+02
Bathyraja trachura egg case	200-600	1.23E-01	1.50E-02	7.00E+03	4.91E+07	1.68E-03	2.82E-04	9.59E-02	9.20E-01
	600-1,200	1.53E+01	1.11E+01	1.07E+06	4.98E+10	1.78E-01	1.64E-01	1.17E+01	5.37E+02
	All depths	1.54E+01	1.11E+01	1.07E+06	4.98E+10	1.80E-01	1.65E-01	1.17E+01	5.38E+02
Belonella borealis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	7.67E+00	1.29E+01	3.40E+04	3.00E+08	1.33E-01	3.97E-01	5.96E-01	9.39E+00
	All depths	7.67E+00	1.29E+01	3.40E+04	3.00E+08	1.33E-01	3.97E-01	5.96E-01	9.39E+00
Benthalbella dentata	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.12E+00	4.60E-01	2.04E+04	1.63E+08	2.01E-02	1.43E-02	4.09E-01	7.54E+00
	All depths	1.12E+00	4.60E-01	2.04E+04	1.63E+08	2.01E-02	1.43E-02	4.09E-01	7.54E+00
Bentheogennema borealis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.09E-01	1.28E-02	8.55E+04	1.97E+09	3.81E-03	5.70E-04	1.46E+00	7.11E+01
	All depths	2.09E-01	1.28E-02	8.55E+04	1.97E+09	3.81E-03	5.70E-04	1.46E+00	7.11E+01
Benthoctopus leioderma	200-600	4.50E+01	1.34E+02	1.11E+05	8.00E+08	1.67E-01	2.20E-01	4.21E-01	1.25E+00
	600-1,200	8.75E+01	5.78E+02	2.52E+05	4.95E+09	6.45E-01	3.06E+00	1.93E+00	2.81E+01
	All depths	1.33E+02	7.12E+02	3.63E+05	5.75E+09	8.12E-01	3.28E+00	2.35E+00	2.93E+01
Benthoctopus oregonensis	200-600	1.46E+01	1.24E+02	2.30E+04	2.66E+08	7.67E-02	3.90E-01	1.14E-01	6.98E-01
	600-1,200	1.36E+02	1.59E+03	1.67E+05	2.26E+09	2.27E+00	5.65E+01	2.41E+00	4.58E+01
	All depths	1.51E+02	1.71E+03	1.90E+05	2.52E+09	2.35E+00	5.69E+01	2.53E+00	4.65E+01
Beringius frielei	200-600	9.16E+01	4.71E+02	9.00E+05	4.63E+10	2.52E-01	3.15E-01	2.49E+00	3.07E+01
	600-1,200	8.94E+00	1.11E+01	1.99E+05	8.10E+09	1.06E-01	2.37E-01	2.98E+00	2.61E+02
	All depths	1.01E+02	4.82E+02	1.10E+06	5.44E+10	3.59E-01	5.52E-01	5.47E+00	2.92E+02
Berryteuthis magister	200-600	1.06E+03	5.13E+04	2.88E+06	2.52E+11	5.51E+00	7.46E+01	1.61E+01	6.04E+02
	600-1,200	6.80E+01	1.61E+02	2.07E+05	1.58E+09	7.17E-01	1.62E+00	2.21E+00	1.52E+01
	All depths	1.13E+03	5.14E+04	3.09E+06	2.54E+11	6.23E+00	7.62E+01	1.83E+01	6.19E+02
Bothrocara brunneum	200-600	1.51E+02	3.12E+03	6.72E+04	6.01E+08	1.80E+00	4.29E+01	7.81E-01	7.70E+00
	600-1,200	9.91E+02	8.04E+04	9.45E+05	1.29E+11	1.01E+01	6.23E+02	8.87E+00	7.53E+02
	All depths	1.14E+03	8.35E+04	1.01E+06	1.29E+11	1.19E+01	6.66E+02	9.65E+00	7.61E+02

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bothrocara nyx	600-1,200	4.23E-01	4.27E-02	5.12E+04	1.05E+09	5.27E-03	5.86E-04	5.76E-01	9.95E+00
	All depths	4.23E-01	4.27E-02	5.12E+04	1.05E+09	5.27E-03	5.86E-04	5.76E-01	9.95E+00
	200-600	3.02E-02	9.13E-04	6.04E+03	3.65E+07	7.44E-05	5.53E-07	1.49E-02	2.21E-02
Bothrocara pusillum	600-1,200	1.42E-01	8.60E-03	1.53E+04	8.99E+07	2.65E-03	3.00E-04	2.86E-01	3.13E+00
	All depths	1.72E-01	9.52E-03	2.14E+04	1.26E+08	2.73E-03	3.00E-04	3.01E-01	3.16E+00
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bothrocara species	600-1,200	6.20E+00	2.89E+01	7.23E+04	3.87E+09	1.15E-01	1.01E+00	1.33E+00	1.34E+02
	All depths	6.20E+00	2.89E+01	7.23E+04	3.87E+09	1.15E-01	1.01E+00	1.33E+00	1.34E+02
	200-600	1.05E+04	6.38E+06	1.87E+07	2.03E+13	2.70E+01	3.98E+03	4.82E+01	1.24E+04
Bothrocara zestum	600-1,200	1.44E+03	1.59E+05	8.71E+06	6.64E+12	1.33E+01	1.36E+03	8.86E+01	6.53E+04
	All depths	1.19E+04	6.54E+06	2.74E+07	2.69E+13	4.03E+01	5.34E+03	1.37E+02	7.77E+04
	200-600	7.66E-01	3.56E-01	6.55E+04	1.17E+09	6.60E-03	2.67E-03	5.74E-01	9.00E+00
Brachiopoda	600-1,200	1.12E+00	6.84E-01	1.18E+05	6.88E+09	1.40E-02	9.62E-03	1.52E+00	9.75E+01
	All depths	1.89E+00	1.04E+00	1.84E+05	8.04E+09	2.06E-02	1.23E-02	2.09E+00	1.07E+02
	200-600	7.06E+02	2.60E+05	2.98E+07	4.43E+14	3.61E+00	7.97E+02	1.50E+02	1.44E+06
Brisaster latifrons	600-1,200	1.38E+02	1.71E+04	9.52E+06	7.50E+13	2.08E+00	3.90E+02	1.43E+02	1.71E+06
	All depths	8.45E+02	2.77E+05	3.93E+07	5.18E+14	5.69E+00	1.19E+03	2.93E+02	3.15E+06
	200-600	1.10E+03	1.20E+06	5.78E+07	3.34E+15	6.43E+00	4.14E+03	3.39E+02	1.15E+07
Brisaster species	600-1,200	1.48E-01	2.18E-02	3.54E+04	1.25E+09	8.47E-04	7.18E-05	2.03E-01	4.13E+00
	All depths	1.10E+03	1.20E+06	5.78E+07	3.34E+15	6.43E+00	4.14E+03	3.39E+02	1.15E+07
	200-600	4.26E+00	1.01E+01	1.66E+04	5.76E+07	3.33E-02	2.16E-02	3.41E-01	2.47E+00
Brisingidae	600-1,200	5.05E+01	2.04E+03	6.30E+05	3.08E+11	2.96E-01	6.74E+00	3.72E+00	1.02E+03
	All depths	5.48E+01	2.05E+03	6.47E+05	3.09E+11	3.29E-01	6.76E+00	4.06E+00	1.02E+03
	200-600	1.72E+00	1.95E+00	0.00E+00	0.00E+00	4.25E-03	1.19E-03	0.00E+00	0.00E+00
Bryozoa	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.72E+00	1.95E+00	0.00E+00	0.00E+00	4.25E-03	1.19E-03	0.00E+00	0.00E+00
	200-600	6.32E-01	3.99E-01	6.20E+03	3.84E+07	1.56E-03	2.42E-04	1.53E-02	2.33E-02
Buccinum costatum	600-1,200	1.60E+01	2.74E+01	4.59E+05	1.93E+10	1.75E-01	2.87E-01	5.63E+00	3.12E+02
	All depths	1.66E+01	2.78E+01	4.65E+05	1.93E+10	1.77E-01	2.87E-01	5.64E+00	3.12E+02
	200-600	1.17E+02	1.52E+03	3.86E+06	1.57E+12	4.29E-01	1.28E+00	1.29E+01	1.18E+03
Buccinum oedematum	600-1,200	1.81E+02	7.49E+02	6.63E+06	1.20E+12	2.10E+00	1.06E+01	7.58E+01	1.57E+04
	All depths	2.98E+02	2.27E+03	1.05E+07	2.77E+12	2.53E+00	1.19E+01	8.87E+01	1.69E+04
	200-600	2.19E+00	1.27E+00	3.61E+04	3.18E+08	8.45E-03	1.88E-03	1.39E-01	4.72E-01
Buccinum scalariforme	600-1,200	1.57E+00	2.46E+00	5.73E+04	3.29E+09	2.65E-02	7.03E-02	9.70E-01	9.40E+01
	All depths	3.76E+00	3.73E+00	9.35E+04	3.60E+09	3.50E-02	7.22E-02	1.11E+00	9.45E+01
	200-600	1.12E+00	7.11E-01	2.95E+04	4.74E+08	7.08E-03	3.93E-03	1.81E-01	2.48E+00
Buccinum species	600-1,200	8.40E+00	1.41E+01	2.85E+05	2.10E+10	1.16E-01	2.75E-01	4.06E+00	4.31E+02
	All depths	9.51E+00	1.48E+01	3.15E+05	2.15E+10	1.23E-01	2.79E-01	4.24E+00	4.33E+02
	200-600	5.64E-02	3.18E-03	1.13E+04	1.27E+08	2.17E-04	4.72E-06	4.34E-02	1.89E-01
Bulbus fragilis	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.64E-02	3.18E-03	1.13E+04	1.27E+08	2.17E-04	4.72E-06	4.34E-02	1.89E-01
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Careproctus bowersianus	600-1,200	2.09E-02	4.37E-04	2.61E+03	6.83E+06	3.78E-04	1.43E-05	4.73E-02	2.23E-01
	All depths	2.09E-02	4.37E-04	2.61E+03	6.83E+06	3.78E-04	1.43E-05	4.73E-02	2.23E-01

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Careproctus colletti	200-600	6.71E+01	1.12E+03	2.28E+05	1.67E+10	6.69E-01	1.23E+01	1.96E+00	9.21E+01
	600-1,200	1.17E+01	2.97E+01	7.76E+04	8.19E+08	1.38E-01	2.88E-01	1.12E+00	1.80E+01
	All depths	7.89E+01	1.15E+03	3.05E+05	1.75E+10	8.07E-01	1.26E+01	3.08E+00	1.10E+02
Careproctus cypselurus	200-600	3.10E+00	3.57E+00	3.83E+04	5.20E+08	2.49E-02	3.72E-02	3.37E-01	5.95E+00
	600-1,200	8.11E+01	2.26E+02	9.03E+05	2.67E+10	1.09E+00	4.27E+00	1.18E+01	4.98E+02
	All depths	8.42E+01	2.29E+02	9.42E+05	2.72E+10	1.12E+00	4.31E+00	1.21E+01	5.04E+02
Careproctus furcellus	200-600	2.24E+02	4.98E+03	2.37E+05	4.92E+09	1.58E+00	3.78E+01	1.70E+00	2.71E+01
	600-1,200	7.78E+00	2.09E+01	3.14E+04	3.52E+08	6.28E-02	1.06E-01	3.43E-01	5.71E+00
	All depths	2.32E+02	5.00E+03	2.68E+05	5.27E+09	1.65E+00	3.79E+01	2.04E+00	3.28E+01
Careproctus lycopersicus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.18E-01	1.38E-02	3.92E+03	1.54E+07	1.74E-03	3.03E-04	5.80E-02	3.36E-01
	All depths	1.18E-01	1.38E-02	3.92E+03	1.54E+07	1.74E-03	3.03E-04	5.80E-02	3.36E-01
Careproctus melanurus	200-600	2.11E+02	1.80E+03	2.50E+05	3.63E+09	2.32E+00	2.70E+01	2.81E+00	6.78E+01
	600-1,200	3.85E+02	4.42E+03	8.83E+05	1.85E+10	4.80E+00	7.95E+01	1.15E+01	3.88E+02
	All depths	5.96E+02	6.21E+03	1.13E+06	2.21E+10	7.12E+00	1.06E+02	1.43E+01	4.55E+02
Careproctus rastrinus	200-600	1.53E+02	4.33E+03	5.16E+05	1.46E+10	5.38E-01	3.73E+00	1.96E+00	2.57E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.53E+02	4.33E+03	5.16E+05	1.46E+10	5.38E-01	3.73E+00	1.96E+00	2.57E+01
Careproctus scottae	200-600	5.17E-01	1.35E-01	1.16E+04	6.10E+07	1.99E-03	2.01E-04	4.46E-02	9.06E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.17E-01	1.35E-01	1.16E+04	6.10E+07	1.99E-03	2.01E-04	4.46E-02	9.06E-02
Careproctus simus	200-600	6.04E-01	1.10E-01	2.64E+04	2.58E+08	7.64E-03	2.00E-03	3.28E-01	4.69E+00
	600-1,200	1.40E+00	4.93E-01	8.85E+04	2.56E+09	2.07E-02	9.98E-03	1.38E+00	6.66E+01
	All depths	2.00E+00	6.02E-01	1.15E+05	2.82E+09	2.84E-02	1.20E-02	1.71E+00	7.13E+01
Careproctus species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.73E-01	6.94E-02	4.72E+04	4.09E+08	1.03E-02	1.63E-03	7.25E-01	9.77E+00
	All depths	6.73E-01	6.94E-02	4.72E+04	4.09E+08	1.03E-02	1.63E-03	7.25E-01	9.77E+00
Careproctus species cf. *gilberti*	200-600	5.98E-02	3.58E-03	1.20E+04	1.43E+08	1.47E-04	2.17E-06	2.95E-02	8.68E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.98E-02	3.58E-03	1.20E+04	1.43E+08	1.47E-04	2.17E-06	2.95E-02	8.68E-02
Celleporina ventricosa	200-600	5.90E-03	3.49E-05	0.00E+00	0.00E+00	3.46E-05	1.20E-07	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.90E-03	3.49E-05	0.00E+00	0.00E+00	3.46E-05	1.20E-07	0.00E+00	0.00E+00
Ceramaster species	200-600	4.11E+03	5.81E+05	3.75E+07	4.49E+13	1.89E+01	8.69E+02	1.60E+02	6.91E+04
	600-1,200	5.32E+02	2.74E+04	8.34E+06	1.05E+13	4.91E+00	1.58E+02	6.63E+01	4.25E+04
	All depths	4.64E+03	6.09E+05	4.58E+07	5.54E+13	2.38E+01	1.03E+03	2.27E+02	1.12E+05
Chauliodus macouni	200-600	5.58E-01	1.72E-01	1.82E+04	1.06E+08	1.96E-03	1.47E-04	1.63E-01	1.78E+00
	600-1,200	4.36E+00	1.45E+00	1.54E+05	1.12E+09	5.00E-02	1.63E-02	1.71E+00	1.19E+01
	All depths	4.92E+00	1.62E+00	1.73E+05	1.23E+09	5.19E-02	1.65E-02	1.88E+00	1.37E+01
Chionoecetes angulatus	200-600	8.92E+01	5.73E+02	6.18E+05	4.20E+10	6.63E-01	4.52E+00	3.54E+00	1.02E+02
	600-1,200	6.04E+03	9.90E+05	4.66E+07	1.03E+14	8.01E+01	2.43E+04	6.05E+02	1.54E+06
	All depths	6.13E+03	9.90E+05	4.72E+07	1.03E+14	8.07E+01	2.43E+04	6.09E+02	1.54E+06
Chionoecetes bairdi	200-600	6.42E+02	3.57E+04	5.60E+06	3.54E+12	2.10E+00	2.90E+01	1.92E+01	3.15E+03
	600-1,200	9.61E-01	9.23E-01	6.01E+03	3.61E+07	5.52E-03	3.04E-03	3.45E-02	1.19E-01
	All depths	6.43E+02	3.57E+04	5.61E+06	3.54E+12	2.11E+00	2.90E+01	1.92E+01	3.15E+03

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Chionoecetes hybrid	200-600	1.14E+01	2.41E+01	1.20E+05	2.52E+09	7.01E-02	8.91E-02	6.42E-01	5.87E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.14E+01	2.41E+01	1.20E+05	2.52E+09	7.01E-02	8.91E-02	6.42E-01	5.87E+00
Chionoecetes opilio	200-600	1.28E+01	3.06E+01	1.97E+05	7.70E+09	6.58E-02	1.10E-01	8.26E-01	1.18E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.28E+01	3.06E+01	1.97E+05	7.70E+09	6.58E-02	1.10E-01	8.26E-01	1.18E+01
Chionoecetes tanneri	200-600	5.19E+02	1.93E+04	1.18E+06	8.34E+10	4.32E+00	1.13E+02	1.04E+01	4.87E+02
	600-1,200	1.21E+03	1.24E+05	6.03E+06	2.42E+12	1.41E+01	1.13E+03	8.16E+01	5.01E+04
	All depths	1.73E+03	1.43E+05	7.22E+06	2.51E+12	1.84E+01	1.24E+03	9.21E+01	5.06E+04
Chiroteuthis calyx	200-600	7.32E-01	5.35E-01	7.32E+03	5.35E+07	2.82E-03	7.95E-04	2.82E-02	7.95E-02
	600-1,200	5.50E-01	3.02E-01	5.24E+03	2.74E+07	8.52E-03	7.26E-03	8.12E-02	6.59E-01
	All depths	1.28E+00	8.38E-01	1.26E+04	8.10E+07	1.13E-02	8.06E-03	1.09E-01	7.38E-01
Chlamys species	200-600	1.74E-01	1.35E-02	2.18E+04	2.34E+08	1.50E-03	1.01E-04	1.88E-01	1.75E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.74E-01	1.35E-02	2.18E+04	2.34E+08	1.50E-03	1.01E-04	1.88E-01	1.75E+00
Chorilia longipes	200-600	3.13E-01	3.30E-02	2.57E+04	1.81E+08	3.51E-03	5.74E-04	2.56E-01	2.33E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.13E-01	3.30E-02	2.57E+04	1.81E+08	3.51E-03	5.74E-04	2.56E-01	2.33E+00
Chrysaora melanaster	200-600	4.29E+02	6.63E+03	5.68E+05	1.13E+10	1.50E+00	7.35E+00	1.99E+00	1.20E+01
	600-1,200	3.05E+02	4.26E+03	6.20E+05	3.91E+10	2.74E+00	3.31E+01	4.88E+00	1.56E+02
	All depths	7.35E+02	1.09E+04	1.19E+06	5.04E+10	4.24E+00	4.05E+01	6.87E+00	1.68E+02
Clupea pallasi	200-600	3.58E+00	6.95E+00	1.24E+04	7.23E+07	8.92E-03	4.32E-03	3.09E-02	4.49E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.58E+00	6.95E+00	1.24E+04	7.23E+07	8.92E-03	4.32E-03	3.09E-02	4.49E-02
Colus species	200-600	2.11E-01	1.69E-02	1.91E+04	1.43E+08	1.06E-03	3.60E-05	1.05E-01	3.84E-01
	600-1,200	6.50E-03	4.23E-05	3.25E+03	1.06E+07	1.21E-04	1.47E-06	6.07E-02	3.69E-01
	All depths	2.17E-01	1.69E-02	2.23E+04	1.54E+08	1.18E-03	3.75E-05	1.66E-01	7.52E-01
Coryphaenoides acrolepis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.02E+03	9.76E+05	2.09E+07	1.14E+13	9.90E+01	3.15E+04	3.26E+02	2.36E+05
	All depths	6.02E+03	9.76E+05	2.09E+07	1.14E+13	9.90E+01	3.15E+04	3.26E+02	2.36E+05
Coryphaenoides cinereus	200-600	2.29E+03	1.78E+06	1.22E+07	6.39E+13	1.98E+01	8.66E+03	9.89E+01	2.70E+05
	600-1,200	6.91E+04	5.45E+07	4.62E+08	3.14E+15	9.03E+02	8.04E+05	6.20E+03	5.19E+07
	All depths	7.14E+04	5.63E+07	4.75E+08	3.20E+15	9.23E+02	8.13E+05	6.29E+03	5.22E+07
Coryphaenoides longifilis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.02E+02	5.60E+03	5.73E+05	1.86E+11	9.18E-01	4.57E+01	5.17E+00	1.52E+03
	All depths	1.02E+02	5.60E+03	5.73E+05	1.86E+11	9.18E-01	4.57E+01	5.17E+00	1.52E+03
Crangon species	200-600	5.29E-01	5.37E-02	2.76E+05	1.45E+10	1.31E-03	3.32E-05	6.88E-01	9.03E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.29E-01	5.37E-02	2.76E+05	1.45E+10	1.31E-03	3.32E-05	6.88E-01	9.03E+00
crinoid species	200-600	2.34E+01	2.80E+02	2.79E+06	3.68E+12	1.48E-01	1.19E+00	2.18E+01	3.23E+04
	600-1,200	8.87E+03	7.08E+07	3.15E+09	9.08E+18	1.28E+02	1.47E+06	4.55E+04	1.88E+11
	All depths	8.89E+03	7.08E+07	3.15E+09	9.08E+18	1.28E+02	1.47E+06	4.55E+04	1.88E+11
Crispatotrochus foxi	200-600	7.24E-02	2.18E-03	6.54E+03	1.72E+07	1.03E-03	4.38E-05	9.27E-02	3.47E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	7.24E-02	2.18E-03	6.54E+03	1.72E+07	1.03E-03	4.38E-05	9.27E-02	3.47E-01

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Crossaster borealis	200-600	9.43E+02	1.97E+04	8.19E+06	9.93E+11	6.46E+00	1.50E+02	4.98E+01	4.68E+03
	600-1,200	5.92E+02	2.77E+04	5.58E+06	1.61E+12	6.55E+00	2.63E+02	6.53E+01	2.05E+04
	All depths	1.53E+03	4.75E+04	1.38E+07	2.61E+12	1.30E+01	4.13E+02	1.15E+02	2.51E+04
Crossaster papposus	200-600	6.29E-01	2.51E-01	5.25E+04	1.64E+09	7.80E-03	4.90E-03	6.36E-01	3.17E+01
	600-1,200	5.61E+00	2.53E+01	6.37E+05	3.54E+11	9.51E-02	7.24E-01	1.08E+01	1.01E+04
	All depths	6.23E+00	2.56E+01	6.89E+05	3.56E+11	1.03E-01	7.29E-01	1.14E+01	1.02E+04
Crossaster species	200-600	7.85E+00	4.56E+01	7.20E+04	2.79E+09	6.80E-02	3.40E-01	6.37E-01	2.09E+01
	600-1,200	6.99E+00	8.88E+00	1.34E+05	4.35E+09	1.22E-01	2.73E-01	2.37E+00	1.44E+02
	All depths	1.48E+01	5.44E+01	2.06E+05	7.13E+09	1.90E-01	6.13E-01	3.01E+00	1.65E+02
Ctenodiscus crispatus	200-600	1.51E+00	1.12E+00	7.89E+04	2.74E+09	5.81E-03	1.67E-03	3.04E-01	4.06E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.51E+00	1.12E+00	7.89E+04	2.74E+09	5.81E-03	1.67E-03	3.04E-01	4.06E+00
Ctenophora	200-600	4.92E-01	8.07E-02	2.49E+04	1.73E+08	1.84E-03	1.20E-04	8.38E-02	1.95E-01
	600-1,200	7.58E-01	1.82E-01	3.16E+04	3.13E+08	6.95E-03	1.16E-03	3.14E-01	2.36E+00
	All depths	1.25E+00	2.62E-01	5.65E+04	4.86E+08	8.79E-03	1.28E-03	3.98E-01	2.56E+00
Cyanea capillata	200-600	9.23E+00	2.11E+01	5.95E+04	9.34E+08	4.53E-02	4.51E-02	2.22E-01	8.90E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.23E+00	2.11E+01	5.95E+04	9.34E+08	4.53E-02	4.51E-02	2.22E-01	8.90E-01
Cyclothone species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.80E-01	7.86E-03	7.76E+04	1.62E+09	2.95E-03	2.70E-04	1.33E+00	5.72E+01
	All depths	1.80E-01	7.86E-03	7.76E+04	1.62E+09	2.95E-03	2.70E-04	1.33E+00	5.72E+01
Dasycottus setiger	200-600	4.07E+02	9.78E+03	2.68E+06	2.15E+11	1.20E+00	6.60E+00	8.95E+00	2.08E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.07E+02	9.78E+03	2.68E+06	2.15E+11	1.20E+00	6.60E+00	8.95E+00	2.08E+02
Decapodiformes	200-600	1.11E+00	5.84E-01	2.94E+04	4.46E+08	6.26E-03	1.38E-03	2.33E-01	2.31E+00
	600-1,200	1.04E+00	8.67E-01	1.85E+04	1.81E+08	1.46E-02	1.79E-02	2.26E-01	2.58E+00
	All depths	2.15E+00	1.45E+00	4.79E+04	6.27E+08	2.08E-02	1.93E-02	4.59E-01	4.90E+00
Delectopecten vancouverensis	200-600	3.07E-02	9.40E-04	4.60E+04	2.11E+09	7.54E-05	5.69E-07	1.13E-01	1.28E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.07E-02	9.40E-04	4.60E+04	2.11E+09	7.54E-05	5.69E-07	1.13E-01	1.28E+00
Diaphus theta	200-600	1.55E-01	1.25E-02	1.14E+04	6.54E+07	3.84E-04	7.65E-06	2.82E-02	4.01E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.55E-01	1.25E-02	1.14E+04	6.54E+07	3.84E-04	7.65E-06	2.82E-02	4.01E-02
Diplopteraster multipes	200-600	1.34E+02	1.11E+03	6.34E+05	4.34E+10	8.50E-01	5.91E+00	4.25E+00	1.74E+02
	600-1,200	9.23E+00	3.06E+01	2.97E+04	3.45E+08	1.33E-01	7.25E-01	4.29E-01	8.86E+00
	All depths	1.44E+02	1.15E+03	6.64E+05	4.38E+10	9.83E-01	6.63E+00	4.68E+00	1.83E+02
Dipsacaster borealis	200-600	1.87E+03	3.62E+05	1.16E+07	1.27E+13	6.38E+00	5.10E+02	3.58E+01	1.22E+04
	600-1,200	1.58E+02	2.15E+04	2.49E+06	5.93E+12	1.00E+00	7.18E+01	1.46E+01	1.96E+04
	All depths	2.02E+03	3.84E+05	1.41E+07	1.86E+13	7.38E+00	5.82E+02	5.04E+01	3.18E+04
Dipsacaster species	200-600	7.49E-01	5.61E-01	8.32E+03	6.93E+07	6.47E-03	4.19E-03	7.19E-02	5.17E-01
	600-1,200	4.64E-01	1.68E-01	6.31E+03	2.05E+07	6.90E-03	3.54E-03	1.01E-01	5.07E-01
	All depths	1.21E+00	7.29E-01	1.46E+04	8.97E+07	1.34E-02	7.72E-03	1.72E-01	1.02E+00
Echinacea	200-600	5.00E+02	2.47E+05	2.48E+07	6.13E+14	2.95E+00	8.50E+02	1.46E+02	2.11E+06
	600-1,200	1.09E+03	1.18E+06	3.92E+07	1.53E+15	1.18E+01	1.40E+04	4.27E+02	1.82E+07
	All depths	1.59E+03	1.43E+06	6.40E+07	2.15E+15	1.48E+01	1.49E+04	5.73E+02	2.03E+07

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Elassochirus cavimanus	200-600	5.19E+00	5.61E+00	1.16E+05	2.39E+09	4.06E-02	4.73E-02	9.97E-01	2.46E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.19E+00	5.61E+00	1.16E+05	2.39E+09	4.06E-02	4.73E-02	9.97E-01	2.46E+01
Elassochirus gilli	200-600	6.25E+00	2.75E+01	1.42E+05	1.42E+10	3.07E-02	4.24E-02	8.51E-01	2.65E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	6.25E+00	2.75E+01	1.42E+05	1.42E+10	3.07E-02	4.24E-02	8.51E-01	2.65E+01
Elassodiscus caudatus	200-600	4.30E+00	4.31E+00	7.35E+04	1.10E+09	1.77E-02	7.55E-03	3.42E-01	3.23E+00
	600-1,200	1.49E+02	1.39E+03	3.10E+06	3.95E+11	1.72E+00	3.14E+01	3.41E+01	5.16E+03
	All depths	1.53E+02	1.40E+03	3.17E+06	3.96E+11	1.74E+00	3.14E+01	3.44E+01	5.16E+03
Elassodiscus species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.45E+00	1.98E+01	2.24E+04	5.00E+08	4.02E-02	1.61E-01	2.02E-01	4.08E+00
	All depths	4.45E+00	1.98E+01	2.24E+04	5.00E+08	4.02E-02	1.61E-01	2.02E-01	4.08E+00
Elassodiscus tremebundus	200-600	7.22E-01	5.21E-01	1.60E+04	2.57E+08	2.78E-03	7.74E-04	6.18E-02	3.82E-01
	600-1,200	9.46E+01	6.06E+02	7.16E+05	3.20E+10	1.21E+00	9.14E+00	1.03E+01	7.38E+02
	All depths	9.53E+01	6.07E+02	7.32E+05	3.22E+10	1.21E+00	9.14E+00	1.04E+01	7.38E+02
Embassichthys bathybius	200-600	8.75E+01	1.80E+03	5.63E+04	8.24E+08	8.86E-01	2.45E+01	5.31E-01	9.48E+00
	600-1,200	3.15E+02	8.17E+03	2.82E+05	6.18E+09	4.76E+00	1.32E+02	4.34E+00	1.01E+02
	All depths	4.03E+02	9.97E+03	3.39E+05	7.00E+09	5.65E+00	1.57E+02	4.88E+00	1.10E+02
empty barnacle shells	200-600	8.72E-01	7.60E-01	5.81E+03	3.38E+07	2.06E-02	4.23E-02	1.37E-01	1.88E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	8.72E-01	7.60E-01	5.81E+03	3.38E+07	2.06E-02	4.23E-02	1.37E-01	1.88E+00
empty bivalve shells	200-600	9.62E+00	1.39E+01	5.01E+03	2.51E+07	3.74E-02	2.07E-02	2.93E-02	8.61E-02
	600-1,200	4.43E+00	1.38E+01	0.00E+00	0.00E+00	5.05E-02	1.66E-01	0.00E+00	0.00E+00
	All depths	1.41E+01	2.78E+01	5.01E+03	2.51E+07	8.79E-02	1.87E-01	2.93E-02	8.61E-02
empty gastropod shells	200-600	1.35E+02	2.71E+03	5.81E+03	3.38E+07	4.36E-01	1.82E+00	1.37E-01	1.88E+00
	600-1,200	2.61E+01	2.00E+02	5.07E+04	2.10E+09	2.13E-01	9.00E-01	8.51E-01	5.99E+01
	All depths	1.61E+02	2.91E+03	5.66E+04	2.13E+09	6.49E-01	2.72E+00	9.88E-01	6.18E+01
Enteroctopus dofleini	200-600	5.60E+02	3.14E+04	3.98E+05	4.16E+09	6.62E+00	1.30E+03	4.55E+00	1.10E+02
	600-1,200	5.46E+00	1.17E+01	1.02E+04	3.60E+07	9.02E-02	3.43E-01	1.49E-01	7.39E-01
	All depths	5.66E+02	3.15E+04	4.08E+05	4.20E+09	6.71E+00	1.30E+03	4.70E+00	1.11E+02
Eogonatus tinro	200-600	3.04E-01	5.09E-02	1.22E+04	7.01E+07	7.49E-04	3.08E-05	3.01E-02	4.25E-02
	600-1,200	3.73E-02	1.39E-03	3.73E+03	1.39E+07	5.52E-04	3.04E-05	5.52E-02	3.04E-01
	All depths	3.42E-01	5.23E-02	1.60E+04	8.40E+07	1.30E-03	6.13E-05	8.53E-02	3.47E-01
Erimacrus isenbeckii	200-600	8.46E-01	3.12E-01	1.11E+04	6.15E+07	7.30E-03	2.33E-03	9.60E-02	4.59E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	8.46E-01	3.12E-01	1.11E+04	6.15E+07	7.30E-03	2.33E-03	9.60E-02	4.59E-01
Erimacrus species	200-600	4.86E-01	2.36E-01	3.62E+03	1.31E+07	4.19E-03	1.76E-03	3.13E-02	9.80E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.86E-01	2.36E-01	3.62E+03	1.31E+07	4.19E-03	1.76E-03	3.13E-02	9.80E-02
Eualus biunguis	200-600	7.00E-02	1.67E-03	2.13E+04	1.91E+08	7.57E-04	2.08E-05	2.55E-01	3.32E+00
	600-1,200	3.06E+01	6.19E+01	2.11E+07	1.07E+14	3.76E-01	1.35E+00	2.22E+02	9.03E+05
	All depths	3.07E+01	6.19E+01	2.11E+07	1.07E+14	3.77E-01	1.35E+00	2.22E+02	9.03E+05
Eualus species	200-600	5.81E-03	3.38E-05	2.91E+03	8.45E+06	8.25E-05	6.80E-07	4.12E-02	1.70E-01
	600-1,200	7.71E-03	5.94E-05	2.31E+04	5.35E+08	8.40E-05	7.06E-07	2.52E-01	6.35E+00
	All depths	1.35E-02	9.32E-05	2.60E+04	5.43E+08	1.66E-04	1.39E-06	2.93E-01	6.52E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Eunoe depressa	200-600	4.05E-02	1.64E-03	8.10E+03	6.56E+07	1.56E-04	2.43E-06	3.12E-02	9.74E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.05E-02	1.64E-03	8.10E+03	6.56E+07	1.56E-04	2.43E-06	3.12E-02	9.74E-02
Eunoe nodosa	200-600	4.05E-02	1.64E-03	1.62E+04	2.62E+08	1.56E-04	2.43E-06	6.24E-02	3.90E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.05E-02	1.64E-03	1.62E+04	2.62E+08	1.56E-04	2.43E-06	6.24E-02	3.90E-01
Euspira pallida	200-600	5.01E-03	2.51E-05	5.01E+03	2.51E+07	2.93E-05	8.61E-08	2.93E-02	8.61E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.01E-03	2.51E-05	5.01E+03	2.51E+07	2.93E-05	8.61E-08	2.93E-02	8.61E-02
Fanellia species	200-600	1.53E+00	9.39E-01	0.00E+00	0.00E+00	2.17E-02	1.89E-02	0.00E+00	0.00E+00
	600-1,200	1.92E+00	1.20E+00	0.00E+00	0.00E+00	3.30E-02	3.51E-02	0.00E+00	0.00E+00
	All depths	3.45E+00	2.14E+00	0.00E+00	0.00E+00	5.47E-02	5.39E-02	0.00E+00	0.00E+00
Florometra serratissima	200-600	1.26E+00	1.59E+00	1.78E+05	3.17E+10	3.10E-03	9.61E-04	4.38E-01	1.92E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.26E+00	1.59E+00	1.78E+05	3.17E+10	3.10E-03	9.61E-04	4.38E-01	1.92E+01
Frieleia halli	200-600	4.40E-02	1.93E-03	4.40E+03	1.93E+07	3.80E-04	1.44E-05	3.80E-02	1.44E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.40E-02	1.93E-03	4.40E+03	1.93E+07	3.80E-04	1.44E-05	3.80E-02	1.44E-01
Fusitriton oregonensis	200-600	2.91E+02	3.81E+03	4.33E+06	7.63E+11	1.05E+00	4.09E+00	1.65E+01	1.01E+03
	600-1,200	6.53E-02	4.26E-03	4.66E+03	2.18E+07	5.90E-04	3.48E-05	4.21E-02	1.78E-01
	All depths	2.91E+02	3.81E+03	4.34E+06	7.63E+11	1.06E+00	4.09E+00	1.65E+01	1.01E+03
Gadus chalcogrammus	200-600	8.08E+04	3.04E+08	9.50E+07	4.84E+14	3.30E+02	4.85E+05	3.76E+02	6.89E+05
	600-1,200	1.23E+02	2.13E+03	1.55E+05	4.20E+09	2.08E+00	6.13E+01	2.61E+00	1.21E+02
	All depths	8.09E+04	3.04E+08	9.52E+07	4.84E+14	3.32E+02	4.85E+05	3.79E+02	6.90E+05
Gadus macrocephalus	200-600	5.81E+03	2.19E+06	2.11E+06	1.84E+11	3.30E+01	1.24E+04	1.10E+01	7.71E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.81E+03	2.19E+06	2.11E+06	1.84E+11	3.30E+01	1.24E+04	1.10E+01	7.71E+02
Galiteuthis phyllura	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.87E-01	1.50E-01	4.84E+03	2.34E+07	7.00E-03	4.90E-03	8.75E-02	7.65E-01
	All depths	3.87E-01	1.50E-01	4.84E+03	2.34E+07	7.00E-03	4.90E-03	8.75E-02	7.65E-01
Gammaridae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.85E-02	3.42E-03	1.17E+04	1.37E+08	1.03E-03	1.05E-04	2.05E-01	4.21E+00
	All depths	5.85E-02	3.42E-03	1.17E+04	1.37E+08	1.03E-03	1.05E-04	2.05E-01	4.21E+00
gastropod eggs	200-600	5.92E+01	7.44E+02	0.00E+00	0.00E+00	1.61E-01	4.73E-01	0.00E+00	0.00E+00
	600-1,200	8.98E+00	8.54E+00	0.00E+00	0.00E+00	1.03E-01	5.92E-02	0.00E+00	0.00E+00
	All depths	6.82E+01	7.53E+02	0.00E+00	0.00E+00	2.64E-01	5.32E-01	0.00E+00	0.00E+00
Gastropoda	200-600	1.15E+00	5.93E-01	8.47E+04	4.33E+09	6.24E-03	2.45E-03	2.99E-01	4.07E+00
	600-1,200	6.57E-01	4.31E-01	1.36E+04	1.85E+08	1.19E-02	1.41E-02	2.46E-01	6.04E+00
	All depths	1.80E+00	1.02E+00	9.83E+04	4.51E+09	1.81E-02	1.66E-02	5.44E-01	1.01E+01
Gephyreaster swifti	200-600	3.34E+01	1.12E+03	2.06E+04	4.25E+08	2.70E-01	7.30E+00	1.67E-01	2.78E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.34E+01	1.12E+03	2.06E+04	4.25E+08	2.70E-01	7.30E+00	1.67E-01	2.78E+00
Glyptocephalus zachirus	200-600	1.22E+04	2.89E+06	1.66E+07	4.93E+12	9.49E+01	2.62E+04	1.26E+02	4.10E+04
	600-1,200	1.66E+01	2.75E+02	1.63E+04	2.66E+08	2.80E-01	7.85E+00	2.76E-01	7.61E+00
	All depths	1.22E+04	2.89E+06	1.66E+07	4.93E+12	9.52E+01	2.62E+04	1.26E+02	4.10E+04

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Gonatidae	200-600	6.11E+00	6.55E+00	1.23E+05	3.77E+09	1.53E-02	3.99E-03	3.23E-01	2.37E+00
	600-1,200	2.57E+01	3.75E+01	2.03E+05	2.33E+09	2.85E-01	5.45E-01	2.18E+00	3.02E+01
	All depths	3.18E+01	4.41E+01	3.26E+05	6.10E+09	3.00E-01	5.49E-01	2.50E+00	3.25E+01
Gonatopsis borealis	200-600	4.29E+00	2.85E+00	6.23E+04	6.20E+08	3.19E-02	2.10E-02	4.68E-01	3.84E+00
	600-1,200	2.50E+00	1.38E+00	2.66E+04	1.24E+08	3.16E-02	2.57E-02	3.21E-01	1.82E+00
	All depths	6.78E+00	4.22E+00	8.89E+04	7.44E+08	6.35E-02	4.67E-02	7.89E-01	5.67E+00
Gonatopsis species	200-600	4.64E-01	2.15E-01	4.04E+03	1.63E+07	4.01E-03	1.61E-03	3.49E-02	1.21E-01
	600-1,200	4.11E-01	1.69E-01	4.84E+03	2.34E+07	7.44E-03	5.53E-03	8.75E-02	7.65E-01
	All depths	8.75E-01	3.84E-01	8.87E+03	3.97E+07	1.14E-02	7.14E-03	1.22E-01	8.87E-01
Gonatus berryi	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	9.01E-01	3.44E-01	9.81E+03	3.37E+07	1.23E-02	6.42E-03	1.34E-01	6.29E-01
	All depths	9.01E-01	3.44E-01	9.81E+03	3.37E+07	1.23E-02	6.42E-03	1.34E-01	6.29E-01
Gonatus onyx	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.77E+00	2.57E+00	1.89E+04	1.21E+08	2.92E-02	7.84E-02	2.39E-01	2.33E+00
	All depths	1.77E+00	2.57E+00	1.89E+04	1.21E+08	2.92E-02	7.84E-02	2.39E-01	2.33E+00
Gonatus pyros	200-600	3.09E-01	9.57E-02	1.24E+04	1.53E+08	7.61E-04	5.80E-05	3.05E-02	9.27E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.09E-01	9.57E-02	1.24E+04	1.53E+08	7.61E-04	5.80E-05	3.05E-02	9.27E-02
Gonatus species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	7.84E+00	2.28E+01	8.67E+04	2.04E+09	8.38E-02	1.75E-01	1.08E+00	3.08E+01
	All depths	7.84E+00	2.28E+01	8.67E+04	2.04E+09	8.38E-02	1.75E-01	1.08E+00	3.08E+01
Gorgonacea	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.51E+00	2.28E+00	0.00E+00	0.00E+00	2.24E-02	5.00E-02	0.00E+00	0.00E+00
	All depths	1.51E+00	2.28E+00	0.00E+00	0.00E+00	2.24E-02	5.00E-02	0.00E+00	0.00E+00
Gorgonocephalus eucnemis	200-600	5.90E+03	1.16E+07	1.48E+07	1.34E+14	7.94E+01	2.31E+05	1.83E+02	2.67E+06
	600-1,200	9.12E+00	2.18E+01	1.25E+05	4.34E+09	1.39E-01	4.77E-01	1.91E+00	9.24E+01
	All depths	5.91E+03	1.16E+07	1.49E+07	1.35E+14	7.95E+01	2.31E+05	1.85E+02	2.67E+06
Graneledone boreopacifica	200-600	4.61E-01	2.12E-01	3.69E+03	1.36E+07	6.31E-03	3.98E-03	5.05E-02	2.55E-01
	600-1,200	1.42E+02	5.34E+02	3.94E+05	8.97E+09	2.41E+00	1.68E+01	6.66E+00	2.65E+02
	All depths	1.43E+02	5.34E+02	3.97E+05	8.98E+09	2.42E+00	1.68E+01	6.71E+00	2.65E+02
Halargyreus johnsonii	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	9.95E+00	2.76E+01	2.23E+04	1.27E+08	1.16E-01	4.20E-01	2.59E-01	2.01E+00
	All depths	9.95E+00	2.76E+01	2.23E+04	1.27E+08	1.16E-01	4.20E-01	2.59E-01	2.01E+00
Halipteris willemoesi	200-600	9.44E+01	4.36E+03	3.07E+06	8.32E+12	3.99E-01	7.10E+00	1.22E+01	1.24E+04
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.44E+01	4.36E+03	3.07E+06	8.32E+12	3.99E-01	7.10E+00	1.22E+01	1.24E+04
Hemilepidotus jordani	200-600	1.04E+02	1.01E+04	1.40E+05	1.78E+10	2.59E-01	6.29E+00	3.50E-01	1.10E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.04E+02	1.01E+04	1.40E+05	1.78E+10	2.59E-01	6.29E+00	3.50E-01	1.10E+01
Hemitripterus bolini	200-600	1.77E+03	8.66E+04	4.55E+05	4.61E+09	1.33E+01	6.96E+02	3.39E+00	3.51E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.77E+03	8.66E+04	4.55E+05	4.61E+09	1.33E+01	6.96E+02	3.39E+00	3.51E+01
Hemitripterus bolini eggs	200-600	5.53E-02	3.06E-03	0.00E+00	0.00E+00	7.57E-04	5.73E-05	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.53E-02	3.06E-03	0.00E+00	0.00E+00	7.57E-04	5.73E-05	0.00E+00	0.00E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Henricia species	200-600	1.49E+01	9.40E+00	6.22E+05	1.09E+10	8.66E-02	6.33E-02	3.42E+00	6.21E+01
	600-1,200	1.95E+00	5.72E-01	1.35E+05	2.41E+09	2.81E-02	1.19E-02	1.97E+00	4.84E+01
	All depths	1.68E+01	9.98E+00	7.56E+05	1.33E+10	1.15E-01	7.51E-02	5.40E+00	1.10E+02
Heterozonias alternatus	200-600	1.13E+00	1.29E+00	1.08E+04	1.17E+08	4.37E-03	1.91E-03	4.16E-02	1.73E-01
	600-1,200	6.01E+01	1.39E+03	3.14E+05	3.61E+10	6.61E-01	1.65E+01	3.44E+00	4.30E+02
	All depths	6.13E+01	1.39E+03	3.25E+05	3.63E+10	6.65E-01	1.65E+01	3.48E+00	4.30E+02
Heterozonias species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	8.72E+00	1.76E+01	6.39E+04	1.02E+09	8.73E-02	1.95E-01	6.22E-01	9.09E+00
	All depths	8.72E+00	1.76E+01	6.39E+04	1.02E+09	8.73E-02	1.95E-01	6.22E-01	9.09E+00
Hippasteria heathi	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.75E-01	7.59E-02	2.70E+03	7.29E+06	4.98E-03	2.48E-03	4.89E-02	2.39E-01
	All depths	2.75E-01	7.59E-02	2.70E+03	7.29E+06	4.98E-03	2.48E-03	4.89E-02	2.39E-01
Hippasteria species	200-600	3.28E+02	4.61E+04	3.75E+05	3.26E+10	1.53E+00	7.18E+01	2.16E+00	6.30E+01
	600-1,200	1.29E+01	4.42E+01	1.23E+05	2.39E+09	2.11E-01	1.09E+00	2.06E+00	6.12E+01
	All depths	3.41E+02	4.62E+04	4.98E+05	3.50E+10	1.74E+00	7.29E+01	4.22E+00	1.24E+02
Hippoglossoides elassodon	200-600	1.93E+04	4.84E+06	5.14E+07	2.79E+13	1.19E+02	2.24E+04	2.89E+02	8.04E+04
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.93E+04	4.84E+06	5.14E+07	2.79E+13	1.19E+02	2.24E+04	2.89E+02	8.04E+04
Hippoglossus stenolepis	200-600	4.67E+03	6.72E+05	6.38E+05	1.13E+10	3.43E+01	5.00E+03	4.34E+00	5.25E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.67E+03	6.72E+05	6.38E+05	1.13E+10	3.43E+01	5.00E+03	4.34E+00	5.25E+01
Holothuroidea	200-600	1.81E+00	1.41E+00	4.17E+04	4.63E+08	1.34E-02	1.02E-02	3.99E-01	6.17E+00
	600-1,200	6.94E+01	4.81E+03	0.00E+00	0.00E+00	1.29E+00	1.68E+02	0.00E+00	0.00E+00
	All depths	7.12E+01	4.81E+03	4.17E+04	4.63E+08	1.31E+00	1.68E+02	3.99E-01	6.17E+00
Hyas lyratus	200-600	4.84E+00	1.50E+00	2.77E+05	4.73E+09	1.83E-02	1.99E-03	1.16E+00	7.76E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.84E+00	1.50E+00	2.77E+05	4.73E+09	1.83E-02	1.99E-03	1.16E+00	7.76E+00
Hydroidolina	200-600	2.41E-01	5.79E-02	0.00E+00	0.00E+00	1.95E-03	3.79E-04	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.41E-01	5.79E-02	0.00E+00	0.00E+00	1.95E-03	3.79E-04	0.00E+00	0.00E+00
Hymenodora frontalis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.11E-01	2.64E-03	6.30E+04	8.25E+08	1.25E-03	3.73E-05	7.26E-01	1.28E+01
	All depths	1.11E-01	2.64E-03	6.30E+04	8.25E+08	1.25E-03	3.73E-05	7.26E-01	1.28E+01
Icelus canaliculatus	200-600	8.94E+00	1.67E+01	6.51E+05	8.29E+10	9.12E-02	2.42E-01	6.70E+00	1.30E+03
	600-1,200	3.13E+01	2.14E+02	1.91E+06	6.73E+11	4.89E-01	5.64E+00	2.92E+01	1.71E+04
	All depths	4.03E+01	2.31E+02	2.56E+06	7.56E+11	5.80E-01	5.88E+00	3.59E+01	1.84E+04
Icelus euryops	200-600	8.34E+00	5.04E+01	6.11E+05	2.54E+11	4.44E-02	7.86E-02	3.46E+00	4.13E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	8.34E+00	5.04E+01	6.11E+05	2.54E+11	4.44E-02	7.86E-02	3.46E+00	4.13E+02
Icelus spiniger	200-600	2.13E+01	4.17E+01	7.12E+05	3.59E+10	8.60E-02	6.24E-02	3.31E+00	7.17E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.13E+01	4.17E+01	7.12E+05	3.59E+10	8.60E-02	6.24E-02	3.31E+00	7.17E+01
Icosteus aenigmaticus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.86E+00	4.70E+01	3.80E+03	1.44E+07	1.38E-01	1.91E+00	7.65E-02	5.85E-01
	All depths	6.86E+00	4.70E+01	3.80E+03	1.44E+07	1.38E-01	1.91E+00	7.65E-02	5.85E-01

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Isidella species	600-1,200	2.16E+02	4.53E+04	0.00E+00	0.00E+00	3.90E+00	1.48E+03	0.00E+00	0.00E+00
	All depths	2.16E+02	4.53E+04	0.00E+00	0.00E+00	3.90E+00	1.48E+03	0.00E+00	0.00E+00
	200-600	3.46E-01	5.44E-02	6.72E+04	3.04E+09	1.01E-03	4.42E-05	1.78E-01	1.93E+00
Isopoda	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.46E-01	5.44E-02	6.72E+04	3.04E+09	1.01E-03	4.42E-05	1.78E-01	1.93E+00
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Japetella diaphana	600-1,200	8.63E+00	1.85E+01	4.07E+04	3.59E+08	1.05E-01	2.98E-01	5.24E-01	7.37E+00
	All depths	8.63E+00	1.85E+01	4.07E+04	3.59E+08	1.05E-01	2.98E-01	5.24E-01	7.37E+00
	200-600	2.80E+00	8.92E-01	1.84E+05	2.55E+09	1.03E-02	1.28E-03	6.41E-01	3.13E+00
Labidochirus splendescens	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.80E+00	8.92E-01	1.84E+05	2.55E+09	1.03E-02	1.28E-03	6.41E-01	3.13E+00
	200-600	9.38E+00	5.01E+01	2.34E+05	4.13E+10	2.31E-02	3.04E-02	5.77E-01	2.50E+01
Lampanyctus jordani	600-1,200	1.70E+00	8.43E-01	5.71E+04	1.05E+09	1.16E-02	3.37E-03	3.76E-01	3.93E+00
	All depths	1.11E+01	5.10E+01	2.91E+05	4.23E+10	3.47E-02	3.37E-02	9.52E-01	2.89E+01
	200-600	1.10E+02	1.03E+03	2.64E+05	5.08E+09	6.73E-01	6.09E+00	1.64E+00	3.05E+01
Lampetra tridentata	600-1,200	4.46E+01	1.52E+02	1.17E+05	7.75E+08	5.33E-01	1.65E+00	1.47E+00	1.03E+01
	All depths	1.55E+02	1.18E+03	3.82E+05	5.86E+09	1.21E+00	7.74E+00	3.11E+00	4.08E+01
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lebbeus groenlandicus	600-1,200	5.31E-01	2.20E-01	7.91E+04	5.02E+09	8.76E-03	6.25E-03	1.31E+00	1.43E+02
	All depths	5.31E-01	2.20E-01	7.91E+04	5.02E+09	8.76E-03	6.25E-03	1.31E+00	1.43E+02
	200-600	4.25E-02	1.80E-03	3.03E+03	9.19E+06	6.02E-04	3.62E-05	4.30E-02	1.85E-01
Lebbeus species	600-1,200	5.92E-01	2.10E-01	9.18E+04	3.90E+09	9.48E-03	5.86E-03	1.57E+00	1.16E+02
	All depths	6.35E-01	2.12E-01	9.48E+04	3.90E+09	1.01E-02	5.90E-03	1.61E+00	1.17E+02
	200-600	4.01E+02	1.58E+05	5.42E+05	2.85E+11	1.00E+00	9.80E+01	1.36E+00	1.77E+02
Lepidopsetta polyxystra	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.01E+02	1.58E+05	5.42E+05	2.85E+11	1.00E+00	9.80E+01	1.36E+00	1.77E+02
	200-600	3.26E+02	9.92E+03	6.99E+06	4.27E+12	1.57E+00	1.24E+01	3.22E+01	4.88E+03
Leptagonus frenatus	600-1,200	1.18E+00	7.11E-01	2.41E+04	2.92E+08	2.25E-02	2.91E-02	4.51E-01	1.12E+01
	All depths	3.27E+02	9.92E+03	7.01E+06	4.27E+12	1.60E+00	1.25E+01	3.27E+01	4.89E+03
	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Leptasterias species	600-1,200	2.79E+00	7.79E+00	7.25E+03	5.26E+07	4.90E-02	2.40E-01	1.27E-01	1.62E+00
	All depths	2.79E+00	7.79E+00	7.25E+03	5.26E+07	4.90E-02	2.40E-01	1.27E-01	1.62E+00
	200-600	5.35E-01	2.86E-01	3.30E+03	1.09E+07	4.62E-03	2.14E-03	2.85E-02	8.15E-02
Lethasterias nanimensis	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.35E-01	2.86E-01	3.30E+03	1.09E+07	4.62E-03	2.14E-03	2.85E-02	8.15E-02
	200-600	2.82E+01	5.65E+01	3.85E+06	9.64E+11	2.65E-01	1.10E+00	3.54E+01	1.54E+04
Leuroglossus schmidti	600-1,200	3.79E+01	1.23E+02	4.67E+06	2.92E+12	3.40E-01	5.45E-01	4.10E+01	1.14E+04
	All depths	6.61E+01	1.80E+02	8.52E+06	3.88E+12	6.05E-01	1.65E+00	7.64E+01	2.68E+04
	200-600	7.29E-01	5.31E-01	1.01E+05	1.02E+10	1.71E-02	2.93E-02	2.37E+00	5.62E+02
Leuroglossus species	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	7.29E-01	5.31E-01	1.01E+05	1.02E+10	1.71E-02	2.93E-02	2.37E+00	5.62E+02
	200-600	1.52E+00	9.07E-01	1.12E+05	1.88E+09	1.35E-02	5.94E-03	1.29E+00	2.11E+01
Liparidae	600-1,200	1.15E+01	1.14E+01	8.57E+05	2.42E+10	1.81E-01	4.21E-01	1.25E+01	6.23E+02
	All depths	1.30E+01	1.23E+01	9.69E+05	2.60E+10	1.95E-01	4.27E-01	1.38E+01	6.44E+02

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Liponema brevicorne	200-600	2.84E+03	3.13E+05	2.52E+07	2.07E+13	1.42E+01	3.88E+02	1.25E+02	3.28E+04
	600-1,200	1.71E+02	1.86E+04	1.47E+06	9.10E+11	1.37E+00	6.45E+01	1.45E+01	3.80E+03
	All depths	3.01E+03	3.32E+05	2.66E+07	2.16E+13	1.56E+01	4.53E+02	1.39E+02	3.66E+04
Lithodes aequispinus	200-600	1.82E+03	1.80E+05	2.40E+06	3.37E+11	1.88E+01	2.15E+03	2.61E+01	5.41E+03
	600-1,200	2.08E+02	9.69E+03	4.61E+05	4.47E+10	3.53E+00	2.81E+02	7.52E+00	1.27E+03
	All depths	2.03E+03	1.89E+05	2.86E+06	3.81E+11	2.23E+01	2.43E+03	3.36E+01	6.68E+03
Lithodes couesi	200-600	1.26E+01	6.05E+01	1.50E+04	6.53E+07	1.79E-01	1.22E+00	2.11E-01	1.30E+00
	600-1,200	4.26E+02	9.59E+03	8.57E+05	3.55E+10	6.87E+00	2.23E+02	1.35E+01	8.27E+02
	All depths	4.39E+02	9.65E+03	8.72E+05	3.55E+10	7.05E+00	2.24E+02	1.37E+01	8.28E+02
Lithodidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.28E-01	5.19E-02	1.14E+04	1.30E+08	3.11E-03	9.67E-04	1.56E-01	2.42E+00
	All depths	2.28E-01	5.19E-02	1.14E+04	1.30E+08	3.11E-03	9.67E-04	1.56E-01	2.42E+00
Lophaster furcilliger	200-600	2.40E+00	2.87E+00	1.48E+05	1.34E+10	1.07E-02	5.02E-03	4.47E-01	9.09E+00
	600-1,200	6.77E-01	1.94E-01	2.73E+04	4.36E+08	1.05E-02	5.10E-03	4.39E-01	1.22E+01
	All depths	3.08E+00	3.07E+00	1.75E+05	1.38E+10	2.12E-02	1.01E-02	8.86E-01	2.13E+01
Lophaster species	200-600	8.54E+00	1.24E+01	3.04E+05	1.16E+10	3.66E-02	1.42E-02	1.25E+00	1.30E+01
	600-1,200	1.47E+02	4.09E+03	4.55E+06	3.95E+12	2.18E+00	8.95E+01	6.69E+01	8.73E+04
	All depths	1.56E+02	4.10E+03	4.85E+06	3.96E+12	2.21E+00	8.96E+01	6.82E+01	8.73E+04
Lumpenella longirostris	200-600	6.52E+00	2.41E+01	1.05E+05	5.87E+09	3.82E-02	8.29E-02	6.15E-01	2.02E+01
	600-1,200	1.35E+00	1.82E+00	3.85E+04	1.49E+09	1.47E-02	2.16E-02	4.20E-01	1.76E+01
	All depths	7.87E+00	2.59E+01	1.43E+05	7.35E+09	5.29E-02	1.05E-01	1.04E+00	3.78E+01
Lycenchelys camchatica	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.47E-02	2.00E-03	4.47E+03	2.00E+07	4.04E-04	1.63E-05	4.04E-02	1.63E-01
	All depths	4.47E-02	2.00E-03	4.47E+03	2.00E+07	4.04E-04	1.63E-05	4.04E-02	1.63E-01
Lycenchelys crotalinus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.86E+01	9.12E+01	1.95E+05	1.07E+10	2.22E-01	1.11E+00	2.37E+00	1.29E+02
	All depths	1.86E+01	9.12E+01	1.95E+05	1.07E+10	2.22E-01	1.11E+00	2.37E+00	1.29E+02
Lycenchelys species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.25E-02	1.96E-03	1.41E+04	1.02E+08	4.66E-04	1.16E-05	1.08E-01	6.57E-01
	All depths	6.25E-02	1.96E-03	1.41E+04	1.02E+08	4.66E-04	1.16E-05	1.08E-01	6.57E-01
Lycodapus species	200-600	2.38E-01	1.15E-02	6.08E+04	6.10E+08	1.14E-03	5.27E-05	2.03E-01	6.43E-01
	600-1,200	1.51E+00	1.86E-01	3.86E+05	2.56E+10	1.59E-02	1.32E-03	3.87E+00	1.29E+02
	All depths	1.75E+00	1.98E-01	4.46E+05	2.62E+10	1.70E-02	1.37E-03	4.07E+00	1.30E+02
Lycodes beringi	200-600	1.68E+02	1.11E+03	2.74E+06	2.64E+11	1.20E+00	4.48E+00	2.00E+01	1.17E+03
	600-1,200	6.72E+01	2.01E+02	1.68E+06	1.24E+11	7.38E-01	3.12E+00	1.78E+01	1.76E+03
	All depths	2.35E+02	1.31E+03	4.42E+06	3.88E+11	1.94E+00	7.60E+00	3.78E+01	2.93E+03
Lycodes brevipes	200-600	1.53E+00	7.52E-01	2.27E+04	1.47E+08	5.91E-03	1.12E-03	8.74E-02	2.18E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.53E+00	7.52E-01	2.27E+04	1.47E+08	5.91E-03	1.12E-03	8.74E-02	2.18E-01
Lycodes concolor	200-600	9.42E+02	4.05E+04	8.43E+05	3.27E+10	8.53E+00	6.02E+02	7.91E+00	5.57E+02
	600-1,200	2.31E+02	3.53E+03	6.32E+05	2.97E+10	3.72E+00	1.02E+02	1.07E+01	9.92E+02
	All depths	1.17E+03	4.41E+04	1.47E+06	6.24E+10	1.22E+01	7.03E+02	1.87E+01	1.55E+03
Lycodes species	200-600	7.44E-02	5.53E-03	6.20E+03	3.84E+07	1.83E-04	3.35E-06	1.53E-02	2.33E-02
	600-1,200	1.26E-01	1.58E-02	3.14E+04	9.87E+08	1.14E-03	1.29E-04	2.84E-01	8.06E+00
	All depths	2.00E-01	2.13E-02	3.76E+04	1.03E+09	1.32E-03	1.32E-04	2.99E-01	8.08E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Lyopsetta exilis	200-600	1.06E+00	1.12E+00	5.68E+03	3.23E+07	2.63E-03	6.94E-04	1.42E-02	2.01E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.06E+00	1.12E+00	5.68E+03	3.23E+07	2.63E-03	6.94E-04	1.42E-02	2.01E-02
Macoma species	200-600	3.07E-02	9.40E-04	1.53E+04	2.35E+08	7.54E-05	5.69E-07	3.77E-02	1.42E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.07E-02	9.40E-04	1.53E+04	2.35E+08	7.54E-05	5.69E-07	3.77E-02	1.42E-01
Macropinna microstoma	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.80E-01	6.59E-02	1.06E+04	5.69E+07	2.49E-03	5.36E-04	8.56E-02	3.67E-01
	All depths	2.80E-01	6.59E-02	1.06E+04	5.69E+07	2.49E-03	5.36E-04	8.56E-02	3.67E-01
Malacocottus zonurus	200-600	7.76E+02	2.97E+04	6.96E+06	2.73E+12	4.50E+00	9.05E+01	4.46E+01	9.60E+03
	600-1,200	1.39E+01	6.20E+01	2.35E+05	1.43E+10	1.39E-01	6.22E-01	2.09E+00	1.22E+02
	All depths	7.90E+02	2.98E+04	7.20E+06	2.74E+12	4.64E+00	9.12E+01	4.67E+01	9.72E+03
Mediaster aequalis	200-600	5.90E-02	3.49E-03	5.90E+03	3.49E+07	3.46E-04	1.20E-05	3.46E-02	1.20E-01
	600-1,200	6.01E-01	2.29E-01	2.73E+04	4.95E+08	1.21E-02	1.14E-02	5.60E-01	2.52E+01
	All depths	6.60E-01	2.33E-01	3.32E+04	5.30E+08	1.25E-02	1.14E-02	5.95E-01	2.53E+01
Mediaster species	200-600	2.62E-01	6.85E-02	7.27E+03	5.29E+07	2.26E-03	5.11E-04	6.28E-02	3.95E-01
	600-1,200	2.30E+00	3.62E+00	9.54E+04	5.95E+09	4.09E-02	1.18E-01	1.70E+00	1.95E+02
	All depths	2.56E+00	3.69E+00	1.03E+05	6.00E+09	4.31E-02	1.19E-01	1.77E+00	1.95E+02
Mediaster tenellus	200-600	1.15E+00	3.58E-01	5.92E+04	9.08E+08	1.21E-02	4.63E-03	6.10E-01	1.19E+01
	600-1,200	1.78E+00	7.64E-01	6.89E+04	1.12E+09	2.59E-02	1.60E-02	1.01E+00	2.37E+01
	All depths	2.93E+00	1.12E+00	1.28E+05	2.03E+09	3.81E-02	2.07E-02	1.62E+00	3.56E+01
Melamphaes lugubris	200-600	1.59E-01	1.32E-02	1.10E+04	6.18E+07	1.25E-03	1.22E-04	7.00E-02	3.23E-01
	600-1,200	7.18E-02	5.15E-03	3.26E+03	1.06E+07	1.21E-03	1.47E-04	5.52E-02	3.04E-01
	All depths	2.31E-01	1.84E-02	1.43E+04	7.25E+07	2.46E-03	2.70E-04	1.25E-01	6.27E-01
Metridium farcimen	200-600	7.88E+00	6.21E+01	6.12E+04	3.75E+09	6.37E-02	4.06E-01	4.95E-01	2.45E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	7.88E+00	6.21E+01	6.12E+04	3.75E+09	6.37E-02	4.06E-01	4.95E-01	2.45E+01
Microstomus pacificus	200-600	5.94E+02	8.57E+04	3.54E+05	3.10E+10	2.42E+00	7.45E+01	1.50E+00	2.87E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.94E+02	8.57E+04	3.54E+05	3.10E+10	2.42E+00	7.45E+01	1.50E+00	2.87E+01
Modiolus modiolus	200-600	3.19E+00	1.02E+01	6.70E+03	4.49E+07	7.85E-03	6.16E-03	1.65E-02	2.72E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.19E+00	1.02E+01	6.70E+03	4.49E+07	7.85E-03	6.16E-03	1.65E-02	2.72E-02
Molgula griffithsii	200-600	4.36E-02	1.90E-03	7.27E+03	5.29E+07	3.77E-04	1.42E-05	6.28E-02	3.95E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.36E-02	1.90E-03	7.27E+03	5.29E+07	3.77E-04	1.42E-05	6.28E-02	3.95E-01
Molpadia species	200-600	9.58E+00	9.18E+01	1.87E+05	3.51E+10	5.62E-02	3.15E-01	1.10E+00	1.20E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.58E+00	9.18E+01	1.87E+05	3.51E+10	5.62E-02	3.15E-01	1.10E+00	1.20E+02
Mycale loveni	200-600	8.80E+00	6.70E+01	0.00E+00	0.00E+00	9.58E-02	8.18E-01	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	8.80E+00	6.70E+01	0.00E+00	0.00E+00	9.58E-02	8.18E-01	0.00E+00	0.00E+00
Myctophidae	200-600	9.38E+00	7.72E+00	1.24E+06	1.18E+11	6.95E-02	4.73E-02	9.59E+00	8.17E+02
	600-1,200	2.25E+01	1.59E+01	3.31E+06	4.37E+11	3.59E-01	3.89E-01	5.19E+01	1.04E+04
	All depths	3.19E+01	2.36E+01	4.55E+06	5.55E+11	4.28E-01	4.37E-01	6.15E+01	1.12E+04

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Mysidae	200-600	5.81E-03	3.38E-05	2.91E+03	8.45E+06	8.25E-05	6.80E-07	4.12E-02	1.70E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.81E-03	3.38E-05	2.91E+03	8.45E+06	8.25E-05	6.80E-07	4.12E-02	1.70E-01
Mytilidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.46E-01	2.13E-02	2.70E+03	7.29E+06	2.64E-03	6.96E-04	4.89E-02	2.39E-01
	All depths	1.46E-01	2.13E-02	2.70E+03	7.29E+06	2.64E-03	6.96E-04	4.89E-02	2.39E-01
Myxoderma sacculatum	200-600	5.95E+01	1.52E+03	3.88E+05	3.73E+10	5.40E-01	7.21E+00	4.36E+00	3.75E+02
	600-1,200	4.70E+02	1.35E+04	4.66E+06	1.57E+12	6.81E+00	2.84E+02	7.23E+01	4.00E+04
	All depths	5.29E+02	1.50E+04	5.05E+06	1.61E+12	7.35E+00	2.91E+02	7.67E+01	4.03E+04
Nannobrachium regale	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.32E-01	1.42E-01	9.81E+03	4.94E+07	7.55E-03	2.85E-03	1.39E-01	9.76E-01
	All depths	5.32E-01	1.42E-01	9.81E+03	4.94E+07	7.55E-03	2.85E-03	1.39E-01	9.76E-01
Naticidae	200-600	9.27E-02	8.59E-03	5.79E+03	3.36E+07	2.31E-04	5.34E-06	1.44E-02	2.09E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.27E-02	8.59E-03	5.79E+03	3.36E+07	2.31E-04	5.34E-06	1.44E-02	2.09E-02
Nearchaster aciculosus	200-600	8.52E+01	2.18E+03	1.66E+06	6.23E+11	4.12E-01	2.88E+00	9.28E+00	1.14E+03
	600-1,200	2.36E+03	3.09E+06	6.82E+07	2.01E+15	1.88E+01	1.08E+04	6.09E+02	7.81E+06
	All depths	2.44E+03	3.09E+06	6.99E+07	2.01E+15	1.92E+01	1.08E+04	6.18E+02	7.81E+06
Nearchaster species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.15E+01	8.01E+02	3.06E+06	3.51E+12	7.80E-01	1.83E+01	4.62E+01	8.00E+04
	All depths	5.15E+01	8.01E+02	3.06E+06	3.51E+12	7.80E-01	1.83E+01	4.62E+01	8.00E+04
Nearchaster variabilis	200-600	2.90E+01	4.93E+02	5.58E+05	1.38E+11	8.72E-02	3.23E-01	1.81E+00	9.79E+01
	600-1,200	1.61E+01	3.09E+01	5.67E+05	3.31E+10	2.33E-01	6.53E-01	8.25E+00	6.95E+02
	All depths	4.51E+01	5.24E+02	1.13E+06	1.71E+11	3.20E-01	9.76E-01	1.01E+01	7.93E+02
Neoesperiopsis species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.69E+00	2.85E+00	0.00E+00	0.00E+00	3.15E-02	9.94E-02	0.00E+00	0.00E+00
	All depths	1.69E+00	2.85E+00	0.00E+00	0.00E+00	3.15E-02	9.94E-02	0.00E+00	0.00E+00
Neognathophausia ingens	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.85E-02	3.42E-03	2.34E+04	5.47E+08	1.03E-03	1.05E-04	4.10E-01	1.68E+01
	All depths	5.85E-02	3.42E-03	2.34E+04	5.47E+08	1.03E-03	1.05E-04	4.10E-01	1.68E+01
Neognathophausia species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.16E-01	8.06E-03	1.77E+04	1.08E+08	1.02E-03	6.50E-05	1.46E-01	6.78E-01
	All depths	1.16E-01	8.06E-03	1.77E+04	1.08E+08	1.02E-03	6.50E-05	1.46E-01	6.78E-01
Neomenia species	200-600	2.76E+00	2.00E+00	4.03E+04	3.60E+08	3.94E-02	5.88E-02	5.30E-01	8.83E+00
	600-1,200	1.58E+02	1.12E+04	2.04E+06	1.19E+12	2.37E+00	2.51E+02	3.02E+01	2.59E+04
	All depths	1.61E+02	1.12E+04	2.08E+06	1.19E+12	2.41E+00	2.52E+02	3.07E+01	2.59E+04
Neptunea amianta	200-600	5.48E+02	3.50E+04	5.05E+06	2.63E+12	1.94E+00	3.86E+01	2.15E+01	5.56E+03
	600-1,200	3.30E+02	8.92E+03	8.12E+06	5.88E+12	2.82E+00	3.70E+01	7.20E+01	2.54E+04
	All depths	8.78E+02	4.39E+04	1.32E+07	8.51E+12	4.76E+00	7.56E+01	9.35E+01	3.10E+04
Neptunea lyrata	200-600	1.31E+00	1.72E+00	1.64E+04	2.69E+08	5.05E-03	2.55E-03	6.31E-02	3.99E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.31E+00	1.72E+00	1.64E+04	2.69E+08	5.05E-03	2.55E-03	6.31E-02	3.99E-01
Neptunea pribiloffensis	200-600	3.92E+02	5.20E+04	3.23E+06	3.31E+12	1.00E+00	3.16E+01	8.32E+00	2.01E+03
	600-1,200	5.10E+00	7.93E+00	7.40E+04	1.51E+09	4.53E-02	5.06E-02	7.20E-01	1.42E+01
	All depths	3.97E+02	5.20E+04	3.31E+06	3.31E+12	1.05E+00	3.16E+01	9.04E+00	2.03E+03

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Neptunea species	200-600	8.18E-02	6.69E-03	4.09E+03	1.67E+07	9.23E-04	8.53E-05	4.62E-02	2.13E-01
	600-1,200	4.43E+00	6.98E+00	9.30E+04	3.56E+09	6.12E-02	1.52E-01	1.36E+00	8.08E+01
	All depths	4.51E+00	6.98E+00	9.71E+04	3.58E+09	6.22E-02	1.52E-01	1.41E+00	8.10E+01
Notostomobdella species	200-600	9.90E-02	5.74E-03	1.31E+04	8.65E+07	4.23E-04	9.24E-06	7.70E-02	4.12E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.90E-02	5.74E-03	1.31E+04	8.65E+07	4.23E-04	9.24E-06	7.70E-02	4.12E-01
Notostomus japonicus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.71E-01	5.86E-02	1.82E+04	1.82E+08	1.66E-03	1.98E-04	1.24E-01	7.84E-01
	All depths	2.71E-01	5.86E-02	1.82E+04	1.82E+08	1.66E-03	1.98E-04	1.24E-01	7.84E-01
Nudibranchia	200-600	2.79E+01	8.58E+01	8.24E+05	5.63E+10	2.29E-01	7.53E-01	6.01E+00	2.67E+02
	600-1,200	1.65E+01	1.82E+01	9.38E+05	1.90E+11	2.79E-01	5.07E-01	1.43E+01	3.81E+03
	All depths	4.44E+01	1.04E+02	1.76E+06	2.47E+11	5.08E-01	1.26E+00	2.03E+01	4.07E+03
Octopodidae	200-600	4.24E-01	1.37E-01	1.46E+04	1.06E+08	1.91E-03	2.24E-04	9.10E-02	4.74E-01
	600-1,200	4.91E+00	2.22E+01	1.42E+04	1.01E+08	6.87E-02	4.44E-01	1.75E-01	1.54E+00
	All depths	5.33E+00	2.24E+01	2.88E+04	2.08E+08	7.06E-02	4.44E-01	2.66E-01	2.01E+00
Onchidorididae	200-600	6.52E-02	4.25E-03	1.09E+04	1.18E+08	5.63E-04	3.17E-05	9.39E-02	8.82E-01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	6.52E-02	4.25E-03	1.09E+04	1.18E+08	5.63E-04	3.17E-05	9.39E-02	8.82E-01
Oncorhynchus gorbuscha	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.53E+00	2.18E+01	7.48E+03	2.83E+07	9.81E-02	4.83E-01	1.13E-01	6.41E-01
	All depths	6.53E+00	2.18E+01	7.48E+03	2.83E+07	9.81E-02	4.83E-01	1.13E-01	6.41E-01
Oncorhynchus keta	200-600	2.40E+01	1.50E+02	2.60E+04	1.59E+08	1.36E-01	6.53E-01	1.61E-01	8.16E-01
	600-1,200	2.68E+01	1.37E+02	2.33E+04	9.27E+07	3.32E-01	2.13E+00	2.87E-01	1.26E+00
	All depths	5.08E+01	2.87E+02	4.93E+04	2.52E+08	4.68E-01	2.78E+00	4.47E-01	2.07E+00
Oncorhynchus nerka	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.34E+01	2.85E+03	2.49E+04	6.22E+08	5.86E-01	3.44E+01	2.74E-01	7.51E+00
	All depths	5.34E+01	2.85E+03	2.49E+04	6.22E+08	5.86E-01	3.44E+01	2.74E-01	7.51E+00
Oneirodes bulbosus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	8.03E-01	6.45E-01	4.12E+03	1.70E+07	1.19E-02	1.41E-02	6.10E-02	3.72E-01
	All depths	8.03E-01	6.45E-01	4.12E+03	1.70E+07	1.19E-02	1.41E-02	6.10E-02	3.72E-01
Oneirodes species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.32E+00	5.68E+00	3.83E+04	1.77E+08	7.62E-02	1.25E-01	5.81E-01	4.38E+00
	All depths	5.32E+00	5.68E+00	3.83E+04	1.77E+08	7.62E-02	1.25E-01	5.81E-01	4.38E+00
Oneirodes thompsoni	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.10E+00	8.36E+00	1.21E+04	3.85E+07	7.31E-02	1.69E-01	1.75E-01	7.88E-01
	All depths	5.10E+00	8.36E+00	1.21E+04	3.85E+07	7.31E-02	1.69E-01	1.75E-01	7.88E-01
Oneirodidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.53E+01	2.28E+01	8.46E+04	4.32E+08	2.51E-01	6.48E-01	1.40E+00	1.21E+01
	All depths	1.53E+01	2.28E+01	8.46E+04	4.32E+08	2.51E-01	6.48E-01	1.40E+00	1.21E+01
Ophiopholis aculeata	200-600	4.83E-01	8.85E-02	1.24E+05	6.40E+09	3.66E-03	6.03E-04	8.17E-01	3.46E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.83E-01	8.85E-02	1.24E+05	6.40E+09	3.66E-03	6.03E-04	8.17E-01	3.46E+01
Ophiura sarsi	200-600	7.61E+01	5.80E+03	3.81E+07	1.45E+15	1.87E-01	3.51E+00	9.37E+01	8.78E+05
	600-1,200	2.88E+01	5.42E+02	1.17E+07	7.61E+13	2.27E-01	2.45E+00	1.09E+02	5.78E+05
	All depths	1.05E+02	6.34E+03	4.98E+07	1.52E+15	4.15E-01	5.96E+00	2.02E+02	1.46E+06

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Ophiura species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.80E+00	3.34E+01	3.97E+06	1.57E+13	8.77E-02	7.61E-01	6.00E+01	3.58E+05
	All depths	5.80E+00	3.34E+01	3.97E+06	1.57E+13	8.77E-02	7.61E-01	6.00E+01	3.58E+05
Ophiuridae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.16E+01	1.73E+03	1.62E+07	2.62E+14	7.53E-01	5.67E+01	2.93E+02	8.57E+06
	All depths	4.16E+01	1.73E+03	1.62E+07	2.62E+14	7.53E-01	5.67E+01	2.93E+02	8.57E+06
Ophiuroidea	200-600	2.32E+03	1.77E+06	1.17E+09	3.04E+17	5.76E+00	1.07E+03	2.90E+03	1.84E+08
	600-1,200	3.22E+03	1.89E+06	2.73E+09	1.46E+18	3.60E+01	1.49E+04	3.31E+04	1.97E+10
	All depths	5.55E+03	3.66E+06	3.90E+09	1.77E+18	4.18E+01	1.60E+04	3.60E+04	1.99E+10
Opisthoteuthis californiana	200-600	1.16E+03	5.36E+04	9.60E+05	3.55E+10	5.87E+00	1.74E+02	6.02E+00	1.51E+02
	600-1,200	5.02E+01	5.23E+02	6.48E+04	9.50E+08	4.88E-01	7.72E+00	6.40E-01	1.34E+01
	All depths	1.21E+03	5.41E+04	1.03E+06	3.64E+10	6.35E+00	1.82E+02	6.66E+00	1.65E+02
Oplophoridae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.63E-02	1.31E-03	7.25E+03	5.26E+07	6.36E-04	4.04E-05	1.27E-01	1.62E+00
	All depths	3.63E-02	1.31E-03	7.25E+03	5.26E+07	6.36E-04	4.04E-05	1.27E-01	1.62E+00
Oregonia bifurca	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.77E-01	2.28E-02	2.37E+04	3.47E+08	2.62E-03	5.00E-04	3.51E-01	7.60E+00
	All depths	1.77E-01	2.28E-02	2.37E+04	3.47E+08	2.62E-03	5.00E-04	3.51E-01	7.60E+00
Otukaia kiheiziebisu	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.80E-01	5.19E-02	2.16E+04	3.25E+08	5.19E-03	1.73E-03	3.99E-01	1.08E+01
	All depths	2.80E-01	5.19E-02	2.16E+04	3.25E+08	5.19E-03	1.73E-03	3.99E-01	1.08E+01
Paelopatides confundens	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	8.37E-01	2.34E-01	6.03E+03	1.23E+07	1.56E-02	8.15E-03	1.13E-01	4.28E-01
	All depths	8.37E-01	2.34E-01	6.03E+03	1.23E+07	1.56E-02	8.15E-03	1.13E-01	4.28E-01
Pagurus aleuticus	200-600	3.72E+01	3.55E+02	4.75E+05	5.40E+10	9.28E-02	2.20E-01	1.18E+00	3.35E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.72E+01	3.55E+02	4.75E+05	5.40E+10	9.28E-02	2.20E-01	1.18E+00	3.35E+01
Pagurus brandti	200-600	1.37E+00	5.33E-01	5.32E+04	6.79E+08	8.16E-03	1.93E-03	4.34E-01	8.33E+00
	600-1,200	1.15E-01	1.33E-02	5.77E+03	3.32E+07	1.26E-03	1.58E-04	6.28E-02	3.95E-01
	All depths	1.49E+00	5.46E-01	5.90E+04	7.12E+08	9.41E-03	2.09E-03	4.97E-01	8.72E+00
Pagurus confragosus	200-600	6.96E+00	2.59E+01	1.35E+05	7.13E+09	2.67E-02	2.06E-02	7.22E-01	8.93E+00
	600-1,200	2.69E-01	3.63E-02	1.01E+04	3.66E+07	4.91E-03	1.24E-03	1.82E-01	1.19E+00
	All depths	7.23E+00	2.59E+01	1.45E+05	7.17E+09	3.16E-02	2.18E-02	9.04E-01	1.01E+01
Pagurus cornutus	200-600	3.33E+02	9.88E+03	5.90E+06	2.85E+12	1.31E+00	1.37E+01	2.56E+01	5.48E+03
	600-1,200	1.48E-01	2.20E-02	1.19E+04	1.41E+08	1.62E-03	2.61E-04	1.29E-01	1.67E+00
	All depths	3.33E+02	9.88E+03	5.91E+06	2.85E+12	1.31E+00	1.37E+01	2.57E+01	5.48E+03
Pagurus rathbuni	200-600	2.20E+00	1.73E+00	1.07E+05	4.67E+09	9.22E-03	2.64E-03	4.86E-01	7.71E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.20E+00	1.73E+00	1.07E+05	4.67E+09	9.22E-03	2.64E-03	4.86E-01	7.71E+00
Pagurus species	200-600	1.66E+00	9.56E-01	5.90E+04	1.13E+09	5.33E-03	7.67E-04	2.48E-01	1.53E+00
	600-1,200	1.18E-01	1.40E-02	3.69E+03	1.36E+07	1.70E-03	2.90E-04	5.32E-02	2.83E-01
	All depths	1.78E+00	9.70E-01	6.27E+04	1.15E+09	7.04E-03	1.06E-03	3.01E-01	1.82E+00
Pagurus tanneri	200-600	2.12E+01	2.81E+02	9.47E+05	6.26E+11	6.63E-02	1.78E-01	2.95E+00	3.94E+02
	600-1,200	6.64E+01	7.82E+02	2.29E+06	5.27E+11	5.62E-01	3.04E+00	2.05E+01	2.32E+03
	All depths	8.76E+01	1.06E+03	3.24E+06	1.15E+12	6.28E-01	3.22E+00	2.35E+01	2.72E+03

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Pagurus townsendi	200-600	1.13E+01	1.19E+02	3.22E+05	9.12E+10	3.18E-02	7.36E-02	1.02E+00	5.93E+01
	600-1,200	6.06E+00	4.81E+00	2.35E+05	9.39E+09	8.21E-02	1.13E-01	3.25E+00	2.24E+02
	All depths	1.73E+01	1.24E+02	5.57E+05	1.01E+11	1.14E-01	1.86E-01	4.27E+00	2.84E+02
Pagurus trigonocheirus	200-600	1.30E+01	2.88E+01	3.86E+05	2.96E+10	5.42E-02	4.44E-02	1.62E+00	4.54E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.30E+01	2.88E+01	3.86E+05	2.96E+10	5.42E-02	4.44E-02	1.62E+00	4.54E+01
Pandalidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.14E-01	6.37E-02	5.85E+04	2.14E+09	5.65E-03	2.08E-03	1.05E+00	6.99E+01
	All depths	3.14E-01	6.37E-02	5.85E+04	2.14E+09	5.65E-03	2.08E-03	1.05E+00	6.99E+01
Pandalopsis ampla	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.83E+01	2.06E+02	3.06E+06	8.19E+11	5.46E-01	3.51E+00	3.47E+01	1.40E+04
	All depths	4.83E+01	2.06E+02	3.06E+06	8.19E+11	5.46E-01	3.51E+00	3.47E+01	1.40E+04
Pandalopsis dispar	200-600	1.59E+02	1.42E+03	1.18E+07	1.13E+13	1.18E+00	8.58E+00	8.72E+01	6.84E+04
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.59E+02	1.42E+03	1.18E+07	1.13E+13	1.18E+00	8.58E+00	8.72E+01	6.84E+04
Pandalopsis longirostris	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.50E+01	8.53E+02	3.86E+06	4.74E+12	8.59E-01	1.87E+01	5.97E+01	1.00E+05
	All depths	5.50E+01	8.53E+02	3.86E+06	4.74E+12	8.59E-01	1.87E+01	5.97E+01	1.00E+05
Pandalopsis species	200-600	3.51E-02	1.23E-03	7.01E+03	4.92E+07	4.97E-04	2.47E-05	9.94E-02	9.89E-01
	600-1,200	1.20E-02	1.44E-04	6.01E+03	3.61E+07	8.87E-05	7.87E-07	4.43E-02	1.97E-01
	All depths	4.71E-02	1.37E-03	1.30E+04	8.53E+07	5.86E-04	2.55E-05	1.44E-01	1.19E+00
Pandalus eous	200-600	7.89E+02	1.62E+04	1.21E+08	4.33E+14	4.14E+00	6.80E+01	6.60E+02	2.07E+06
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	7.89E+02	1.62E+04	1.21E+08	4.33E+14	4.14E+00	6.80E+01	6.60E+02	2.07E+06
Pandalus species	200-600	2.43E-01	2.31E-02	7.57E+04	2.25E+09	3.45E-03	4.65E-04	1.07E+00	4.52E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.43E-01	2.31E-02	7.57E+04	2.25E+09	3.45E-03	4.65E-04	1.07E+00	4.52E+01
Pandalus tridens	200-600	3.60E-01	1.29E-01	5.99E+04	3.59E+09	3.11E-03	9.64E-04	5.18E-01	2.68E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.60E-01	1.29E-01	5.99E+04	3.59E+09	3.11E-03	9.64E-04	5.18E-01	2.68E+01
Pannychia moseleyi	200-600	1.06E+04	8.64E+06	1.33E+08	2.70E+15	2.62E+01	5.24E+03	3.28E+02	1.63E+06
	600-1,200	2.87E+03	2.15E+06	9.57E+07	5.33E+15	1.90E+01	7.74E+03	5.75E+02	1.76E+07
	All depths	1.34E+04	1.08E+07	2.28E+08	8.03E+15	4.51E+01	1.30E+04	9.03E+02	1.93E+07
Paragorgia arborea	200-600	2.12E+00	2.32E+00	0.00E+00	0.00E+00	1.45E-02	1.17E-02	0.00E+00	0.00E+00
	600-1,200	1.67E+02	1.15E+04	0.00E+00	0.00E+00	2.72E+00	2.62E+02	0.00E+00	0.00E+00
	All depths	1.69E+02	1.15E+04	0.00E+00	0.00E+00	2.74E+00	2.62E+02	0.00E+00	0.00E+00
Paralepididae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.67E-01	8.91E-02	1.11E+04	6.14E+07	4.74E-03	1.24E-03	1.70E-01	1.54E+00
	All depths	3.67E-01	8.91E-02	1.11E+04	6.14E+07	4.74E-03	1.24E-03	1.70E-01	1.54E+00
Paraliparis cephalus	200-600	2.52E-01	4.97E-02	1.79E+04	2.26E+08	9.89E-04	4.94E-05	8.08E-02	3.30E-01
	600-1,200	6.74E-02	2.33E-03	9.57E+03	4.73E+07	9.66E-04	4.85E-05	1.35E-01	9.32E-01
	All depths	3.20E-01	5.21E-02	2.74E+04	2.74E+08	1.95E-03	9.79E-05	2.16E-01	1.26E+00
Paraliparis grandis	200-600	4.75E+00	2.25E+01	5.83E+03	3.40E+07	1.17E-02	1.37E-02	1.44E-02	2.06E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.75E+00	2.25E+01	5.83E+03	3.40E+07	1.17E-02	1.37E-02	1.44E-02	2.06E-02

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Paraliparis ulochir	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.41E-02	4.11E-03	6.41E+03	4.11E+07	1.48E-03	2.20E-04	1.48E-01	2.20E+00
	All depths	6.41E-02	4.11E-03	6.41E+03	4.11E+07	1.48E-03	2.20E-04	1.48E-01	2.20E+00
Paralomis multispina	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.22E+02	4.15E+03	4.95E+05	2.18E+10	3.69E+00	1.20E+02	8.27E+00	6.52E+02
	All depths	2.22E+02	4.15E+03	4.95E+05	2.18E+10	3.69E+00	1.20E+02	8.27E+00	6.52E+02
Paralomis species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.84E+00	1.48E+01	2.70E+03	7.32E+06	6.95E-02	4.83E-01	4.89E-02	2.39E-01
	All depths	3.84E+00	1.48E+01	2.70E+03	7.32E+06	6.95E-02	4.83E-01	4.89E-02	2.39E-01
Paralomis species A	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.93E+00	8.61E+00	3.06E+03	9.34E+06	4.96E-02	2.46E-01	5.17E-02	2.67E-01
	All depths	2.93E+00	8.61E+00	3.06E+03	9.34E+06	4.96E-02	2.46E-01	5.17E-02	2.67E-01
Parapasiphae sulcatifrons	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.95E-02	1.57E-03	1.91E+04	1.90E+08	8.90E-04	6.01E-05	2.78E-01	3.91E+00
	All depths	4.95E-02	1.57E-03	1.91E+04	1.90E+08	8.90E-04	6.01E-05	2.78E-01	3.91E+00
Pasiphaea pacifica	200-600	4.93E+00	1.35E+01	1.57E+06	1.13E+12	1.41E-02	8.42E-03	4.57E+00	7.12E+02
	600-1,200	5.64E-01	1.53E-01	2.67E+05	3.70E+10	3.70E-03	5.62E-04	1.70E+00	1.32E+02
	All depths	5.49E+00	1.37E+01	1.84E+06	1.16E+12	1.78E-02	8.99E-03	6.27E+00	8.45E+02
Pasiphaea tarda	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.48E+00	1.31E+00	7.55E+04	4.05E+08	3.53E-02	2.78E-02	1.03E+00	7.12E+00
	All depths	2.48E+00	1.31E+00	7.55E+04	4.05E+08	3.53E-02	2.78E-02	1.03E+00	7.12E+00
Pasiphaeidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.40E-02	9.86E-04	1.74E+04	1.04E+08	7.85E-04	2.09E-05	2.53E-01	2.23E+00
	All depths	5.40E-02	9.86E-04	1.74E+04	1.04E+08	7.85E-04	2.09E-05	2.53E-01	2.23E+00
Pedicellaster magister	200-600	4.40E-01	9.23E-02	3.57E+04	5.19E+08	3.72E-03	6.33E-04	3.61E-01	5.39E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.40E-01	9.23E-02	3.57E+04	5.19E+08	3.72E-03	6.33E-04	3.61E-01	5.39E+00
Pennatulacea	200-600	2.32E-01	5.37E-02	5.15E+03	2.65E+07	1.36E-03	1.85E-04	3.02E-02	9.12E-02
	600-1,200	2.96E-01	8.78E-02	3.49E+03	1.22E+07	4.59E-03	2.11E-03	5.40E-02	2.92E-01
	All depths	5.28E-01	1.42E-01	8.64E+03	3.87E+07	5.95E-03	2.29E-03	8.42E-02	3.83E-01
Periphylla periphylla	200-600	1.94E-01	9.49E-03	2.59E+04	1.50E+08	2.34E-03	1.66E-04	2.86E-01	2.22E+00
	600-1,200	1.07E+01	3.70E+00	8.57E+05	1.88E+10	1.37E-01	5.51E-02	1.17E+01	4.26E+02
	All depths	1.09E+01	3.70E+00	8.83E+05	1.89E+10	1.39E-01	5.53E-02	1.20E+01	4.28E+02
Phacellophora camtschatica	200-600	3.14E+02	1.00E+04	5.49E+05	1.45E+10	1.66E+00	2.21E+01	2.96E+00	2.69E+01
	600-1,200	6.03E+01	2.33E+02	1.71E+05	1.14E+09	8.39E-01	4.55E+00	2.40E+00	2.04E+01
	All depths	3.74E+02	1.02E+04	7.20E+05	1.56E+10	2.49E+00	2.66E+01	5.36E+00	4.73E+01
Pleurogrammus monopterygius	200-600	7.09E+00	5.02E+01	8.05E+03	6.49E+07	8.00E-02	6.40E-01	9.09E-02	8.26E-01
	600-1,200	9.17E+00	4.23E+01	9.22E+03	4.25E+07	9.11E-02	4.15E-01	9.24E-02	4.32E-01
	All depths	1.63E+01	9.25E+01	1.73E+04	1.07E+08	1.71E-01	1.05E+00	1.83E-01	1.26E+00
Plumarella species	200-600	1.23E+00	1.51E+00	0.00E+00	0.00E+00	1.06E-02	1.13E-02	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.23E+00	1.51E+00	0.00E+00	0.00E+00	1.06E-02	1.13E-02	0.00E+00	0.00E+00
Polychaeta	200-600	4.88E+00	1.37E+01	3.85E+05	6.68E+10	1.21E-02	8.29E-03	9.58E-01	4.05E+01
	600-1,200	6.11E-03	3.74E-05	6.11E+03	3.74E+07	1.03E-04	1.07E-06	1.03E-01	1.07E+00
	All depths	4.89E+00	1.37E+01	3.91E+05	6.68E+10	1.22E-02	8.30E-03	1.06E+00	4.16E+01

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Polychaete tubes	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.02E+03	4.12E+06	0.00E+00	0.00E+00	6.39E+01	1.11E+05	0.00E+00	0.00E+00
	All depths	4.02E+03	4.12E+06	0.00E+00	0.00E+00	6.39E+01	1.11E+05	0.00E+00	0.00E+00
Poraniopsis inflata	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.93E-01	3.74E-02	2.61E+03	6.83E+06	3.50E-03	1.22E-03	4.73E-02	2.23E-01
	All depths	1.93E-01	3.74E-02	2.61E+03	6.83E+06	3.50E-03	1.22E-03	4.73E-02	2.23E-01
Porifera	200-600	2.38E+03	1.17E+06	5.01E+03	2.51E+07	1.52E+01	5.62E+03	2.93E-02	8.61E-02
	600-1,200	1.27E+03	3.31E+05	0.00E+00	0.00E+00	1.93E+01	6.94E+03	0.00E+00	0.00E+00
	All depths	3.65E+03	1.50E+06	5.01E+03	2.51E+07	3.44E+01	1.26E+04	2.93E-02	8.61E-02
Poromitra curilensis	200-600	1.23E-01	1.52E-02	6.84E+03	4.69E+07	3.03E-04	9.20E-06	1.68E-02	2.84E-02
	600-1,200	4.35E-01	5.61E-02	1.86E+04	1.01E+08	3.37E-03	3.30E-04	1.44E-01	5.92E-01
	All depths	5.58E-01	7.13E-02	2.55E+04	1.48E+08	3.67E-03	3.39E-04	1.61E-01	6.20E-01
Primnoa species	200-600	9.28E-01	8.61E-01	0.00E+00	0.00E+00	7.51E-03	5.63E-03	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.28E-01	8.61E-01	0.00E+00	0.00E+00	7.51E-03	5.63E-03	0.00E+00	0.00E+00
Pseudarchaster parelii	200-600	7.63E+00	2.22E+01	9.47E+04	1.56E+09	1.89E-02	1.36E-02	2.34E-01	9.50E-01
	600-1,200	1.65E+00	1.10E+00	5.73E+04	1.38E+09	1.87E-02	1.77E-02	6.50E-01	2.23E+01
	All depths	9.28E+00	2.33E+01	1.52E+05	2.94E+09	3.75E-02	3.13E-02	8.84E-01	2.33E+01
Pseudarchaster species	200-600	3.17E+00	2.73E+00	1.05E+05	2.09E+09	1.97E-02	1.82E-02	6.53E-01	1.35E+01
	600-1,200	9.39E+00	2.95E+01	3.56E+05	4.13E+10	1.62E-01	9.58E-01	6.15E+00	1.35E+03
	All depths	1.26E+01	3.22E+01	4.61E+05	4.34E+10	1.82E-01	9.76E-01	6.80E+00	1.36E+03
Psolus species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.78E+01	8.12E+02	2.32E+06	1.27E+12	1.02E+00	2.28E+01	4.19E+01	3.98E+04
	All depths	5.78E+01	8.12E+02	2.32E+06	1.27E+12	1.02E+00	2.28E+01	4.19E+01	3.98E+04
Psychrolutes phrictus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.77E+03	7.13E+04	1.06E+06	3.74E+10	2.64E+01	1.91E+03	1.63E+01	1.08E+03
	All depths	1.77E+03	7.13E+04	1.06E+06	3.74E+10	2.64E+01	1.91E+03	1.63E+01	1.08E+03
Pteraster jordani	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	6.13E+00	3.76E+01	9.87E+04	9.75E+09	1.24E-01	1.53E+00	1.99E+00	3.96E+02
	All depths	6.13E+00	3.76E+01	9.87E+04	9.75E+09	1.24E-01	1.53E+00	1.99E+00	3.96E+02
Pteraster militaris	200-600	4.55E+00	8.98E+00	7.80E+04	2.77E+09	5.89E-02	1.67E-01	9.82E-01	4.94E+01
	600-1,200	6.03E-01	1.91E-01	1.48E+04	6.64E+07	1.03E-02	5.49E-03	2.55E-01	1.98E+00
	All depths	5.16E+00	9.17E+00	9.28E+04	2.84E+09	6.92E-02	1.73E-01	1.24E+00	5.13E+01
Pteraster species	200-600	3.96E+01	1.42E+02	4.74E+05	2.04E+10	3.23E-01	6.26E-01	3.75E+00	9.60E+01
	600-1,200	3.59E+01	1.63E+02	5.38E+05	4.35E+10	5.85E-01	4.87E+00	9.09E+00	1.41E+03
	All depths	7.55E+01	3.05E+02	1.01E+06	6.38E+10	9.08E-01	5.50E+00	1.28E+01	1.50E+03
Pteraster tesselatus	200-600	5.48E+00	2.86E+01	2.44E+04	4.54E+08	6.03E-02	3.50E-01	2.62E-01	5.51E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.48E+00	2.86E+01	2.44E+04	4.54E+08	6.03E-02	3.50E-01	2.62E-01	5.51E+00
Puzanovia rubra	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.99E-01	3.94E-02	2.61E+03	6.83E+06	3.59E-03	1.29E-03	4.73E-02	2.23E-01
	All depths	1.99E-01	3.94E-02	2.61E+03	6.83E+06	3.59E-03	1.29E-03	4.73E-02	2.23E-01
Pycnogonida	200-600	5.21E-02	2.71E-03	3.65E+04	1.33E+09	1.28E-04	1.64E-06	8.97E-02	8.05E-01
	600-1,200	5.90E-02	3.48E-03	4.13E+04	1.71E+09	3.39E-04	1.15E-05	2.37E-01	5.63E+00
	All depths	1.11E-01	6.20E-03	7.78E+04	3.04E+09	4.67E-04	1.31E-05	3.27E-01	6.43E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Pyrulofusus deformis	200-600	3.76E+01	2.36E+02	2.08E+05	7.20E+09	2.81E-01	2.06E+00	1.30E+00	2.88E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.76E+01	2.36E+02	2.08E+05	7.20E+09	2.81E-01	2.06E+00	1.30E+00	2.88E+01
Pyrulofusus melonis	200-600	1.31E+02	2.09E+03	1.13E+06	1.63E+11	3.64E-01	1.32E+00	3.00E+00	1.00E+02
	600-1,200	3.51E+00	8.15E+00	3.80E+04	1.00E+09	2.02E-02	2.69E-02	2.18E-01	3.31E+00
	All depths	1.34E+02	2.10E+03	1.16E+06	1.64E+11	3.84E-01	1.34E+00	3.22E+00	1.04E+02
Rajidae	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.85E+00	3.44E+00	3.37E+03	1.14E+07	3.14E-02	9.84E-02	5.70E-02	3.25E-01
	All depths	1.85E+00	3.44E+00	3.37E+03	1.14E+07	3.14E-02	9.84E-02	5.70E-02	3.25E-01
Rastrinus scutiger	200-600	9.98E-01	7.56E-01	1.51E+05	1.74E+10	4.02E-03	1.14E-03	5.98E-01	2.59E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.98E-01	7.56E-01	1.51E+05	1.74E+10	4.02E-03	1.14E-03	5.98E-01	2.59E+01
Reinhardtius hippoglossoides	200-600	1.53E+04	1.63E+07	6.72E+06	4.41E+12	1.45E+02	2.02E+05	6.77E+01	6.33E+04
	600-1,200	8.31E+03	1.49E+06	2.31E+06	1.68E+11	1.02E+02	1.78E+04	2.77E+01	1.78E+03
	All depths	2.36E+04	1.78E+07	9.03E+06	4.57E+12	2.47E+02	2.20E+05	9.53E+01	6.51E+04
Rhinoliparis attenuatus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	1.58E-01	7.99E-03	1.57E+04	4.55E+07	2.35E-03	1.75E-04	2.33E-01	9.96E-01
	All depths	1.58E-01	7.99E-03	1.57E+04	4.55E+07	2.35E-03	1.75E-04	2.33E-01	9.96E-01
Rhinoliparis species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.82E-01	2.16E-01	5.45E+04	1.47E+09	6.45E-03	1.99E-03	6.40E-01	1.55E+01
	All depths	5.82E-01	2.16E-01	5.45E+04	1.47E+09	6.45E-03	1.99E-03	6.40E-01	1.55E+01
Rossia pacifica	200-600	2.88E+01	7.94E+01	3.20E+05	6.35E+09	2.24E-01	2.71E-01	2.67E+00	2.00E+01
	600-1,200	5.81E-01	3.37E-01	2.70E+03	7.29E+06	1.05E-02	1.10E-02	4.89E-02	2.39E-01
	All depths	2.94E+01	7.98E+01	3.23E+05	6.36E+09	2.35E-01	2.82E-01	2.72E+00	2.02E+01
Sasakiopus salebrosus	200-600	3.96E+01	6.36E+01	3.17E+05	1.81E+09	1.85E-01	1.66E-01	1.63E+00	6.83E+00
	600-1,200	1.15E+01	1.64E+01	1.45E+05	2.11E+09	1.39E-01	2.86E-01	1.74E+00	4.06E+01
	All depths	5.11E+01	8.01E+01	4.61E+05	3.91E+09	3.24E-01	4.52E-01	3.37E+00	4.74E+01
Scabrotrophon species	200-600	2.70E-02	7.30E-04	5.40E+03	2.92E+07	1.04E-04	1.08E-06	2.08E-02	4.33E-02
	600-1,200	5.85E-02	1.73E-03	2.60E+04	3.59E+08	7.79E-04	3.22E-05	3.29E-01	5.47E+00
	All depths	8.55E-02	2.46E-03	3.14E+04	3.88E+08	8.83E-04	3.33E-05	3.50E-01	5.51E+00
Scopelosaurus harryi	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.17E-01	1.00E-01	6.60E+03	4.35E+07	2.34E-03	5.46E-04	4.87E-02	2.37E-01
	All depths	3.17E-01	1.00E-01	6.60E+03	4.35E+07	2.34E-03	5.46E-04	4.87E-02	2.37E-01
Scyphozoa	200-600	1.00E+02	8.62E+02	1.14E+05	5.02E+09	3.61E-01	8.26E-01	4.39E-01	4.62E+00
	600-1,200	1.61E+02	7.68E+03	1.70E+05	5.67E+09	2.25E+00	1.59E+02	2.95E+00	1.45E+02
	All depths	2.61E+02	8.55E+03	2.84E+05	1.07E+10	2.61E+00	1.60E+02	3.39E+00	1.50E+02
Sebastes aleutianus	200-600	2.06E+02	7.69E+03	1.41E+05	2.31E+09	9.79E-01	3.25E+01	5.62E-01	5.24E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.06E+02	7.69E+03	1.41E+05	2.31E+09	9.79E-01	3.25E+01	5.62E-01	5.24E+00
Sebastes alutus	200-600	3.57E+05	5.97E+10	4.83E+08	1.23E+17	2.90E+03	3.92E+08	3.94E+03	8.05E+08
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.57E+05	5.97E+10	4.83E+08	1.23E+17	2.90E+03	3.92E+08	3.94E+03	8.05E+08
Sebastes borealis	200-600	6.24E+03	3.23E+06	1.79E+06	2.38E+11	6.25E+01	3.19E+04	1.91E+01	2.87E+03
	600-1,200	1.80E+01	3.23E+02	7.25E+03	5.26E+07	3.15E-01	9.95E+00	1.27E-01	1.62E+00
	All depths	6.26E+03	3.23E+06	1.79E+06	2.38E+11	6.28E+01	3.19E+04	1.92E+01	2.88E+03

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Sebastes melanostictus	200-600	2.52E+02	8.08E+03	3.38E+05	1.62E+10	1.96E+00	7.21E+01	2.40E+00	1.12E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.52E+02	8.08E+03	3.38E+05	1.62E+10	1.96E+00	7.21E+01	2.40E+00	1.12E+02
Sebastes polyspinis	200-600	2.51E+00	6.32E+00	5.37E+03	2.89E+07	6.27E-03	3.93E-03	1.34E-02	1.79E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.51E+00	6.32E+00	5.37E+03	2.89E+07	6.27E-03	3.93E-03	1.34E-02	1.79E-02
Sebastes variegatus	200-600	5.67E+00	1.73E+01	1.33E+04	8.98E+07	8.82E-02	3.92E-01	2.20E-01	2.57E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	5.67E+00	1.73E+01	1.33E+04	8.98E+07	8.82E-02	3.92E-01	2.20E-01	2.57E+00
Sebastolobus alascanus	200-600	2.57E+04	1.46E+07	4.92E+07	8.17E+13	1.86E+02	9.12E+04	3.38E+02	5.29E+05
	600-1,200	1.02E+04	2.46E+06	8.12E+06	1.65E+12	1.14E+02	2.14E+04	8.47E+01	1.10E+04
	All depths	3.59E+04	1.70E+07	5.73E+07	8.33E+13	3.00E+02	1.13E+05	4.23E+02	5.40E+05
Sebastolobus altivelis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.01E+01	7.50E+01	4.08E+04	3.06E+08	2.34E-01	1.52E+00	4.78E-01	6.57E+00
	All depths	2.01E+01	7.50E+01	4.08E+04	3.06E+08	2.34E-01	1.52E+00	4.78E-01	6.57E+00
Sebastolobus macrochir	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	4.67E+00	1.13E+01	6.31E+03	2.05E+07	7.75E-02	3.26E-01	1.01E-01	5.07E-01
	All depths	4.67E+00	1.13E+01	6.31E+03	2.05E+07	7.75E-02	3.26E-01	1.01E-01	5.07E-01
Serripes species	200-600	4.10E-01	1.68E-01	5.46E+03	2.98E+07	1.58E-03	2.49E-04	2.10E-02	4.43E-02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	4.10E-01	1.68E-01	5.46E+03	2.98E+07	1.58E-03	2.49E-04	2.10E-02	4.43E-02
shrimp species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	7.55E+00	5.22E+01	8.73E+06	7.50E+13	1.10E-01	1.08E+00	1.26E+02	1.56E+06
	All depths	7.55E+00	5.22E+01	8.73E+06	7.50E+13	1.10E-01	1.08E+00	1.26E+02	1.56E+06
Sigmops gracilis	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.00E-02	9.02E-04	6.01E+03	3.61E+07	1.72E-04	2.97E-06	3.45E-02	1.19E-01
	All depths	3.00E-02	9.02E-04	6.01E+03	3.61E+07	1.72E-04	2.97E-06	3.45E-02	1.19E-01
Sipuncula	200-600	1.04E-01	9.76E-03	1.06E+04	5.66E+07	2.76E-04	6.13E-06	4.39E-02	1.10E-01
	600-1,200	4.44E+00	1.16E+01	3.28E+05	4.67E+10	2.83E-02	4.10E-02	2.31E+00	2.16E+02
	All depths	4.55E+00	1.16E+01	3.38E+05	4.68E+10	2.86E-02	4.11E-02	2.36E+00	2.17E+02
skate egg case species	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	3.73E-01	1.39E-01	1.29E+04	1.65E+08	2.14E-03	4.58E-04	7.38E-02	5.45E-01
	All depths	3.73E-01	1.39E-01	1.29E+04	1.65E+08	2.14E-03	4.58E-04	7.38E-02	5.45E-01
Solaster species	200-600	9.00E+01	6.83E+02	4.78E+05	1.25E+10	5.34E-01	2.85E+00	3.16E+00	5.87E+01
	600-1,200	1.68E+01	3.66E+01	1.46E+05	3.11E+09	2.33E-01	7.29E-01	2.30E+00	9.35E+01
	All depths	1.07E+02	7.19E+02	6.24E+05	1.56E+10	7.67E-01	3.58E+00	5.46E+00	1.52E+02
Solaster species *A*	200-600	3.74E+00	6.46E+00	4.22E+04	8.87E+08	3.25E-02	4.82E-02	3.77E-01	6.75E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.74E+00	6.46E+00	4.22E+04	8.87E+08	3.25E-02	4.82E-02	3.77E-01	6.75E+00
Somniosus pacificus	200-600	1.44E+02	1.08E+04	1.04E+04	6.45E+07	1.51E+00	1.15E+02	1.01E-01	5.32E-01
	600-1,200	1.07E+02	4.25E+03	1.09E+04	4.01E+07	1.54E+00	8.76E+01	1.58E-01	8.42E-01
	All depths	2.51E+02	1.51E+04	2.13E+04	1.05E+08	3.06E+00	2.03E+02	2.59E-01	1.37E+00
Stegophiura ponderosa	200-600	2.85E-01	8.12E-02	2.12E+04	4.51E+08	4.04E-03	1.63E-03	3.01E-01	9.06E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.85E-01	8.12E-02	2.12E+04	4.51E+08	4.04E-03	1.63E-03	3.01E-01	9.06E+00

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Stenobrachius leucopsarus	200-600	1.41E+00	6.66E-01	1.90E+05	9.81E+09	8.83E-03	2.95E-03	1.32E+00	5.81E+01
	600-1,200	3.42E-01	7.24E-02	6.09E+04	3.21E+09	4.44E-03	1.30E-03	8.20E-01	5.97E+01
	All depths	1.75E+00	7.39E-01	2.51E+05	1.30E+10	1.33E-02	4.25E-03	2.14E+00	1.18E+02
Stenobrachius nannochir	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.26E-01	5.11E-02	3.95E+04	1.56E+09	3.09E-03	9.52E-04	5.40E-01	2.92E+01
	All depths	2.26E-01	5.11E-02	3.95E+04	1.56E+09	3.09E-03	9.52E-04	5.40E-01	2.92E+01
Stenobrachius species	200-600	5.71E+00	5.40E+00	8.25E+05	1.29E+11	8.65E-02	2.41E-01	1.27E+01	5.93E+03
	600-1,200	1.77E+01	6.22E+00	2.52E+06	1.30E+11	1.81E-01	1.14E-01	2.61E+01	2.28E+03
	All depths	2.34E+01	1.16E+01	3.34E+06	2.60E+11	2.68E-01	3.56E-01	3.88E+01	8.21E+03
Stomphia species	200-600	2.18E+00	4.57E+00	2.03E+04	2.45E+08	1.86E-02	3.41E-02	1.40E-01	1.60E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.18E+00	4.57E+00	2.03E+04	2.45E+08	1.86E-02	3.41E-02	1.40E-01	1.60E+00
Strongylocentrotus droebachiensis	200-600	9.94E+00	9.89E+01	2.83E+05	8.01E+10	8.59E-02	7.38E-01	2.44E+00	5.97E+02
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	9.94E+00	9.89E+01	2.83E+05	8.01E+10	8.59E-02	7.38E-01	2.44E+00	5.97E+02
Strongylocentrotus species	200-600	2.06E+02	2.17E+04	3.92E+06	5.32E+12	1.94E+00	2.62E+02	3.57E+01	4.98E+04
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.06E+02	2.17E+04	3.92E+06	5.32E+12	1.94E+00	2.62E+02	3.57E+01	4.98E+04
Stylasterina	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	2.94E-01	8.67E-02	0.00E+00	0.00E+00	5.50E-03	3.02E-03	0.00E+00	0.00E+00
	All depths	2.94E-01	8.67E-02	0.00E+00	0.00E+00	5.50E-03	3.02E-03	0.00E+00	0.00E+00
Swiftia pacifica	200-600	5.46E-02	2.98E-03	0.00E+00	0.00E+00	7.74E-04	5.99E-05	0.00E+00	0.00E+00
	600-1,200	5.28E-01	1.83E-01	0.00E+00	0.00E+00	9.49E-03	5.97E-03	0.00E+00	0.00E+00
	All depths	5.82E-01	1.86E-01	0.00E+00	0.00E+00	1.03E-02	6.03E-03	0.00E+00	0.00E+00
Systellaspis braueri	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	8.65E-02	7.48E-03	5.77E+04	3.32E+09	9.43E-04	8.89E-05	6.28E-01	3.95E+01
	All depths	8.65E-02	7.48E-03	5.77E+04	3.32E+09	9.43E-04	8.89E-05	6.28E-01	3.95E+01
Tactostoma macropus	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	9.13E-02	8.33E-03	9.13E+03	8.33E+07	8.25E-04	6.80E-05	8.25E-02	6.80E-01
	All depths	9.13E-02	8.33E-03	9.13E+03	8.33E+07	8.25E-04	6.80E-05	8.25E-02	6.80E-01
Thaleichthys pacificus	200-600	2.10E+01	3.00E+02	3.78E+05	9.96E+10	5.24E-02	1.86E-01	9.43E-01	6.19E+01
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	2.10E+01	3.00E+02	3.78E+05	9.96E+10	5.24E-02	1.86E-01	9.43E-01	6.19E+01
Thaliacea	200-600	1.60E+02	5.66E+02	1.30E+05	7.47E+09	1.11E+00	1.42E+00	2.30E+00	3.94E+02
	600-1,200	1.02E+02	3.62E+02	4.43E+04	1.96E+09	1.51E+00	8.29E+00	3.27E-01	1.07E+01
	All depths	2.61E+02	9.28E+02	1.74E+05	9.43E+09	2.63E+00	9.71E+00	2.63E+00	4.05E+02
Thoracica	200-600	1.12E+01	1.25E+02	0.00E+00	0.00E+00	2.75E-02	7.58E-02	0.00E+00	0.00E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.12E+01	1.25E+02	0.00E+00	0.00E+00	2.75E-02	7.58E-02	0.00E+00	0.00E+00
Triglops scepticus	200-600	6.33E+01	4.26E+02	1.73E+06	3.67E+11	1.09E+00	2.04E+01	3.02E+01	1.82E+04
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	6.33E+01	4.26E+02	1.73E+06	3.67E+11	1.09E+00	2.04E+01	3.02E+01	1.82E+04
Virgulariidae	200-600	4.56E+00	8.67E+00	3.48E+04	7.01E+08	2.70E-02	2.64E-02	2.10E-01	2.23E+00
	600-1,200	4.45E-01	6.43E-02	7.52E+04	3.48E+09	8.96E-03	2.61E-03	1.52E+00	1.41E+02
	All depths	5.00E+00	8.73E+00	1.10E+05	4.18E+09	3.60E-02	2.90E-02	1.73E+00	1.43E+02

Table 9. - - continued.

Species	Stratum	Biomass		Population		CPUE		CPUE	
	(m)	(t)	Variance	Number	Variance	kg/ha	Variance	no./ha	Variance
Volutopsius species	200-600	3.28E+00	4.53E+00	4.57E+04	8.42E+08	1.33E-02	6.92E-03	1.89E-01	1.33E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	3.28E+00	4.53E+00	4.57E+04	8.42E+08	1.33E-02	6.92E-03	1.89E-01	1.33E+00
Zaprora silenus	200-600	2.11E+02	1.16E+04	6.15E+04	8.72E+08	3.22E+00	4.19E+02	9.61E-01	2.95E+01
	600-1,200	2.60E-01	6.75E-02	8.12E+03	6.59E+07	2.35E-03	5.51E-04	7.33E-02	5.38E-01
	All depths	2.11E+02	1.16E+04	6.96E+04	9.38E+08	3.22E+00	4.19E+02	1.03E+00	3.01E+01
Zesticelus profundorum	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	5.09E-01	3.74E-02	7.93E+04	4.02E+08	5.14E-03	2.43E-04	9.19E-01	5.23E+00
	All depths	5.09E-01	3.74E-02	7.93E+04	4.02E+08	5.14E-03	2.43E-04	9.19E-01	5.23E+00
Zoanthidae species A	200-600	1.45E-01	2.11E-02	5.81E+03	3.38E+07	3.43E-03	1.18E-03	1.37E-01	1.88E+00
	600-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	All depths	1.45E-01	2.11E-02	5.81E+03	3.38E+07	3.43E-03	1.18E-03	1.37E-01	1.88E+00
Zoroaster evermanni	200-600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	600-1,200	8.20E+00	9.86E+00	6.75E+04	7.43E+08	1.11E-01	1.71E-01	9.32E-01	1.43E+01
	All depths	8.20E+00	9.86E+00	6.75E+04	7.43E+08	1.11E-01	1.71E-01	9.32E-01	1.43E+01

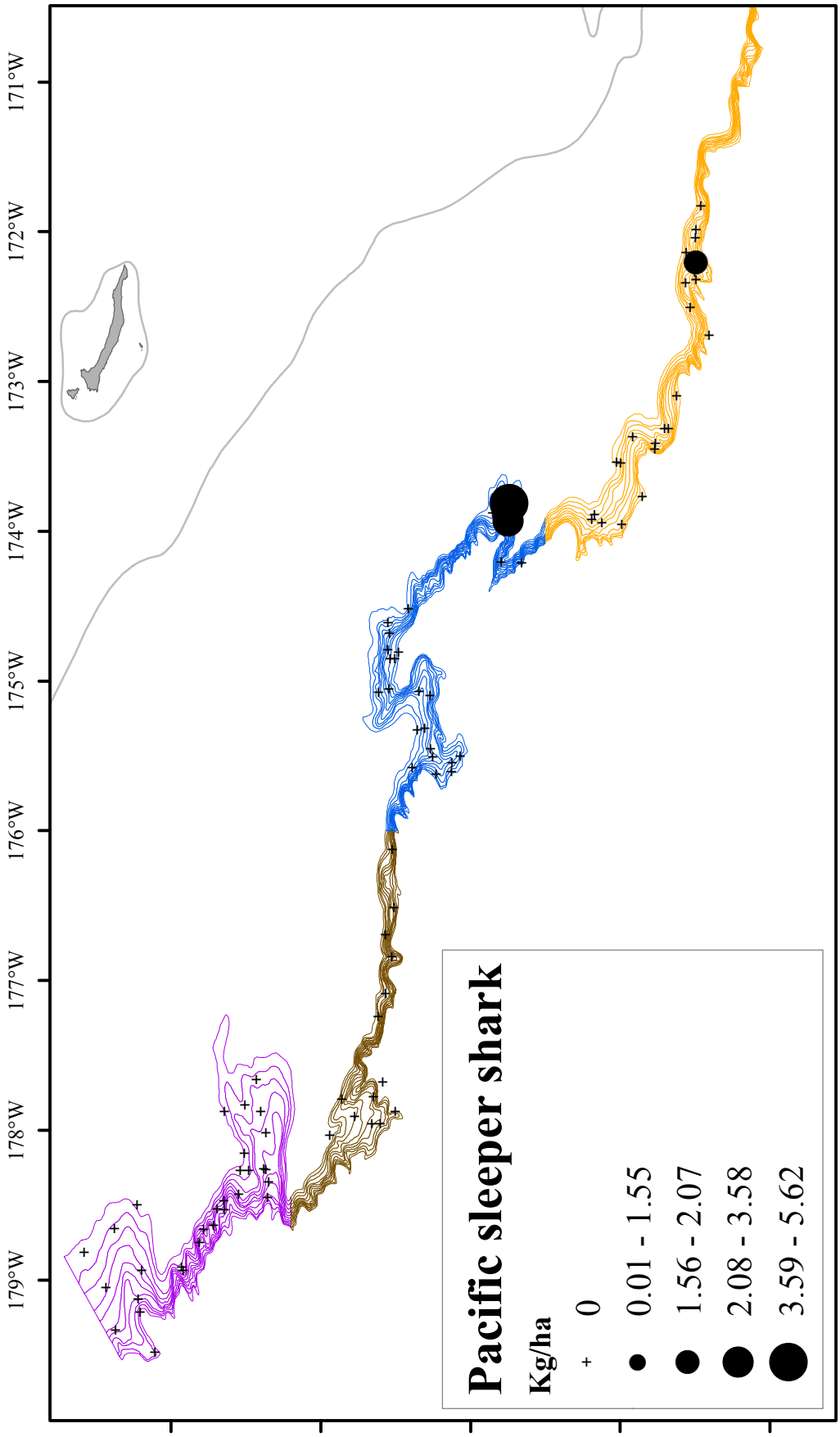

Figure 4. - Distribution and relative abundance of Pacific sleeper shark from the 2016 EBSS survey. Values are CPUE of kg/ha.

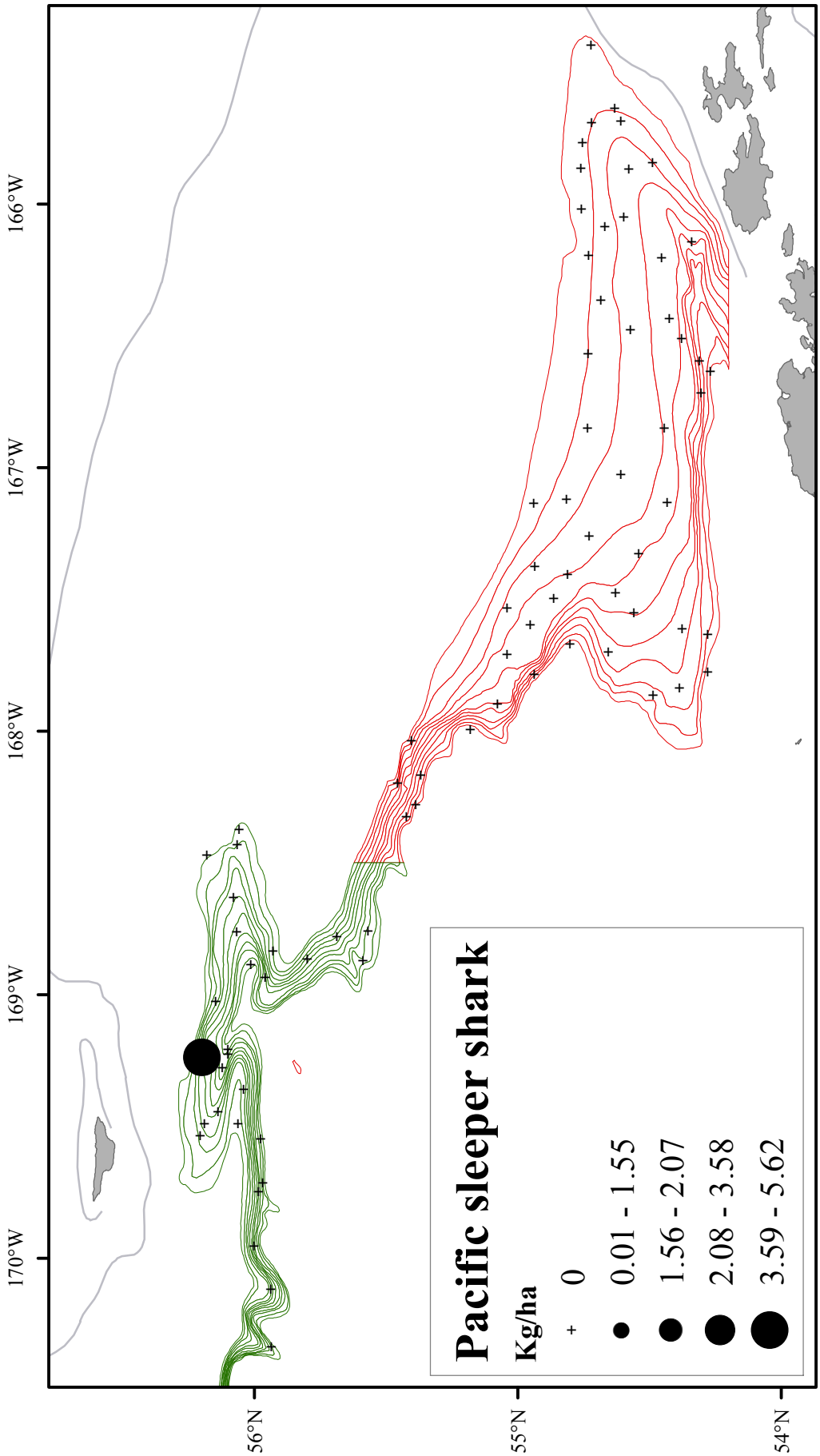

Figure 4. - - continued.

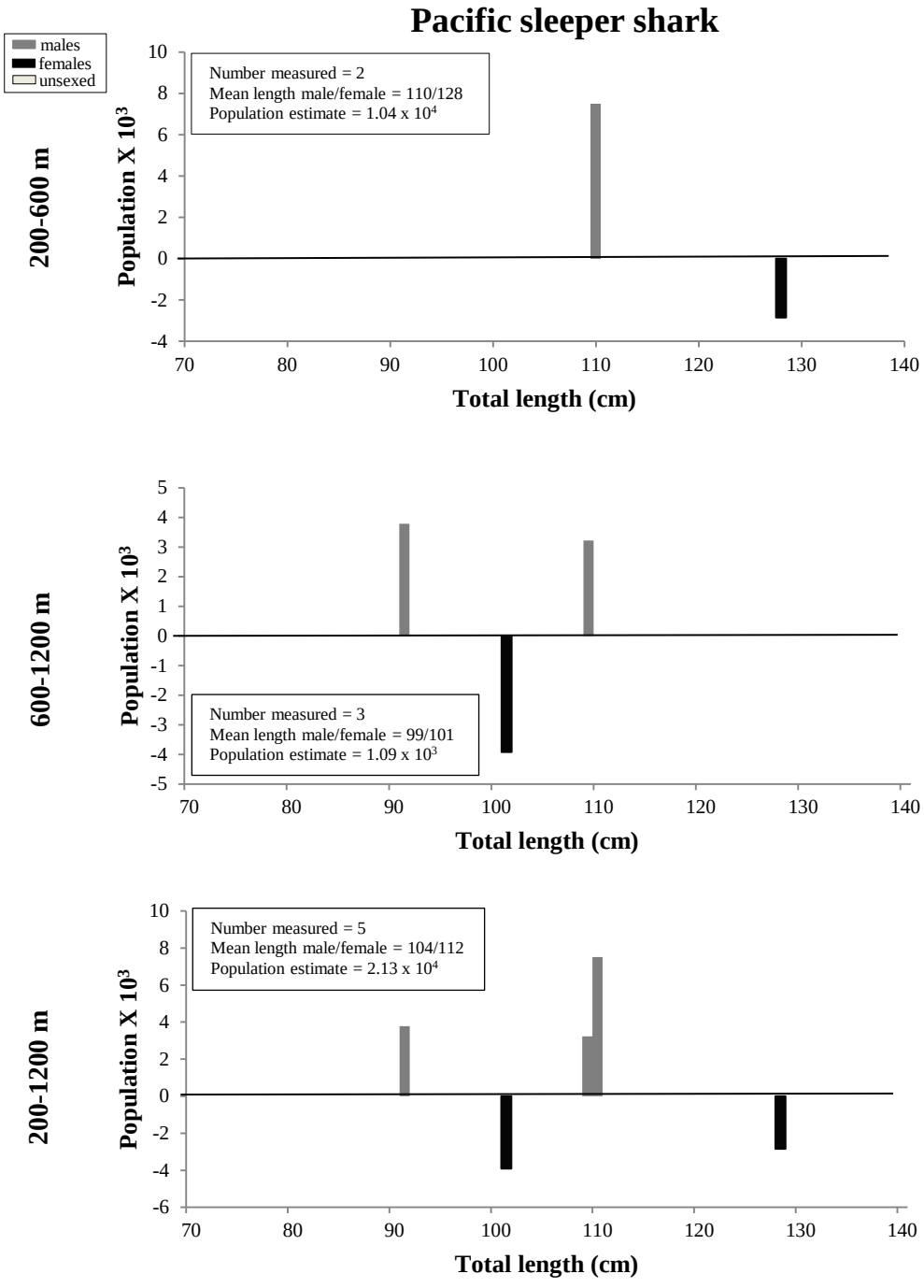

Figure 5. - - Size composition of the estimated sleeper shark population from the 2016 EBSS survey for all subareas by depth.

Table 10. - - Abundance estimates by subarea and depth stratum for Pacific sleeper shark *(Somniosus pacificus)* from the 2016 EBSS survey.

Somniosus pacificus **Pacific sleeper shark**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400						
	400-600	5.73E+01	2.85E+03	3.28E+03	8.13E+06	8.13E-01	4.04E-02
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200	3.49E+01	3.92E+03	1.22E+03	1.54E+07	5.17E-01	5.80E-02
4	200-400	8.68E+01	7.51E+03	7.53E+03	5.63E+07	7.02E-01	6.07E-02
	400-600						
	600-800	2.15E+01	3.79E+03	4.61E+02	1.43E+07	3.09E-01	5.46E-02
	800-1,000	5.07E+01	3.23E+03	2.57E+03	1.04E+07	7.16E-01	4.56E-02
	1,000-1,200						
5	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.51E+02**	**2.13E+04**	**1.51E+04**	**1.05E+08**	**7.68E-02**	**6.51E-03**

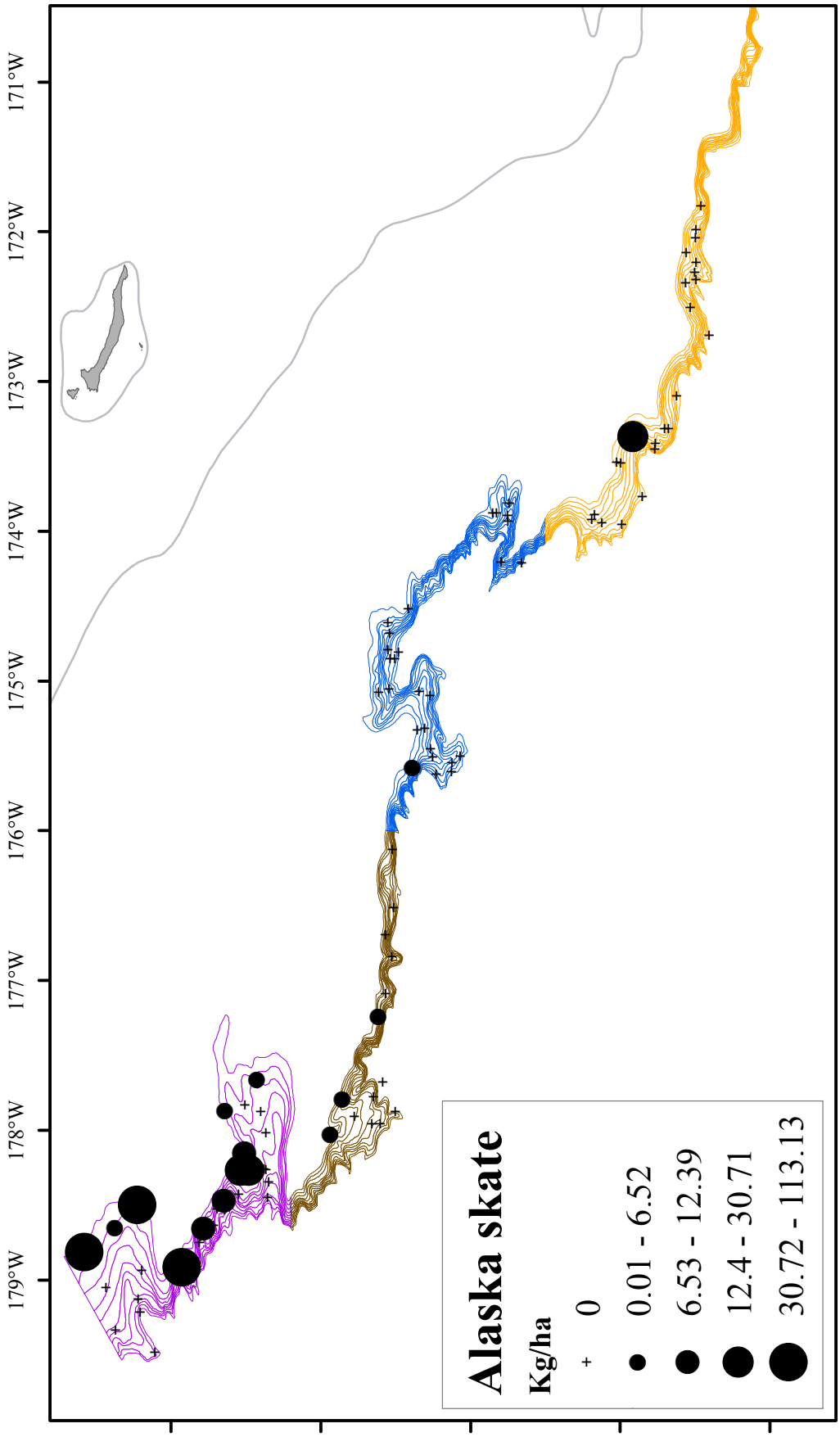

Figure 6. - - Distribution and relative abundance of Alaska skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

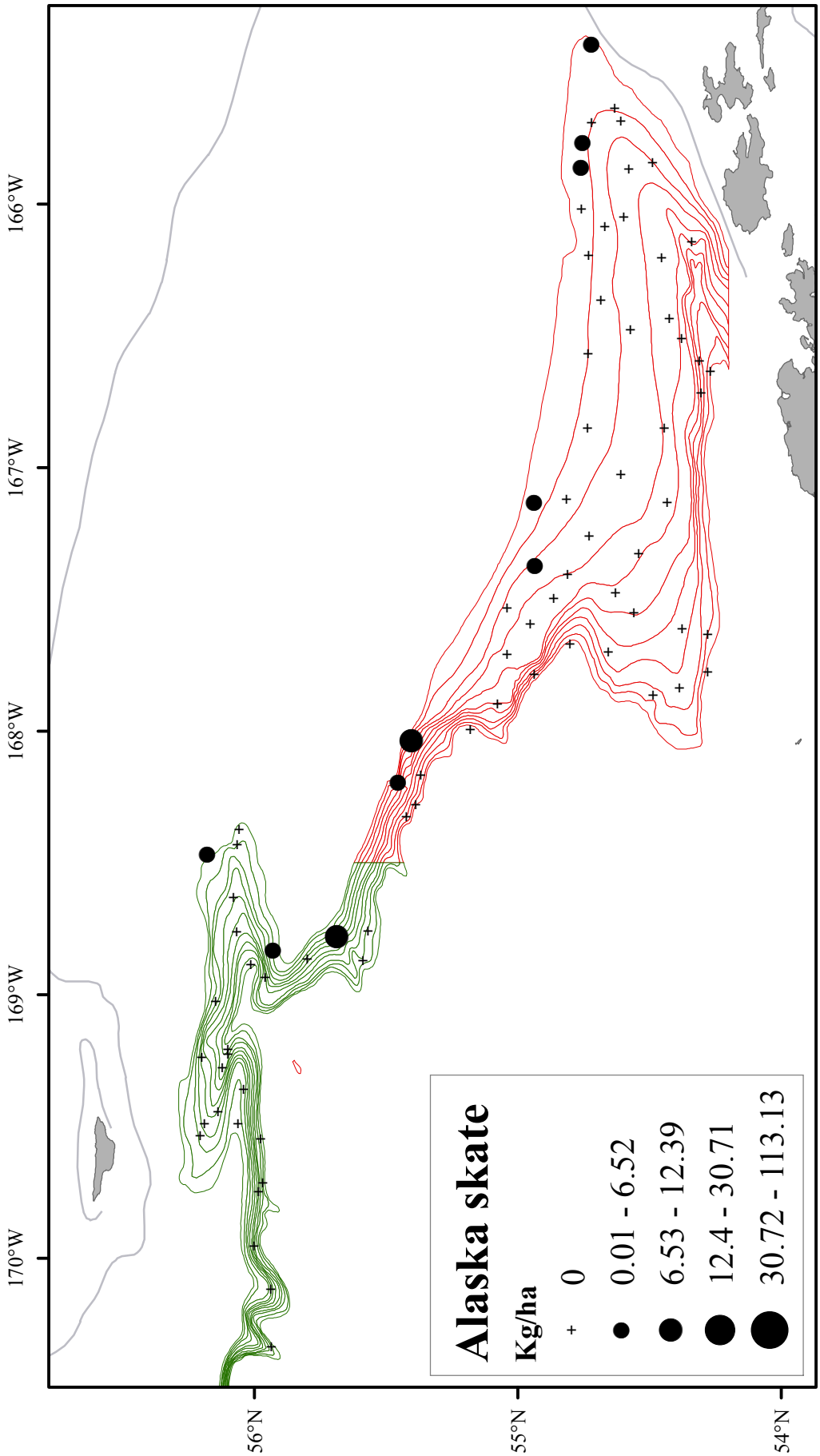

Figure 6. - - continued.

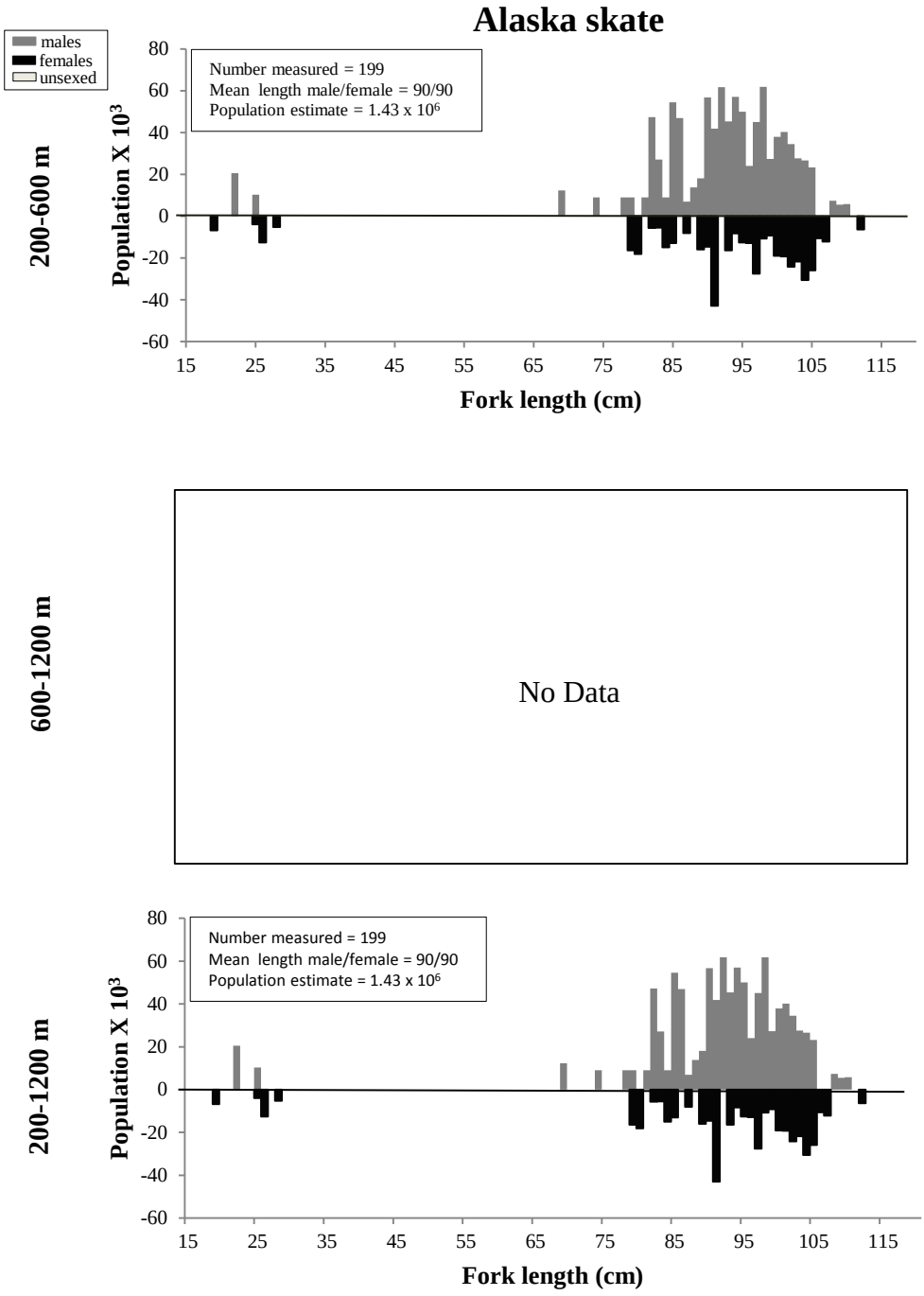

Figure 7. - - Size composition of the estimated Alaska skate population from the 2016 EBSS survey for all subareas by depth.

Table 11. - - Abundance estimates by subarea and depth stratum for Alaska skate *(Bathyraja parmifera)* from the 2016 EBSS survey.

Bathyraja parmifera **Alaska skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	7.94E+02	1.48E+05	9.83E+04	3.02E+09	1.98E+00	3.69E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	2.51E+02	3.06E+04	2.05E+04	3.14E+08	2.17E+00	2.64E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	3.31E+02	3.69E+04	1.10E+05	1.36E+09	3.66E+00	4.08E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	3.46E+01	7.89E+03	1.19E+03	6.23E+07	2.80E-01	6.38E-02
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	1.57E+02	1.76E+04	8.40E+02	1.32E+07	3.70E+00	4.16E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	7.30E+03	1.18E+06	7.14E+06	1.99E+11	2.81E+01	4.55E+00
	400-600	9.48E+01	1.15E+04	8.98E+03	1.33E+08	5.55E-01	6.75E-02
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**8.96E+03**	**1.43E+06**	**7.38E+06**	**2.04E+11**	**2.74E+00**	**4.38E-01**

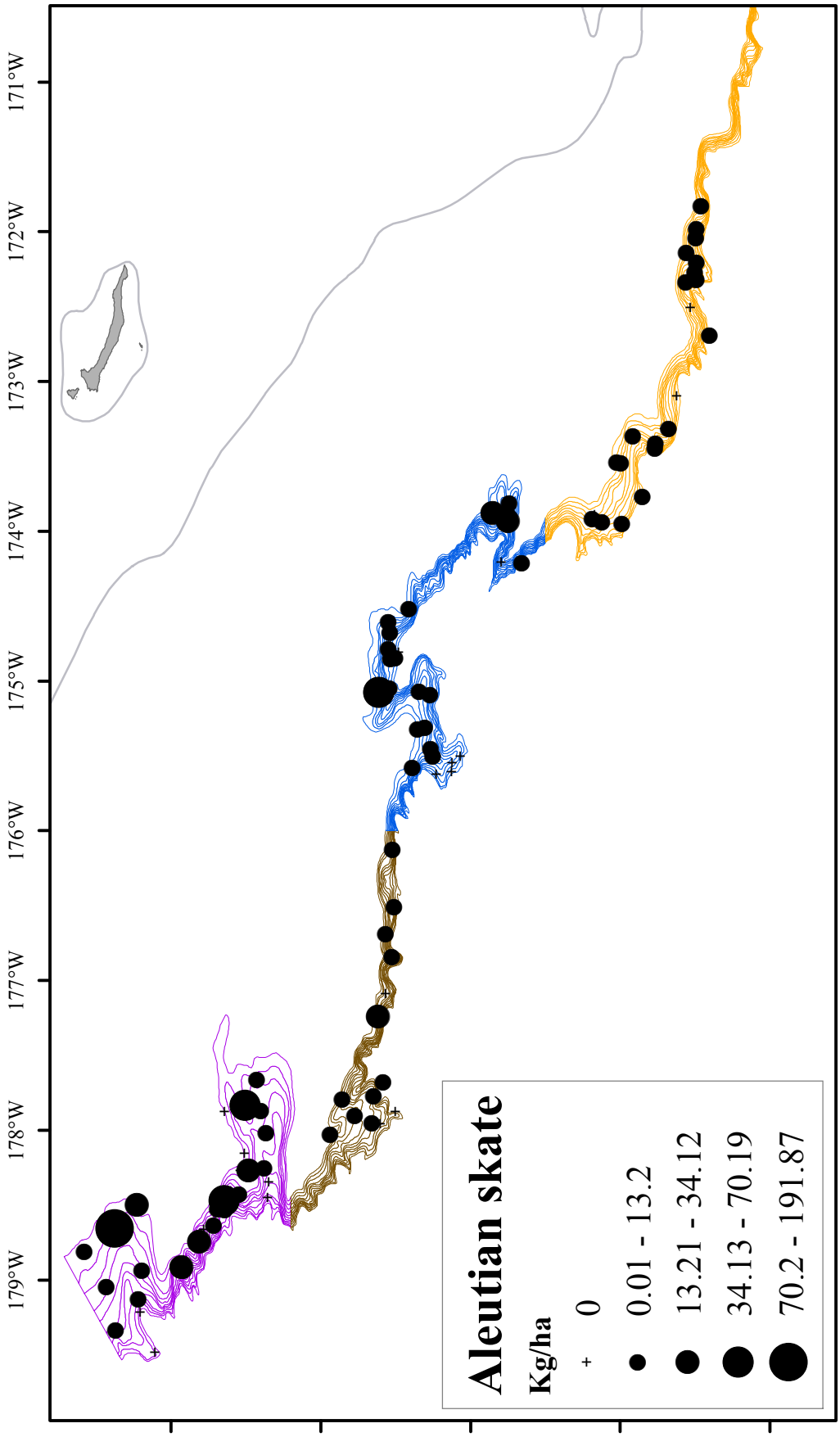

Figure 8. - - Distribution and relative abundance of Aleutian skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

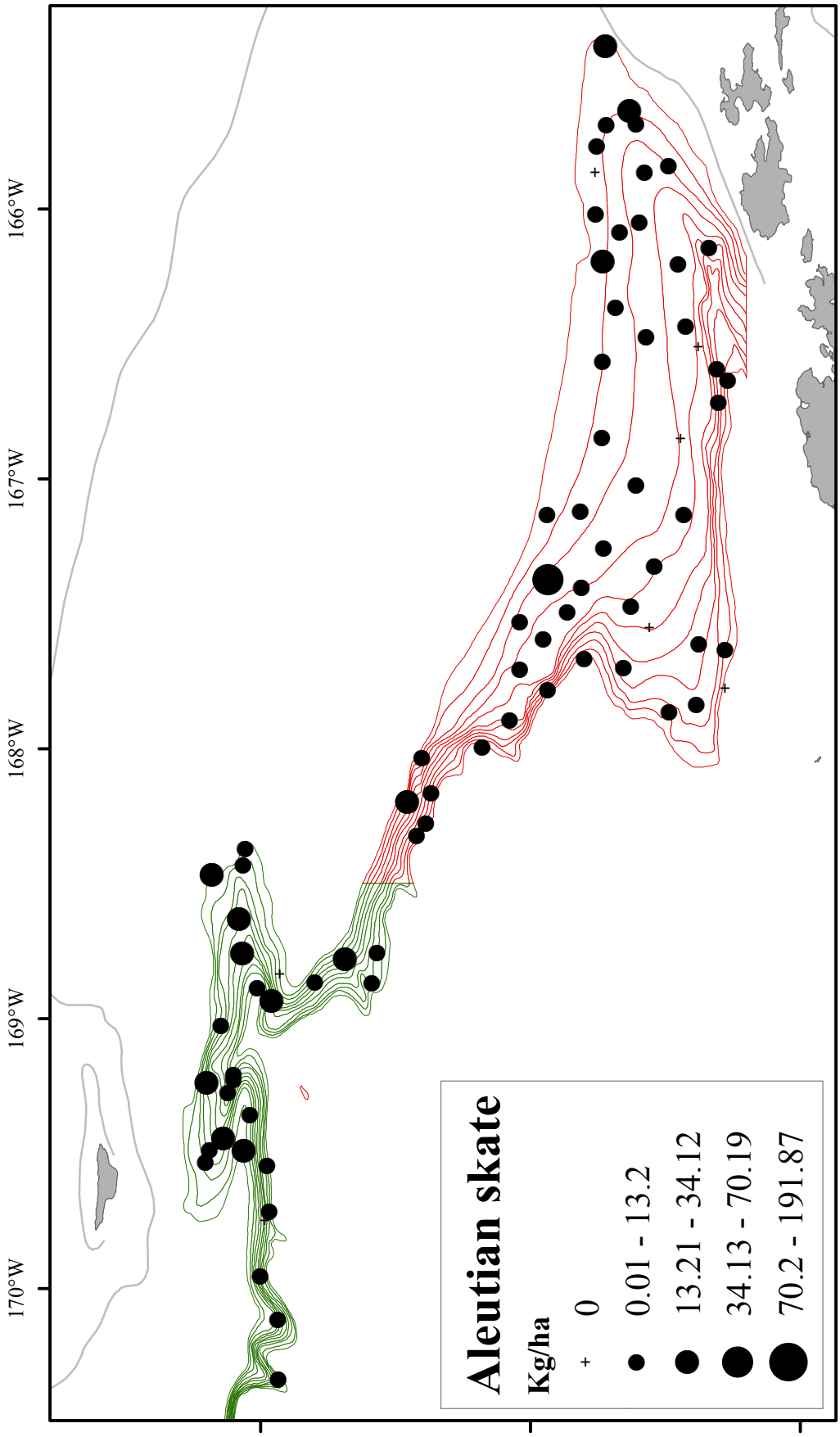

Figure 8.- - continued.

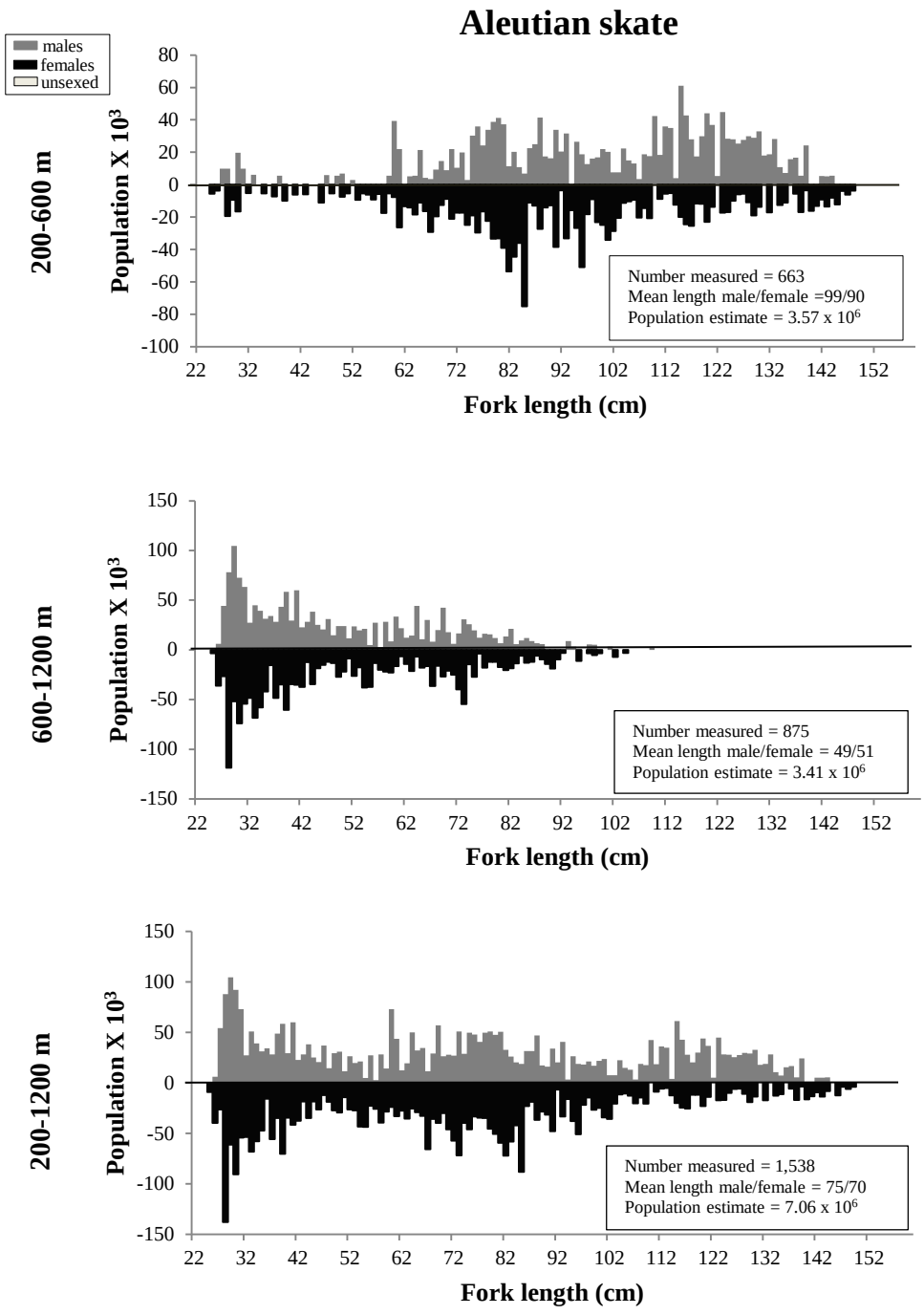

Figure 9. - - Size composition of the estimated Aleutian skate population from the 2016 EBSS survey for all subareas by depth.

Table 12. - - Abundance estimates by subarea and depth stratum for Aleutian skate *(Bathyraja aleutica)* from the 2016 EBSS survey.

Bathyraja aleutica **Aleutian skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	5.45E+03	6.48E+05	2.42E+06	1.89E+10	1.36E+01	1.62E+00
	400-600	9.54E+02	3.61E+05	1.00E+05	5.65E+09	2.35E+00	8.88E-01
	600-800	2.54E+02	3.06E+05	1.23E+04	2.01E+10	1.46E+00	1.76E+00
	800-1,000	5.12E+01	1.66E+05	8.19E+02	7.66E+09	3.78E-01	1.22E+00
	1,000-1,200	2.92E+01	1.34E+05	9.85E+01	2.78E+09	2.64E-01	1.21E+00
2	200-400	1.27E+03	2.32E+05	1.12E+05	2.79E+09	1.10E+01	2.00E+00
	400-600	4.50E+02	1.20E+05	4.40E+04	2.84E+09	6.39E+00	1.70E+00
	600-800	8.82E+02	3.48E+05	5.09E+04	5.49E+09	1.49E+01	5.89E+00
	800-1,000	2.94E+02	2.16E+05	2.32E+04	6.06E+09	5.32E+00	3.90E+00
	1,000-1,200	2.15E+02	7.93E+05	7.92E+03	1.28E+11	4.02E+00	1.48E+01
3	200-400	2.21E+02	3.46E+04	2.16E+04	2.87E+08	2.45E+00	3.83E-01
	400-600	1.83E+02	3.66E+04	6.63E+03	3.55E+08	2.07E+00	4.13E-01
	600-800	4.20E+02	2.98E+05	1.05E+04	9.42E+09	4.61E+00	3.27E+00
	800-1,000	2.24E+02	2.76E+05	1.05E+04	2.58E+10	3.06E+00	3.77E+00
	1,000-1,200	1.49E+01	5.42E+04	1.21E+02	1.18E+09	2.21E-01	8.03E-01
4	200-400	7.59E+02	1.69E+05	1.70E+05	4.57E+09	6.14E+00	1.37E+00
	400-600	1.07E+03	2.92E+05	5.15E+05	1.63E+10	1.47E+01	4.00E+00
	600-800	1.95E+02	1.97E+05	5.27E+03	3.43E+09	2.81E+00	2.85E+00
	800-1,000	2.86E+02	2.98E+05	5.11E+04	2.25E+10	4.05E+00	4.20E+00
	1,000-1,200	1.17E+01	4.43E+04	1.37E+02	1.96E+09	1.77E-01	6.68E-01
5	200-400	5.86E+02	6.56E+04	1.87E+05	2.63E+09	1.38E+01	1.55E+00
	400-600	1.28E+02	4.12E+04	4.09E+03	4.67E+08	3.00E+00	9.67E-01
	600-800	5.64E+01	6.31E+04	7.09E+01	1.92E+08	1.31E+00	1.46E+00
	800-1,000	3.16E+00	1.48E+04	2.50E+00	6.54E+07	5.72E-02	2.67E-01
	1,000-1,200	1.11E+00	1.17E+04	1.24E+00	1.37E+08	1.95E-02	2.05E-01
6	200-400	7.94E+03	1.16E+06	1.67E+07	2.74E+11	3.06E+01	4.47E+00
	400-600	1.07E+03	4.15E+05	1.69E+05	1.04E+10	6.26E+00	2.43E+00
	600-800	1.77E+02	2.56E+05	1.57E+03	1.07E+10	1.93E+00	2.79E+00
	800-1,000	1.09E+01	5.24E+03	1.19E+02	2.74E+07	1.69E-01	8.12E-02
	1,000-1,200						
1-6	**200-1,200**	**2.32E+04**	**7.06E+06**	**2.07E+07**	**5.85E+11**	**7.09E+00**	**2.16E+00**

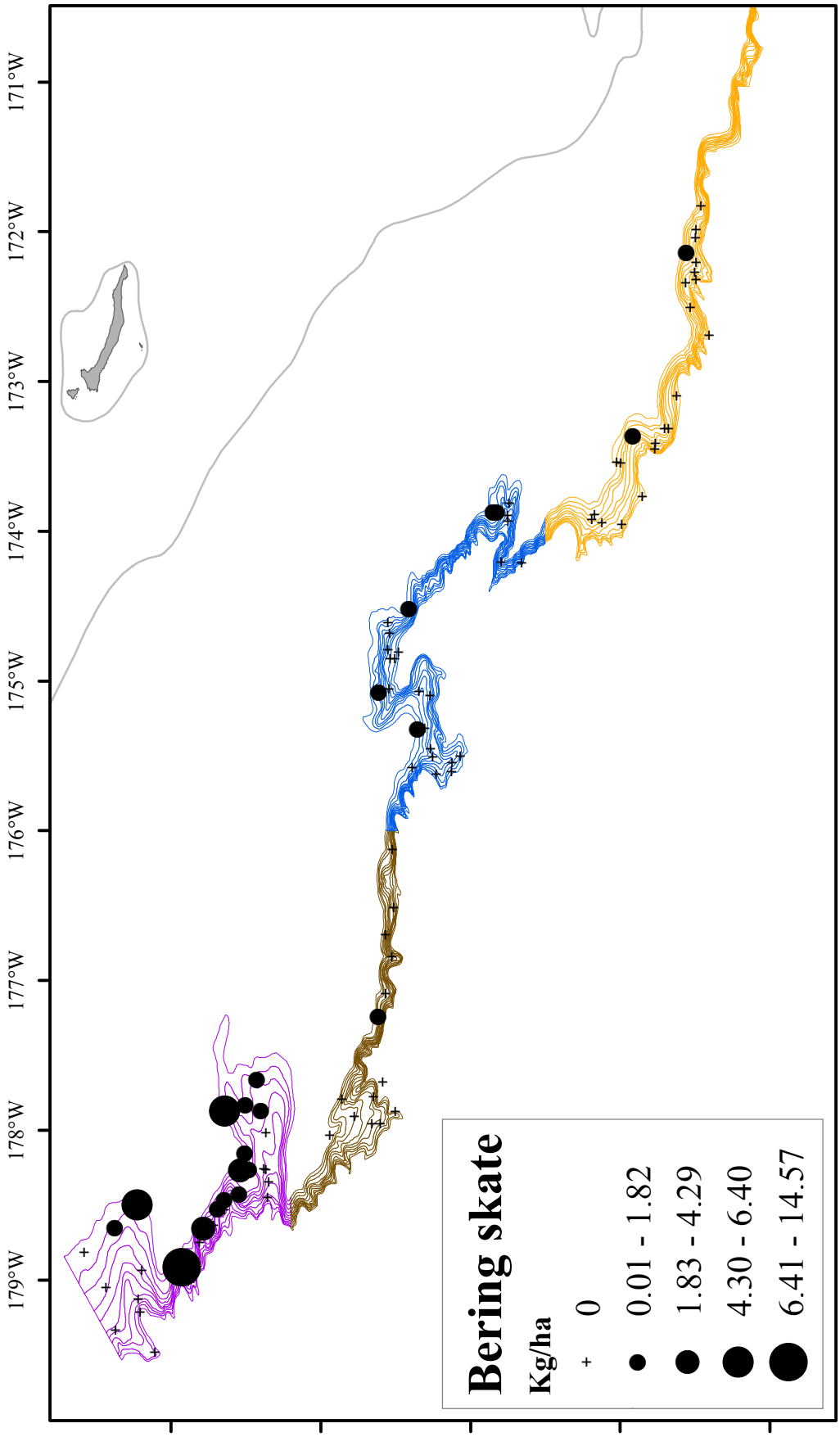

Figure 10. - - Distribution and relative abundance of Bering skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

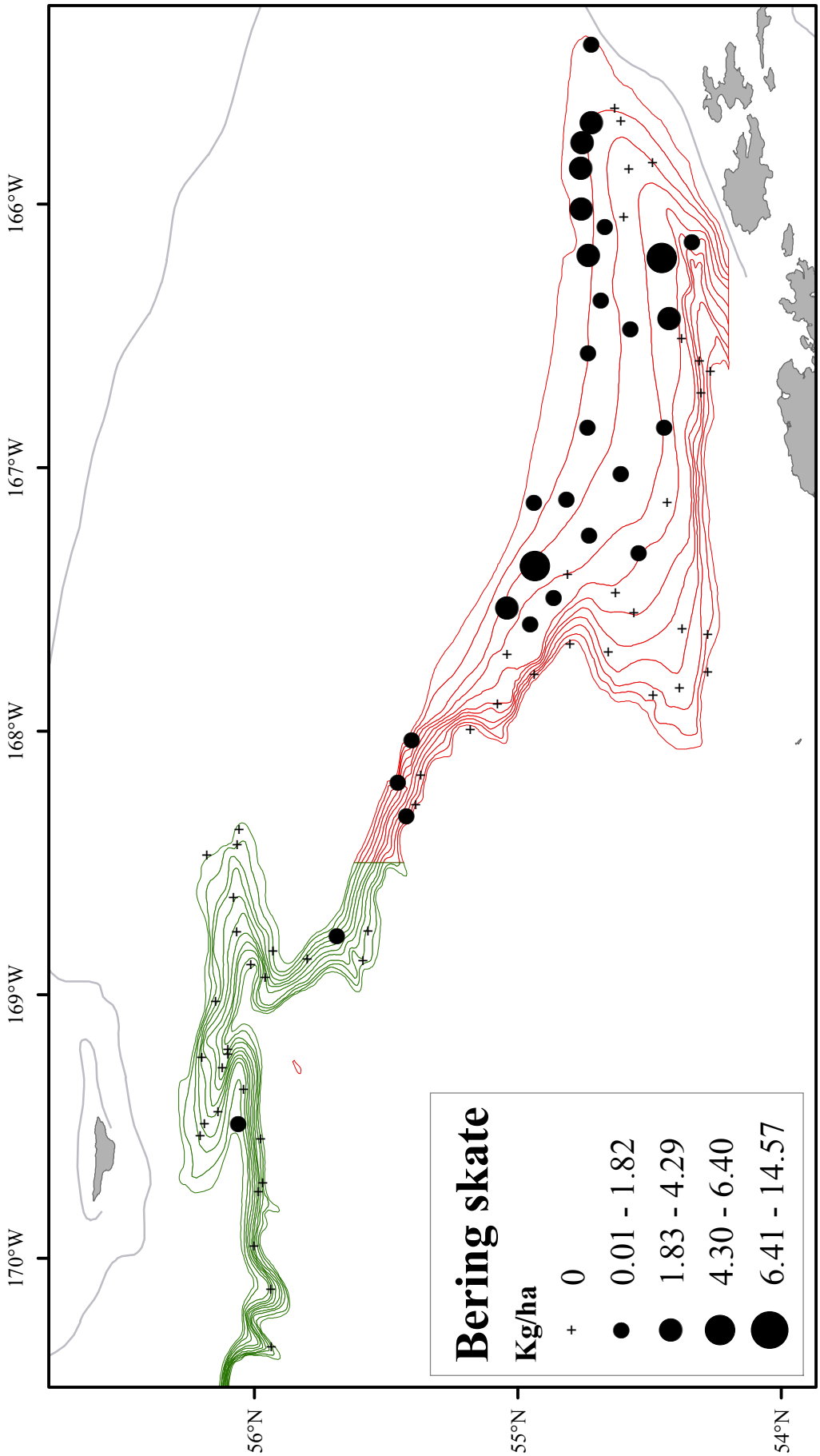

Figure 10. - - continued.

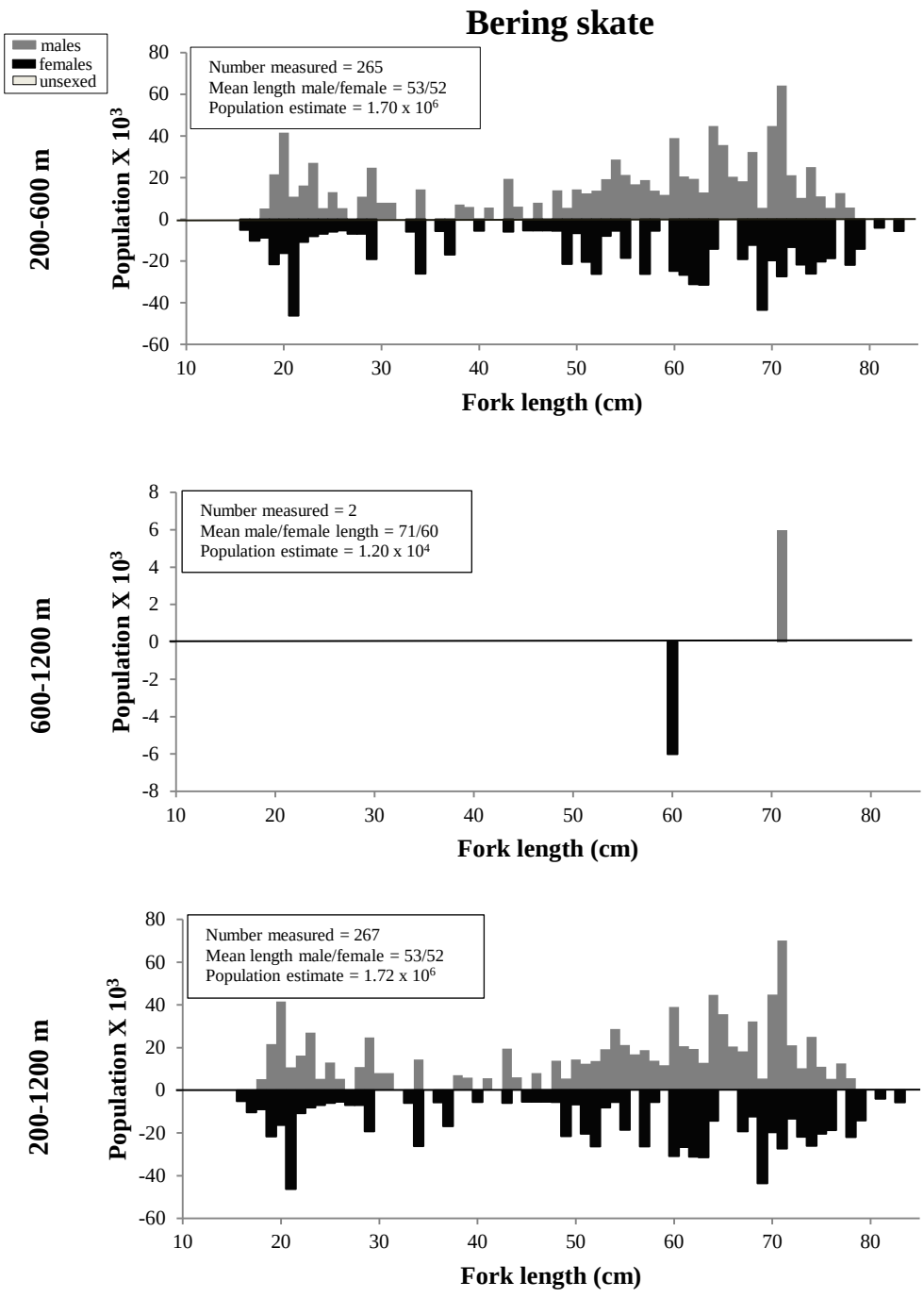

Figure 11. - - Size composition of the estimated Bering skate population from the 2016 EBSS survey for all subareas by depth.

Table 13. - - Abundance estimates by subarea and depth stratum for Bering skate *(Bathyraja interrupta)* from the 2016 EBSS survey.

Bathyraja interrupta **Bering skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	7.21E+02	4.67E+05	2.06E+04	1.05E+10	1.80E+00	1.16E+00
	400-600	3.44E+02	1.71E+05	2.16E+04	5.46E+09	8.47E-01	4.22E-01
	600-800	1.62E+01	1.20E+04	2.63E+02	1.44E+08	9.31E-02	6.90E-02
	800-1,000						
	1,000-1,200						
2	200-400	2.11E+01	3.91E+04	1.92E+02	6.75E+08	1.83E-01	3.38E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	1.61E+01	1.23E+04	1.92E+02	5.86E+07	1.78E-01	1.36E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.60E+01	4.66E+04	1.39E+02	5.45E+08	1.29E-01	3.77E-01
	400-600	2.18E-01	7.20E+03	2.16E-02	1.94E+07	2.98E-03	9.85E-02
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	1.14E+01	4.00E+03	1.31E+02	1.60E+07	2.70E-01	9.44E-02
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	8.01E+02	9.25E+05	1.04E+05	9.76E+10	3.09E+00	3.56E+00
	400-600	1.48E+01	3.27E+04	8.45E+01	3.03E+08	8.69E-02	1.92E-01
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.96E+03**	**1.72E+06**	**1.47E+05**	**1.15E+11**	**6.00E-01**	**5.25E-01**

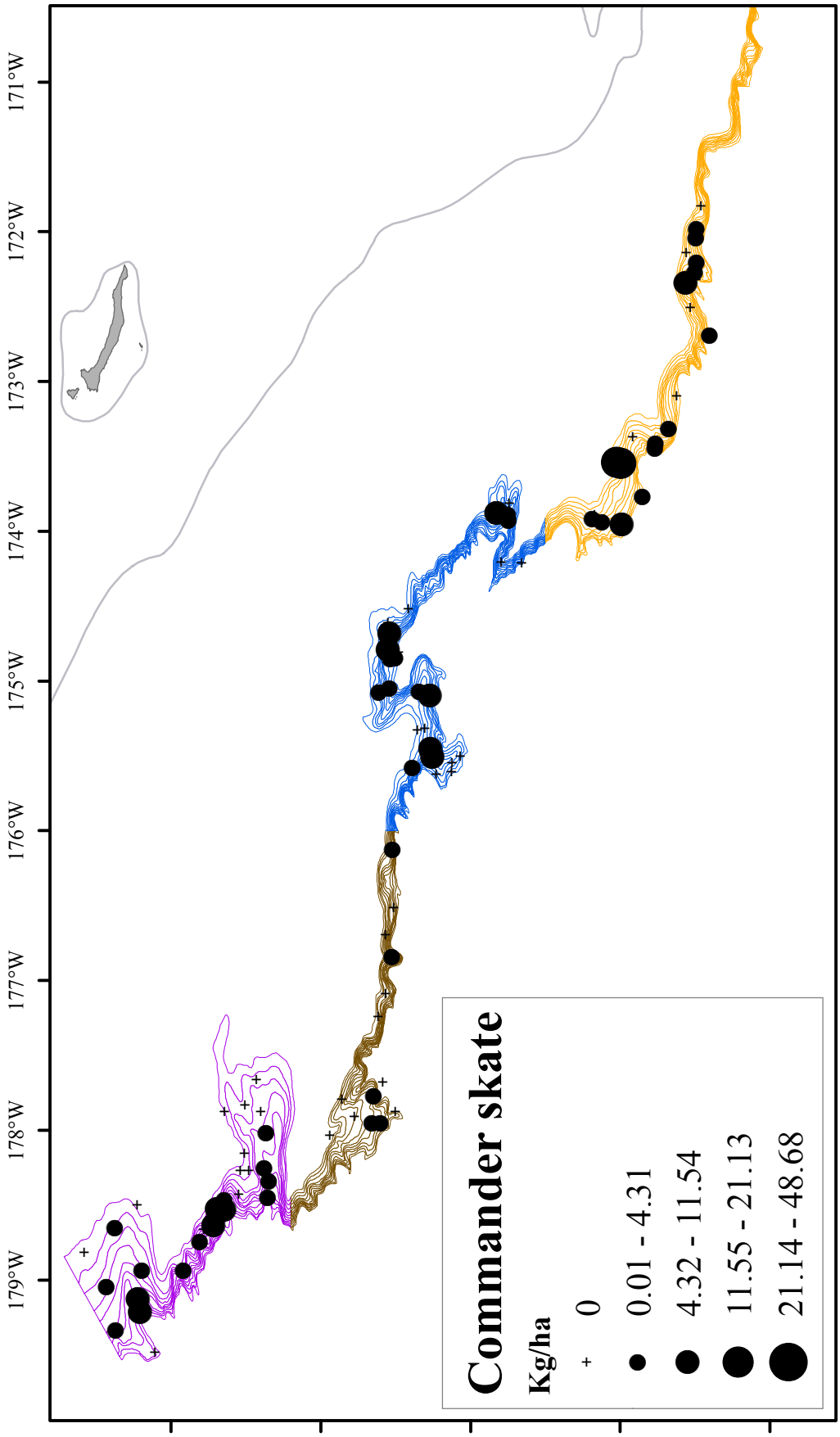

Figure 12. - - Distribution and relative abundance of Commander skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

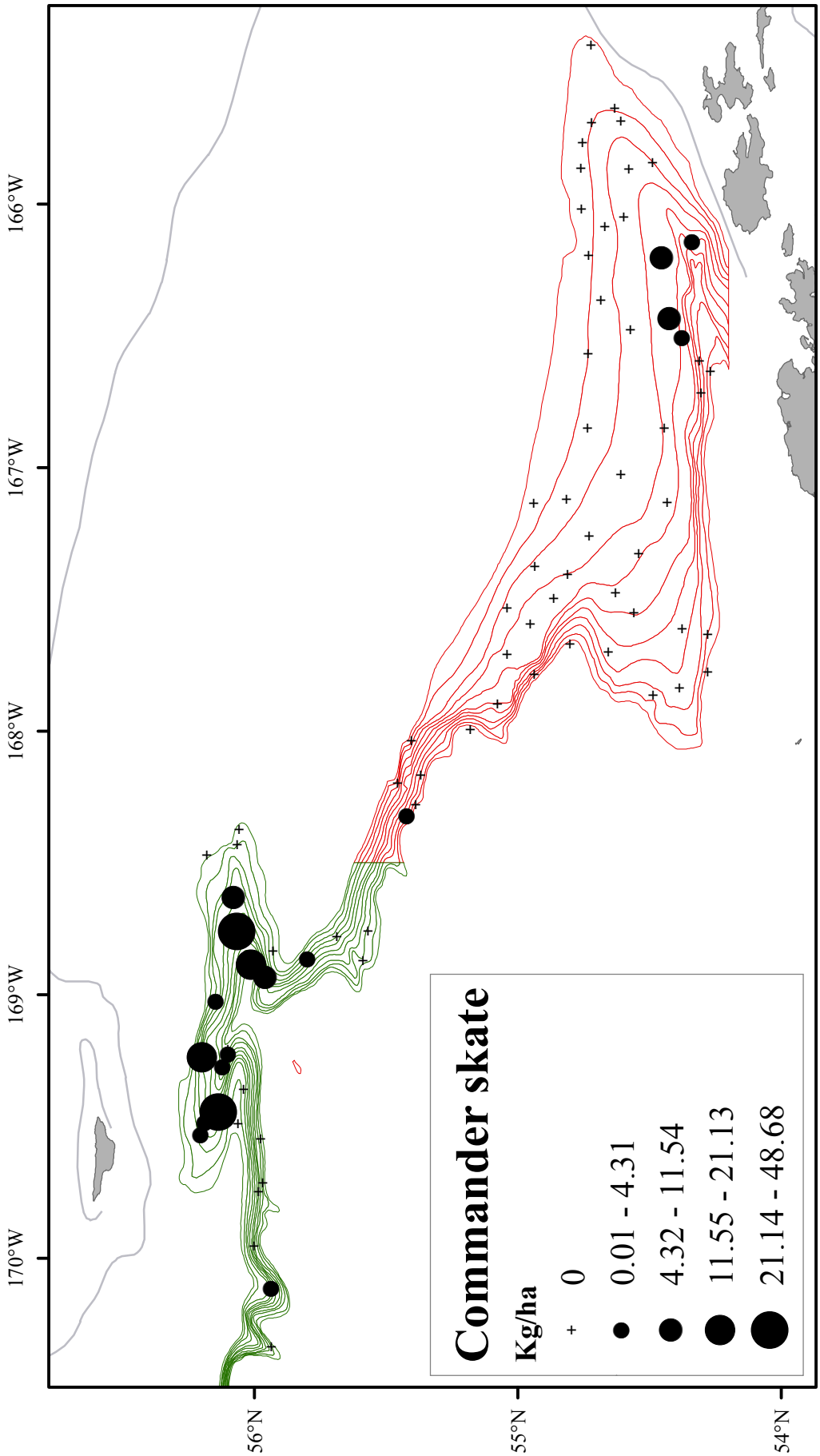

Figure 12. - - continued.

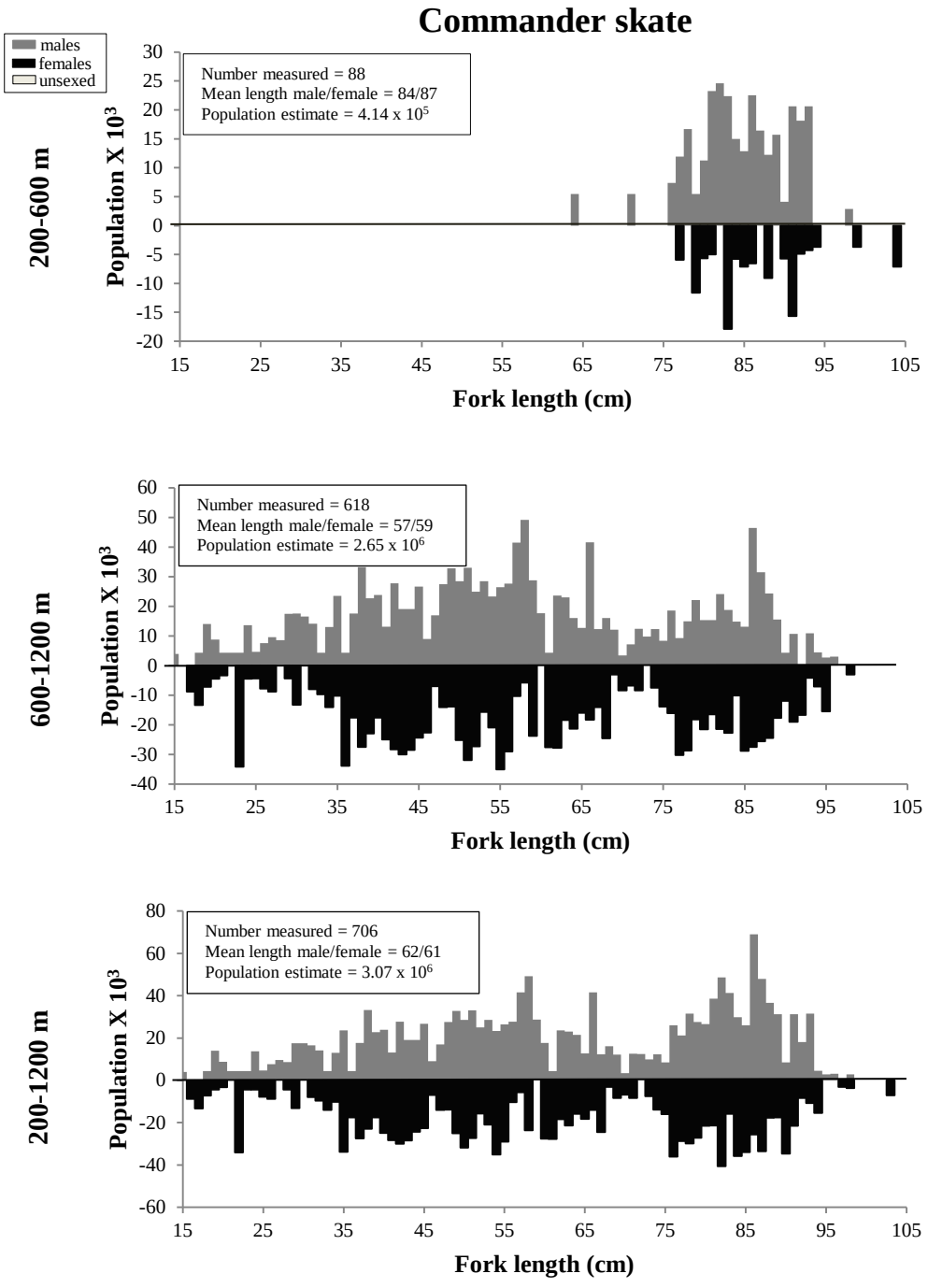

Figure 13. - - Size composition of the estimated Commander skate population from the 2016 EBSS survey for all subareas by depth.

Table 14. - - Abundance estimates by subarea and depth stratum for Commander skate *(Bathyraja lindbergi)* from the 2016 EBSS survey.

Bathyraja lindbergi **Commander skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	3.71E+02	8.92E+04	5.18E+04	3.09E+09	9.13E-01	2.20E-01
	600-800	5.10E+01	2.38E+04	1.34E+03	2.36E+08	2.93E-01	1.37E-01
	800-1,000						
	1,000-1,200						
2	200-400						
	400-600	2.97E+02	7.72E+04	2.44E+04	1.68E+09	4.21E+00	1.09E+00
	600-800	1.12E+03	4.58E+05	3.54E+05	6.20E+10	1.89E+01	7.75E+00
	800-1,000	7.95E+01	2.35E+04	3.57E+03	3.36E+08	1.44E+00	4.24E-01
	1,000-1,200	2.23E+02	6.38E+04	4.36E+04	3.20E+09	4.17E+00	1.19E+00
3	200-400						
	400-600	9.04E+01	2.35E+04	2.42E+03	1.77E+08	1.02E+00	2.66E-01
	600-800	6.29E+02	4.03E+05	1.08E+05	9.31E+10	6.91E+00	4.43E+00
	800-1,000	5.66E+02	6.14E+05	9.39E+04	2.67E+11	7.73E+00	8.39E+00
	1,000-1,200	1.09E+01	3.28E+04	6.46E+01	5.25E+08	1.61E-01	4.86E-01
4	200-400	1.41E+01	3.95E+03	1.99E+02	1.56E+07	1.14E-01	3.19E-02
	400-600	2.85E+02	7.54E+04	1.03E+04	6.58E+08	3.90E+00	1.03E+00
	600-800	4.44E+02	1.50E+05	1.44E+04	1.02E+09	6.40E+00	2.16E+00
	800-1,000	7.17E+01	1.09E+05	2.03E+03	6.71E+09	1.01E+00	1.54E+00
	1,000-1,200	1.99E+01	4.43E+04	3.98E+02	1.96E+09	3.01E-01	6.68E-01
5	200-400						
	400-600						
	600-800	4.01E+01	2.14E+04	5.48E+02	7.63E+07	9.28E-01	4.95E-01
	800-1,000	5.61E+01	5.52E+04	1.65E+03	1.83E+09	1.02E+00	1.00E+00
	1,000-1,200						
6	200-400	2.87E+01	1.16E+04	3.85E+02	6.14E+07	1.10E-01	4.48E-02
	400-600	4.02E+02	1.36E+05	1.49E+04	1.40E+09	2.36E+00	8.00E-01
	600-800	4.45E+02	2.44E+05	3.83E+04	9.83E+09	4.85E+00	2.66E+00
	800-1,000	1.63E+02	2.04E+05	1.75E+04	1.79E+10	2.52E+00	3.16E+00
	1,000-1,200	1.05E+02	2.06E+05	5.81E+03	2.42E+10	2.11E+00	4.16E+00
1-6	**200-1,200**	**5.51E+03**	**3.07E+06**	**7.90E+05**	**4.97E+11**	**1.68E+00**	**9.38E-01**

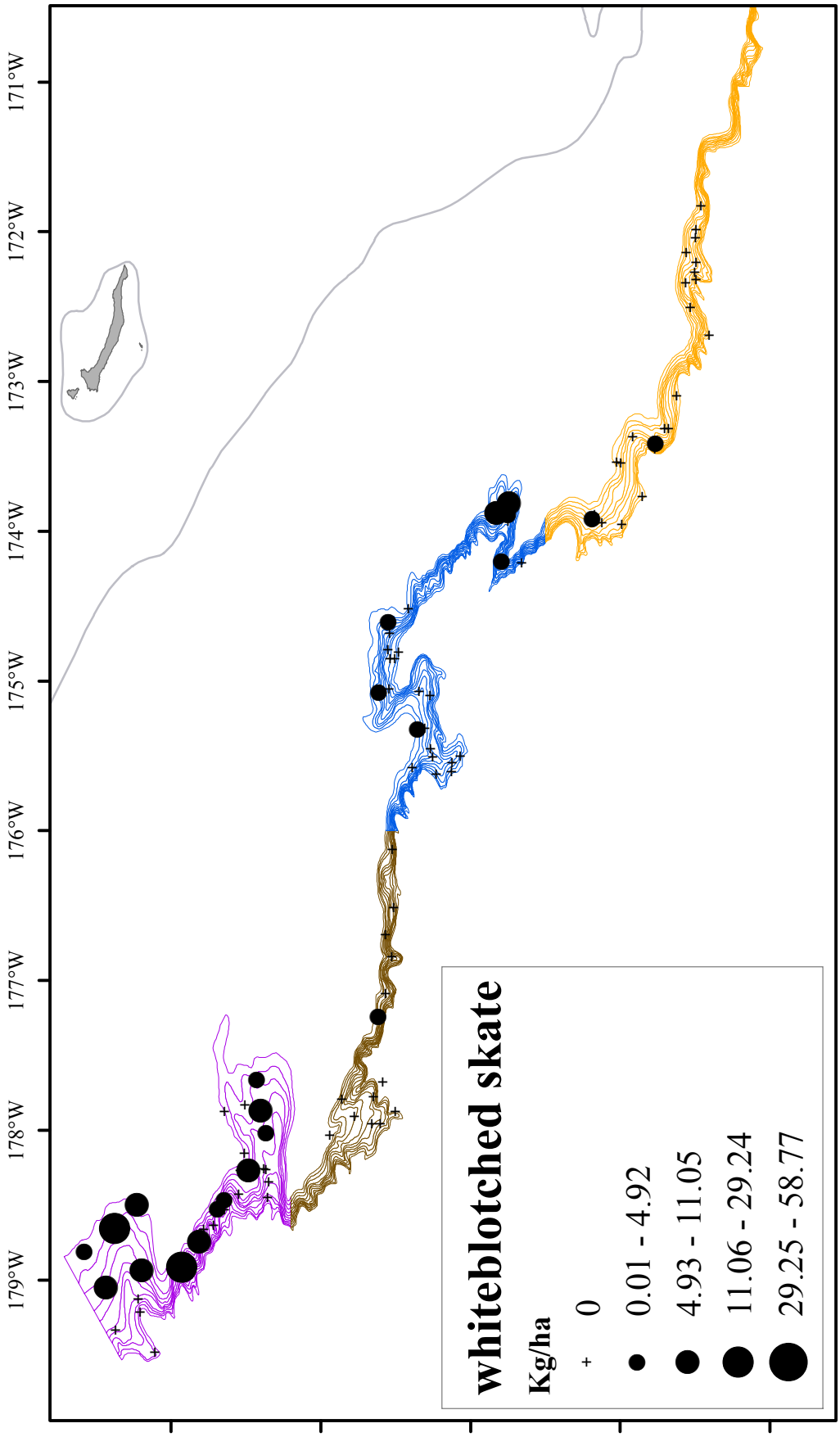

Figure 14. - - Distribution and relative abundance of whiteblotched skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

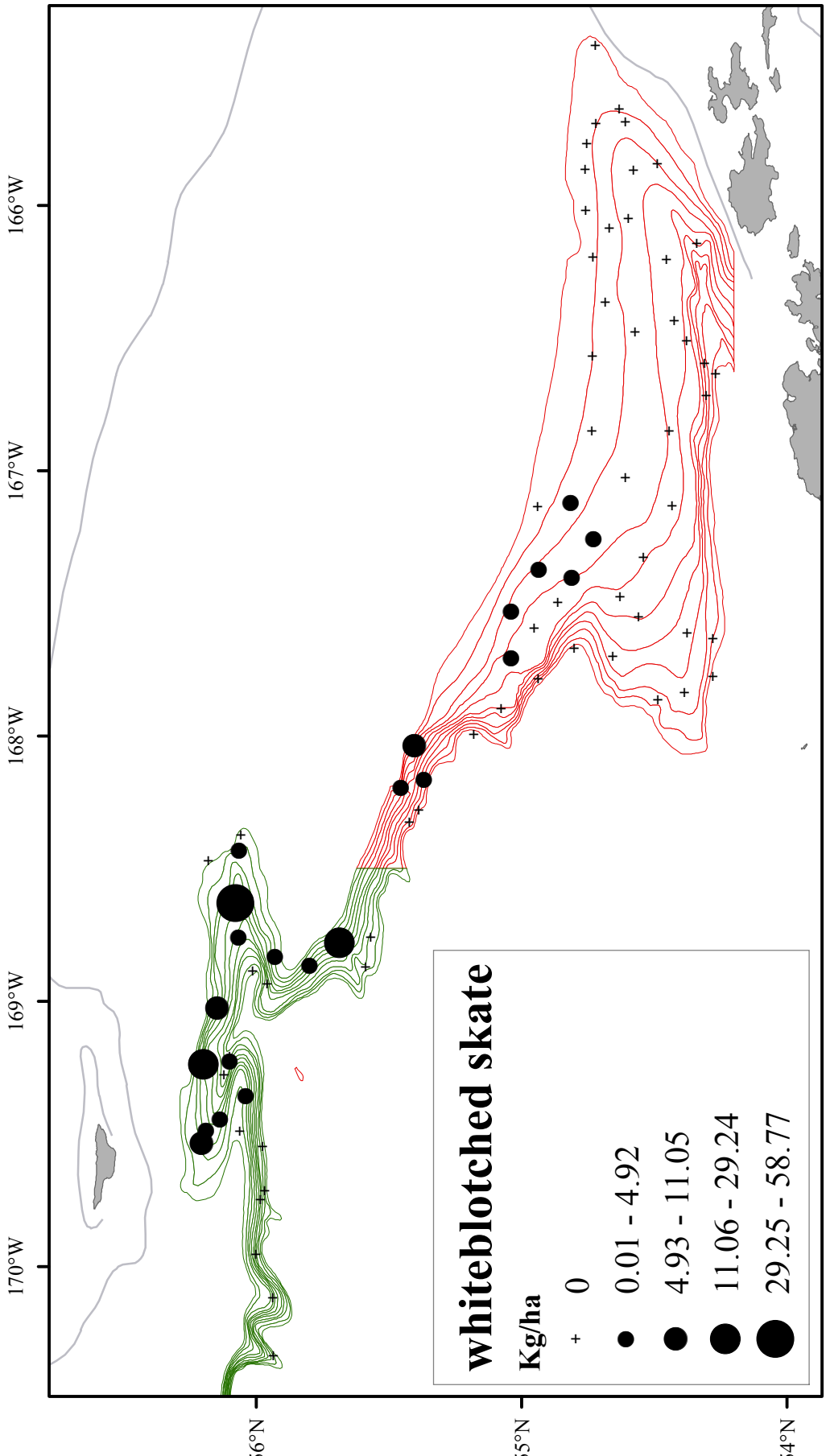

Figure 14. - - continued.

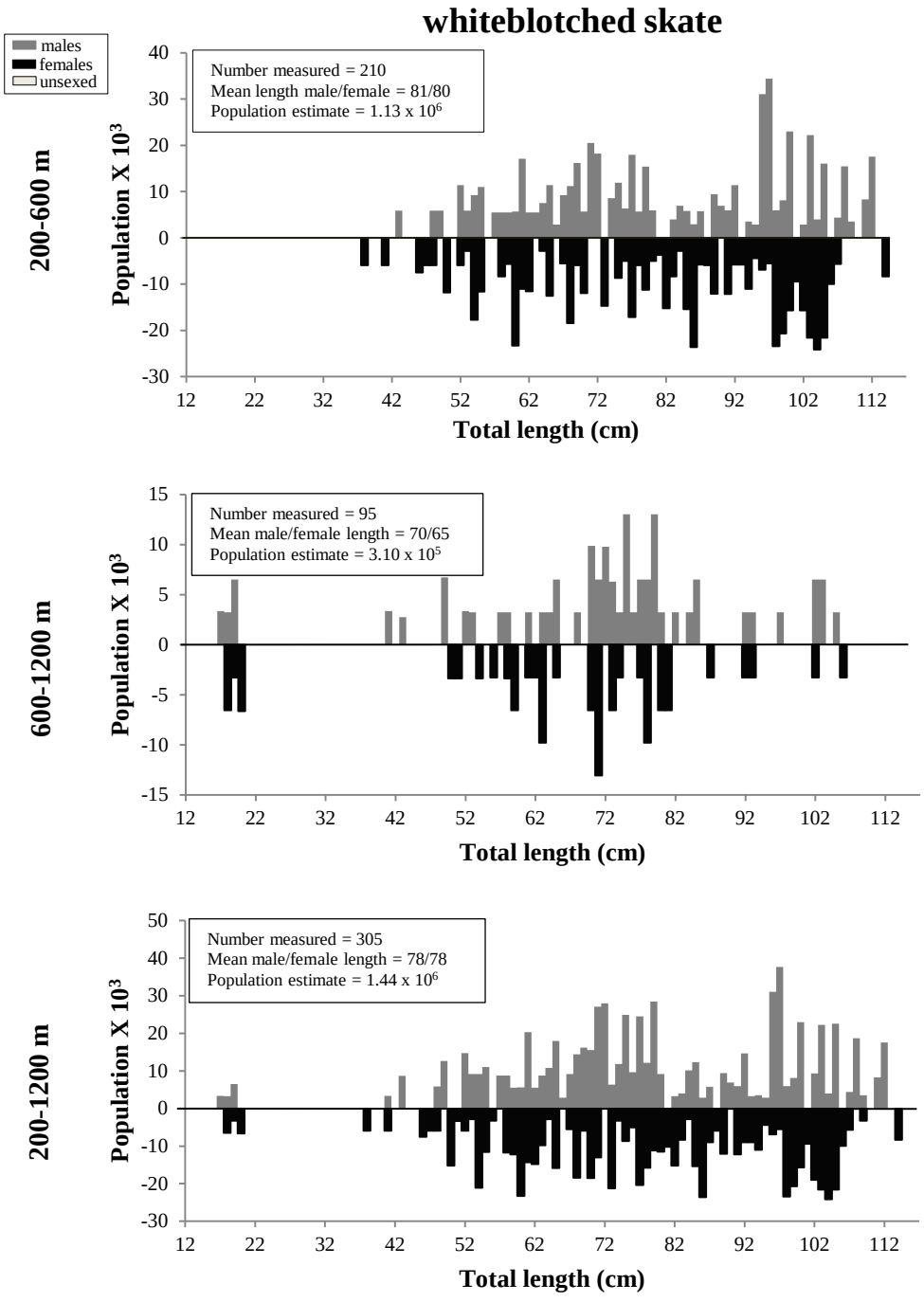

Figure 15. - - Size composition of the estimated whiteblotched skate population from the 2016 EBSS survey for all subareas by depth.

Table 15. - - Abundance estimates by subarea and depth stratum for whiteblotched skate *(Bathyraja maculata)* from the 2016 EBSS survey.

Bathyraja maculata **whiteblotched skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	4.05E+02	5.63E+04	3.45E+04	6.20E+08	1.01E+00	1.40E-01
	400-600	1.33E+02	3.01E+04	5.01E+03	2.19E+08	3.28E-01	7.41E-02
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	3.54E+02	4.55E+04	4.99E+04	6.47E+08	3.06E+00	3.93E-01
	400-600	4.23E+02	1.01E+05	3.12E+04	1.57E+09	6.00E+00	1.44E+00
	600-800	7.28E+02	3.08E+05	4.72E+05	6.75E+10	1.23E+01	5.20E+00
	800-1,000						
	1,000-1,200	1.14E+00	2.78E+03	1.31E+00	7.71E+06	2.14E-02	5.18E-02
3	200-400						
	400-600	5.36E+01	9.74E+03	1.09E+03	3.56E+07	6.04E-01	1.10E-01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	2.64E+02	6.91E+04	2.14E+04	1.89E+09	2.13E+00	5.59E-01
	400-600	1.94E+02	4.76E+04	2.20E+04	1.56E+09	2.66E+00	6.52E-01
	600-800	1.36E-01	3.79E+03	1.86E-02	1.43E+07	1.97E-03	5.46E-02
	800-1,000						
	1,000-1,200						
5	200-400	6.86E+01	1.20E+04	4.70E+03	1.44E+08	1.62E+00	2.83E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	1.59E+03	3.18E+05	4.83E+05	2.31E+10	6.12E+00	1.22E+00
	400-600	8.51E+02	4.39E+05	3.64E+04	1.95E+10	4.99E+00	2.58E+00
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**5.06E+03**	**1.44E+06**	**1.16E+06**	**1.17E+11**	**1.55E+00**	**4.41E-01**

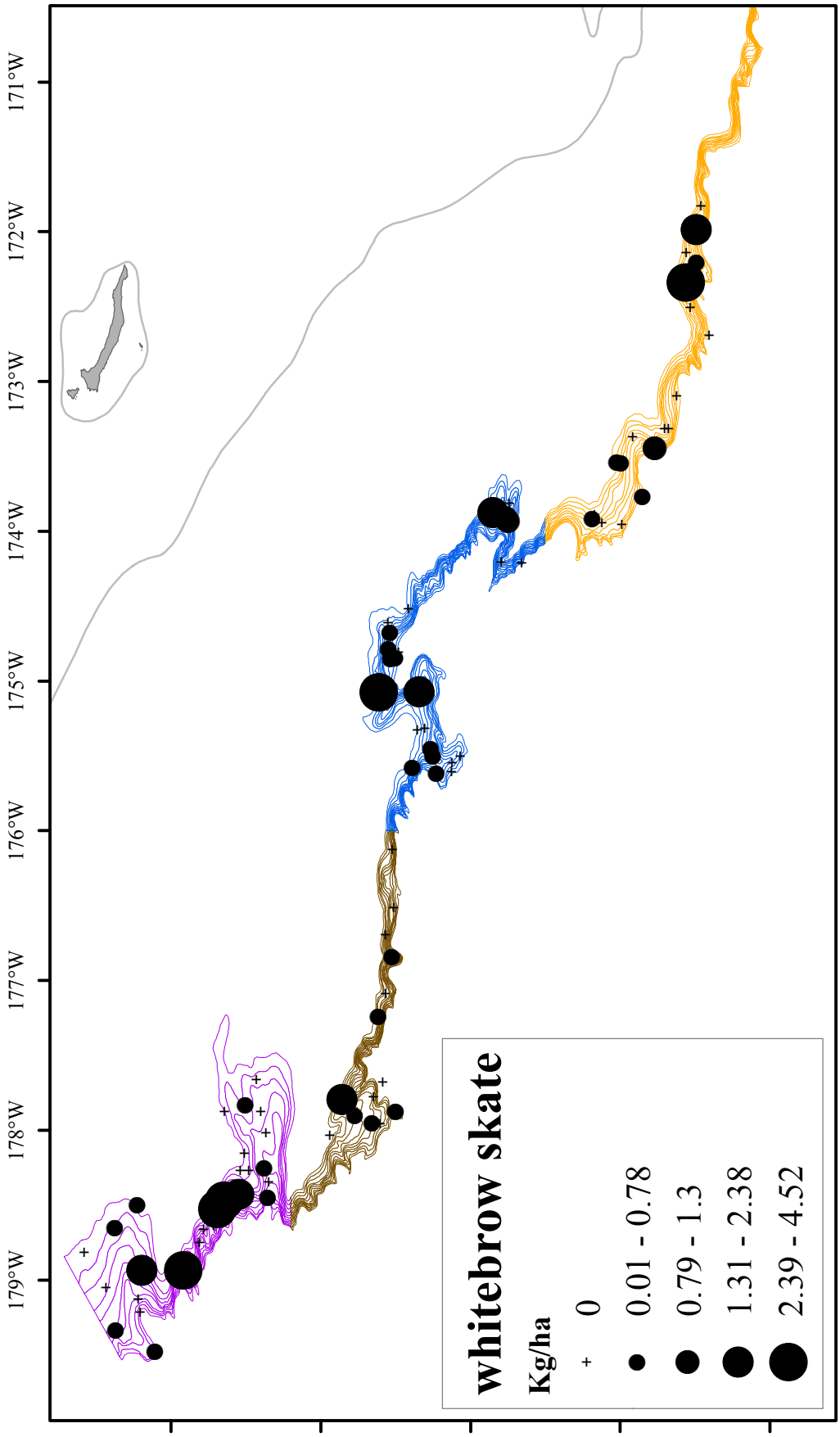

Figure 16. - - Distribution and relative abundance of whitebrow skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

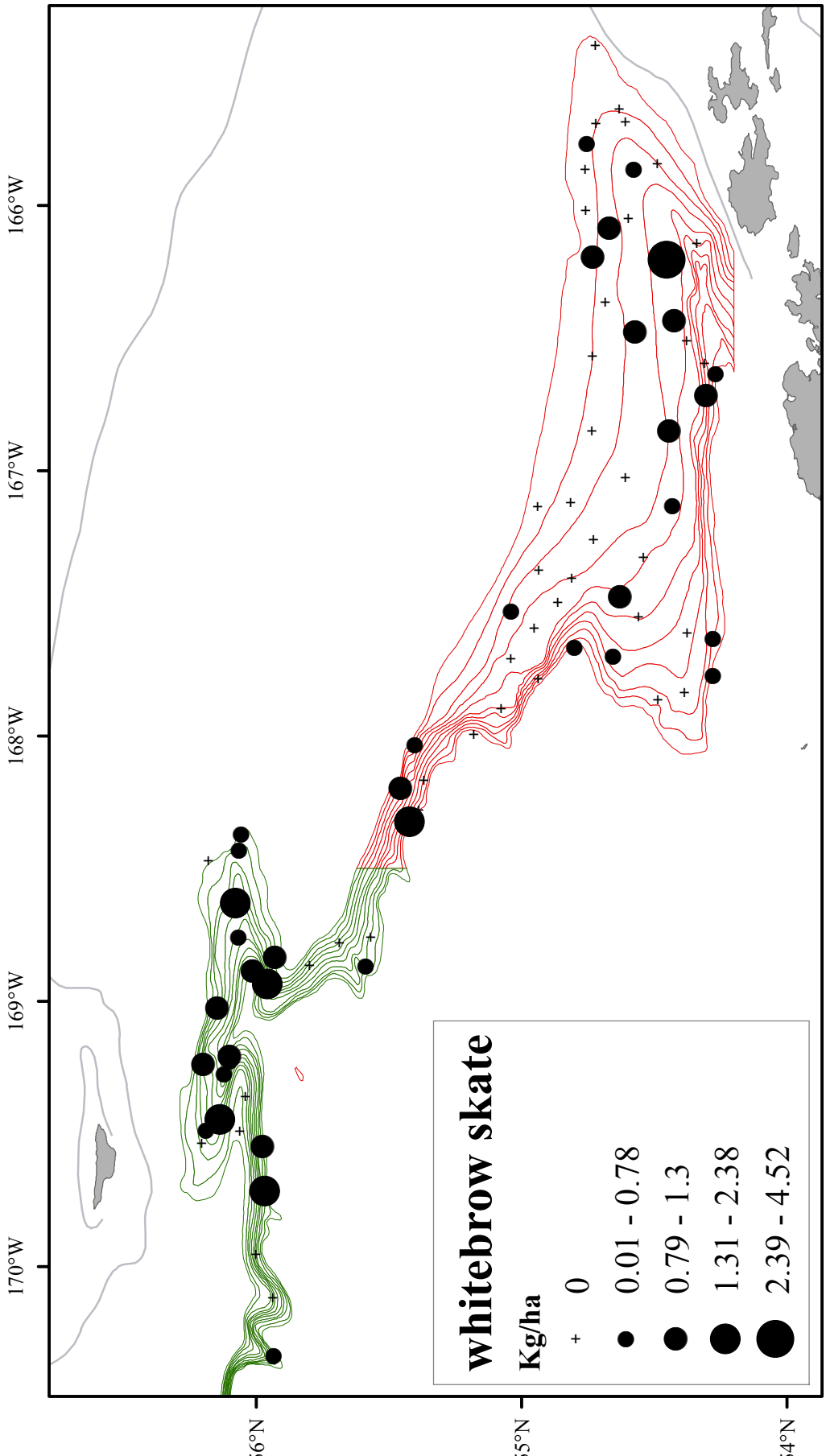

Figure 16. - - continued.

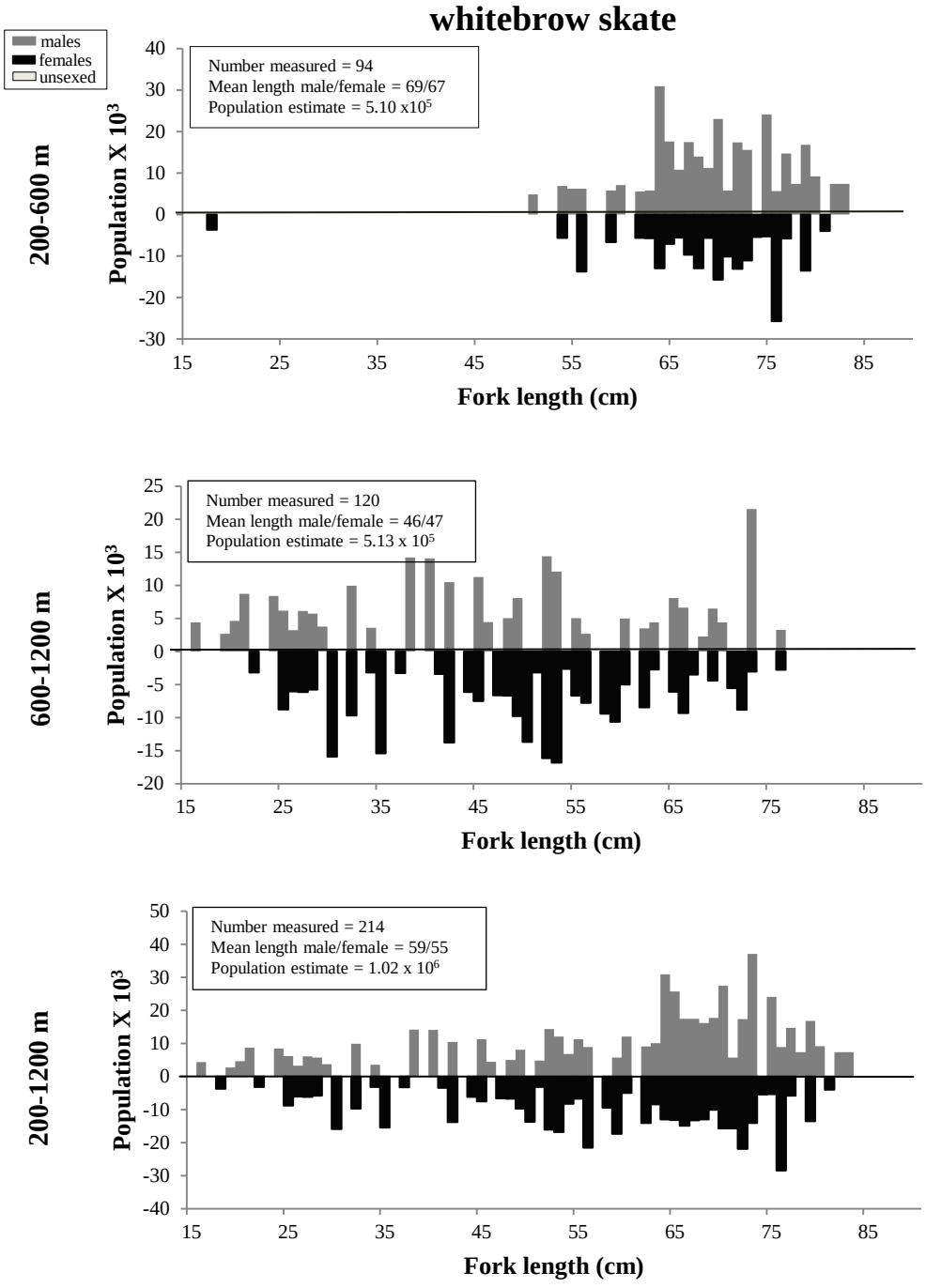

Figure 17. - - Size composition of the estimated whitebrow skate population from the 2016 EBSS survey for all subareas by depth.

Table 16. - - Abundance estimates by subarea and depth stratum for whitebrow skate *(Bathyraja minispinosa)* from the 2016 EBSS survey.

Bathyraja minispinosa **whitebrow skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.22E+02	5.10E+04	2.00E+03	3.48E+08	3.03E-01	1.27E-01
	400-600	2.51E+02	1.42E+05	1.15E+04	2.78E+09	6.17E-01	3.49E-01
	600-800	2.84E+01	4.01E+04	8.05E+02	1.61E+09	1.63E-01	2.31E-01
	800-1,000	3.02E+01	3.34E+04	7.52E+02	6.75E+08	2.23E-01	2.47E-01
	1,000-1,200	2.07E+01	7.99E+04	6.27E+01	2.02E+09	1.87E-01	7.22E-01
2	200-400	3.12E+01	1.50E+04	3.05E+02	6.96E+07	2.70E-01	1.29E-01
	400-600	2.46E+01	1.30E+04	1.50E+02	3.81E+07	3.50E-01	1.85E-01
	600-800	6.50E+01	5.03E+04	3.80E+02	2.73E+08	1.10E+00	8.50E-01
	800-1,000	4.01E+01	3.94E+04	2.51E+02	3.36E+08	7.26E-01	7.13E-01
	1,000-1,200	3.62E+01	3.86E+04	2.03E+02	3.26E+08	6.76E-01	7.20E-01
3	200-400						
	400-600	4.42E+01	2.61E+04	9.31E+02	2.83E+08	4.98E-01	2.94E-01
	600-800	9.67E+01	6.60E+04	3.61E+03	1.02E+09	1.06E+00	7.25E-01
	800-1,000	7.92E+00	1.76E+04	6.27E+01	3.09E+08	1.08E-01	2.40E-01
	1,000-1,200	3.49E+00	1.86E+04	4.07E+00	1.21E+08	5.17E-02	2.76E-01
4	200-400	4.72E+01	1.92E+04	1.35E+03	2.32E+08	3.82E-01	1.56E-01
	400-600	8.05E+01	4.49E+04	2.79E+03	6.14E+08	1.10E+00	6.15E-01
	600-800	1.42E+01	2.73E+04	6.86E+01	1.17E+08	2.05E-01	3.94E-01
	800-1,000	2.39E+01	3.00E+04	1.11E+02	1.31E+08	3.38E-01	4.24E-01
	1,000-1,200	1.99E+00	6.81E+03	3.97E+00	4.64E+07	3.01E-02	1.03E-01
5	200-400	3.72E+01	1.54E+04	5.43E+02	1.00E+08	8.77E-01	3.64E-01
	400-600	5.35E+00	3.48E+03	2.86E+01	1.21E+07	1.26E-01	8.18E-02
	600-800	1.32E+00	5.37E+03	1.73E+00	2.89E+07	3.05E-02	1.24E-01
	800-1,000	3.51E+00	1.39E+04	1.23E+01	1.94E+08	6.35E-02	2.52E-01
	1,000-1,200	3.52E+00	1.45E+04	1.24E+01	2.10E+08	6.17E-02	2.54E-01
6	200-400	1.43E+02	7.09E+04	9.17E+03	1.97E+09	5.49E-01	2.73E-01
	400-600	1.92E+02	1.09E+05	5.96E+03	1.85E+09	1.13E+00	6.39E-01
	600-800	2.31E+00	2.30E+04	3.03E+00	2.65E+08	2.52E-02	2.51E-01
	800-1,000						
	1,000-1,200	2.45E+00	7.80E+03	3.12E+00	1.52E+07	4.94E-02	1.57E-01
1-6	**200-1,200**	**1.36E+03**	**1.02E+06**	**4.11E+04**	**1.60E+10**	**4.15E-01**	**3.12E-01**

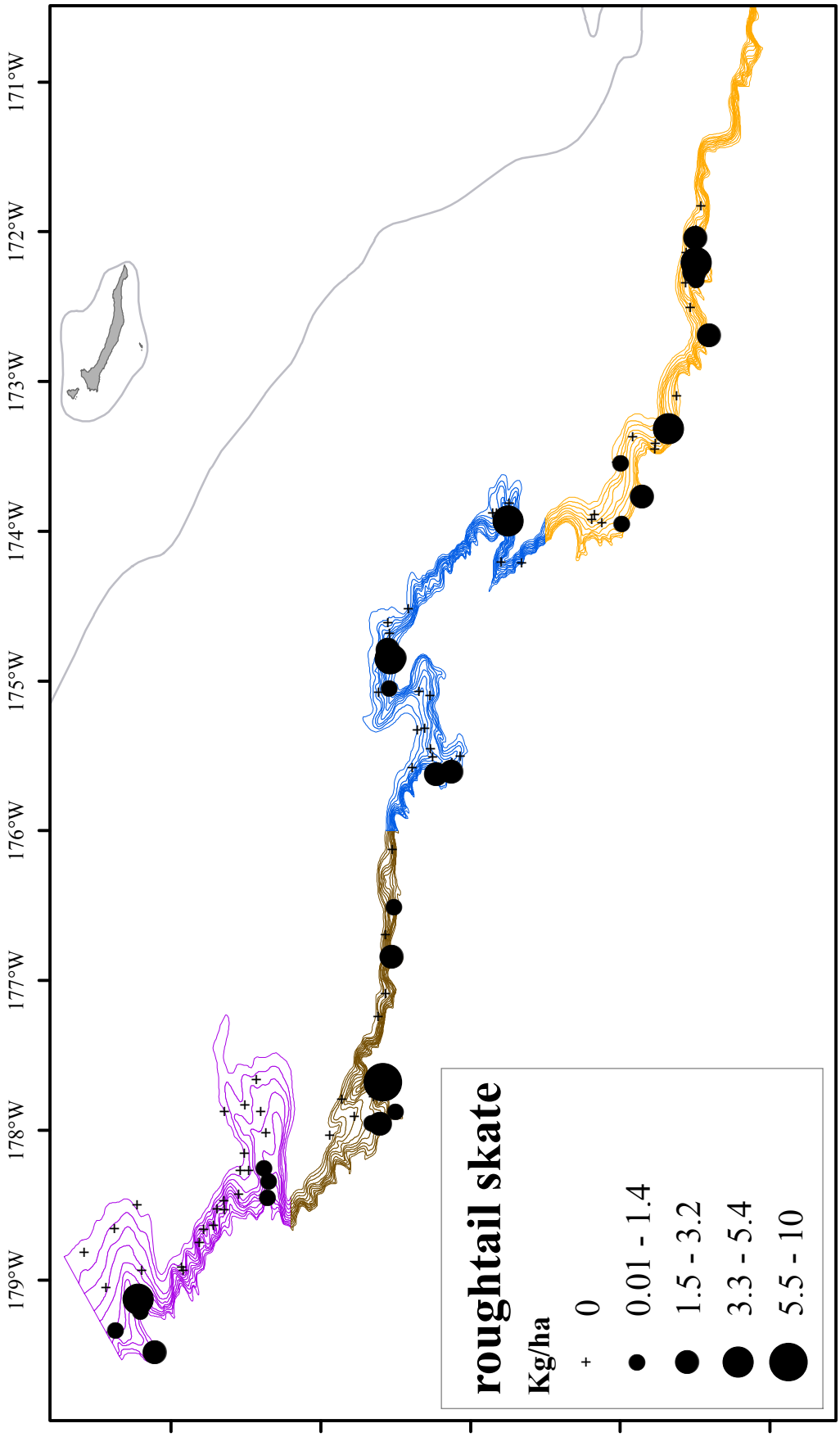

Figure 18. - - Distribution and relative abundance of roughtail skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

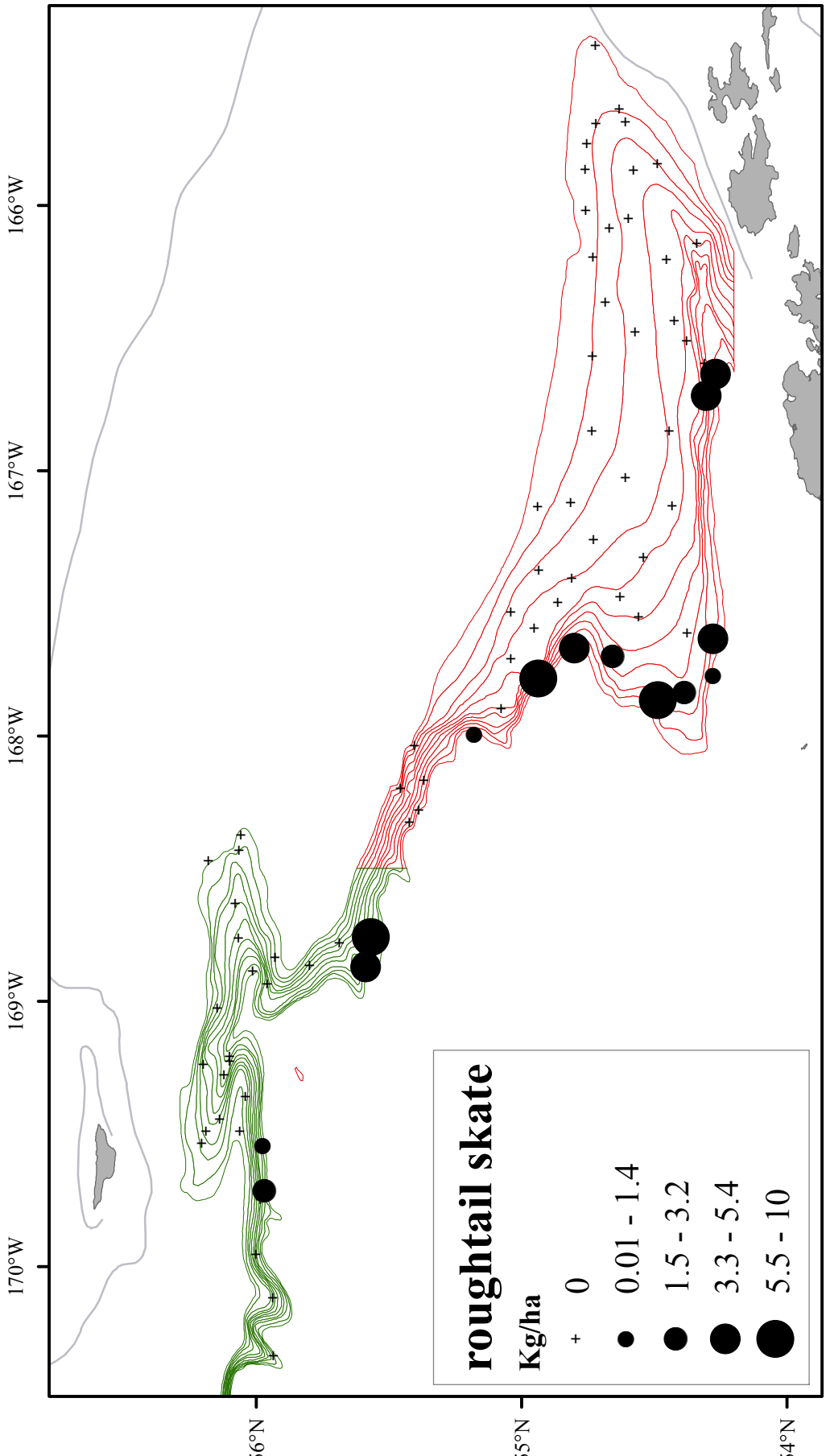

Figure 18. - - continued.

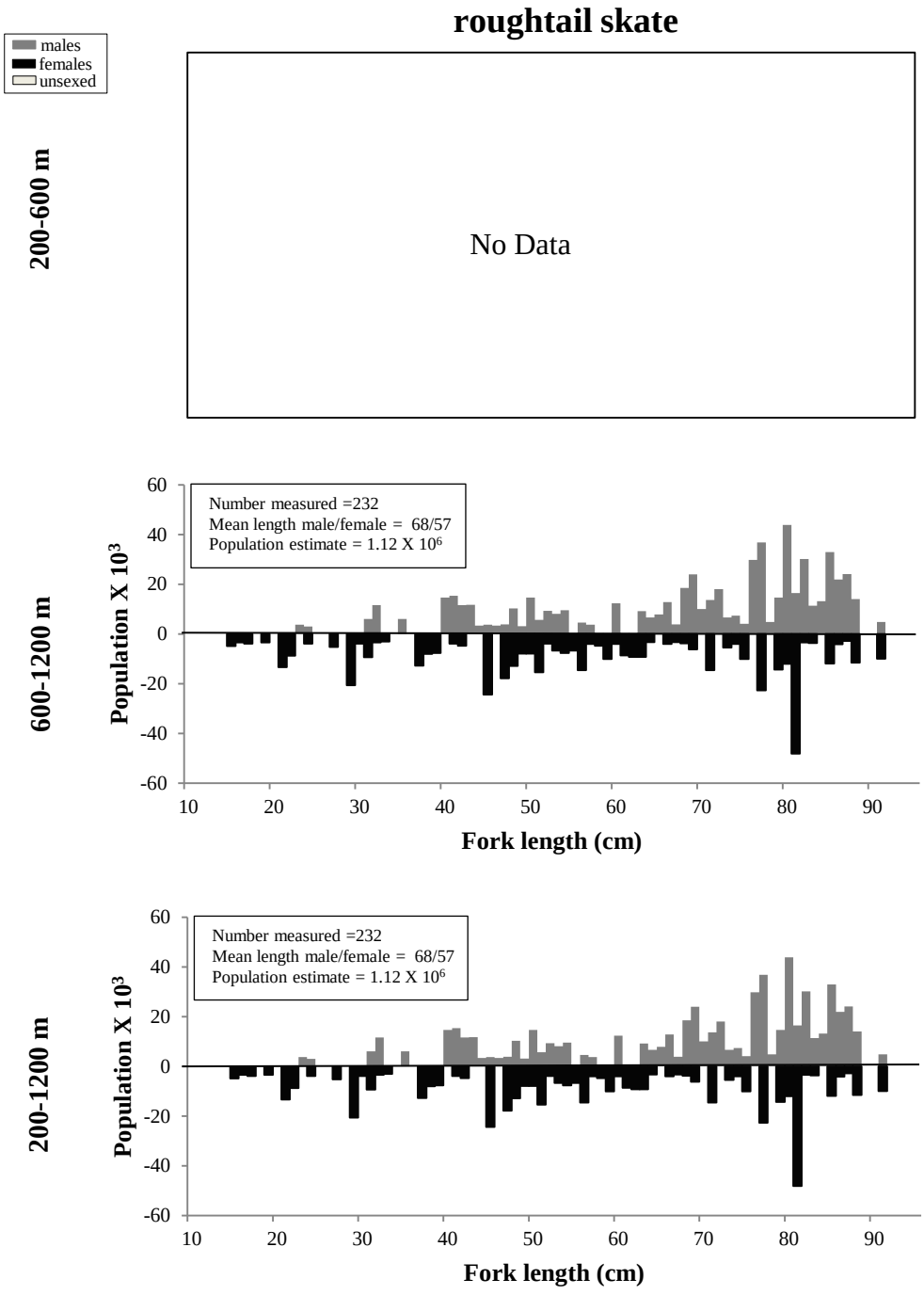

Figure 19. - - Size composition of the estimated roughtail skate population from the 2016 EBSS survey for all subareas by depth.

Table 17. - - Abundance estimates by subarea and depth stratum for roughtail skate *(Bathyraja trachura)* from the 2016 EBSS survey.

Bathyraja trachura **roughtail skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800						
	800-1,000	2.92E+02	1.18E+05	1.45E+04	1.89E+09	2.16E+00	8.72E-01
	1,000-1,200	5.77E+02	2.98E+05	1.73E+04	8.11E+09	5.21E+00	2.70E+00
2	200-400						
	400-600						
	600-800	2.49E+01	7.00E+03	6.21E+02	4.90E+07	4.22E-01	1.18E-01
	800-1,000	1.26E+02	4.62E+04	1.28E+04	1.84E+09	2.27E+00	8.36E-01
	1,000-1,200	5.10E+01	3.02E+04	2.60E+03	9.11E+08	9.52E-01	5.63E-01
3	200-400						
	400-600						
	600-800	3.70E+01	1.40E+04	1.37E+03	1.95E+08	4.06E-01	1.54E-01
	800-1,000	1.51E+02	6.07E+04	6.13E+03	7.59E+08	2.06E+00	8.28E-01
	1,000-1,200	1.96E+02	6.46E+04	3.84E+03	5.38E+08	2.91E+00	9.57E-01
4	200-400						
	400-600						
	600-800	2.85E+01	1.27E+04	8.13E+02	1.60E+08	4.11E-01	1.82E-01
	800-1,000	1.82E+02	7.93E+04	4.83E+03	9.00E+08	2.58E+00	1.12E+00
	1,000-1,200	6.01E+01	5.05E+04	1.21E+03	1.50E+09	9.07E-01	7.63E-01
5	200-400						
	400-600						
	600-800	2.49E+01	1.07E+04	6.21E+02	1.15E+08	5.77E-01	2.49E-01
	800-1,000	9.35E+01	4.63E+04	1.07E+03	2.47E+08	1.69E+00	8.38E-01
	1,000-1,200	2.34E+02	1.08E+05	3.22E+04	6.26E+09	4.10E+00	1.90E+00
6	200-400						
	400-600						
	600-800	2.74E+01	2.88E+04	2.91E+02	2.98E+08	2.99E-01	3.14E-01
	800-1,000	1.23E+02	6.28E+04	8.14E+03	2.30E+09	1.91E+00	9.74E-01
	1,000-1,200	5.43E+01	8.15E+04	6.02E+02	4.56E+09	1.09E+00	1.64E+00
1-6	**200-1,200**	**2.28E+03**	**1.12E+06**	**1.09E+05**	**3.06E+10**	**6.98E-01**	**3.42E-01**

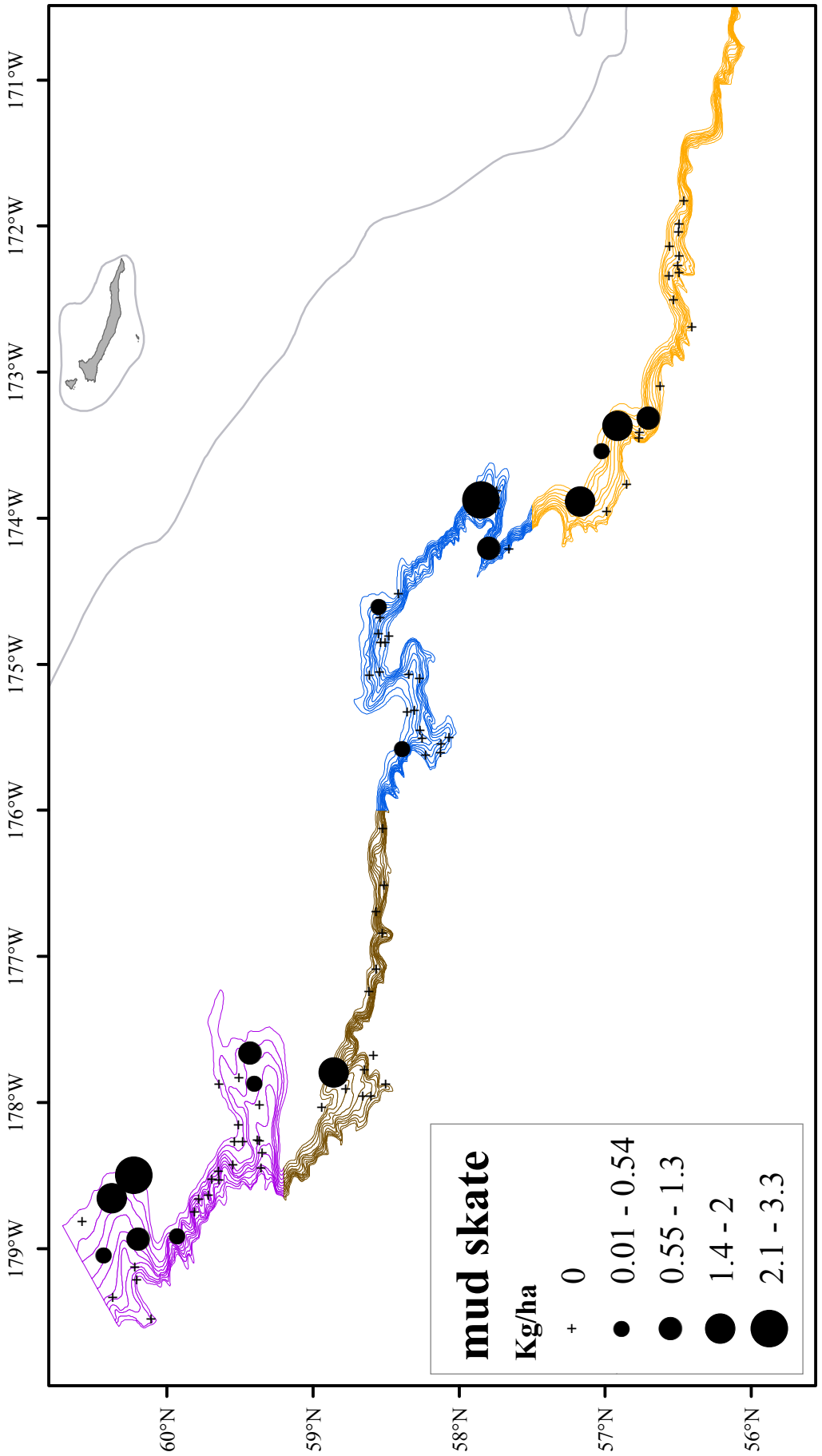

Figure 20. - - Distribution and relative abundance of mud skate from the 2016 EBSS survey. Values are CPUE of kg/ha.

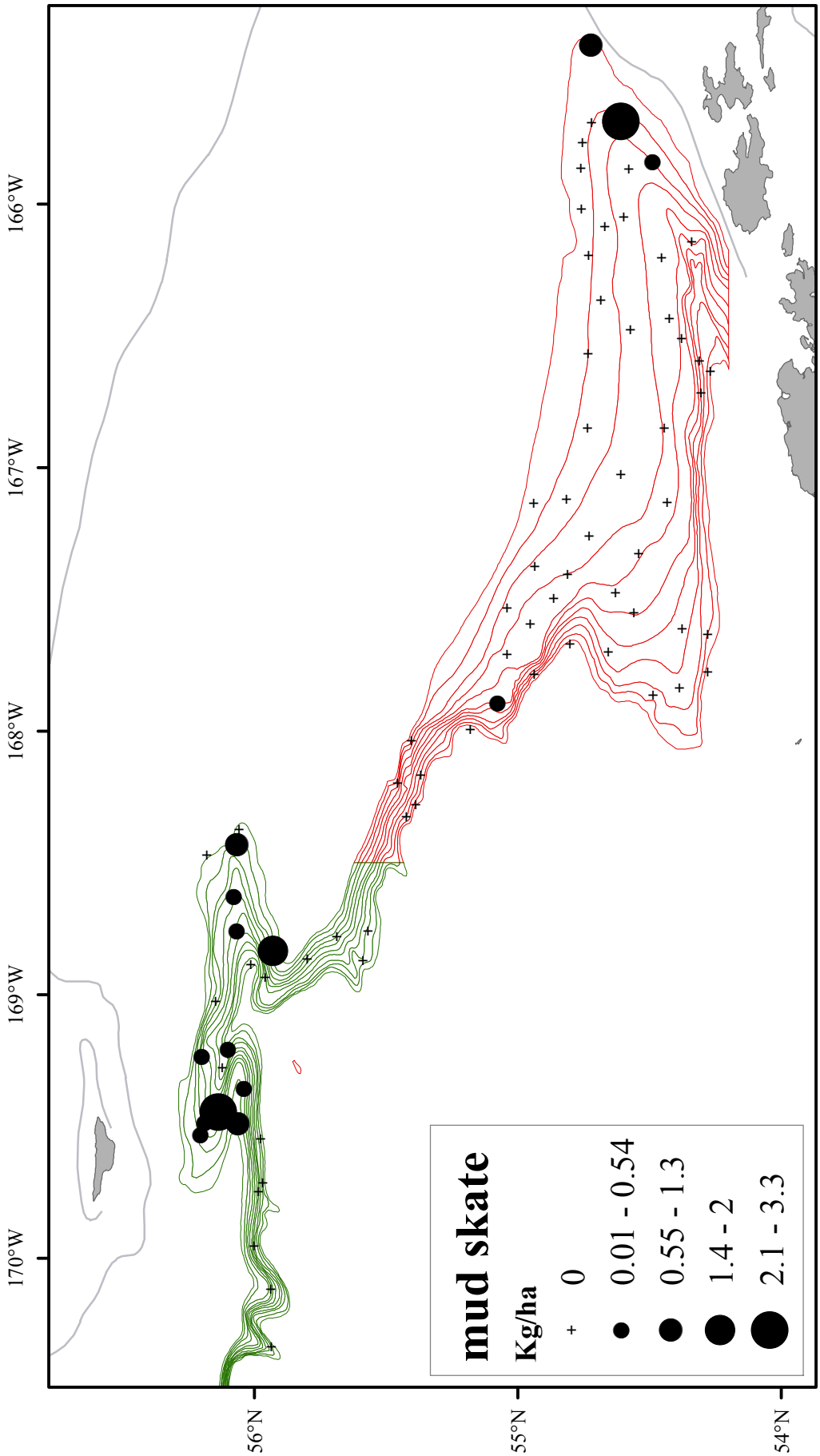

Figure 20. - - continued.

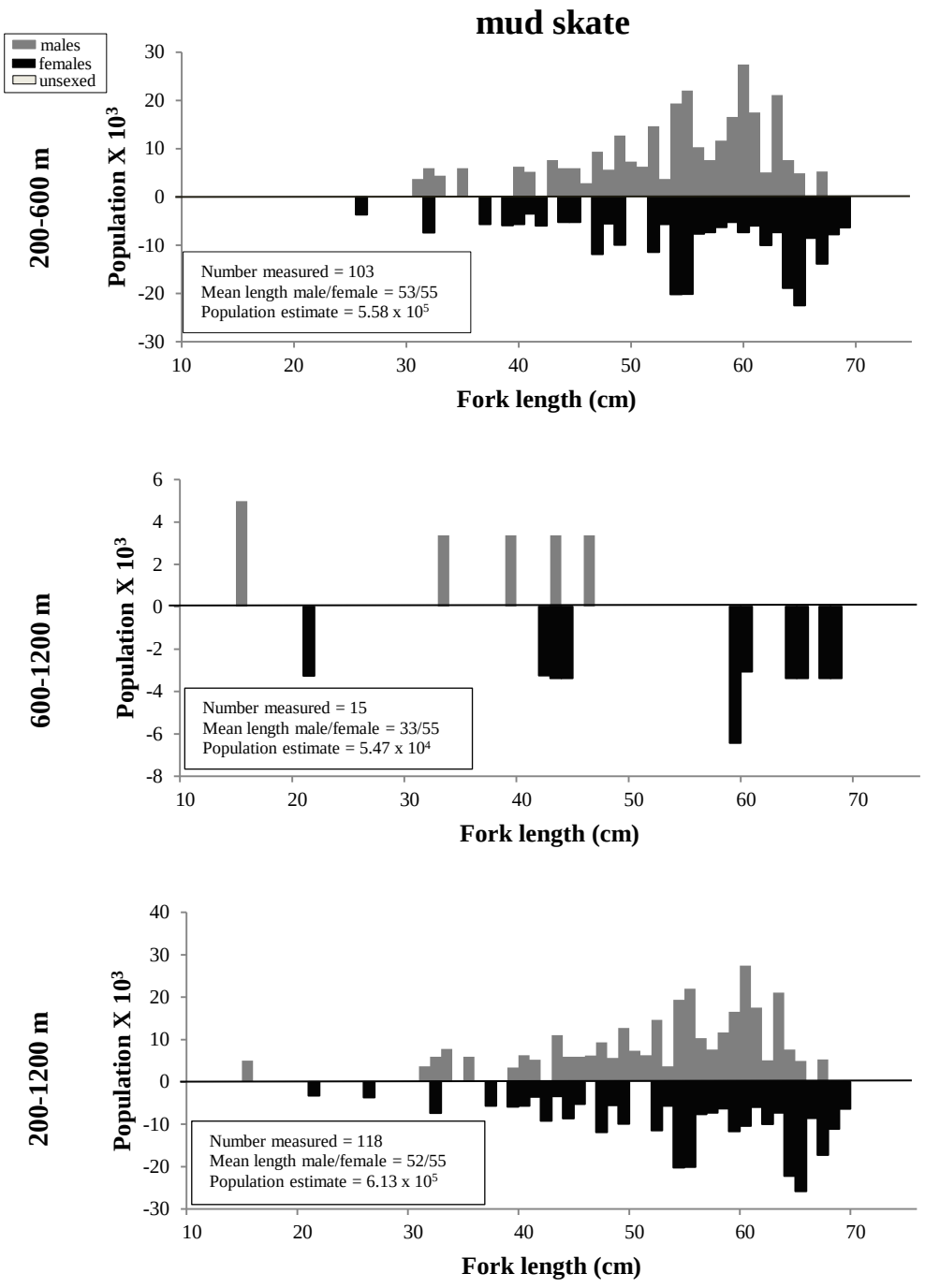

Figure 21. - - Size composition of the estimated mud skate population from the 2016 EBSS survey for all subareas by depth.

Table 18. - - Abundance estimates by subarea and depth stratum for mud skate *(Bathyraja taranetzi)* from the 2016 EBSS survey.

Bathyraja taranetzi **mud skate**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	8.66E+01	6.91E+04	3.98E+03	3.25E+09	2.16E-01	1.72E-01
	400-600	8.66E+00	6.19E+03	7.50E+01	3.83E+07	2.13E-02	1.52E-02
	600-800	8.36E+00	6.43E+03	6.98E+01	4.13E+07	4.80E-02	3.69E-02
	800-1,000						
	1,000-1,200						
2	200-400	6.28E+01	6.54E+04	6.93E+02	7.08E+08	5.43E-01	5.65E-01
	400-600	4.36E+00	9.39E+03	4.14E+00	1.79E+07	6.19E-02	1.33E-01
	600-800	3.57E+01	4.00E+04	9.23E+02	1.05E+09	6.04E-01	6.77E-01
	800-1,000						
	1,000-1,200	1.43E+00	3.25E+03	2.05E+00	1.06E+07	2.67E-02	6.07E-02
3	200-400	8.51E+01	6.33E+04	1.63E+03	1.02E+09	9.42E-01	7.01E-01
	400-600						
	600-800	7.48E-02	4.99E+03	5.60E-03	2.49E+07	8.22E-04	5.48E-02
	800-1,000						
	1,000-1,200						
4	200-400	8.22E+01	7.63E+04	2.29E+03	2.71E+09	6.65E-01	6.17E-01
	400-600	1.11E+01	2.59E+04	1.23E+02	6.69E+08	1.52E-01	3.54E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	2.61E+01	1.52E+04	6.80E+02	2.31E+08	6.16E-01	3.59E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	1.36E+02	1.76E+05	5.88E+03	8.39E+09	5.23E-01	6.79E-01
	400-600	2.85E+01	5.09E+04	3.89E+02	1.13E+09	1.67E-01	2.98E-01
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**5.77E+02**	**6.13E+05**	**1.67E+04**	**1.93E+10**	**1.76E-01**	**1.87E-01**

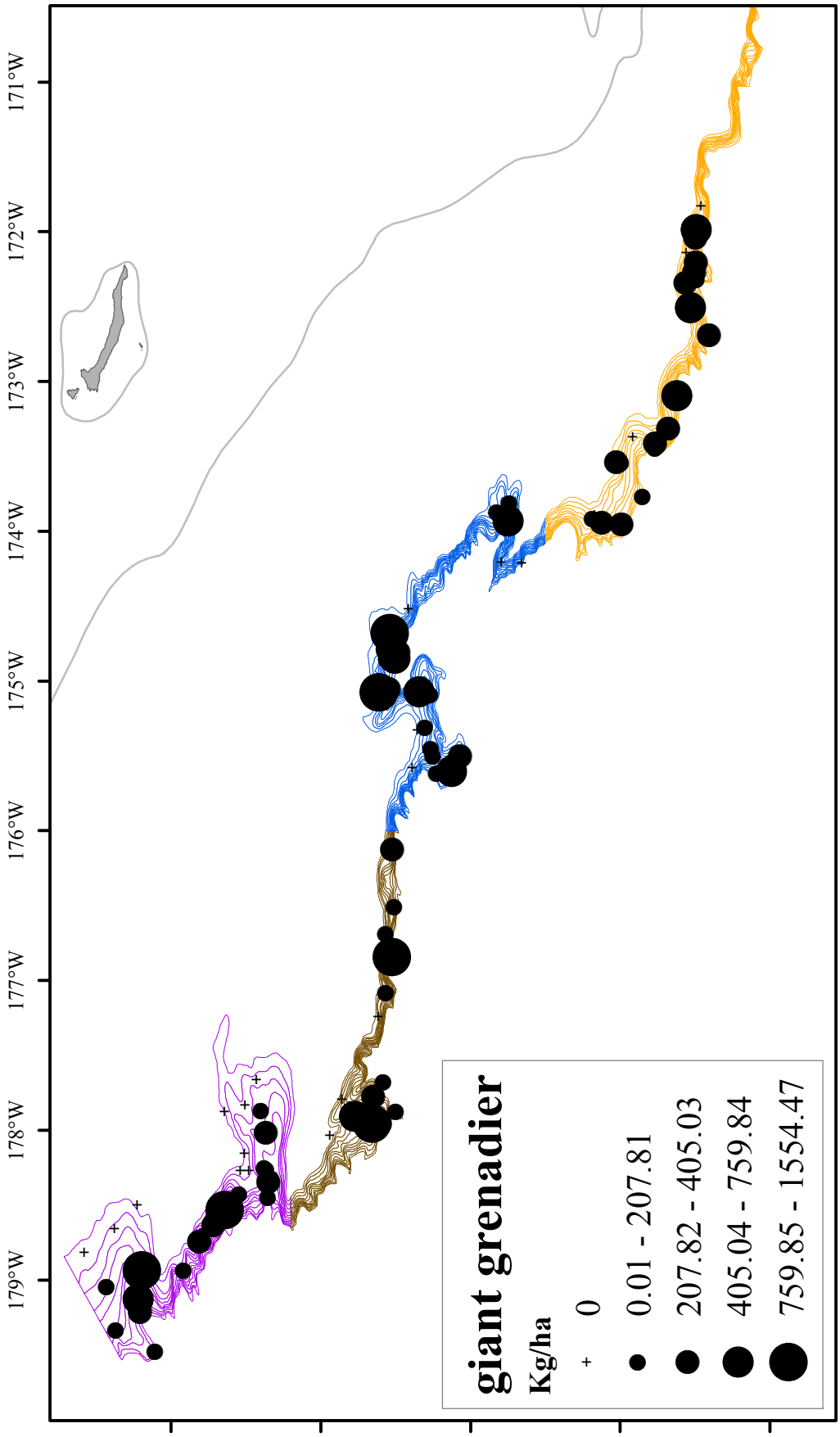

Figure 22. - - Distribution and relative abundance of giant grenadier from the 2016 EBSS survey. Values are CPUE of kg/ha.

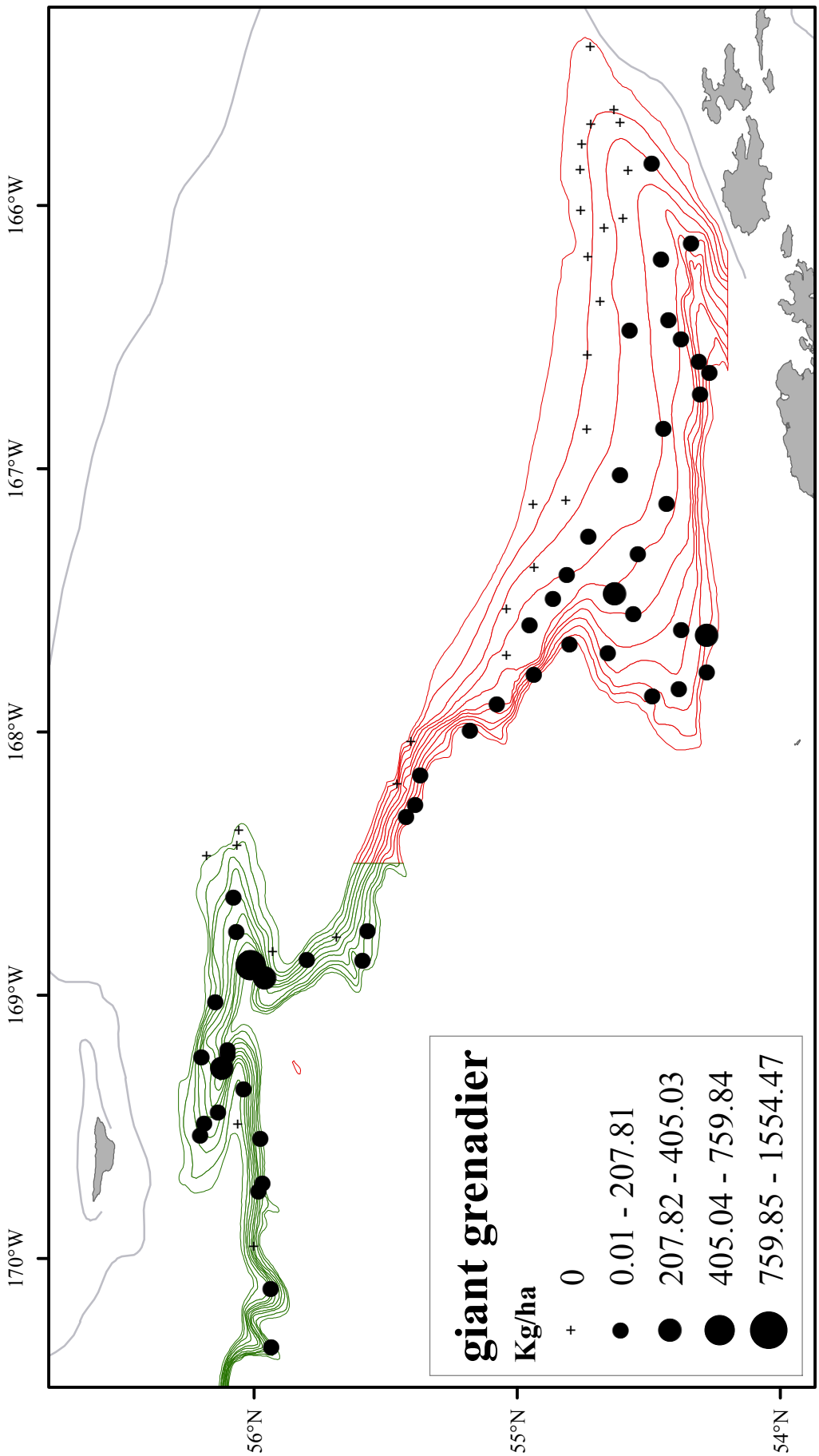

Figure 22. - - continued.

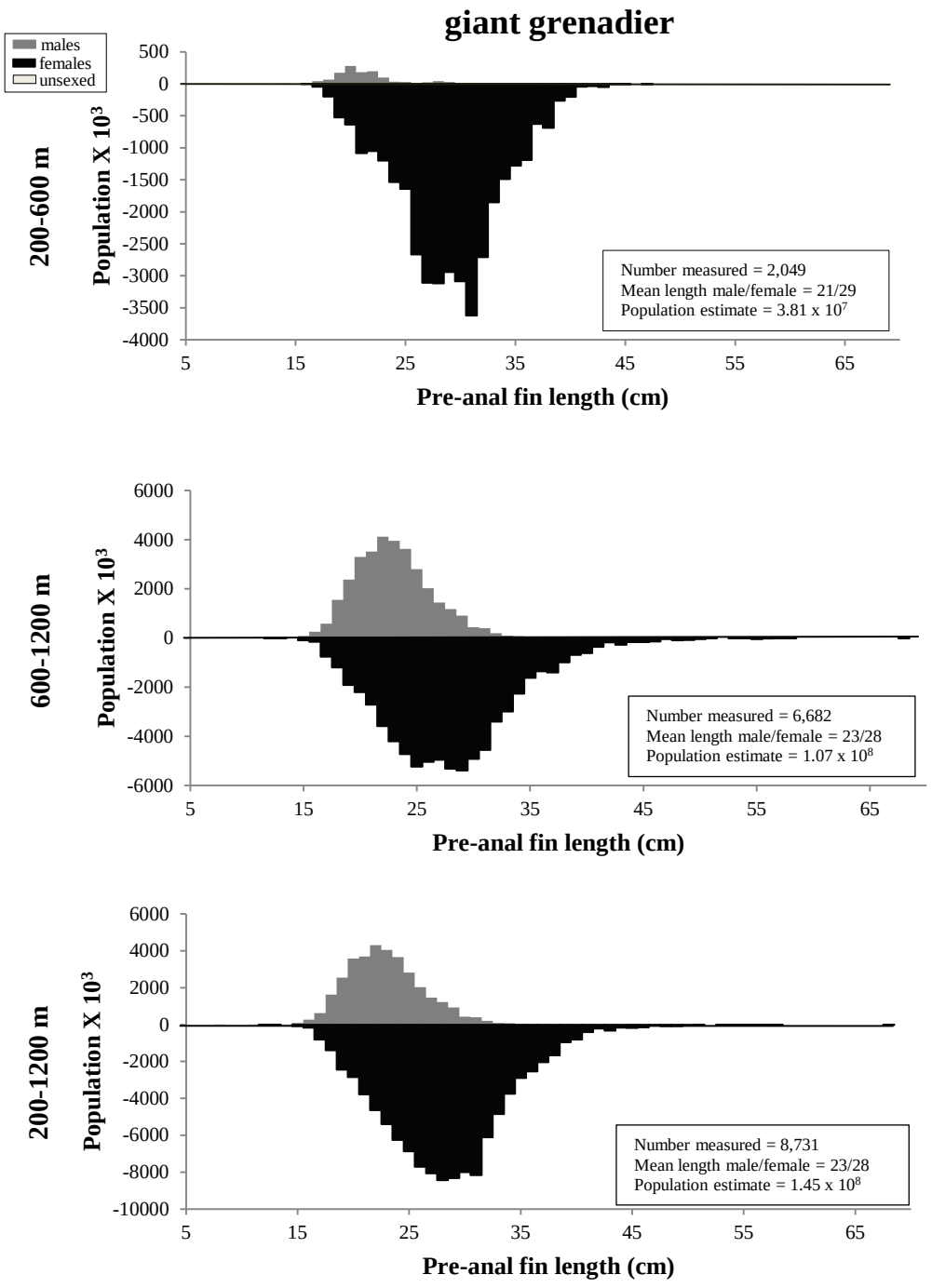

Figure 23. - - Size composition of the estimated giant grenadier population from the 2016 EBSS survey for all subareas by depth.

Table 19. - - Abundance estimates by subarea and depth stratum for giant grenadier *(Albatrossia pectoralis)* from the 2016 EBSS survey.

Albatrossia pectoralis **giant grenadier**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	1.01E+04	3.12E+06	9.48E+06	8.41E+11	2.49E+01	7.67E+00
	600-800	2.02E+04	6.10E+06	3.62E+07	1.39E+12	1.16E+02	3.50E+01
	800-1,000	1.44E+04	8.01E+06	1.62E+07	1.14E+13	1.07E+02	5.92E+01
	1,000-1,200	1.65E+04	6.97E+06	6.47E+06	6.75E+11	1.49E+02	6.30E+01
2	200-400	2.33E+02	3.08E+04	5.43E+04	9.47E+08	2.01E+00	2.66E-01
	400-600	5.49E+03	1.52E+06	3.64E+06	3.36E+11	7.79E+01	2.15E+01
	600-800	5.01E+03	1.27E+06	1.82E+06	2.39E+11	8.48E+01	2.15E+01
	800-1,000	1.27E+04	3.18E+06	4.25E+06	1.18E+11	2.29E+02	5.76E+01
	1,000-1,200	7.77E+03	1.29E+06	2.43E+07	2.52E+11	1.45E+02	2.40E+01
3	200-400						
	400-600	3.26E+04	9.27E+06	5.77E+07	8.52E+12	3.68E+02	1.05E+02
	600-800	2.41E+04	8.09E+06	1.14E+07	2.37E+12	2.65E+02	8.88E+01
	800-1,000	1.67E+04	5.34E+06	5.26E+06	8.18E+11	2.28E+02	7.29E+01
	1,000-1,200	1.50E+04	4.92E+06	6.32E+06	1.55E+12	2.22E+02	7.28E+01
4	200-400	1.45E+02	3.00E+04	2.10E+04	9.02E+08	1.17E+00	2.43E-01
	400-600	2.90E+04	6.61E+06	1.12E+08	5.60E+12	3.97E+02	9.05E+01
	600-800	2.73E+04	8.58E+06	1.63E+08	1.66E+13	3.93E+02	1.24E+02
	800-1,000	2.09E+04	6.10E+06	2.08E+07	2.08E+12	2.95E+02	8.62E+01
	1,000-1,200	2.55E+04	7.19E+06	4.20E+06	9.60E+11	3.85E+02	1.09E+02
5	200-400						
	400-600	1.31E+04	3.05E+06	5.71E+07	3.45E+12	3.07E+02	7.16E+01
	600-800	2.10E+04	5.69E+06	6.53E+07	4.23E+12	4.86E+02	1.32E+02
	800-1,000	2.31E+04	6.62E+06	1.48E+08	8.83E+12	4.18E+02	1.20E+02
	1,000-1,200	8.88E+03	2.89E+06	4.53E+06	2.53E+11	1.56E+02	5.07E+01
6	200-400						
	400-600	6.16E+04	1.45E+07	8.92E+08	4.78E+13	3.61E+02	8.52E+01
	600-800	3.52E+04	1.00E+07	4.02E+08	3.03E+13	3.84E+02	1.09E+02
	800-1,000	2.67E+04	1.08E+07	1.28E+08	3.24E+13	4.14E+02	1.68E+02
	1,000-1,200	1.02E+04	3.86E+06	1.41E+06	6.96E+11	2.05E+02	7.78E+01
1-6	**200-1,200**	**4.83E+05**	**1.45E+08**	**2.18E+09**	**1.82E+14**	**1.48E+02**	**4.44E+01**

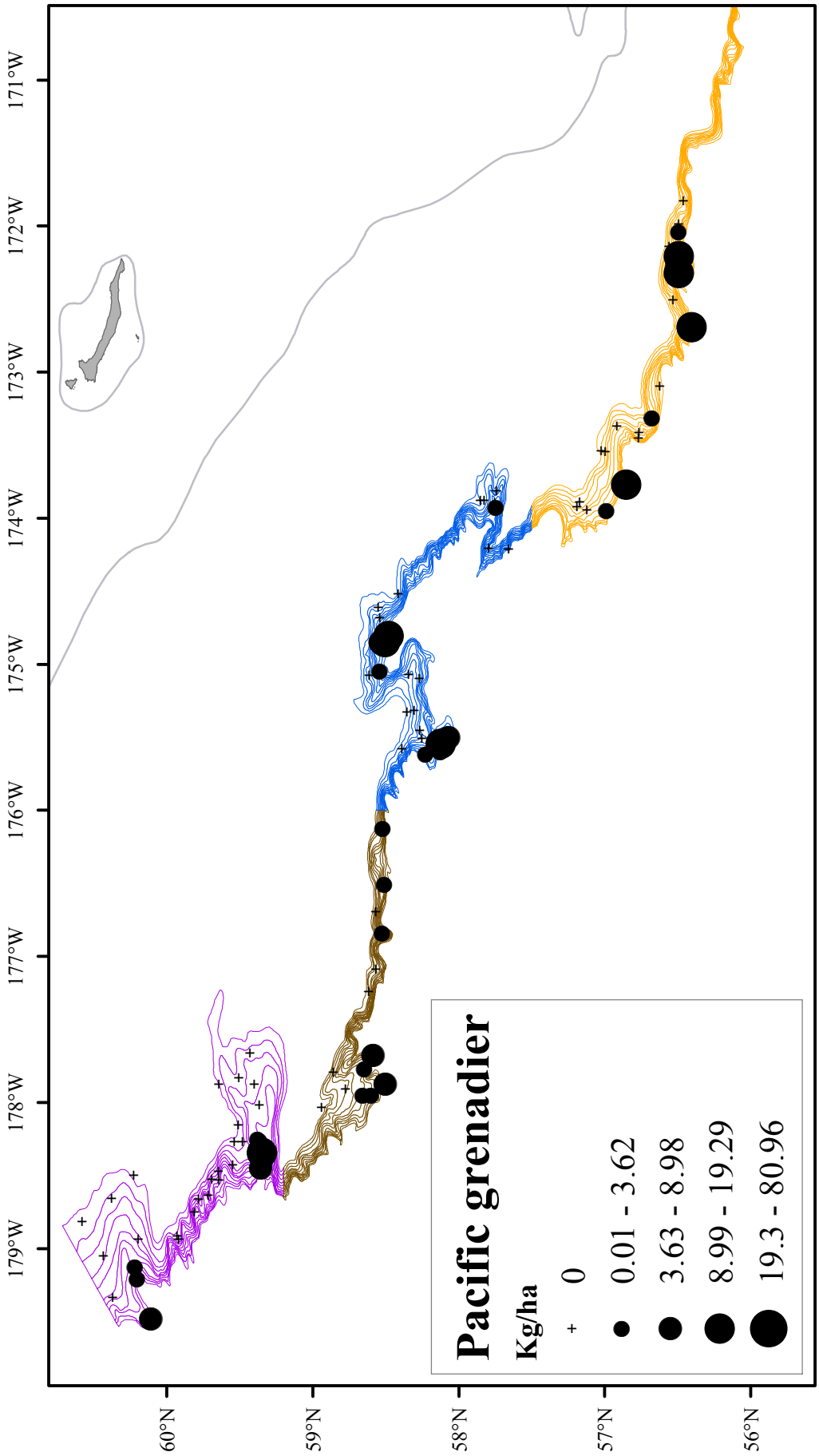

Figure 24. - - Distribution and relative abundance of Pacific grenadier from the 2016 EBSS survey. Values are CPUE of kg/ha.

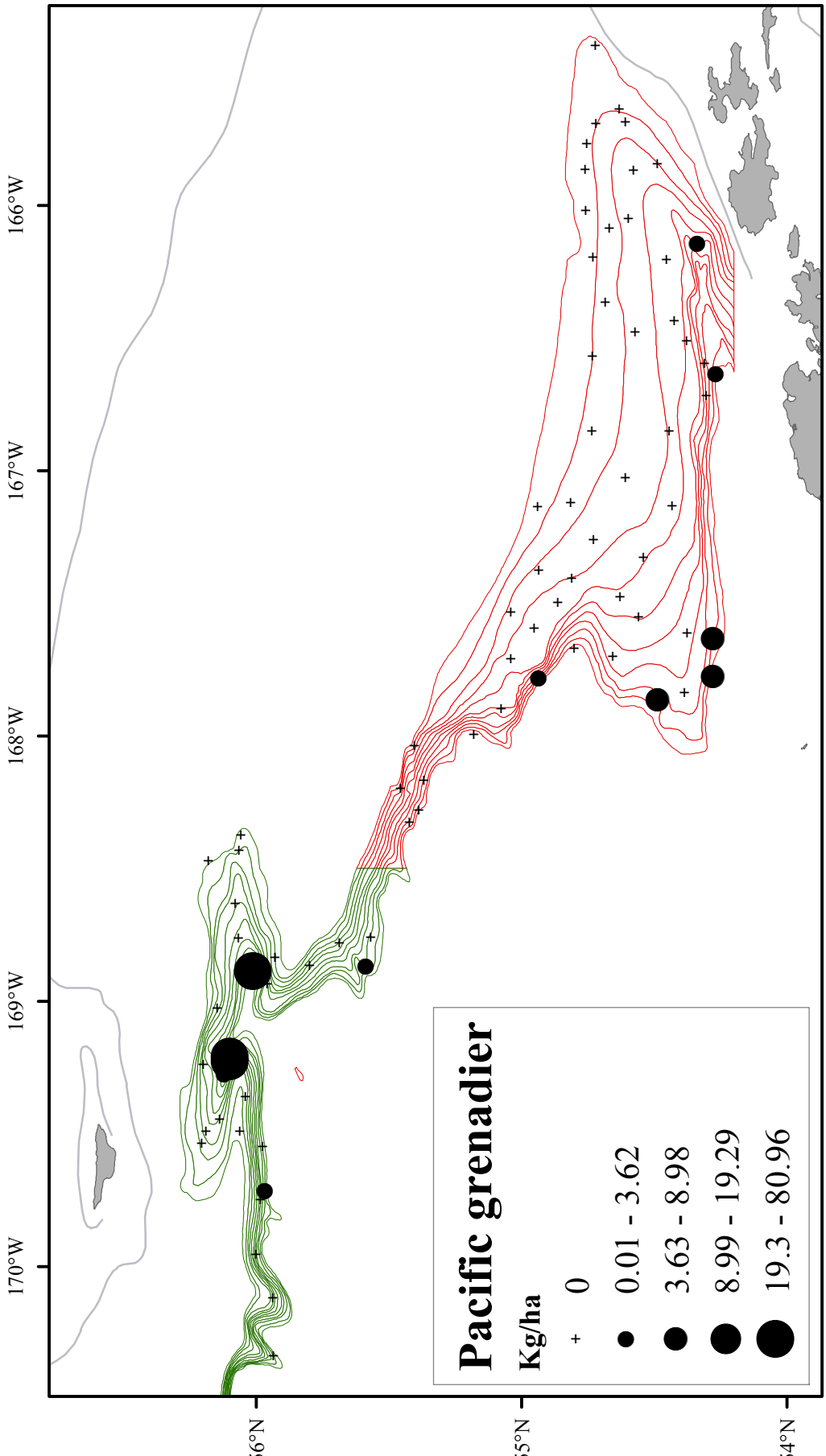

Figure 24. - - continued.

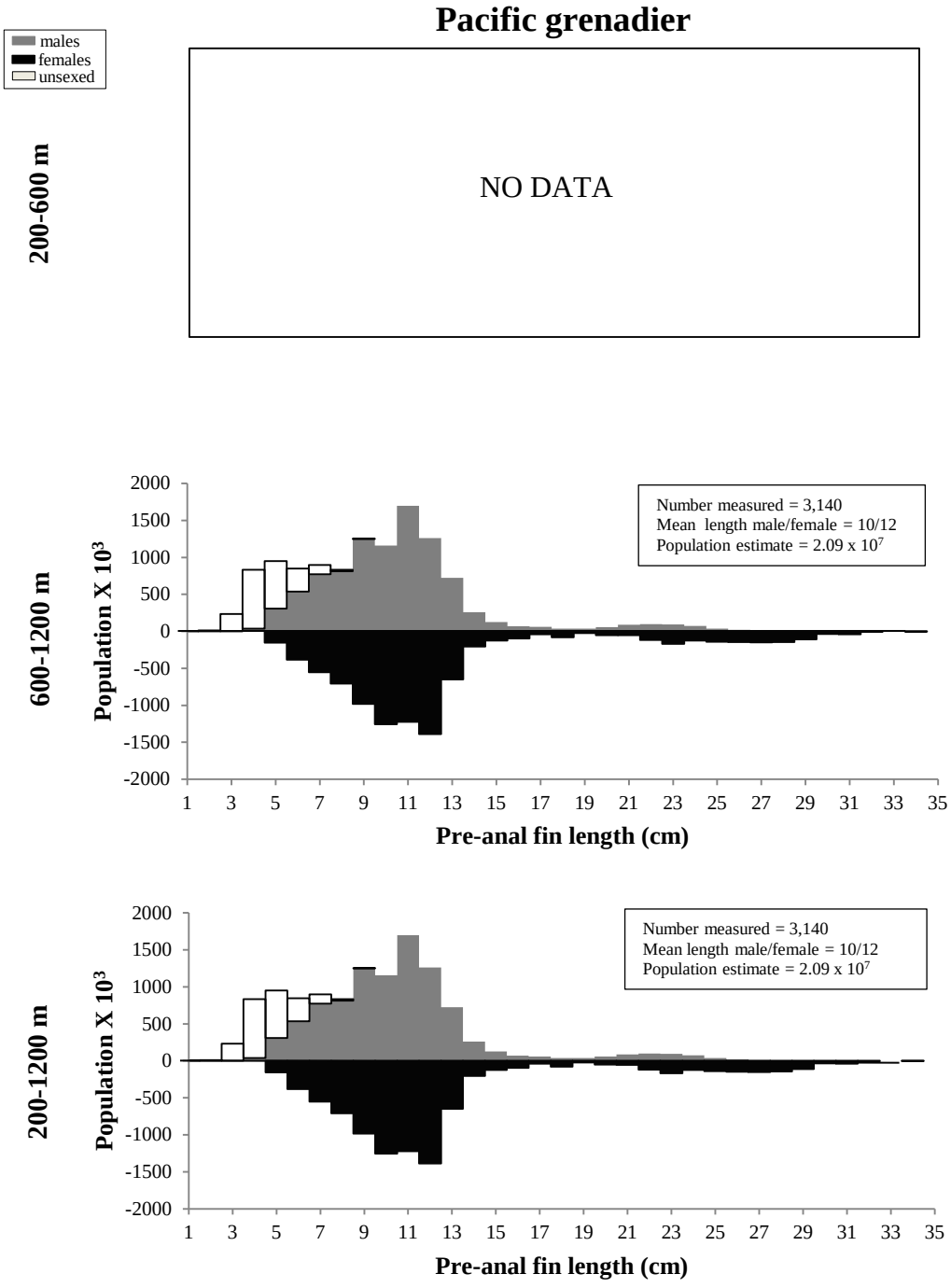

Figure 25. - - Size composition of the estimated Pacific grenadier population from the 2016 EBSS survey for all subareas by depth.

Table 20. - - Abundance estimates by subarea and depth stratum for Pacific grenadier *(Coryphaenoides acrolepis)* from the 2016 EBSS survey.

Coryphaenoides acrolepis **Pacific grenadier**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800	8.71E+01	1.08E+05	7.58E+03	1.17E+10	5.00E-01	6.21E-01
	800-1,000						
	1,000-1,200	2.69E+02	1.19E+06	8.33E+03	3.96E+11	2.43E+00	1.08E+01
2	200-400						
	400-600						
	600-800	9.80E-02	1.05E+04	9.61E-03	1.10E+08	1.66E-03	1.78E-01
	800-1,000	5.57E+00	2.26E+03	3.10E+01	5.13E+06	1.01E-01	4.10E-02
	1,000-1,200	2.49E+03	1.88E+06	7.93E+05	3.30E+11	4.64E+01	3.52E+01
3	200-400						
	400-600						
	600-800	5.36E-01	4.66E+04	2.87E-01	2.17E+09	5.89E-03	5.12E-01
	800-1,000	1.76E+02	1.16E+06	1.76E+04	5.72E+11	2.41E+00	1.58E+01
	1,000-1,200	8.48E+02	2.48E+06	7.68E+02	1.50E+11	1.26E+01	3.67E+01
4	200-400						
	400-600						
	600-800						
	800-1,000	3.83E+02	3.57E+06	6.24E+04	8.33E+12	5.41E+00	5.05E+01
	1,000-1,200	7.19E+02	3.32E+06	3.71E+04	3.10E+11	1.09E+01	5.01E+01
5	200-400						
	400-600						
	600-800	6.50E+00	7.91E+04	1.03E+01	8.25E+08	1.51E-01	1.83E+00
	800-1,000	1.04E+02	1.21E+06	1.31E+03	6.21E+10	1.89E+00	2.20E+01
	1,000-1,200	4.30E+02	2.65E+06	6.71E+03	1.66E+11	7.54E+00	4.65E+01
6	200-400						
	400-600						
	600-800	1.87E+01	1.61E+05	3.48E+02	2.61E+10	2.03E-01	1.76E+00
	800-1,000	2.81E+02	1.67E+06	3.46E+04	8.38E+11	4.36E+00	2.58E+01
	1,000-1,200	2.08E+02	1.39E+06	6.21E+03	1.59E+11	4.20E+00	2.80E+01
1-6	**200-1,200**	**6.02E+03**	**2.09E+07**	**9.76E+05**	**1.14E+13**	**1.84E+00**	**6.40E+00**

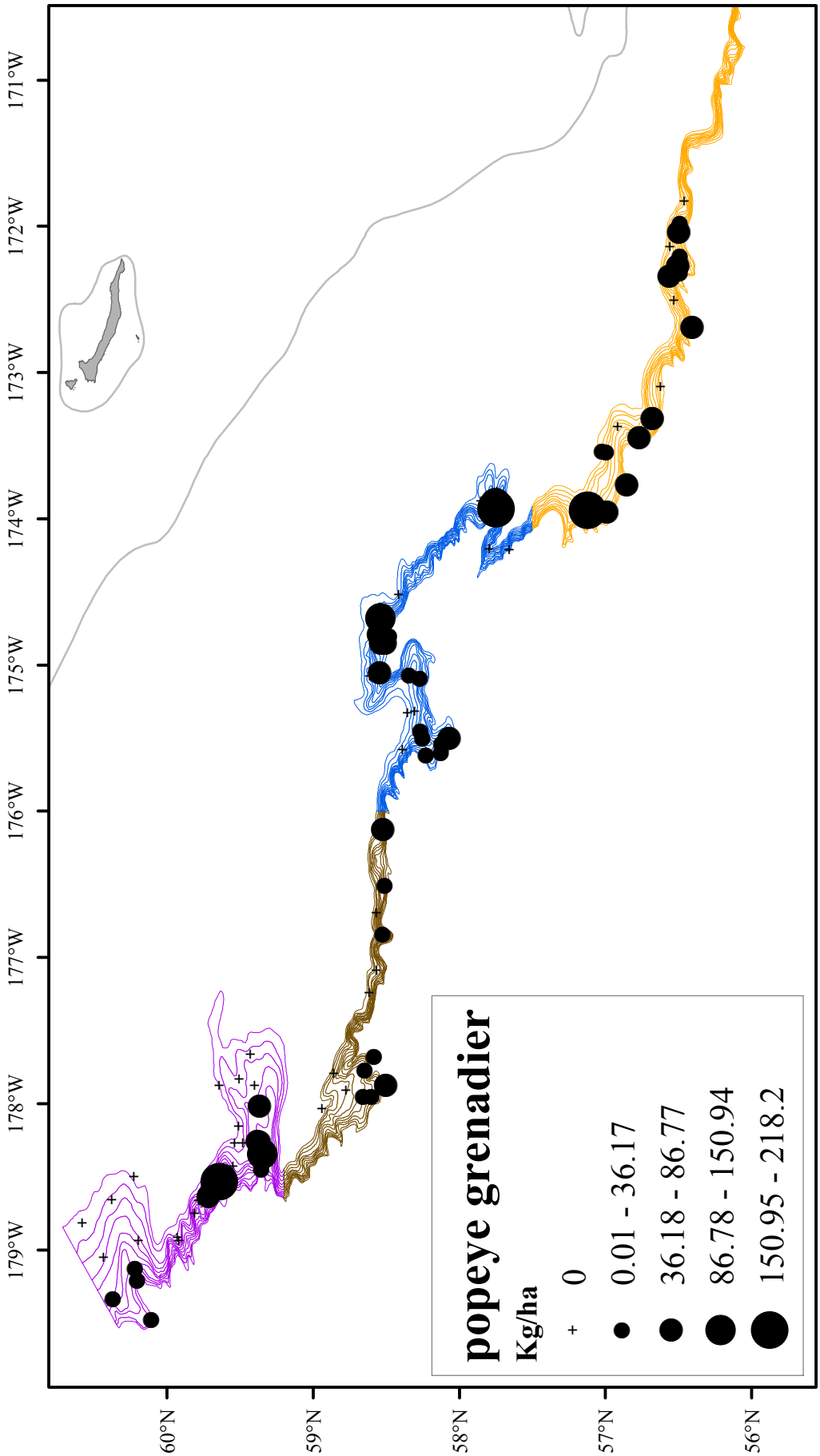

Figure 26. - - Distribution and relative abundance of popeye grenadier from the 2016 EBSS survey. Values are CPUE of kg/ha.

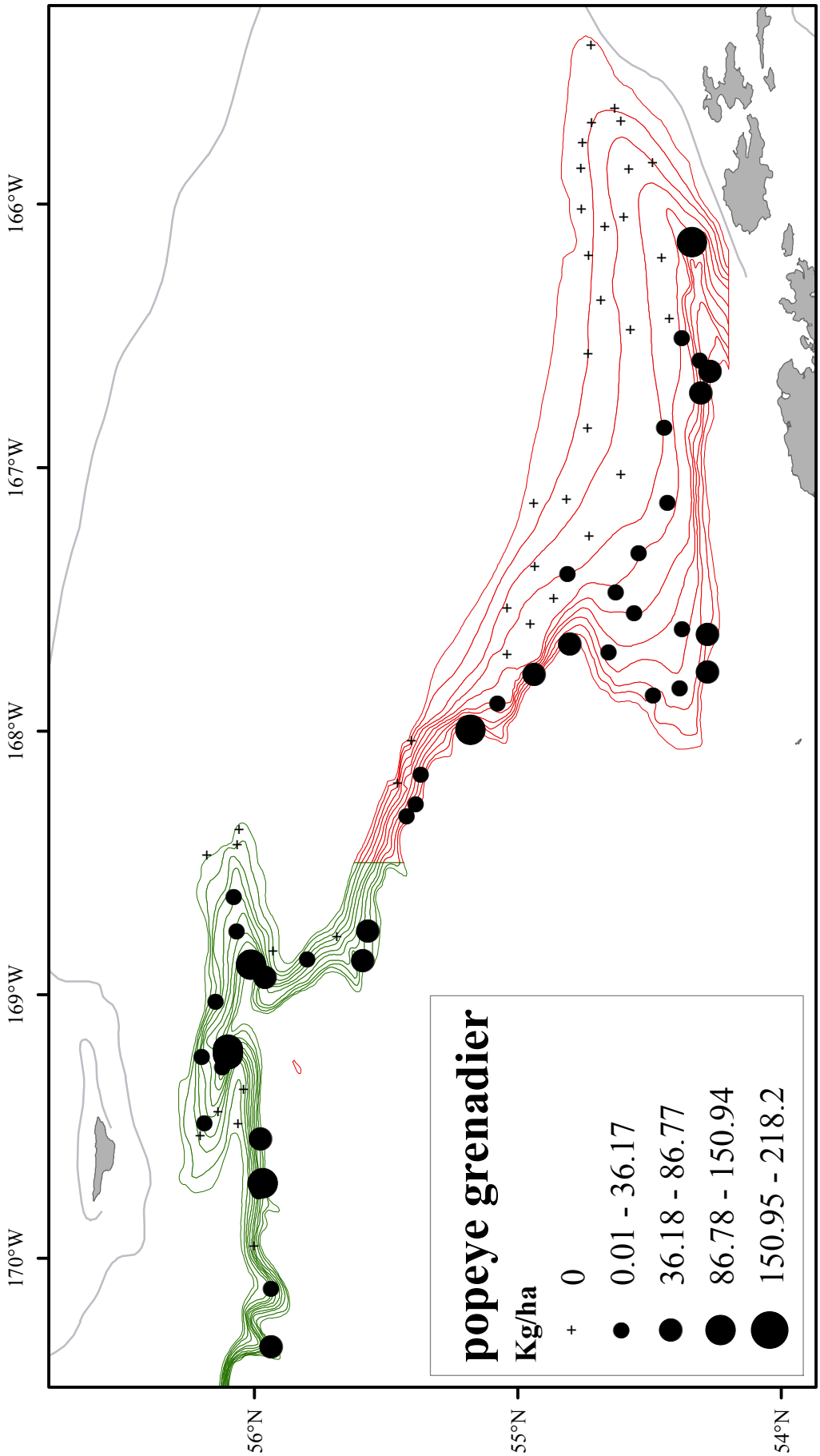

Figure 26. - - continued.

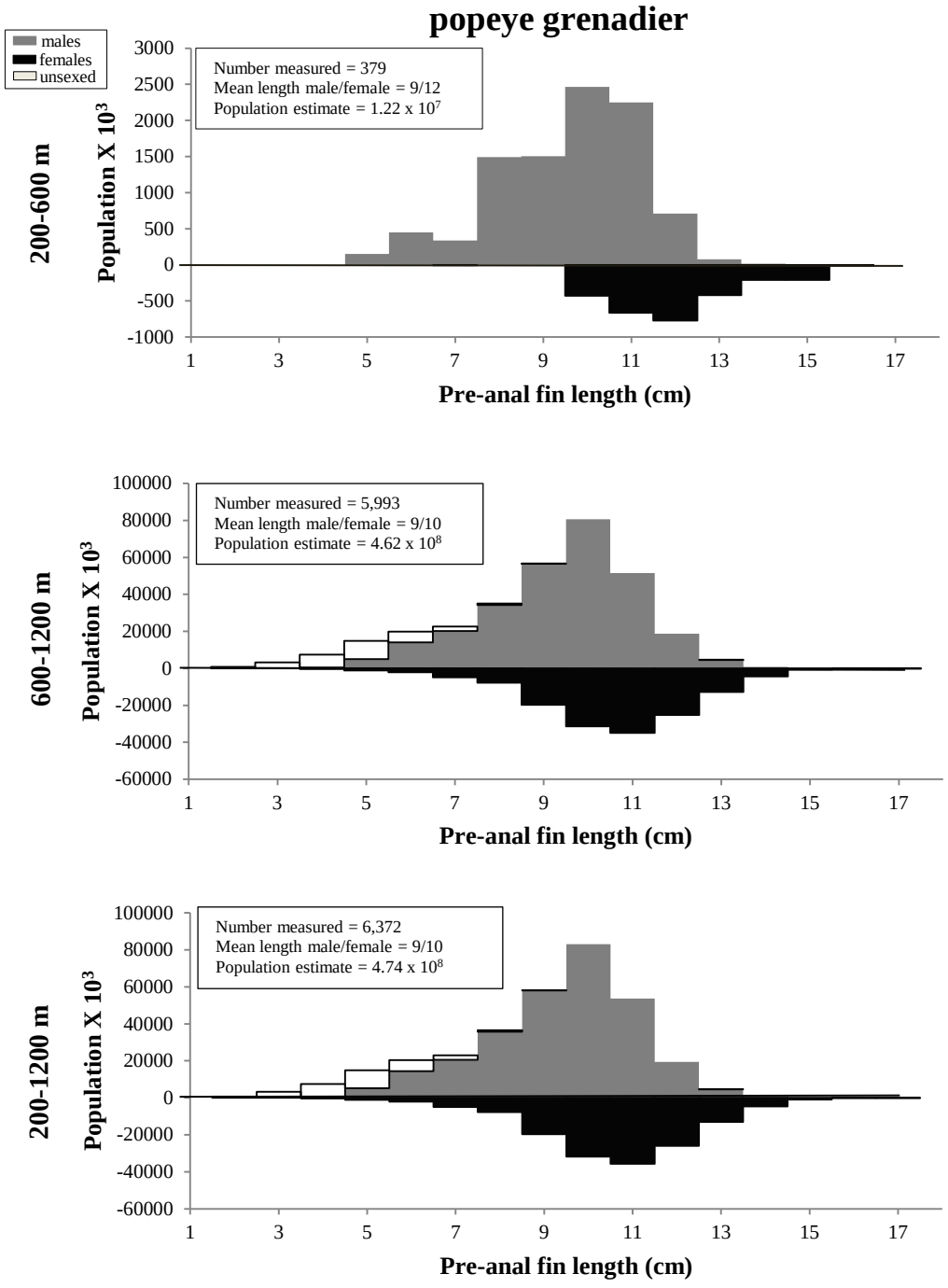

Figure 27. - - Size composition of the estimated popeye grenadier population from the 2016 EBSS survey for all subareas by depth.

Table 21. - - Abundance estimates by subarea and depth stratum for popeye grenadier *(Coryphaenoides cinereus)* from the 2016 EBSS survey.

Coryphaenoides cinereus **popeye grenadier**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	6.29E+01	2.25E+05	1.34E+03	2.07E+10	1.55E-01	5.54E-01
	600-800	3.30E+03	1.45E+07	4.98E+06	9.05E+13	1.90E+01	8.30E+01
	800-1,000	6.23E+03	3.32E+07	7.70E+06	2.53E+14	4.60E+01	2.45E+02
	1,000-1,200	6.23E+03	2.92E+07	8.49E+05	1.02E+14	5.63E+01	2.64E+02
2	200-400						
	400-600	1.23E+02	3.54E+05	8.55E+03	6.75E+10	1.74E+00	5.01E+00
	600-800	1.63E+03	7.01E+06	1.43E+06	3.14E+13	2.76E+01	1.18E+02
	800-1,000	2.91E+03	1.54E+07	4.18E+05	1.41E+13	5.26E+01	2.78E+02
	1,000-1,200	5.48E+03	2.91E+07	9.66E+05	3.39E+13	1.02E+02	5.43E+02
3	200-400						
	400-600	3.31E+02	1.43E+06	1.10E+05	2.05E+12	3.74E+00	1.62E+01
	600-800	8.21E+03	6.37E+07	7.05E+06	6.53E+14	9.02E+01	6.99E+02
	800-1,000	3.20E+03	2.99E+07	9.19E+05	1.53E+14	4.37E+01	4.09E+02
	1,000-1,200	2.68E+03	1.58E+07	2.15E+04	9.89E+11	3.96E+01	2.34E+02
4	200-400						
	400-600	4.75E+02	2.25E+06	8.97E+04	1.97E+12	6.51E+00	3.07E+01
	600-800	5.22E+03	3.26E+07	4.17E+06	1.48E+14	7.53E+01	4.70E+02
	800-1,000	5.28E+03	4.00E+07	6.84E+06	3.13E+14	7.47E+01	5.65E+02
	1,000-1,200	2.14E+03	1.43E+07	3.55E+05	1.95E+13	3.23E+01	2.16E+02
5	200-400						
	400-600						
	600-800	1.40E+03	1.67E+07	4.69E+05	1.39E+14	3.25E+01	3.86E+02
	800-1,000	6.35E+02	6.45E+06	5.18E+04	1.38E+13	1.15E+01	1.17E+02
	1,000-1,200	2.11E+03	1.24E+07	2.56E+06	9.09E+13	3.70E+01	2.18E+02
6	200-400						
	400-600	1.30E+03	7.92E+06	1.57E+06	5.98E+13	7.62E+00	4.64E+01
	600-800	7.34E+03	5.76E+07	1.37E+07	8.58E+14	8.00E+01	6.28E+02
	800-1,000	4.22E+03	3.81E+07	1.93E+06	2.21E+14	6.54E+01	5.90E+02
	1,000-1,200	8.55E+02	6.59E+06	4.57E+04	3.59E+12	1.72E+01	1.33E+02
1-6	**200-1,200**	**7.14E+04**	**4.75E+08**	**5.63E+07**	**3.20E+15**	**2.18E+01**	**1.45E+02**

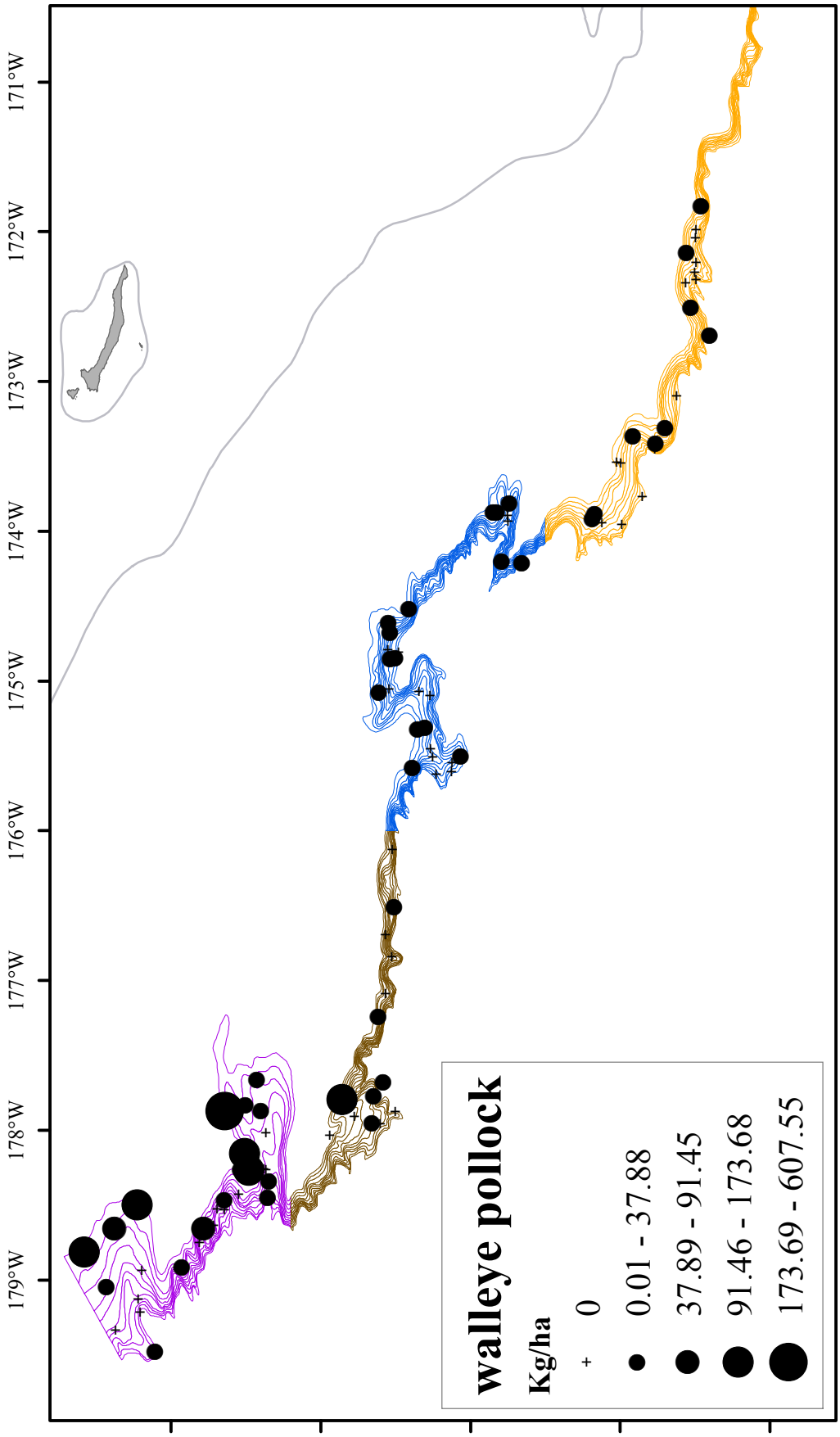

Figure 28. - - Distribution and relative abundance of walleye pollock from the 2016 EBSS survey. Values are CPUE of kg/ha.

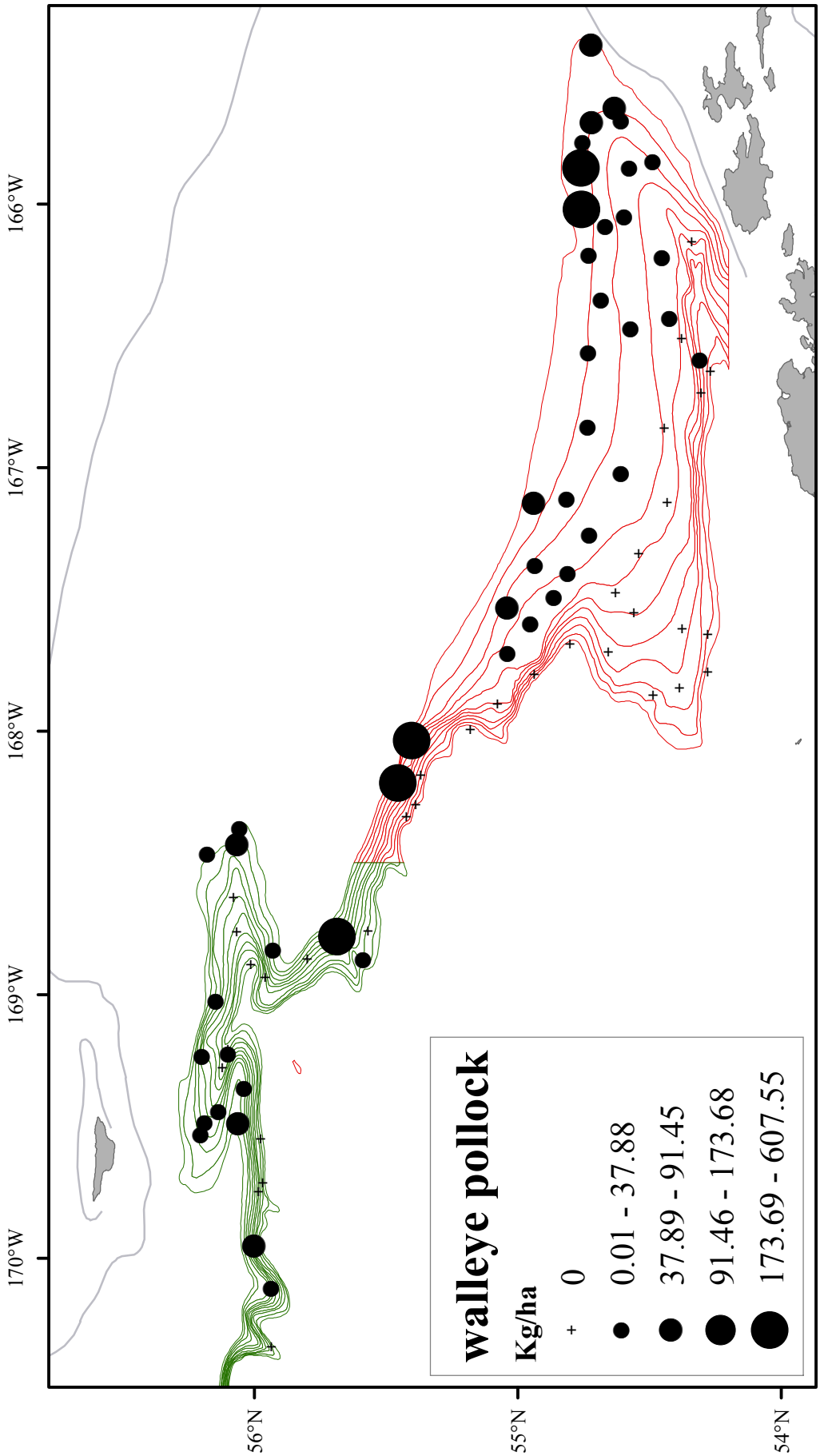

Figure 28. - - continued.

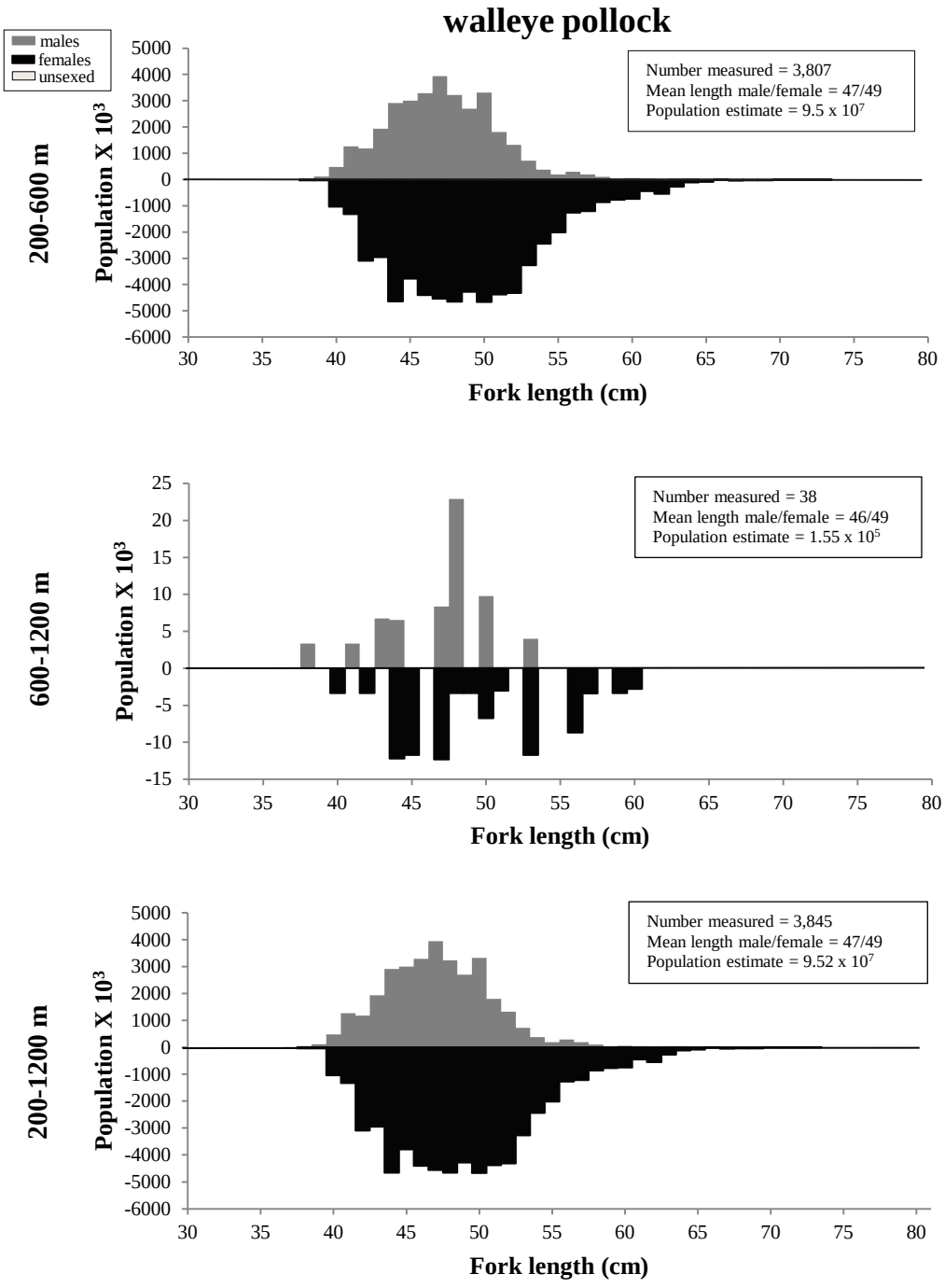

Figure 29. - - Size composition of the estimated walleye pollock population from the 2016 EBSS survey for all subareas by depth.

Table 22. - - Abundance estimates by subarea and depth stratum for walleye pollock *(Gadus chalcogramma)* from the 2016 EBSS survey.

Gadus chalcogramma **walleye pollock**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.91E+03	2.09E+06	4.03E+05	5.11E+11	4.69E+00	5.14E+00
	400-600						
	600-800	8.35E+00	8.69E+03	6.96E+01	7.56E+07	6.16E-02	6.42E-02
	800-1,000						
	1,000-1,200	7.03E+03	7.41E+06	1.28E+07	1.40E+13	6.07E+01	6.40E+01
2	200-400	1.88E+02	1.94E+05	1.48E+04	1.53E+10	2.66E+00	2.76E+00
	400-600	4.44E+01	6.41E+04	1.66E+03	3.59E+09	7.50E-01	1.08E+00
	600-800						
	800-1,000	6.47E+00	5.80E+03	1.47E+01	1.12E+07	1.21E-01	1.08E-01
	1,000-1,200	9.48E+02	8.34E+05	3.92E+05	3.03E+11	1.05E+01	9.23E+00
3	200-400	4.27E+01	4.47E+04	4.01E+02	4.91E+08	4.82E-01	5.04E-01
	400-600						
	600-800						
	800-1,000	3.13E+00	3.73E+03	9.80E+00	1.39E+07	4.63E-02	5.52E-02
	1,000-1,200	1.28E+03	1.11E+06	2.78E+05	1.77E+11	1.04E+01	8.96E+00
4	200-400	7.98E+01	8.15E+04	4.39E+03	4.05E+09	1.09E+00	1.12E+00
	400-600	2.49E+00	3.69E+03	6.22E+00	1.36E+07	3.59E-02	5.32E-02
	600-800	1.92E+00	3.17E+03	3.69E+00	1.01E+07	2.71E-02	4.49E-02
	800-1,000	5.96E+00	6.46E+03	1.33E+01	1.40E+07	9.00E-02	9.76E-02
	1,000-1,200	1.76E+03	2.11E+06	3.00E+06	4.34E+12	4.15E+01	4.97E+01
5	200-400						
	400-600	6.76E+00	6.41E+03	4.57E+01	4.11E+07	1.57E-01	1.48E-01
	600-800	2.30E+01	2.95E+04	1.66E+02	2.62E+08	4.17E-01	5.35E-01
	800-1,000	1.06E+01	1.17E+04	1.12E+02	1.37E+08	1.86E-01	2.05E-01
	1,000-1,200	2.14E+04	2.39E+07	4.15E+07	5.67E+13	8.26E+01	9.19E+01
6	200-400	1.19E+01	1.14E+04	6.45E+01	5.59E+07	7.00E-02	6.69E-02
	400-600						
	600-800	2.88E+00	3.49E+03	8.27E+00	1.22E+07	4.46E-02	5.40E-02
	800-1,000	7.16E+00	7.80E+03	1.41E+01	1.52E+07	1.44E-01	1.57E-01
	1,000-1,200	8.09E+04	9.52E+07	3.04E+08	4.84E+14	2.47E+01	2.91E+01
1-6	**200-1,200**	**1.16E+05**	**1.33E+08**	**3.63E+08**	**5.60E+14**	**1.16E-01**	**1.17E-01**

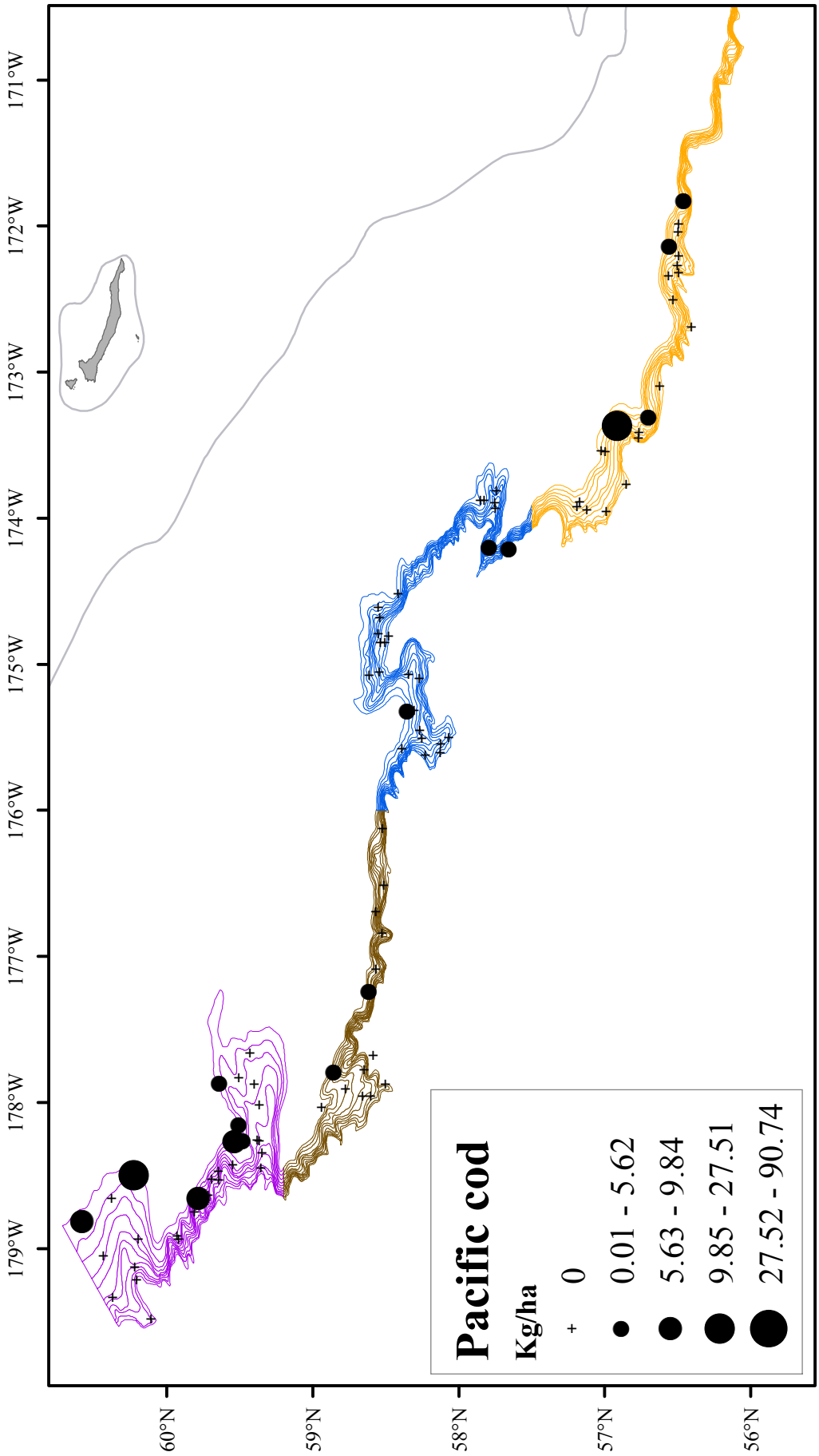

Figure 30. - - Distribution and relative abundance of Pacific cod from the 2016 EBSS survey. Values are CPUE of kg/ha.

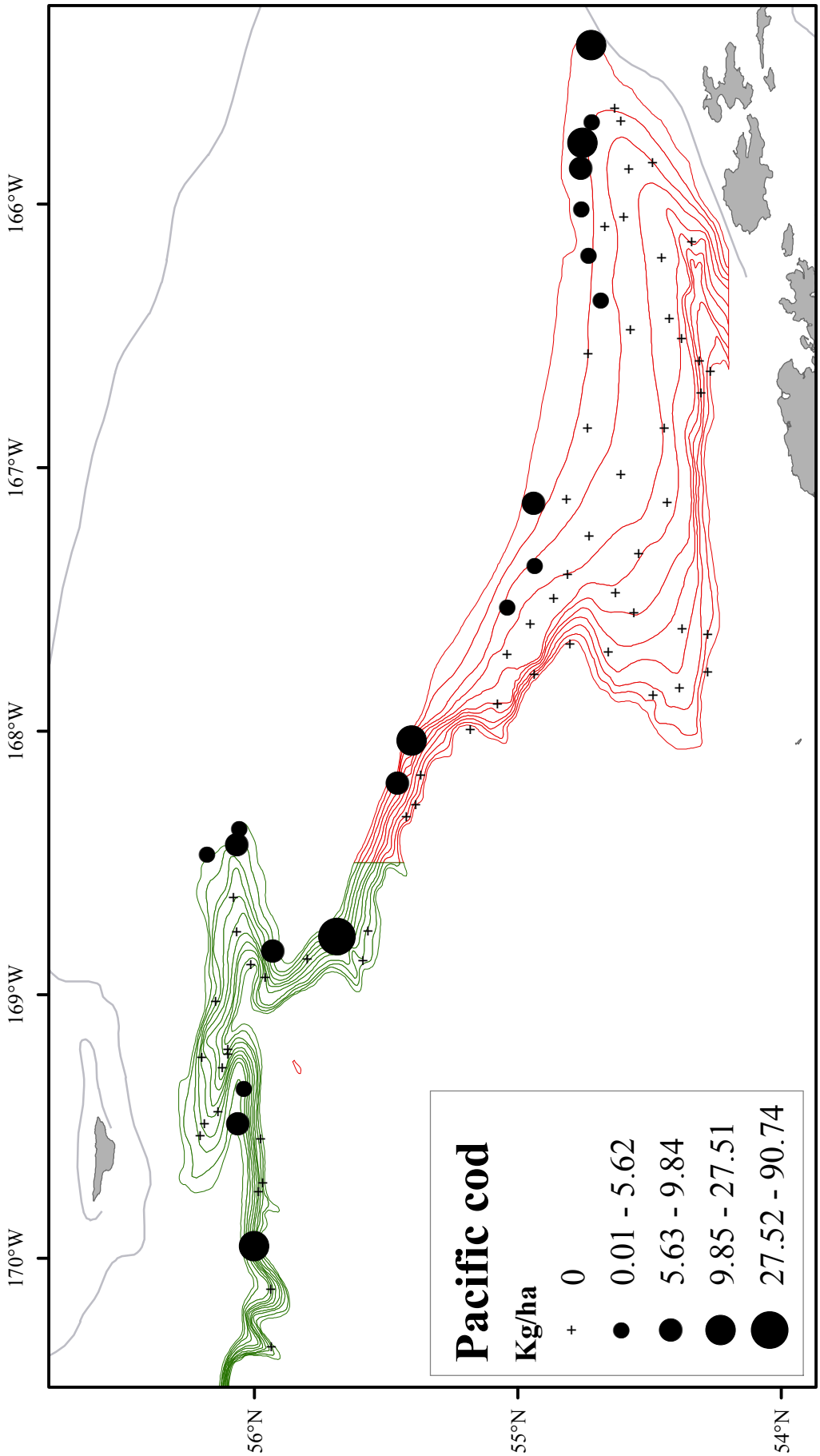

Figure 30. - - continued.

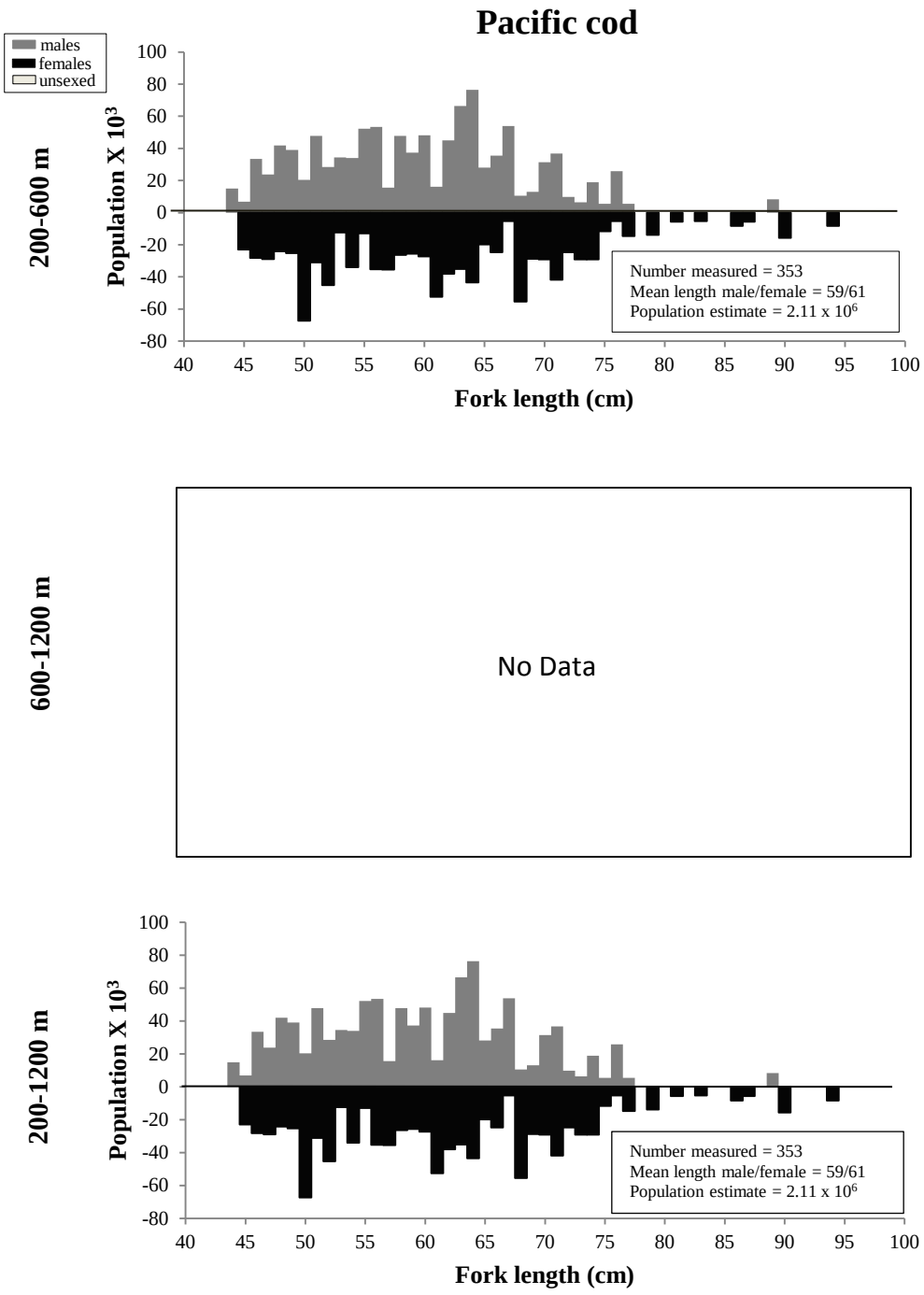

Figure 31. - - Size composition of the estimated Pacific cod population from the 2016 EBSS survey for all subareas by depth.

Table 23. - - Abundance estimates by subarea and depth strata for Pacific cod *(Gadus macrocephalus)* from the 2016 EBSS survey.

Gadus macrocephalus **Pacific cod**

Subarea	Depth strata (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	2.18E+03	1.01E+06	4.79E+05	8.14E+10	5.42E+00	2.52E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	2.00E+03	5.99E+05	1.50E+06	8.59E+10	1.73E+01	5.18E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	3.20E+02	9.48E+04	4.78E+04	3.95E+09	3.54E+00	1.05E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.62E+02	5.27E+04	6.72E+03	8.12E+08	1.31E+00	4.26E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	5.32E+01	2.34E+04	8.42E+02	1.37E+08	1.26E+00	5.53E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	1.10E+03	3.24E+05	1.47E+05	1.20E+10	4.22E+00	1.25E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**5.81E+03**	**2.11E+06**	**2.19E+06**	**1.84E+11**	**1.77E+00**	**6.44E-01**

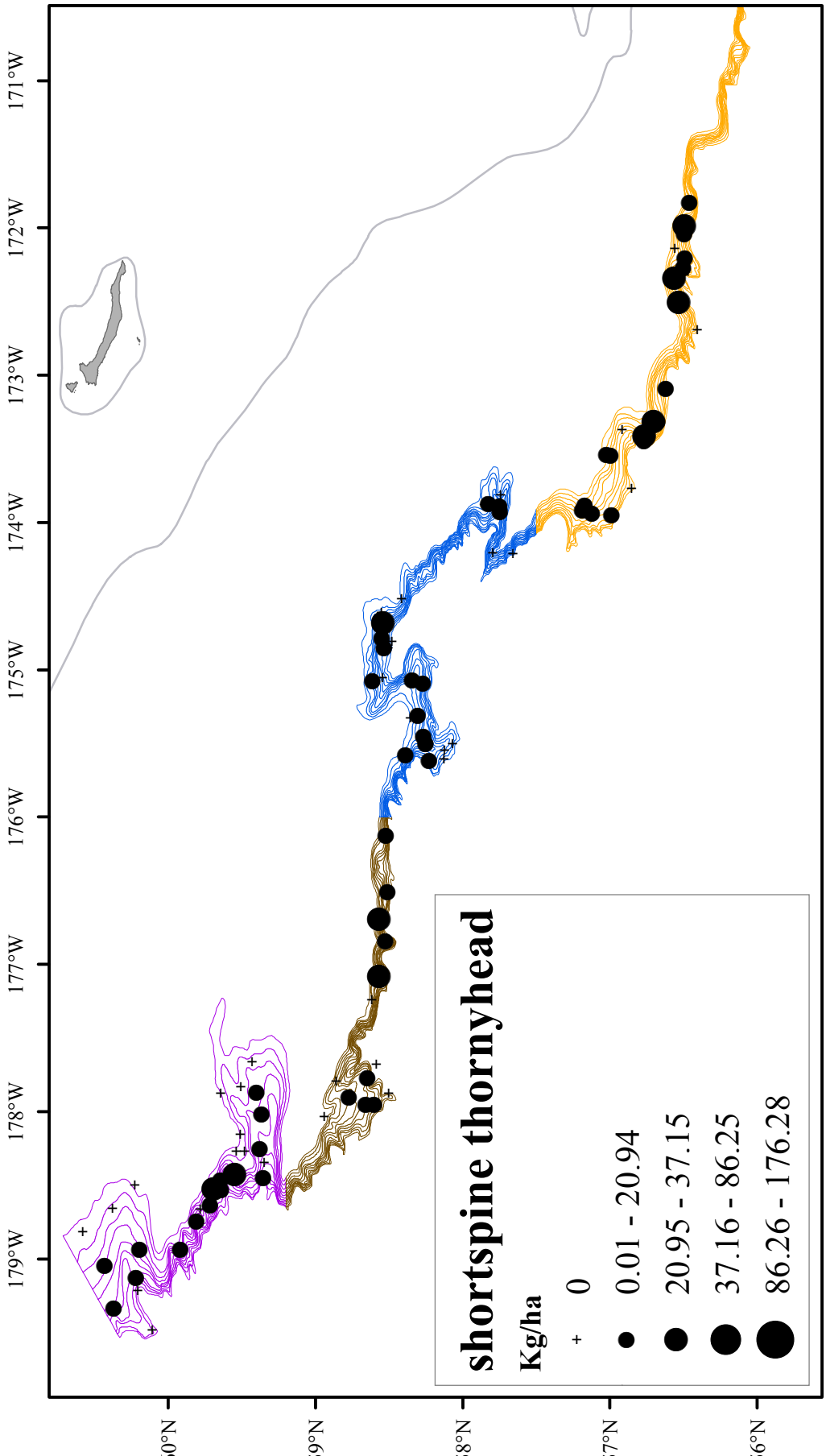

Figure 32. - Distribution and relative abundance of shortspine thornyhead from the 2016 EBSS survey. Values are CPUE of kg/ha.

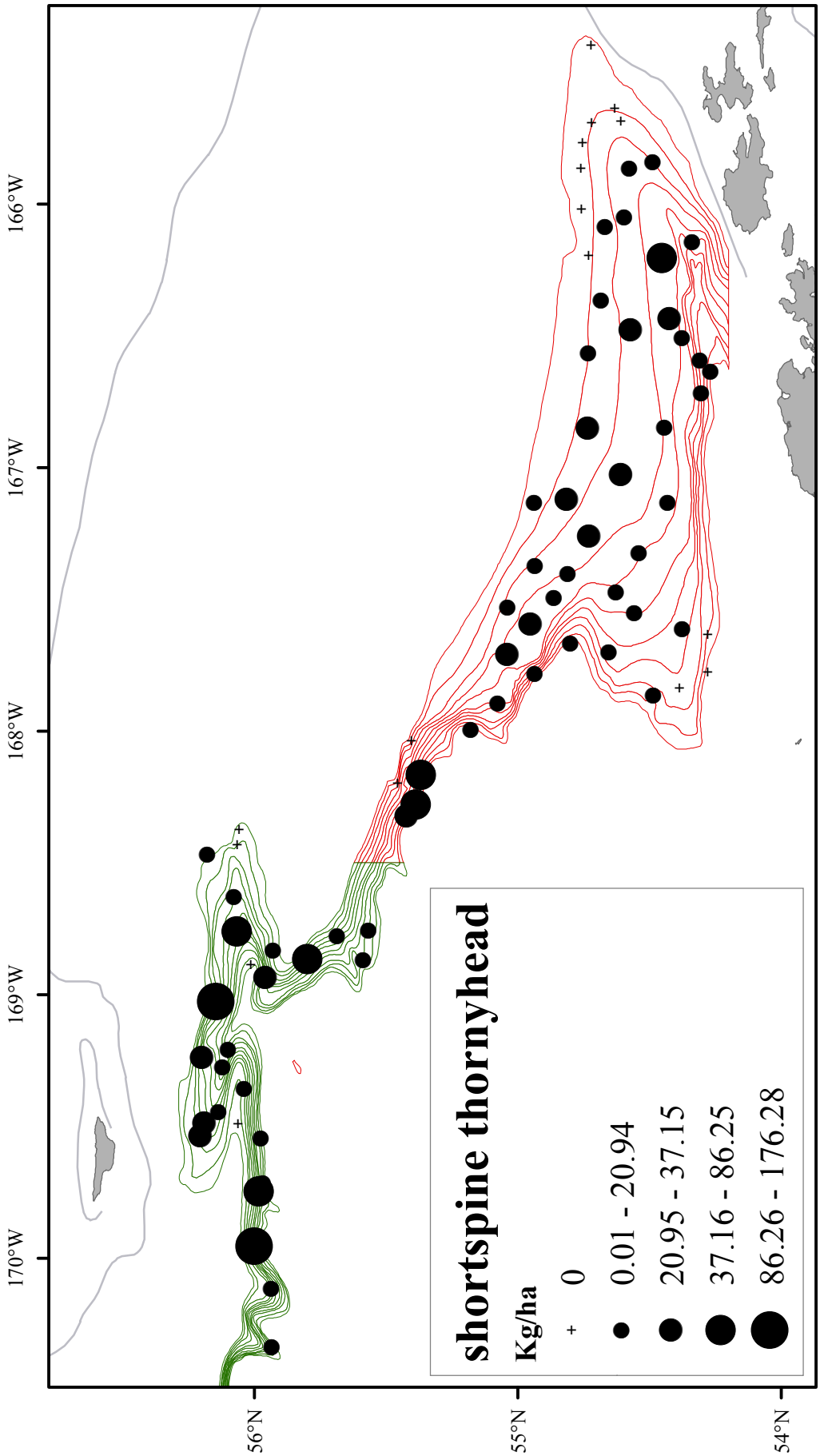

Figure 32. - - continued.

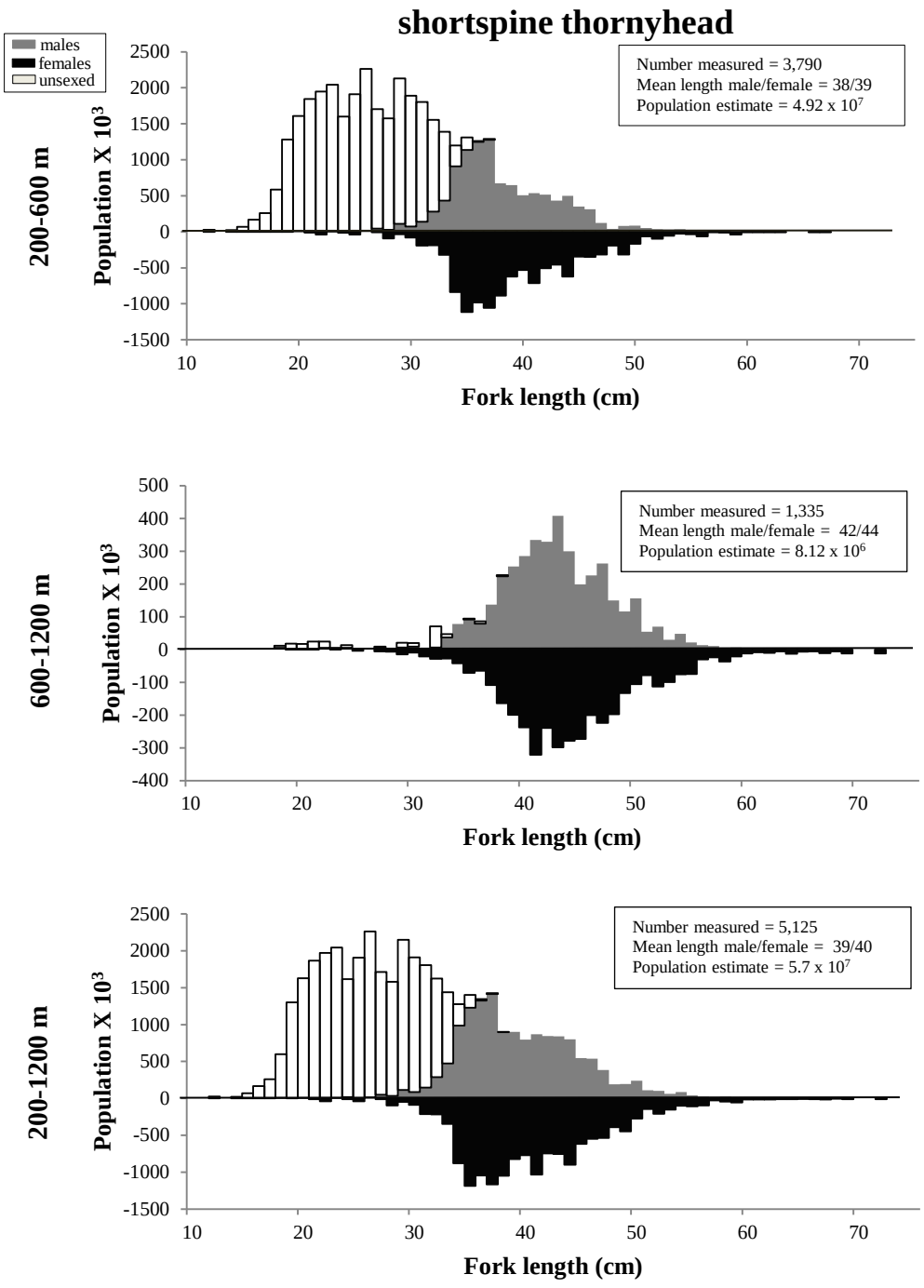

Figure 33. - - Size composition of the estimated shortspine thornyhead population from the 2016 EBSS survey for all subareas by depth.

Table 24. - - Abundance estimates by subarea and depth stratum for shortspine thornyhead *(Sebastolobus alascanus)* from the 2016 EBSS survey.

Sebastolobus alascanus **shortspine thornyhead**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.82E+03	5.13E+06	7.87E+05	6.68E+12	4.55E+00	1.28E+01
	400-600	1.05E+04	1.97E+07	5.05E+06	1.22E+13	2.58E+01	4.84E+01
	600-800	2.85E+03	2.64E+06	1.56E+06	1.11E+12	1.64E+01	1.51E+01
	800-1,000	1.68E+03	1.42E+06	2.23E+05	2.07E+11	1.24E+01	1.05E+01
	1,000-1,200	1.16E+02	7.86E+04	2.72E+03	8.97E+08	1.05E+00	7.10E-01
2	200-400	2.61E+03	7.58E+06	6.46E+06	5.66E+13	2.26E+01	6.55E+01
	400-600	4.05E+03	3.99E+06	1.51E+06	1.31E+12	5.74E+01	5.66E+01
	600-800	1.17E+03	8.02E+05	2.72E+05	7.30E+10	1.97E+01	1.36E+01
	800-1,000	7.74E+02	4.78E+05	3.15E+04	9.05E+09	1.40E+01	8.65E+00
	1,000-1,200	4.25E+01	2.46E+04	9.06E+02	2.92E+08	7.93E-01	4.59E-01
3	200-400	4.99E+02	1.01E+06	1.60E+05	7.30E+11	5.52E+00	1.12E+01
	400-600	2.09E+03	4.39E+06	2.25E+05	2.02E+12	2.36E+01	4.96E+01
	600-800	1.66E+03	1.44E+06	2.32E+05	1.81E+11	1.82E+01	1.58E+01
	800-1,000	2.73E+02	2.21E+05	2.07E+04	1.96E+10	3.73E+00	3.02E+00
	1,000-1,200	1.96E+01	1.18E+04	3.84E+02	1.38E+08	2.90E-01	1.74E-01
4	200-400	1.22E+01	3.95E+03	1.50E+02	1.56E+07	9.89E-02	3.19E-02
	400-600	1.09E+03	1.53E+06	3.92E+04	4.13E+11	1.50E+01	2.09E+01
	600-800	6.55E+02	3.18E+05	7.99E+04	1.97E+10	9.45E+00	4.59E+00
	800-1,000	1.42E+02	6.14E+04	7.60E+03	1.32E+09	2.00E+00	8.68E-01
	1,000-1,200						
5	200-400						
	400-600	7.99E+02	2.20E+06	4.62E+04	3.93E+11	1.88E+01	5.17E+01
	600-800	4.54E+02	3.14E+05	1.96E+04	1.29E+10	1.05E+01	7.27E+00
	800-1,000	9.70E+01	6.20E+04	2.42E+03	1.26E+09	1.76E+00	1.12E+00
	1,000-1,200						
6	200-400	4.52E+01	1.30E+05	2.04E+03	1.70E+10	1.74E-01	5.03E-01
	400-600	2.21E+03	3.53E+06	2.91E+05	1.36E+12	1.29E+01	2.07E+01
	600-800	2.78E+02	2.38E+05	6.54E+03	7.73E+09	3.03E+00	2.59E+00
	800-1,000	1.02E+01	5.24E+03	1.03E+02	2.74E+07	1.57E-01	8.12E-02
	1,000-1,200	1.63E+01	8.00E+03	2.66E+02	6.40E+07	3.29E-01	1.61E-01
1-6	**200-1,200**	**3.59E+04**	**5.73E+07**	**1.70E+07**	**8.33E+13**	**1.10E+01**	**1.75E+01**

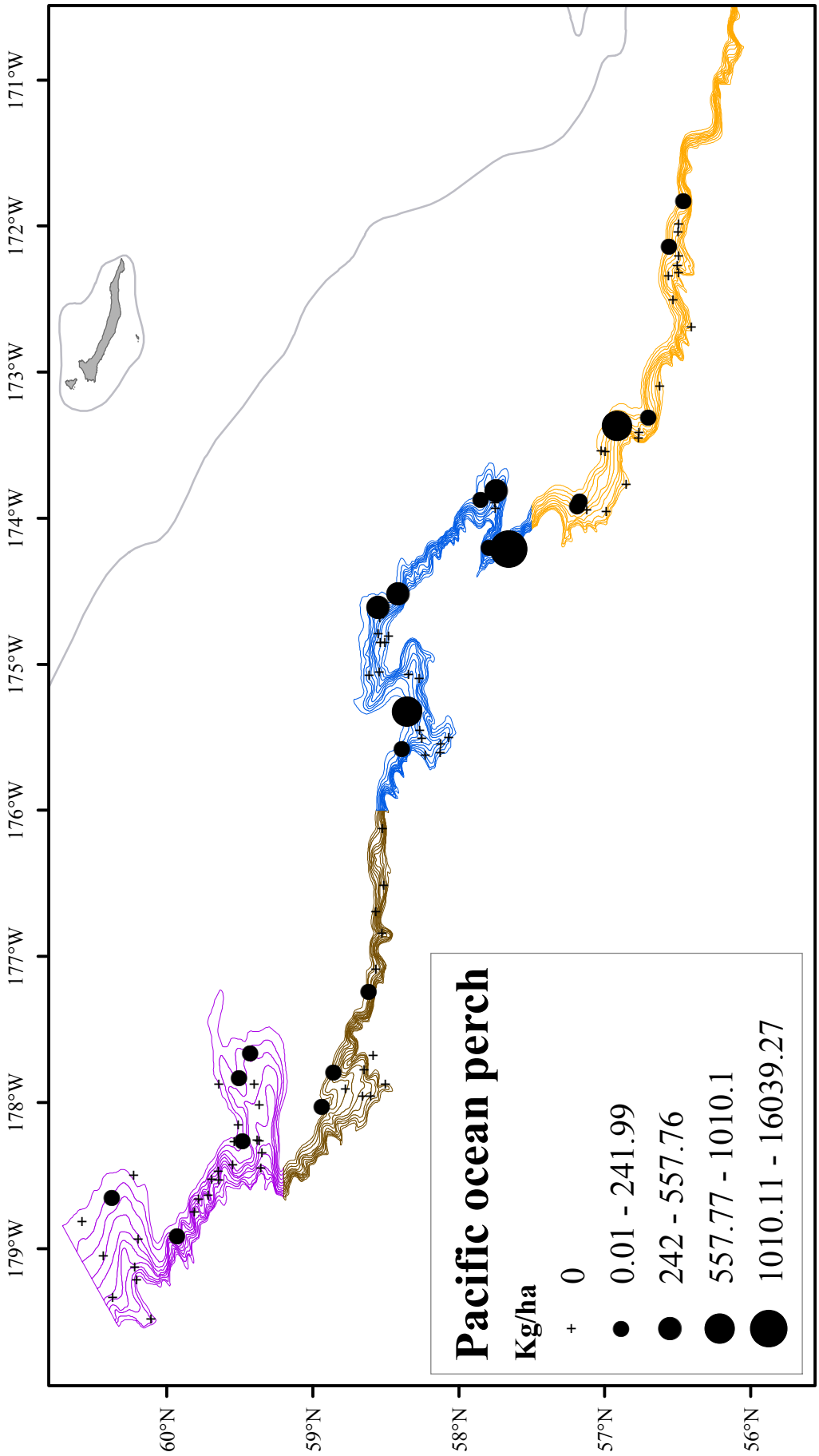

Figure 34. - - Distribution and relative abundance of Pacific ocean perch from the 2016 EBSS survey. Values are CPUE of kg/ha.

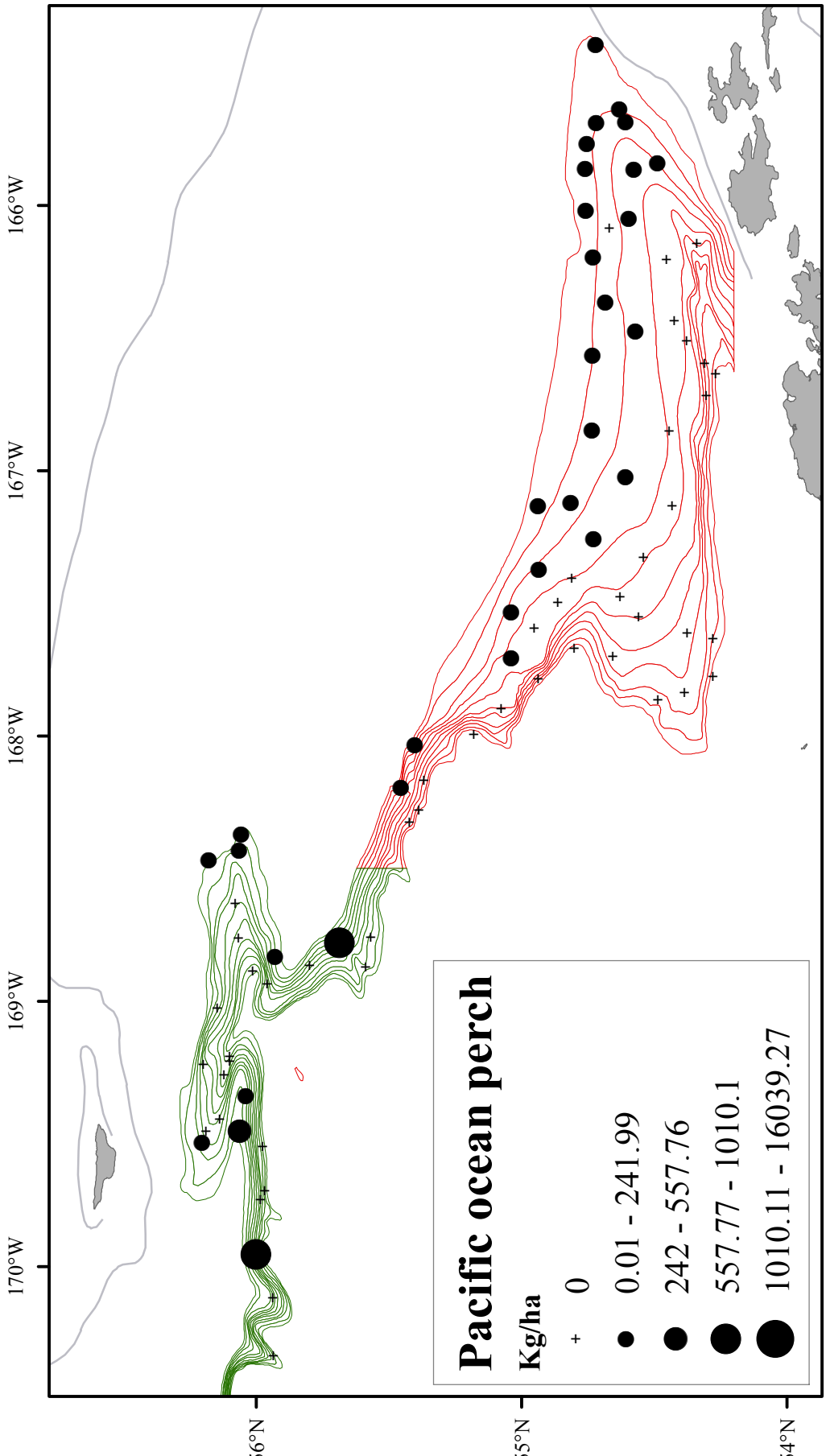

Figure 34. - - continued.

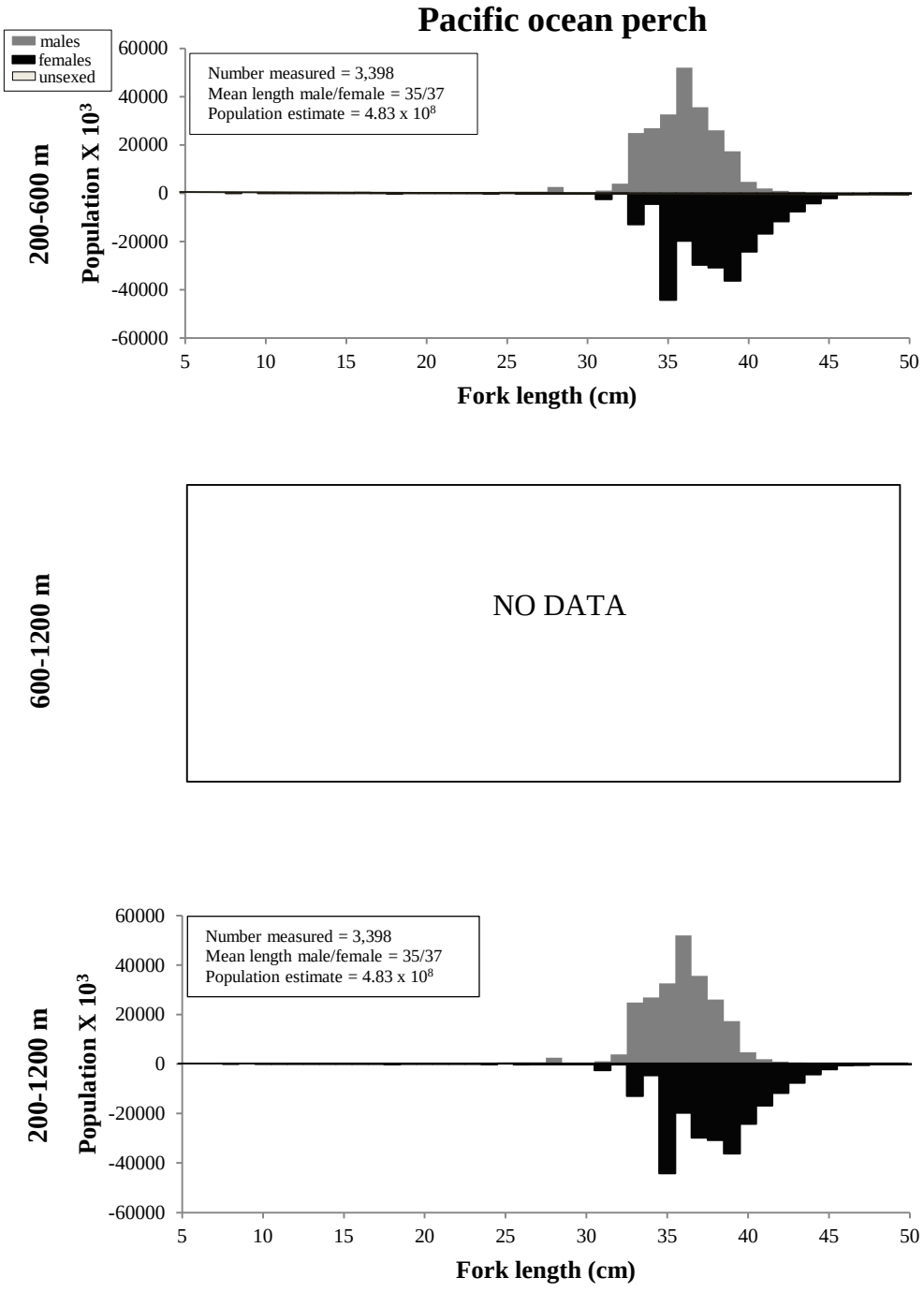

Figure 35. - - Size composition of the estimated Pacific ocean perch population from the 2016 EBSS survey for all subareas by depth.

Table 25. - - Abundance estimates by subarea and depth stratum for Pacific ocean perch *(Sebastes alutus)* from the 2016 EBSS survey.

Sebastes alutus **Pacific ocean perch**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.19E+04	1.43E+07	3.13E+07	5.38E+13	2.97E+01	3.57E+01
	400-600	1.24E+02	1.60E+05	2.85E+03	3.93E+09	3.05E-01	3.94E-01
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	3.62E+04	3.88E+07	2.71E+08	2.97E+14	3.13E+02	3.36E+02
	400-600	2.40E+00	3.51E+03	5.75E+00	1.23E+07	3.40E-02	4.97E-02
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	2.37E+04	3.10E+07	1.68E+08	3.69E+14	2.62E+02	3.43E+02
	400-600	2.28E+01	2.91E+04	5.20E+02	8.48E+08	2.57E-01	3.29E-01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	2.81E+05	3.93E+08	5.92E+10	1.22E+17	2.28E+03	3.18E+03
	400-600	2.72E+00	3.83E+03	7.41E+00	1.47E+07	3.73E-02	5.25E-02
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	2.26E+02	1.42E+06	3.93E+04	1.73E+12	5.33E+00	3.34E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	3.86E+03	4.35E+06	1.35E+07	1.64E+13	1.49E+01	1.67E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**3.57E+05**	**4.83E+08**	**5.97E+10**	**1.23E+17**	**1.09E+02**	**1.48E+02**

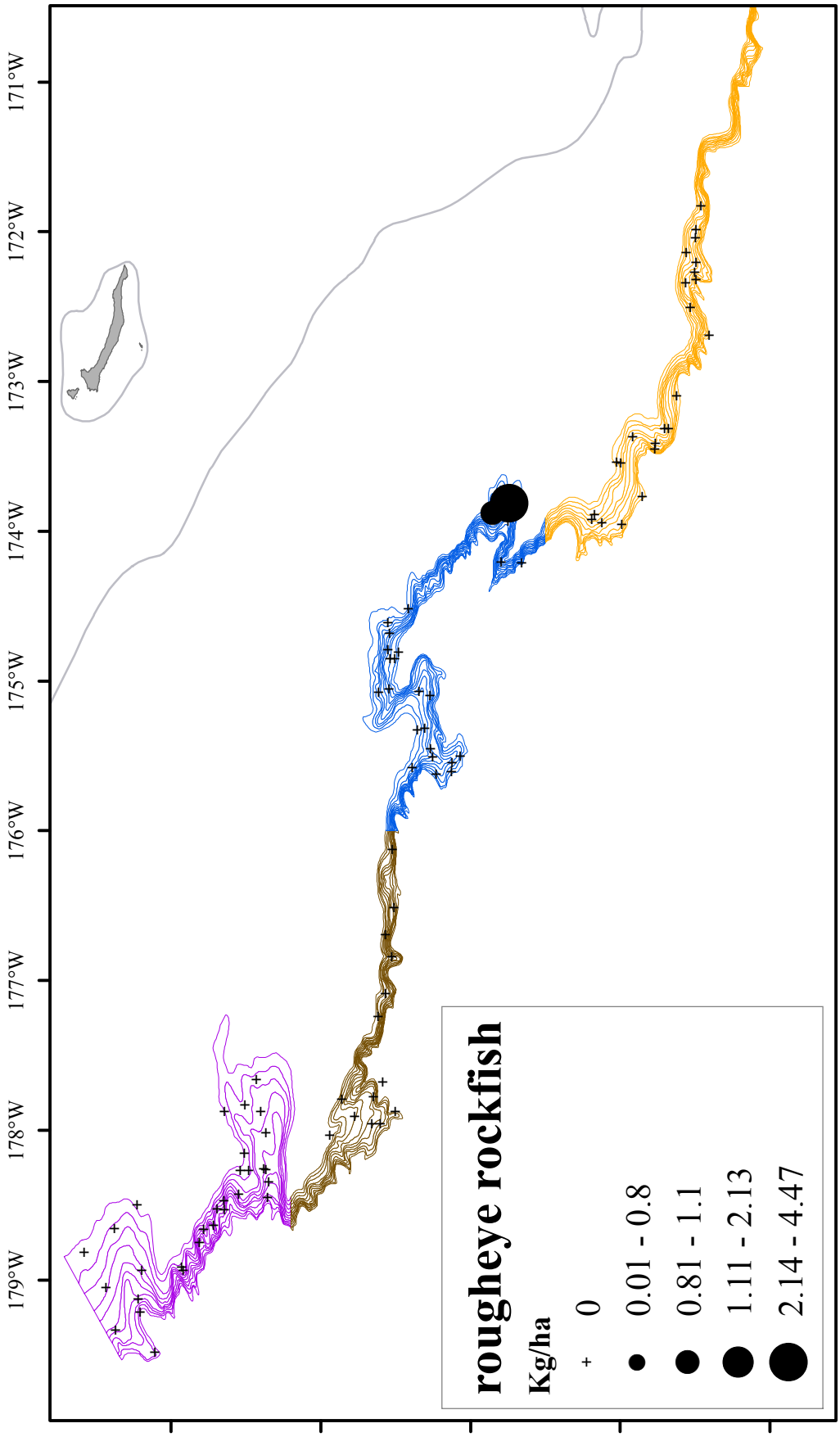

Figure 36. - - Distribution and relative abundance of rougheye rockfish from the 2016 EBSS survey. Values are CPUE of kg/ha.

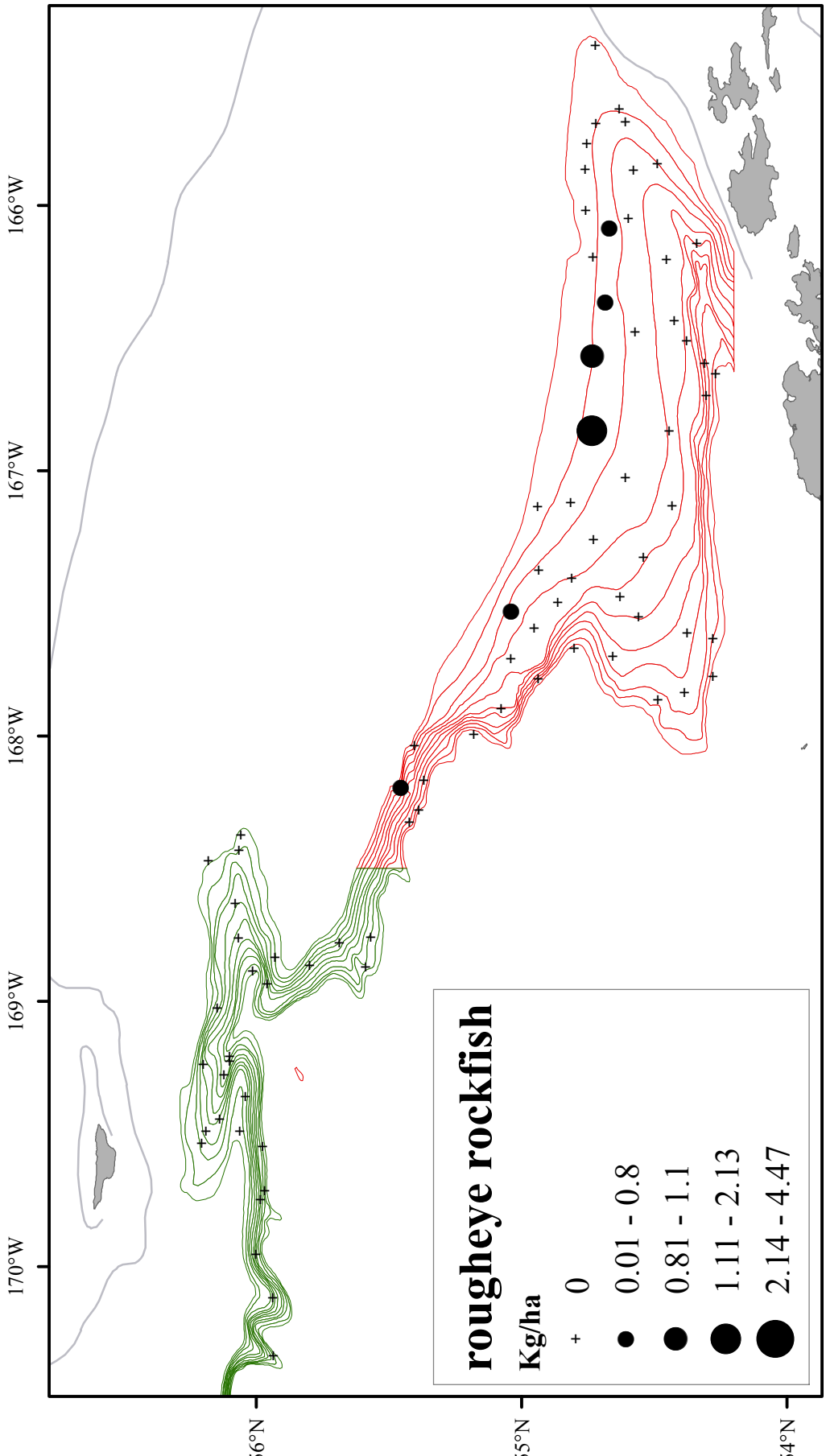

Figure 36. - - continued.

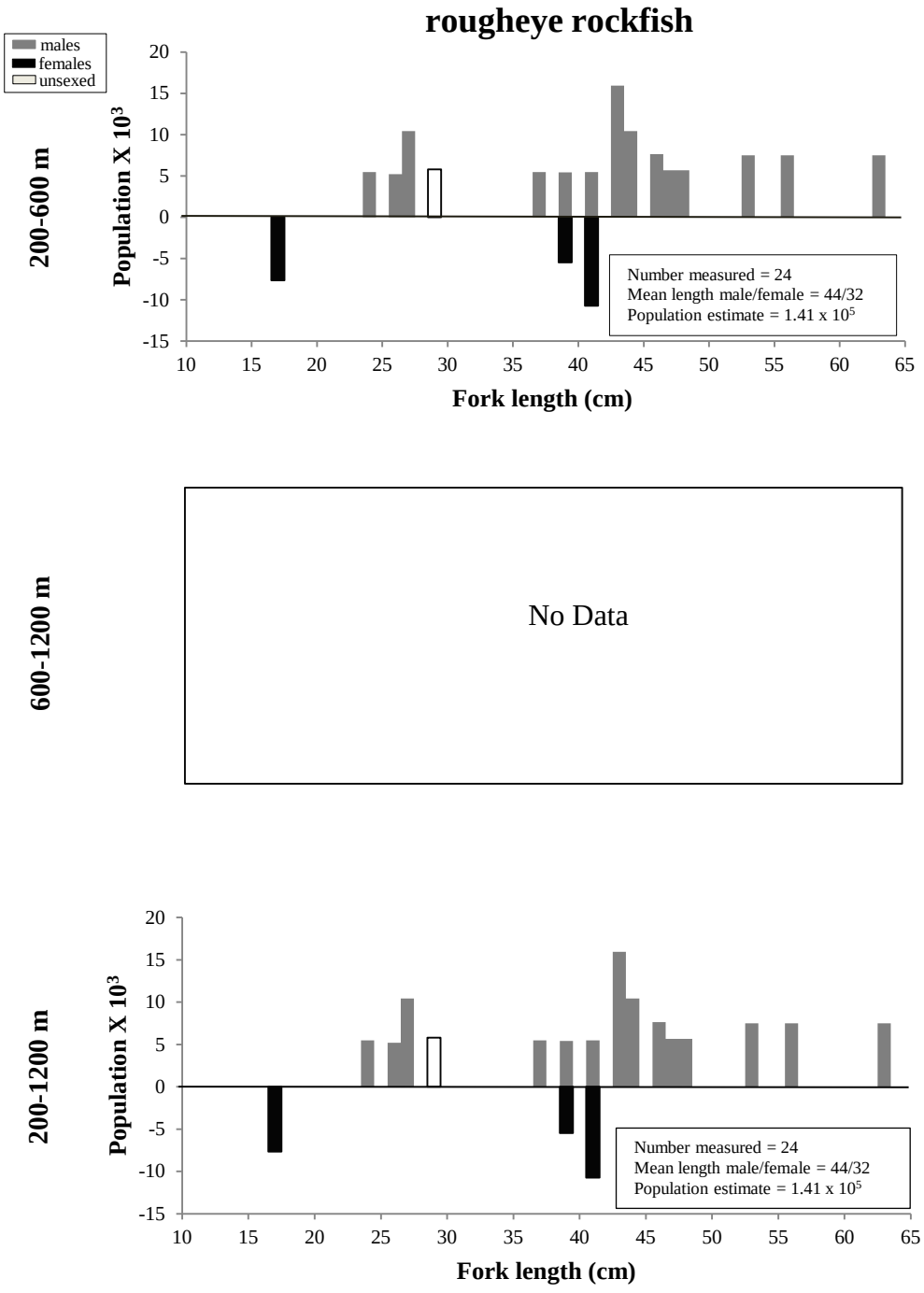

Figure 37. - - Size composition of the estimated rougheye rockfish population from the 2016 EBSS survey for all subareas by depth.

Table 26. - - Abundance estimates by subarea and depth stratum for rougheye rockfish *(Sebastes aleutianus)* from the 2016 EBSS survey.

Sebastes aleutianus **rougheye rockfish**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.23E+02	1.03E+05	3.00E+03	1.66E+09	3.07E-01	2.56E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	8.31E+01	3.78E+04	4.69E+03	6.43E+08	6.72E-01	3.06E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.06E+02**	**1.41E+05**	**7.69E+03**	**2.31E+09**	**6.30E-02**	**4.30E-02**

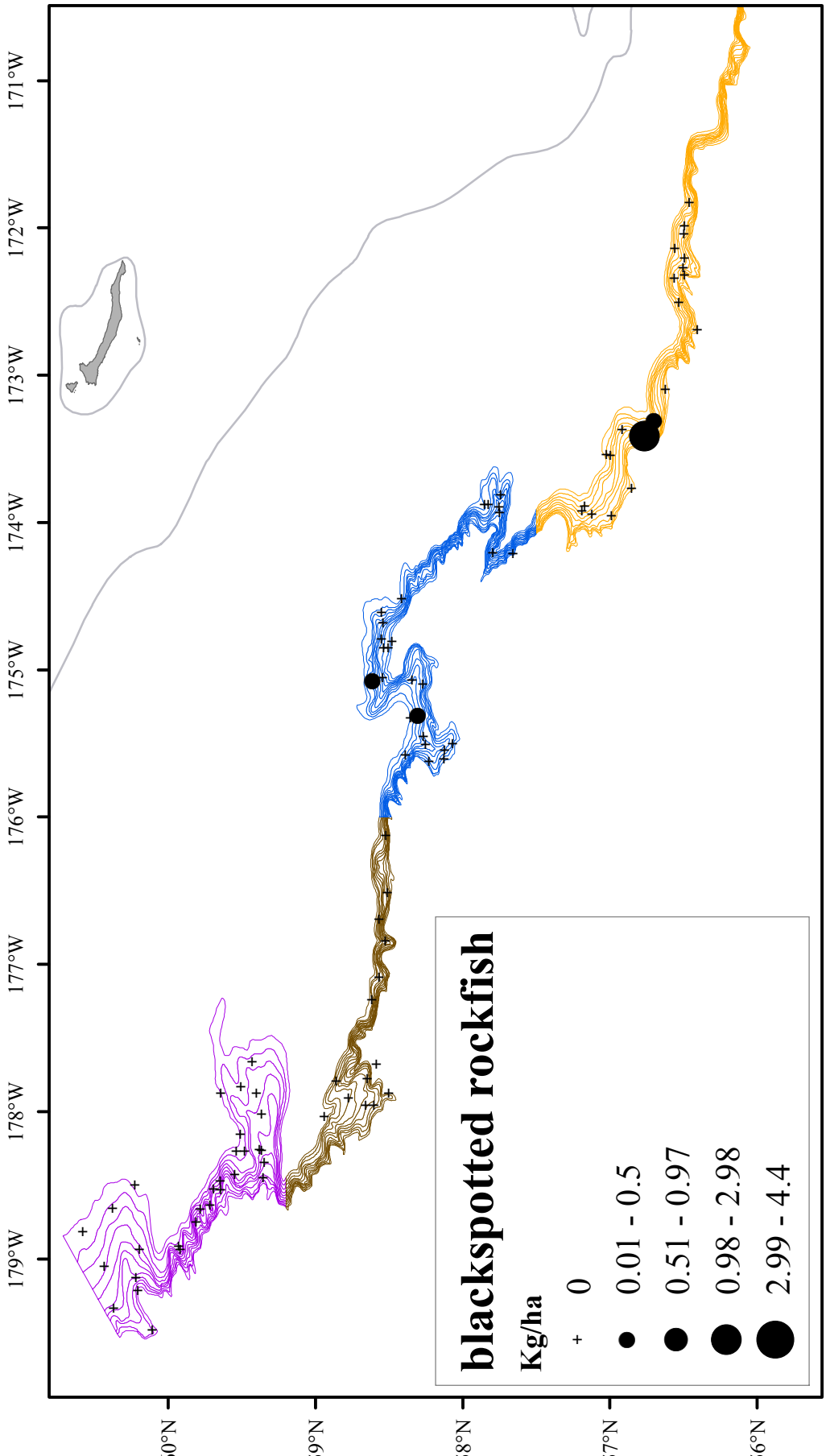

Figure 38. - - Distribution and relative abundance of blackspotted rockfish from the 2016 EBSS survey. Values are CPUE of kg/ha.

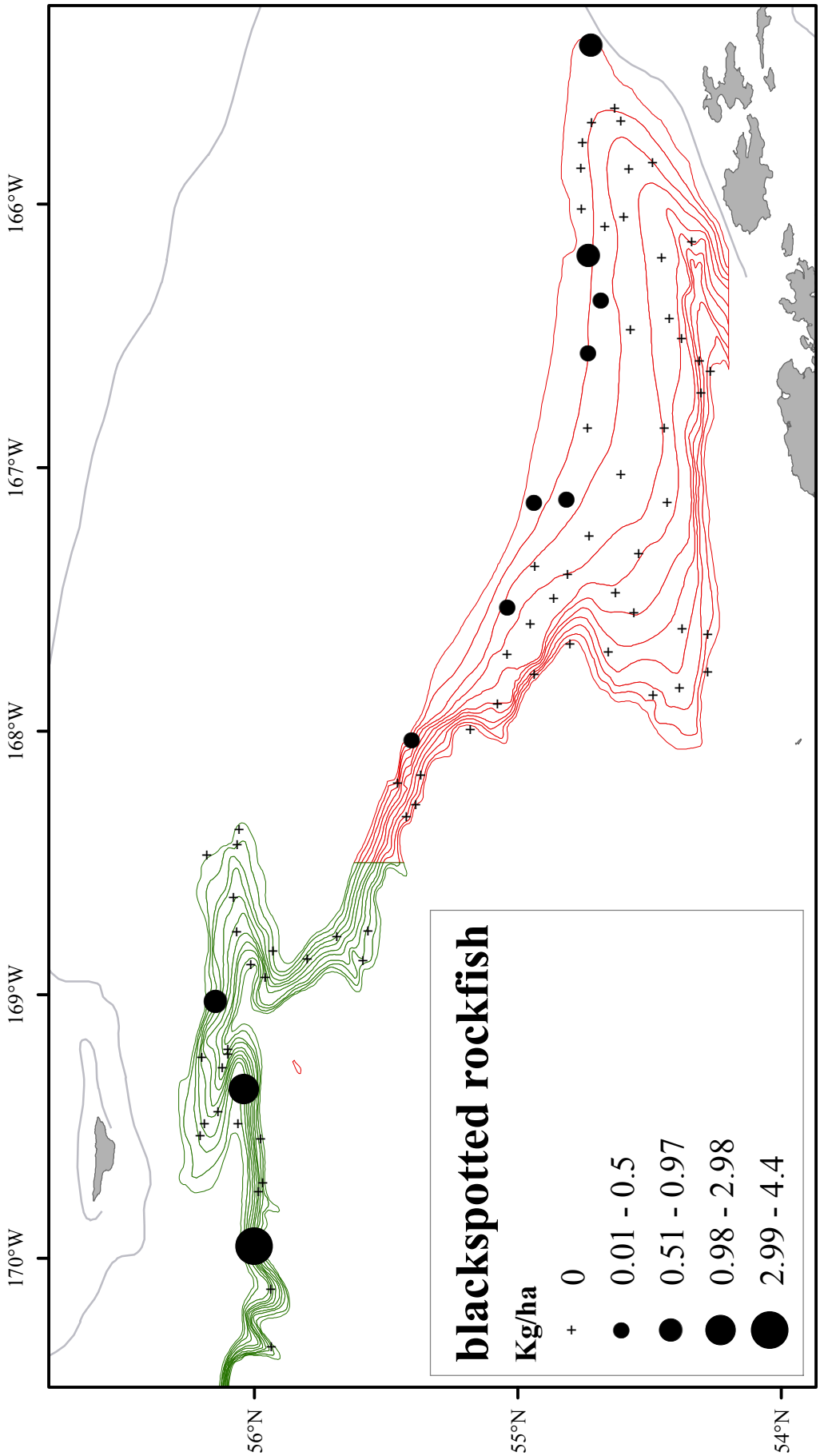

Figure 38. - - continued.

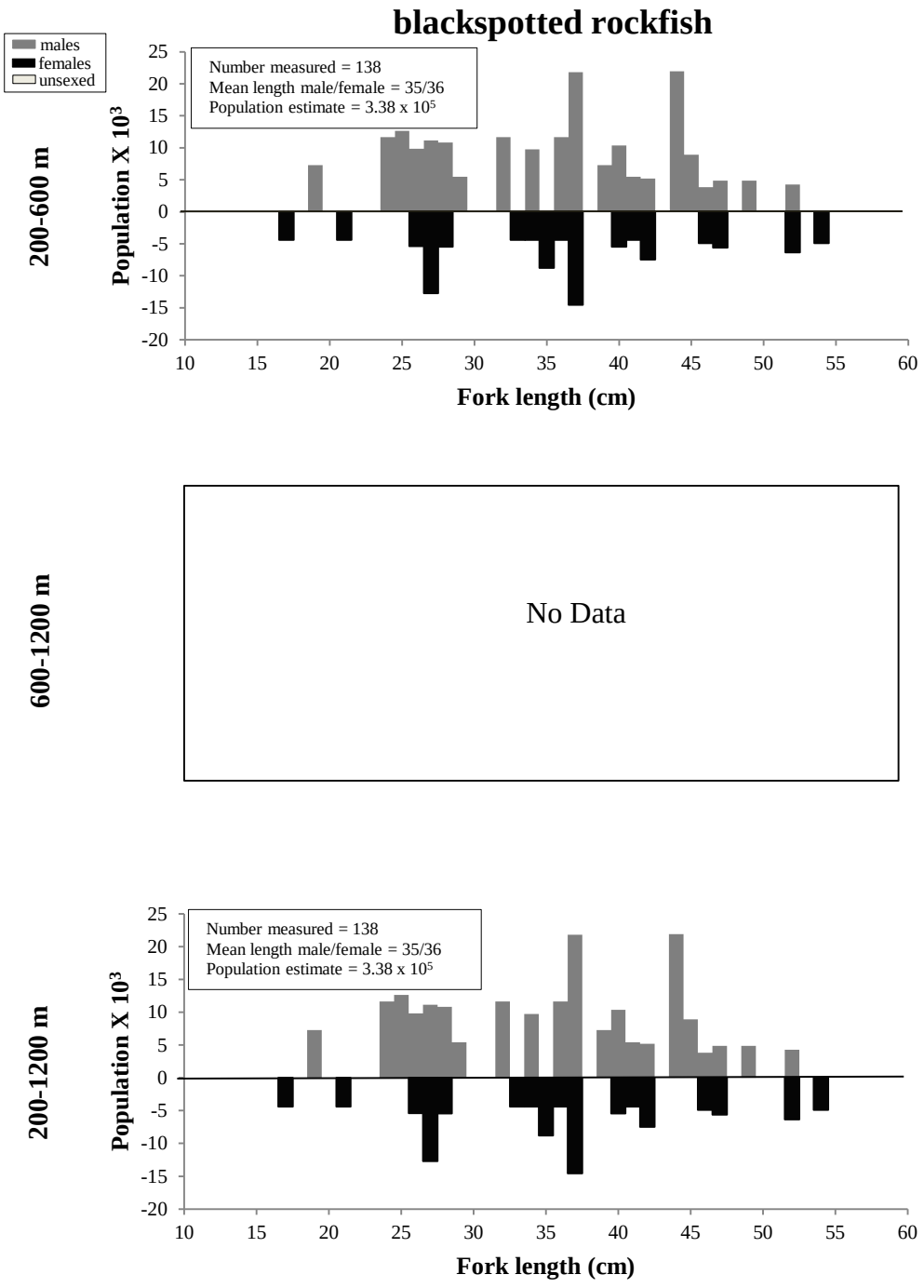

Figure 38. - - Size composition of the estimated blackspotted rockfish population from the 2016 EBSS survey for all subareas by depth.

Table 27. - - Abundance estimates by subarea and depth stratum for blackspotted rockfish *(Sebastes melanostictus)* from the 2016 EBSS survey.

Sebastes melanostictus **blackspotted rockfish**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	7.83E+01	1.15E+05	7.19E+02	2.64E+09	1.95E-01	2.87E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	9.25E+01	1.65E+05	4.37E+03	1.20E+10	7.99E-01	1.42E+00
	400-600	9.65E+00	4.28E+03	9.31E+01	1.83E+07	1.37E-01	6.07E-02
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	9.10E+00	7.49E+03	8.28E+01	5.61E+07	1.01E-01	8.29E-02
	400-600	5.28E+01	3.91E+04	2.79E+03	1.53E+09	5.96E-01	4.41E-01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400						
	400-600	9.63E+00	7.34E+03	3.54E+01	2.02E+07	1.32E-01	1.00E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.52E+02**	**3.38E+05**	**8.08E+03**	**1.62E+10**	**7.70E-02**	**1.03E-01**

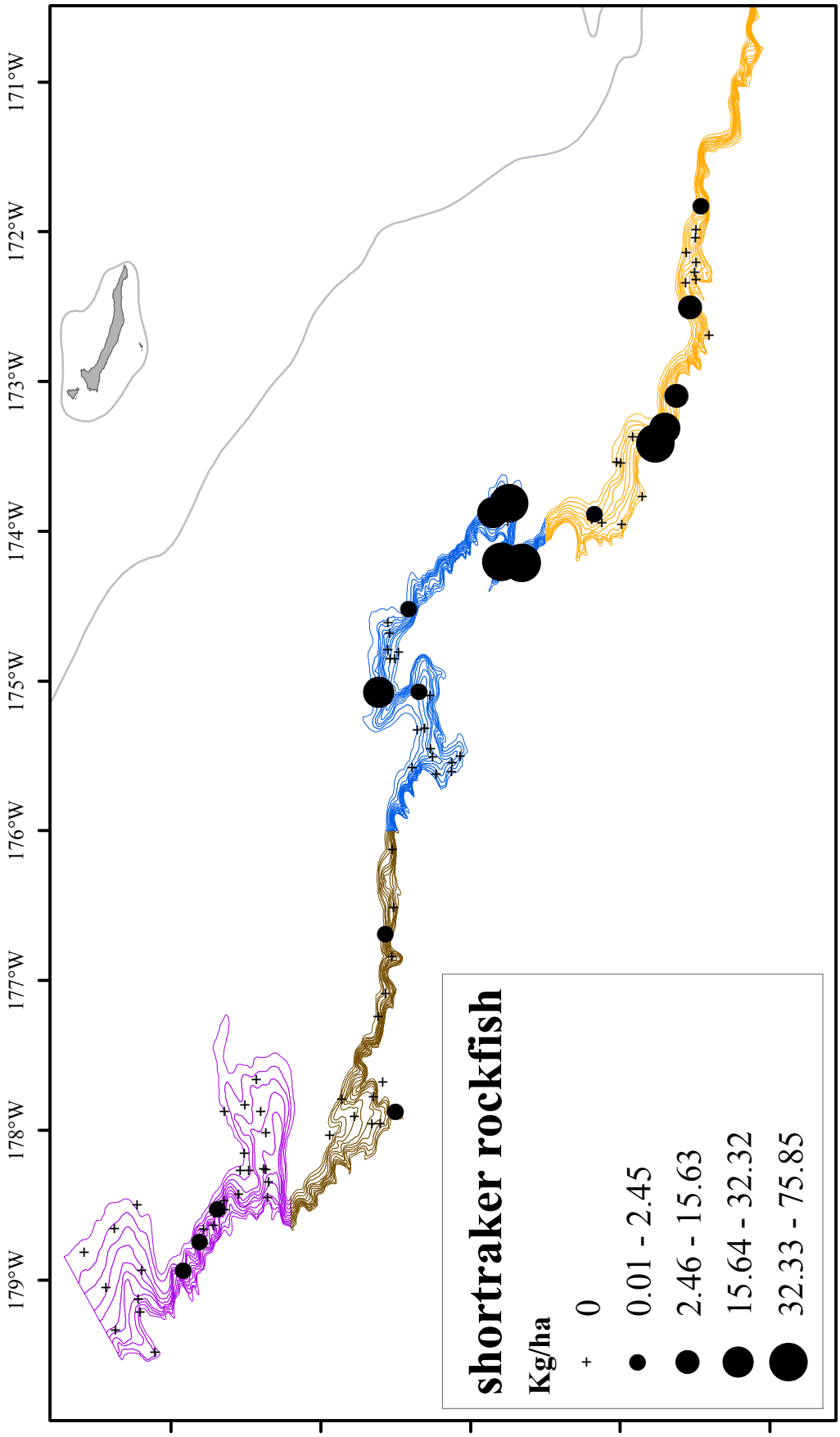

Figure 40. - - Distribution and relative abundance of shortraker rockfish from the 2016 EBSS survey. Values are CPUE of kg/ha.

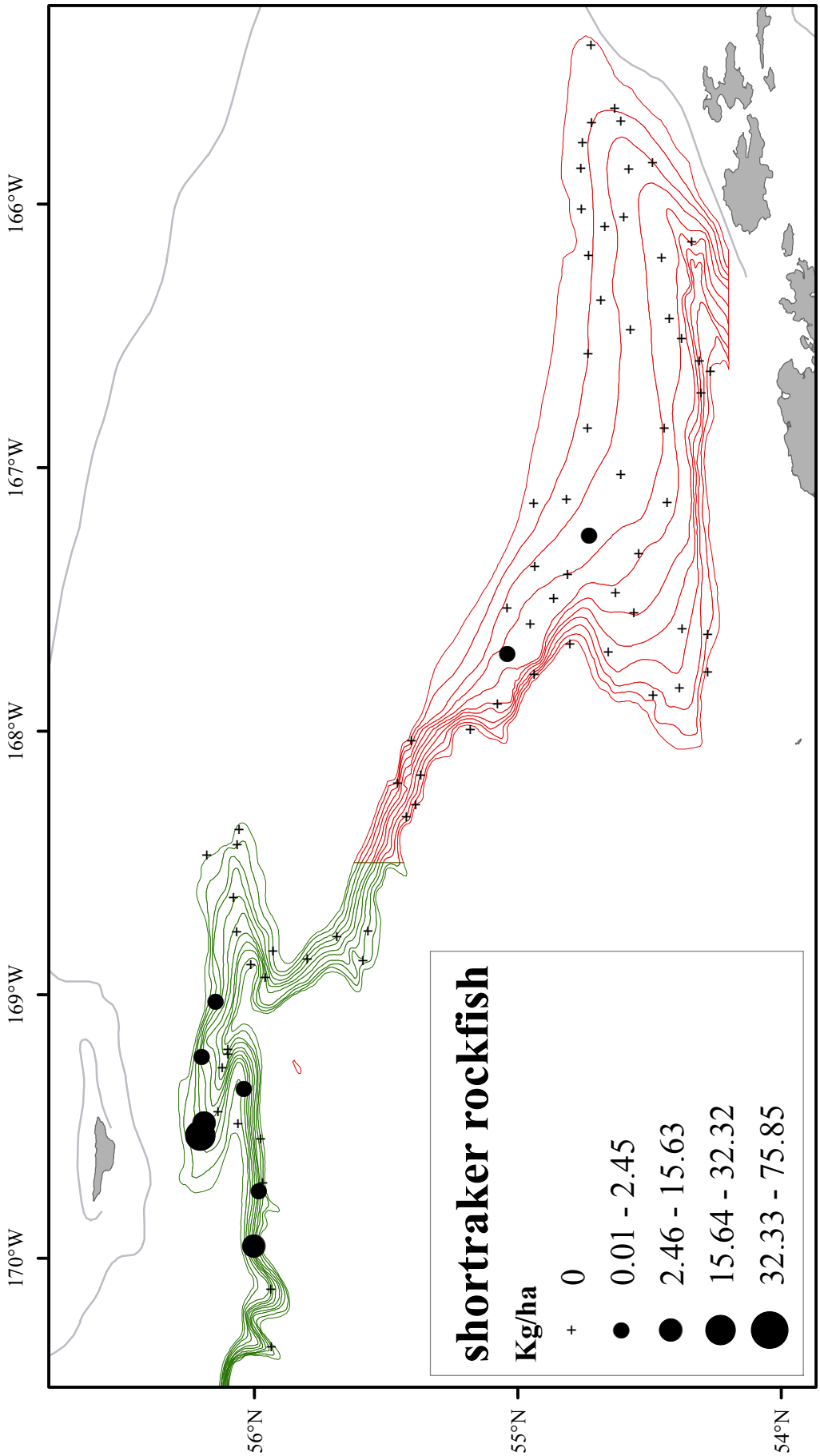

Figure 40. - - continued.

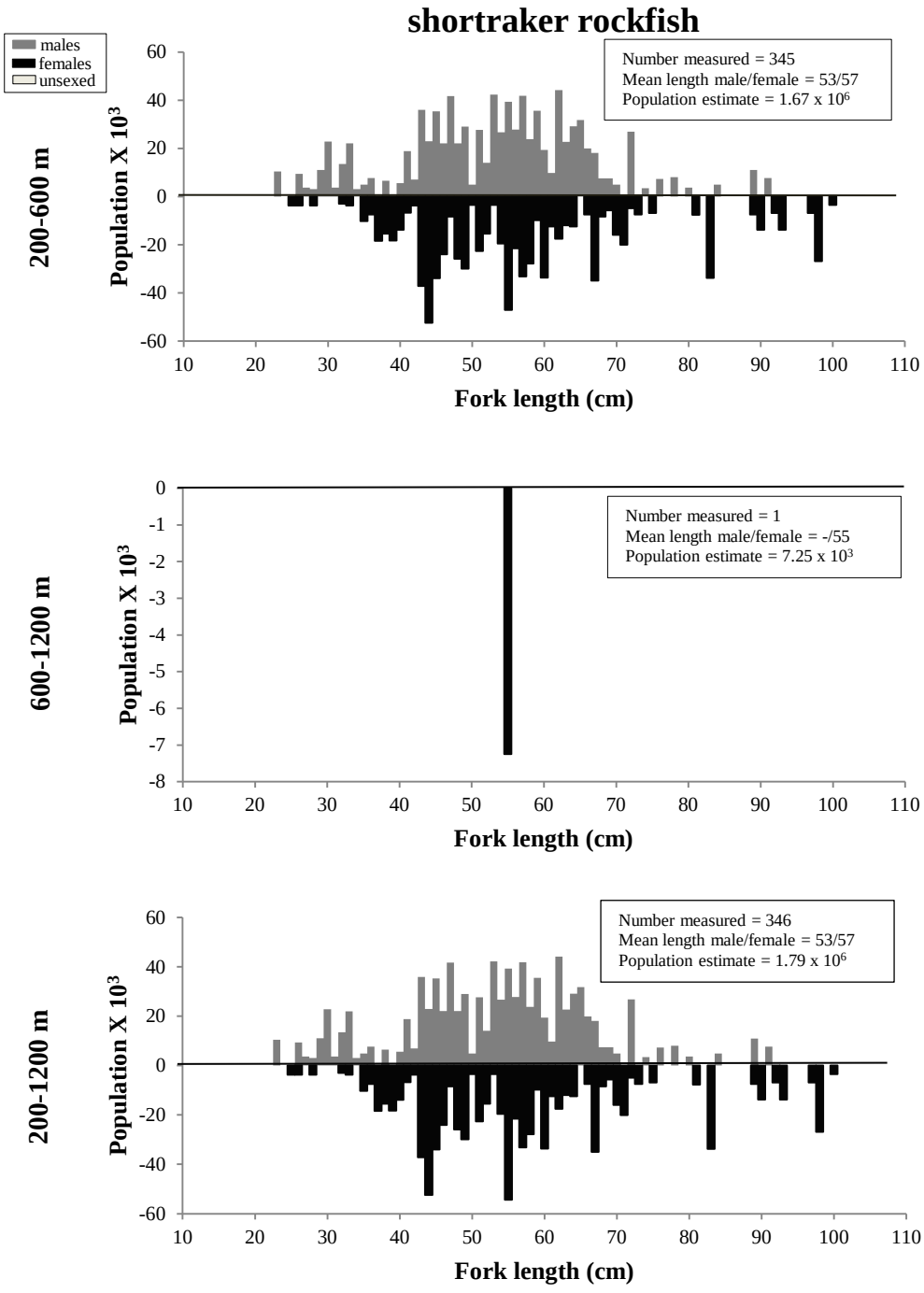

Figure 41. - - Size composition of the estimated shortraker rockfish population from the 2016 EBSS survey for all subareas by depth.

Table 28. - - Abundance estimates by subarea and depth stratum for shortraker rockfish *(Sebastes borealis)* from the 2016 EBSS survey.

Sebastes borealis **shortraker rockfish**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	2.23E+01	1.19E+04	2.46E+02	6.72E+07	5.50E-02	2.92E-02
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	1.02E+02	1.89E+04	8.73E+03	2.13E+08	8.82E-01	1.64E-01
	400-600	4.77E+02	2.22E+05	1.37E+05	1.84E+10	6.76E+00	3.15E+00
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	3.80E+02	6.96E+04	1.02E+05	3.33E+09	4.21E+00	7.70E-01
	400-600	1.66E+03	5.71E+05	1.17E+06	1.42E+11	1.88E+01	6.44E+00
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	3.09E+03	6.66E+05	1.73E+06	6.12E+10	2.50E+01	5.38E+00
	400-600	4.20E+02	1.93E+05	8.67E+04	1.27E+10	5.75E+00	2.64E+00
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600	3.14E+01	1.68E+04	9.87E+02	2.81E+08	7.38E-01	3.94E-01
	600-800						
	800-1,000						
	1,000-1,200	1.80E+01	7.25E+03	3.23E+02	5.26E+07	3.15E-01	1.27E-01
6	200-400						
	400-600	5.62E+01	1.70E+04	8.49E+02	6.97E+07	3.29E-01	9.97E-02
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**6.26E+03**	**1.79E+06**	**3.23E+06**	**2.38E+11**	**1.91E+00**	**5.48E-01**

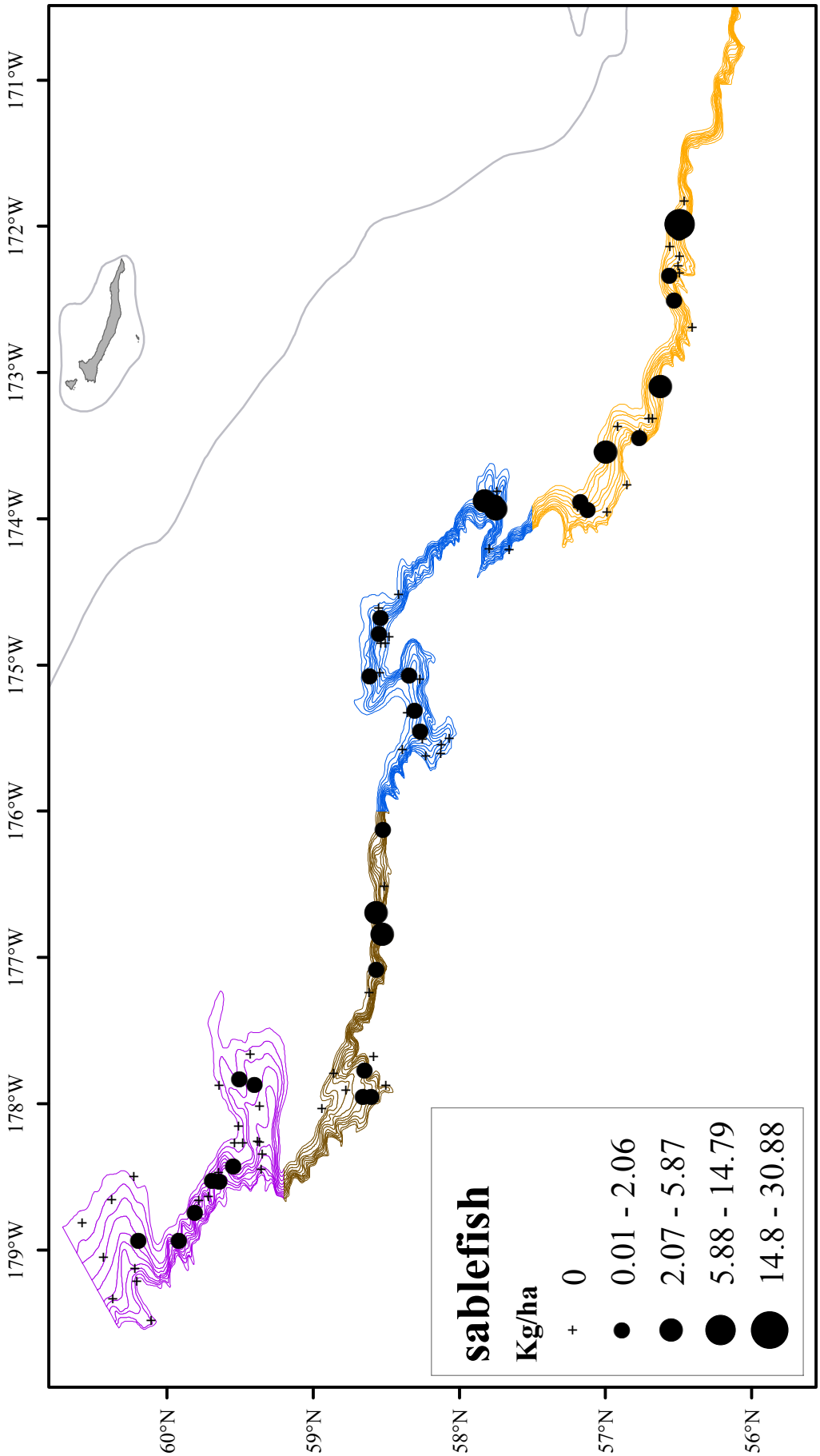

Figure 42. - - Distribution and relative abundance of sablefish from the 2016 EBSS survey. Values are CPUE of kg/ha.

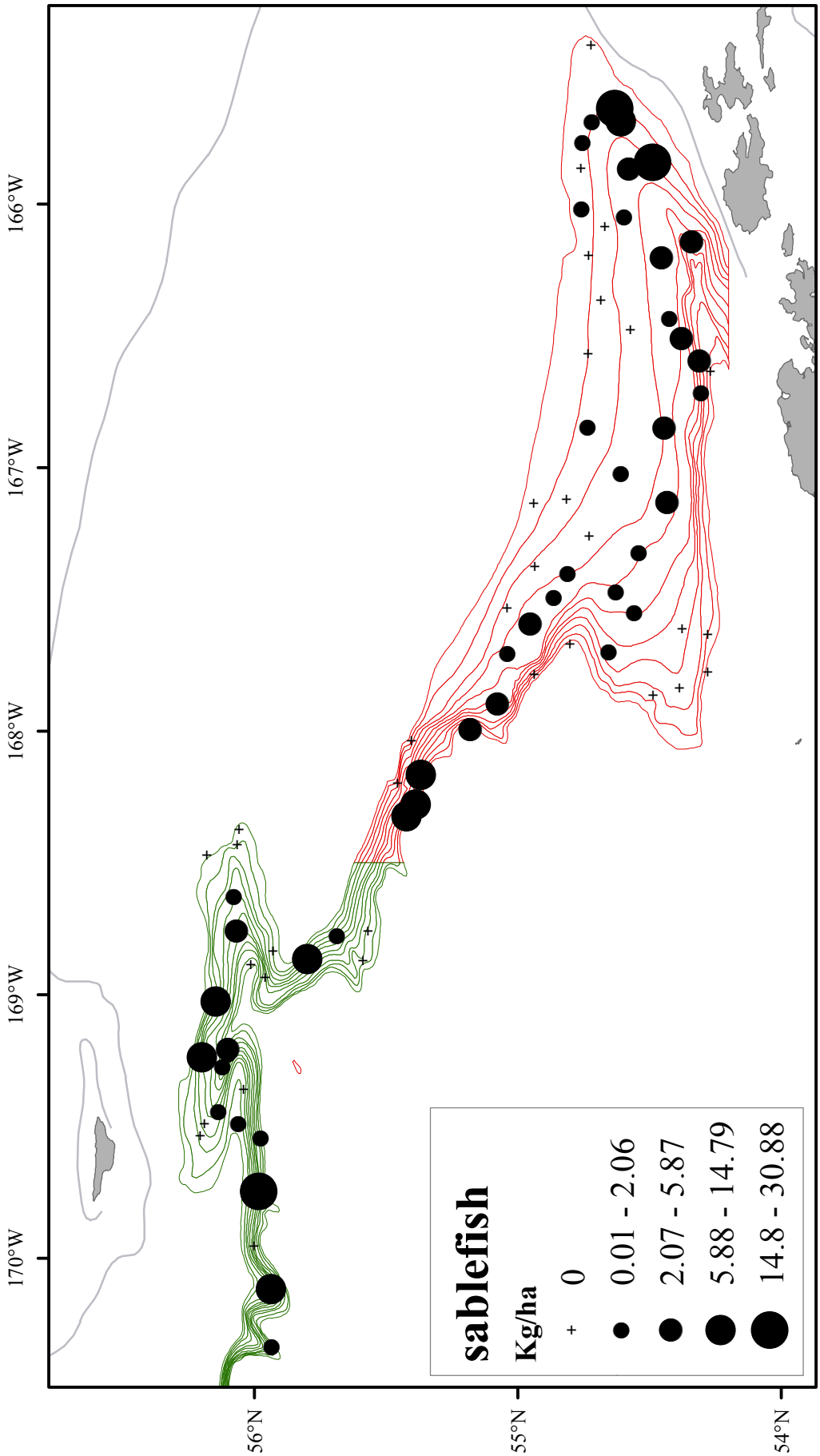

Figure 42. - - continued.

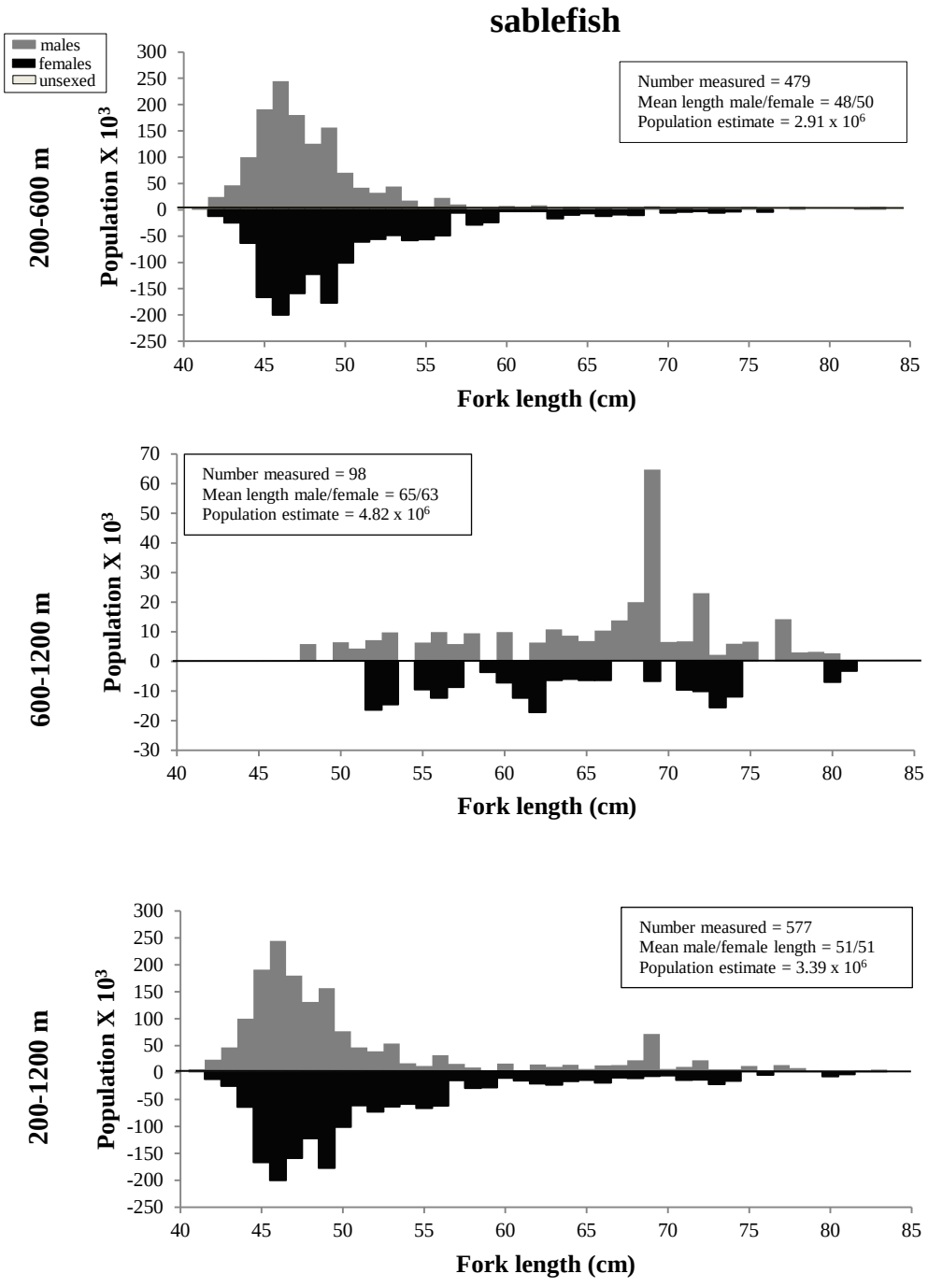

Figure 43. - - Size composition of the estimated sablefish population from the 2016 EBSS survey for all subareas by depth.

Table 29. - - Abundance estimates by subarea and depth stratum for sablefish *(Anoplopoma fimbria)* from the 2016 EBSS survey.

Anoplopoma fimbria **sablefish**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	5.87E+02	5.86E+05	1.65E+05	1.63E+11	1.46E+00	1.46E+00
	400-600	1.79E+03	1.68E+06	5.60E+05	5.89E+11	4.40E+00	4.12E+00
	600-800	5.42E+02	2.06E+05	4.71E+04	7.00E+09	3.11E+00	1.18E+00
	800-1,000	1.81E+02	4.84E+04	4.78E+03	2.95E+08	1.34E+00	3.57E-01
	1,000-1,200						
2	200-400	1.83E+01	1.58E+04	1.47E+02	1.08E+08	1.58E-01	1.37E-01
	400-600	5.93E+02	3.60E+05	4.54E+04	2.34E+10	8.41E+00	5.10E+00
	600-800	2.15E+02	8.32E+04	9.85E+03	2.23E+09	3.64E+00	1.41E+00
	800-1,000	4.22E+01	9.84E+03	3.27E+02	1.91E+07	7.64E-01	1.78E-01
	1,000-1,200	3.91E+01	9.28E+03	7.93E+02	3.80E+07	7.30E-01	1.73E-01
3	200-400	5.31E+00	4.92E+03	2.82E+01	2.42E+07	5.88E-02	5.44E-02
	400-600	2.16E+02	9.02E+04	2.16E+04	1.72E+09	2.43E+00	1.02E+00
	600-800	9.76E+01	3.46E+04	6.92E+02	3.41E+07	1.07E+00	3.80E-01
	800-1,000	4.09E+01	1.32E+04	1.67E+03	1.74E+08	5.58E-01	1.80E-01
	1,000-1,200						
4	200-400						
	400-600	9.31E+01	4.58E+04	1.05E+03	3.03E+08	1.27E+00	6.27E-01
	600-800	5.37E+01	1.54E+04	6.53E+02	4.92E+07	7.73E-01	2.22E-01
	800-1,000	6.71E+01	1.61E+04	4.51E+03	2.60E+08	9.49E-01	2.28E-01
	1,000-1,200						
5	200-400						
	400-600	6.10E+01	3.92E+04	1.64E+03	4.07E+08	1.43E+00	9.20E-01
	600-800	7.69E+01	2.04E+04	7.37E+02	4.30E+07	1.78E+00	4.71E-01
	800-1,000	4.81E+01	1.37E+04	8.33E+02	6.48E+07	8.72E-01	2.48E-01
	1,000-1,200						
6	200-400	1.10E+01	1.08E+04	1.22E+02	1.17E+08	4.26E-02	4.16E-02
	400-600	1.25E+02	8.12E+04	2.06E+03	7.33E+08	7.34E-01	4.76E-01
	600-800	2.21E+01	1.19E+04	4.87E+02	1.41E+08	2.40E-01	1.29E-01
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**4.93E+03**	**3.39E+06**	**8.70E+05**	**7.89E+11**	**1.51E+00**	**1.04E+00**

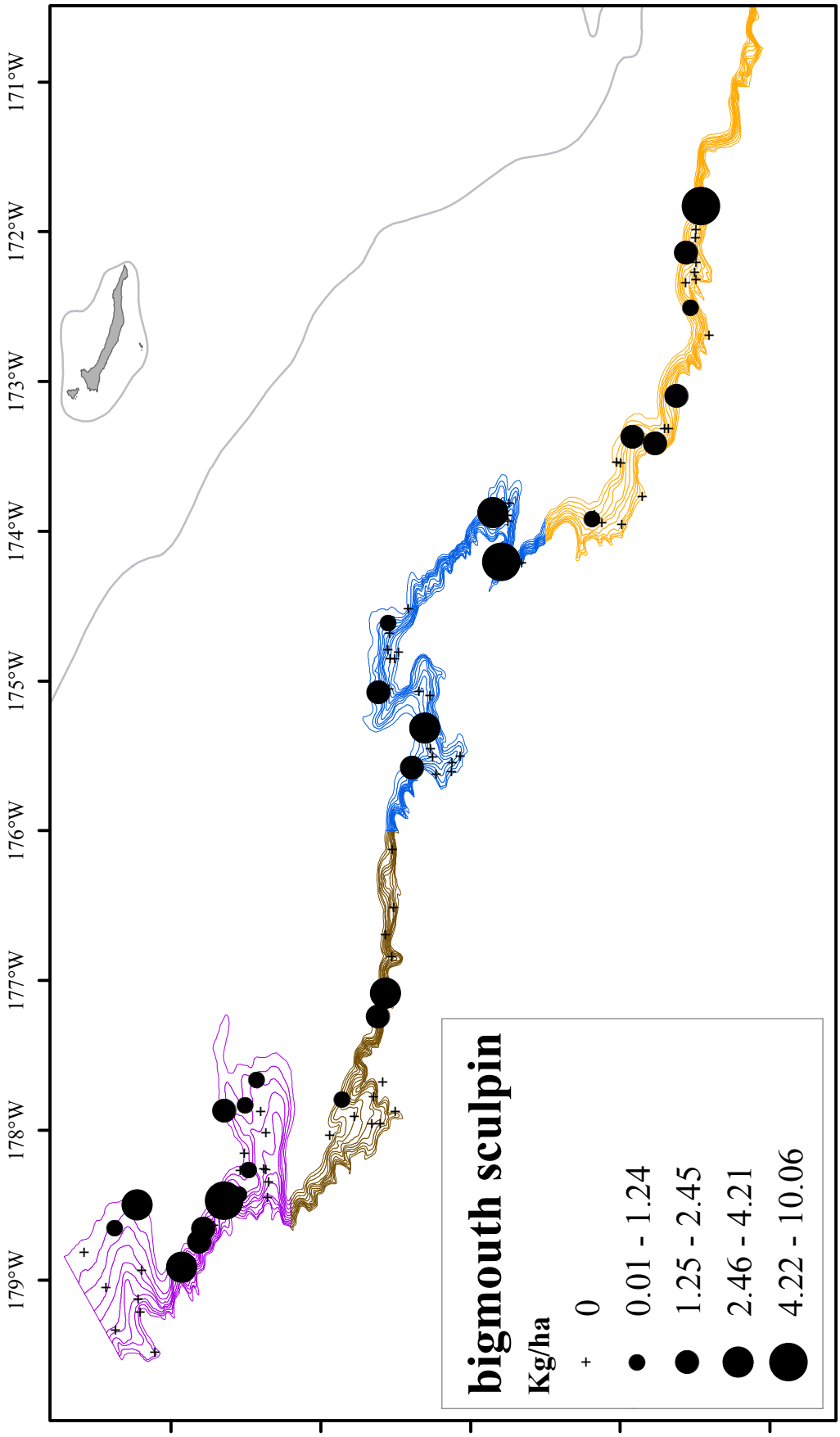

Figure 44. - - Distribution and relative abundance of bigmouth sculpin from the 2016 EBSS survey. Values are CPUE of kg/ha.

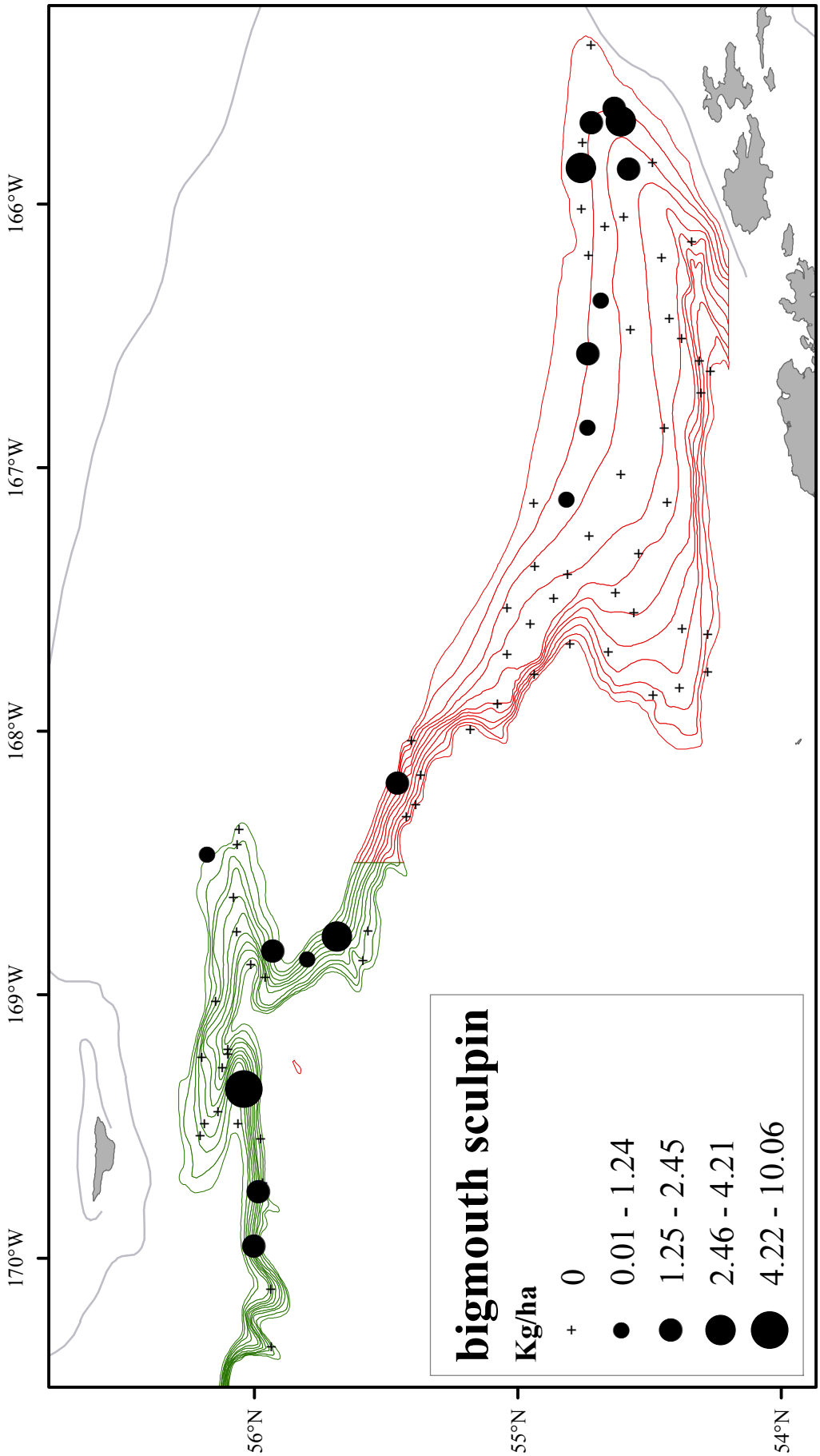

Figure 44. - - continued.

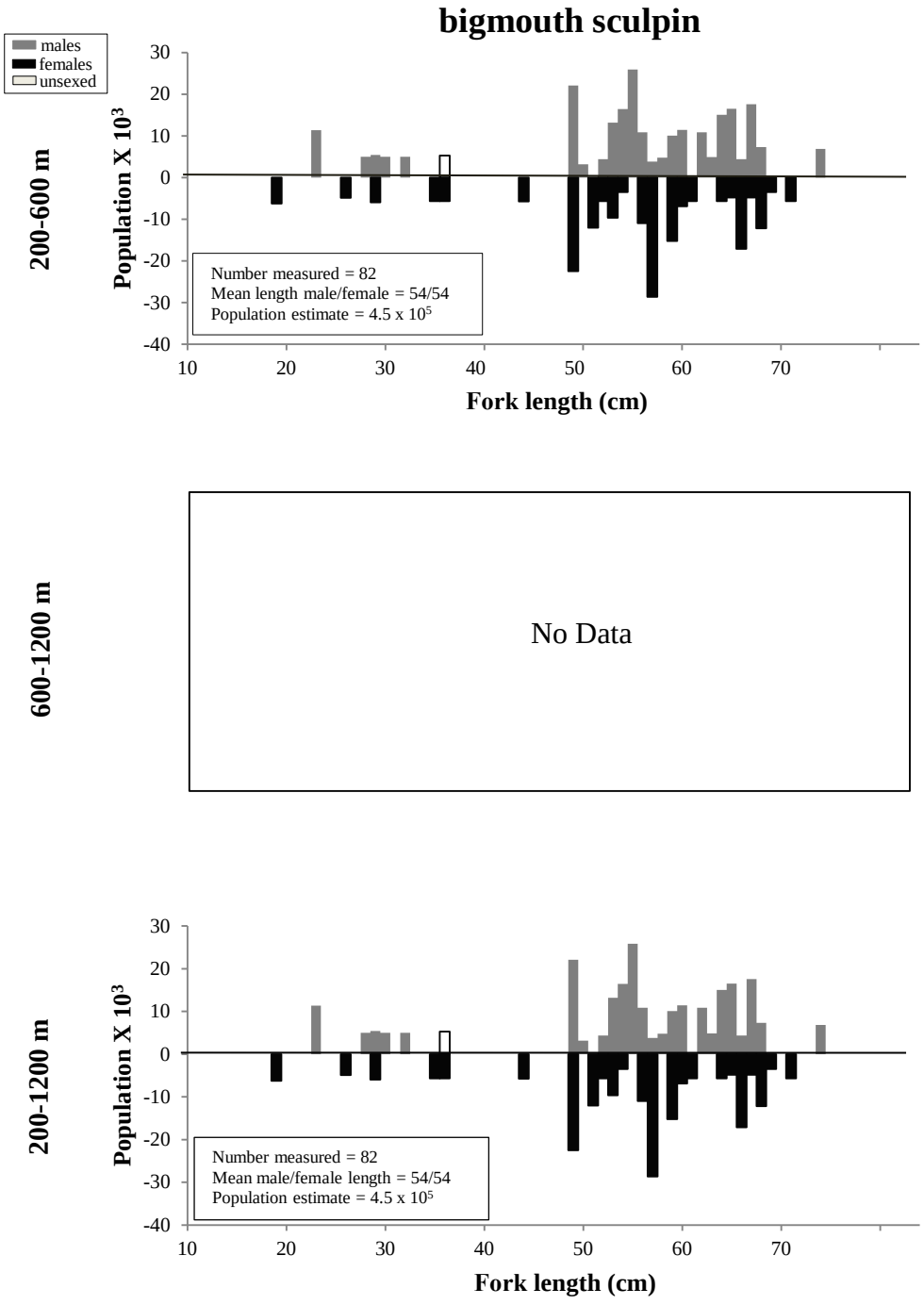

Figure 45. - - Size composition of the estimated bigmouth sculpin population from the 2016 EBSS survey for all subareas by depth.

Table 30. - - Abundance estimates by subarea and depth stratum for bigmouth sculpin *(Hemitripterus bolini)* from the 2016 EBSS survey.

Hemitripterus bolini **bigmouth sculpin**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	3.73E+02	6.89E+04	1.14E+04	4.47E+08	9.30E-01	1.72E-01
	400-600	3.50E+01	6.12E+03	1.23E+03	3.75E+07	8.62E-02	1.51E-02
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	1.81E+02	4.89E+04	6.41E+03	4.36E+08	1.57E+00	4.23E-01
	400-600	2.58E+01	9.19E+03	3.10E+02	4.06E+07	3.65E-01	1.30E-01
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	2.55E+02	6.60E+04	2.85E+04	1.61E+09	2.82E+00	7.30E-01
	400-600	1.04E+02	3.41E+04	1.56E+03	1.02E+08	1.17E+00	3.84E-01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.76E+02	4.20E+04	7.81E+03	3.32E+08	1.42E+00	3.40E-01
	400-600	9.01E+01	1.47E+04	3.42E+03	8.10E+07	1.23E+00	2.01E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	3.74E+01	7.80E+03	4.29E+02	1.53E+07	8.82E-01	1.84E-01
	400-600	3.99E+01	5.61E+03	1.59E+03	3.14E+07	9.38E-01	1.32E-01
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	3.96E+02	1.04E+05	2.22E+04	8.45E+08	1.53E+00	3.99E-01
	400-600	5.62E+01	4.84E+04	1.75E+03	6.27E+08	3.30E-01	2.84E-01
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.77E+03**	**4.55E+05**	**8.66E+04**	**4.61E+09**	**5.41E-01**	**1.39E-01**

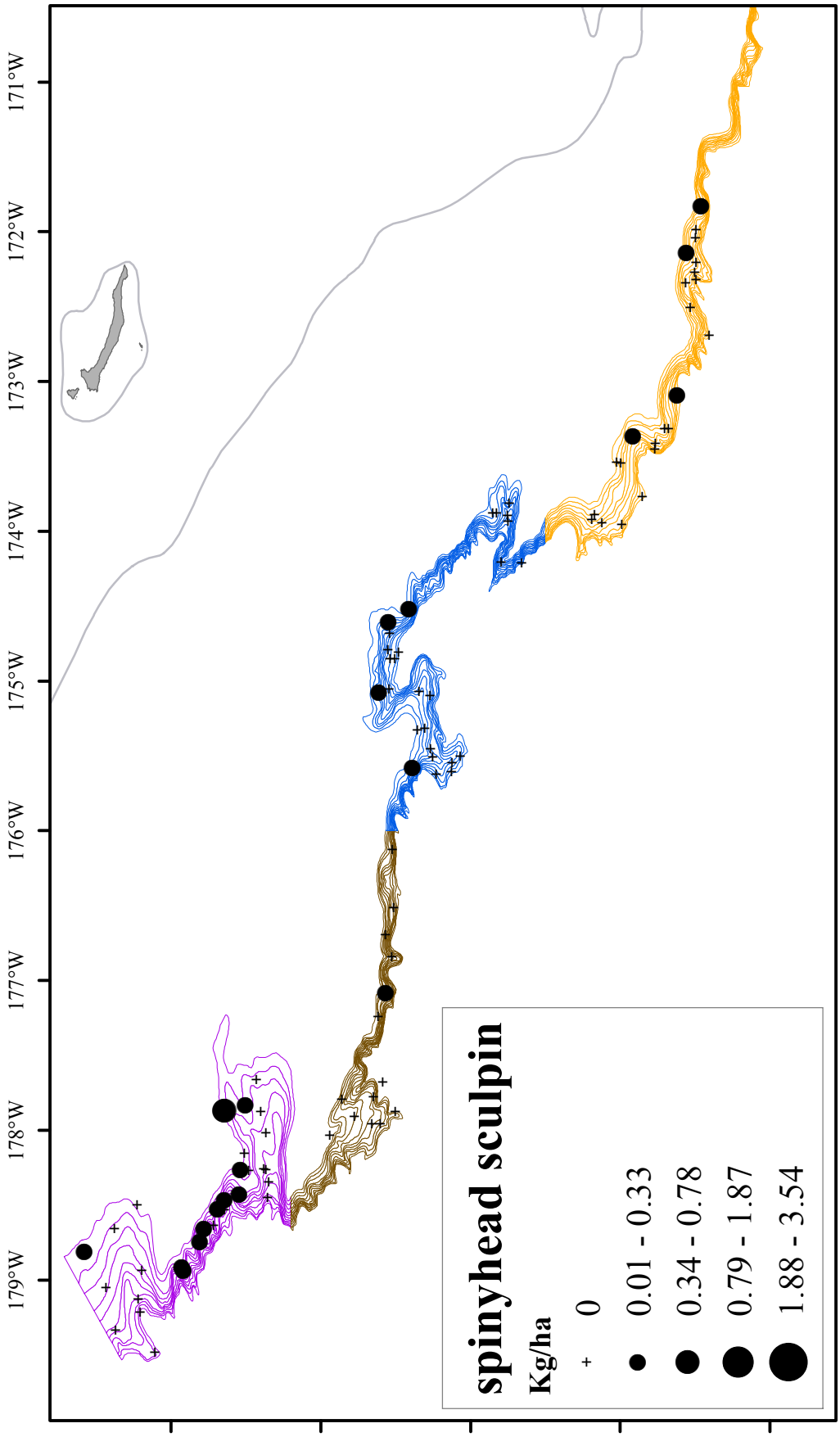

Figure 46. - - Distribution and relative abundance of spinyhead sculpin from the 2016 EBSS survey. Values are CPUE of kg/ha.

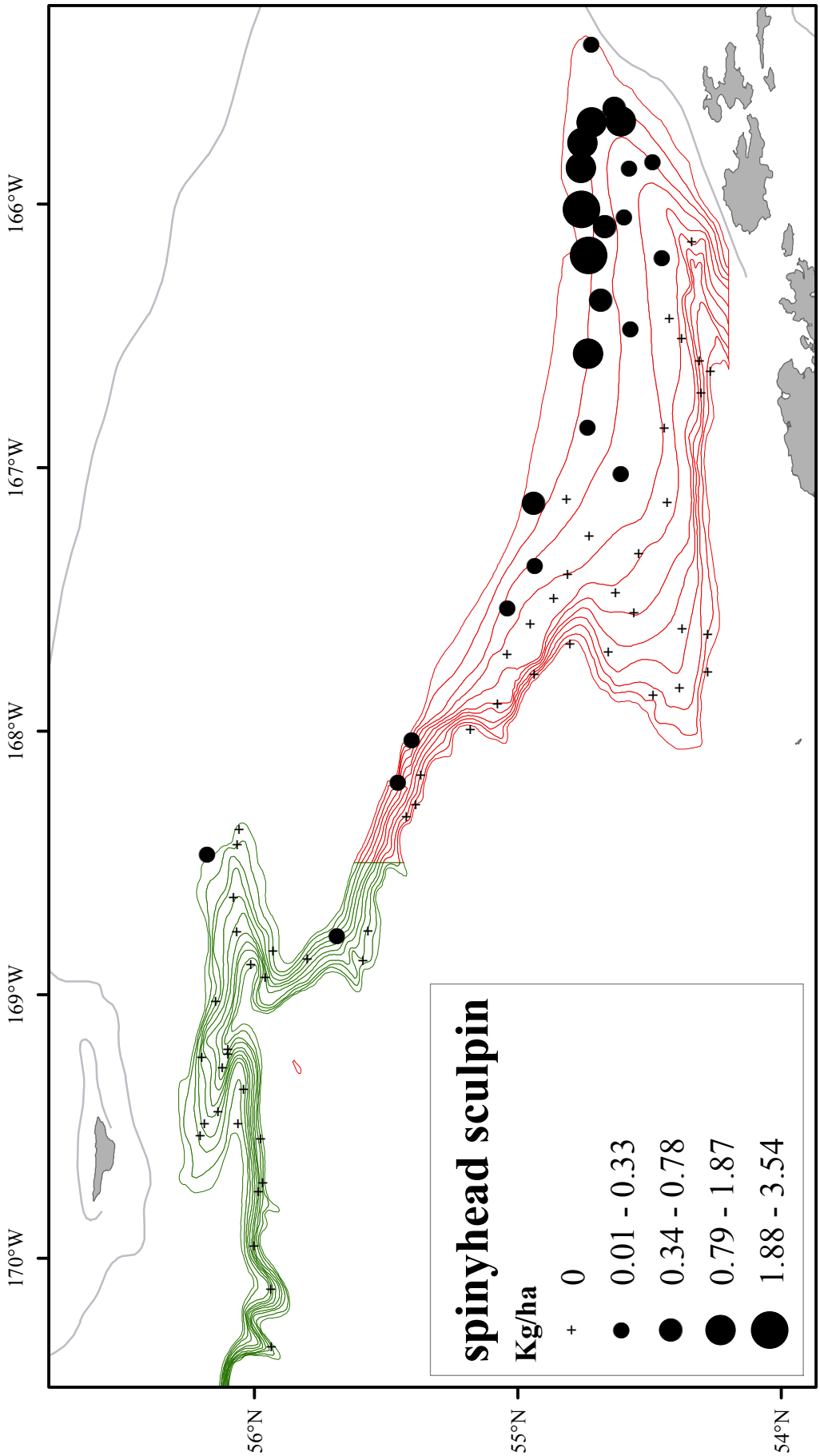

Figure 46. - - continued.

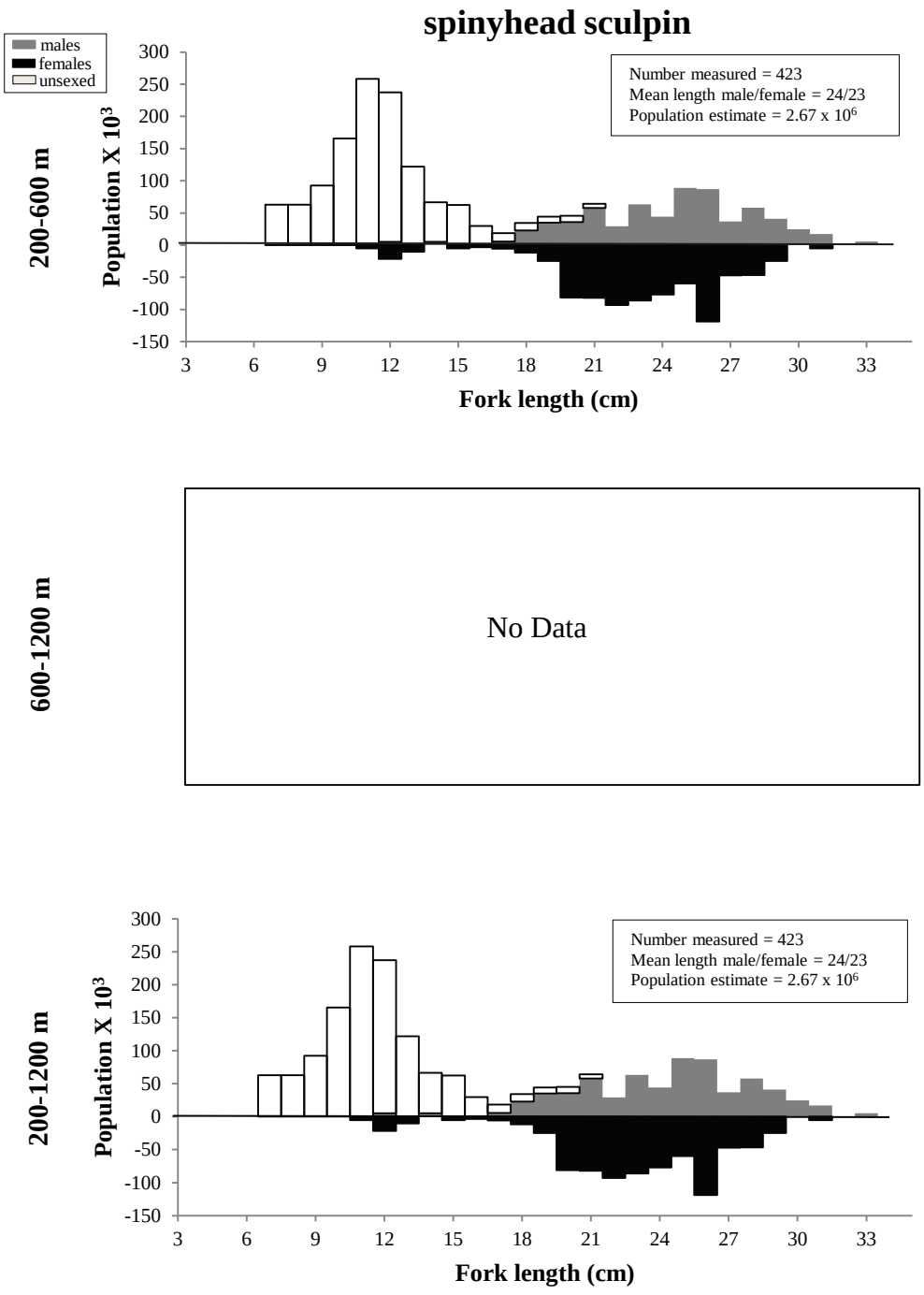

Figure 47. - - Size composition of the estimated spinyhead sculpin population from the 2016 EBSS survey for all subareas by depth.

Table 31. - - Abundance estimates by subarea and depth stratum for spinyhead sculpin *(Dasycottus setiger)* from the 2016 EBSS survey.

Dasycottus setiger **spinyhead sculpin**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	3.47E+02	1.87E+06	9.59E+03	1.85E+11	8.66E-01	4.66E+00
	400-600	1.06E+01	2.25E+05	3.48E+01	1.05E+10	2.60E-02	5.54E-01
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	2.36E+00	1.16E+04	5.41E+00	7.23E+07	2.04E-02	1.00E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	6.43E+00	5.73E+04	1.68E+01	9.18E+08	7.11E-02	6.34E-01
	400-600	8.05E-02	8.05E+03	6.49E-03	6.49E+07	9.09E-04	9.09E-02
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	5.20E+00	2.82E+04	1.39E+01	3.55E+08	4.21E-02	2.28E-01
	400-600	1.96E+00	4.20E+04	3.85E+00	1.77E+09	2.69E-02	5.75E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600	6.45E-01	5.61E+03	4.16E-01	3.14E+07	1.51E-02	1.32E-01
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	2.76E+01	2.70E+05	1.05E+02	1.04E+10	1.06E-01	1.04E+00
	400-600	5.05E+00	1.59E+05	1.02E+01	6.20E+09	2.96E-02	9.32E-01
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**4.07E+02**	**2.68E+06**	**9.78E+03**	**2.15E+11**	**1.24E-01**	**8.19E-01**

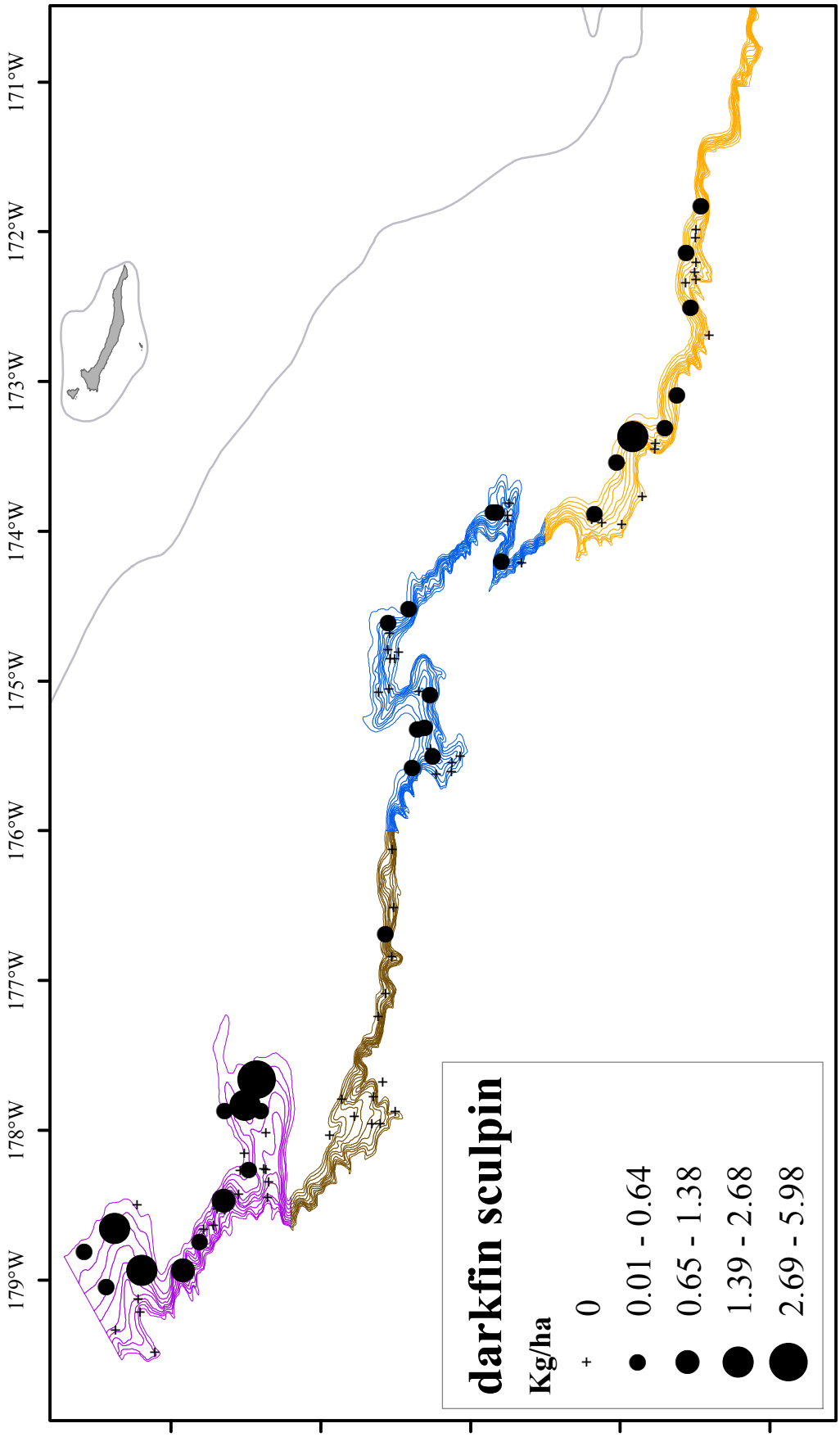

Figure 48. - - Distribution and relative abundance of darkfin sculpin from the 2016 EBSS survey. Values are CPUE of kg/ha.

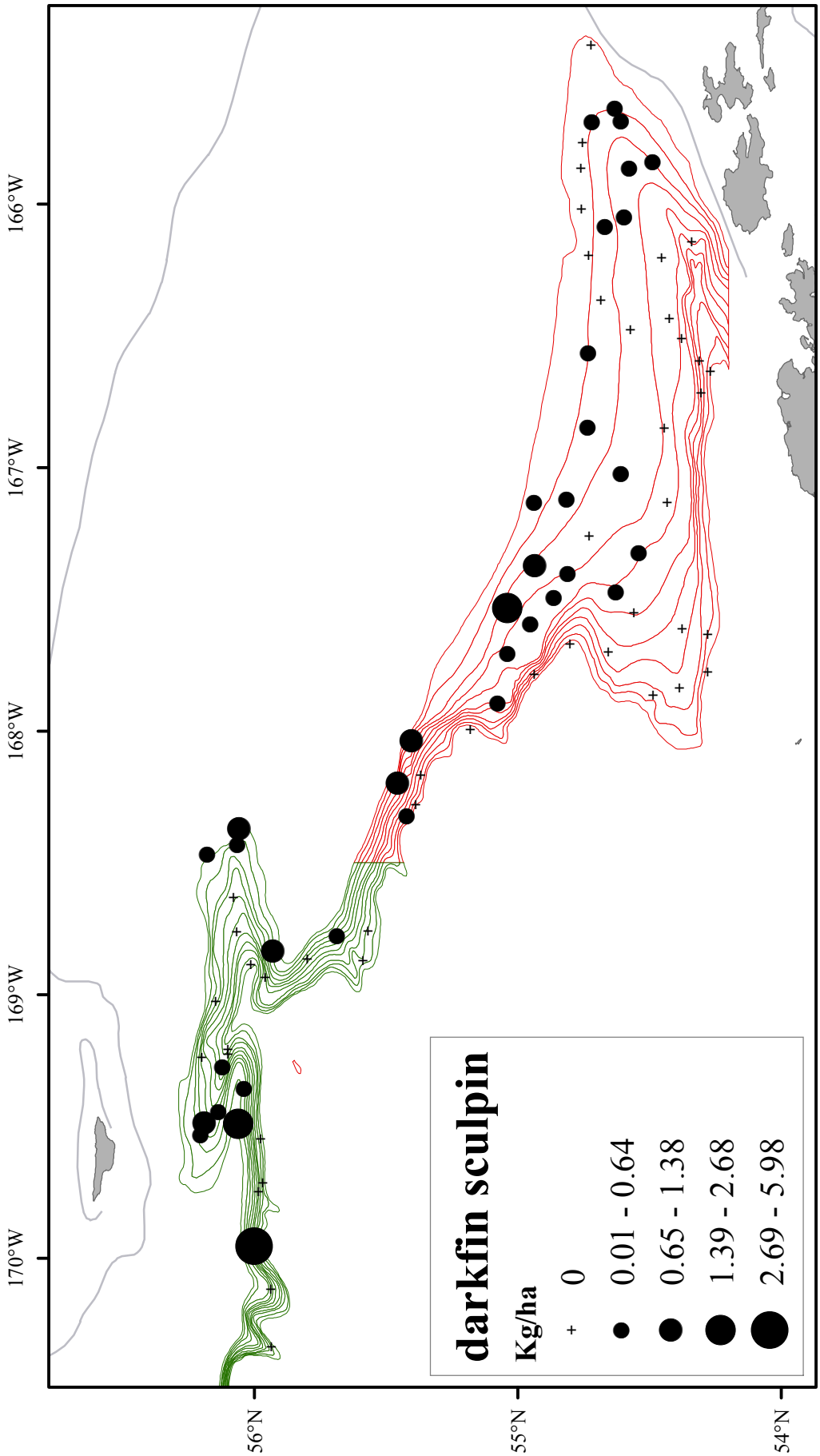

Figure 48. - - continued.

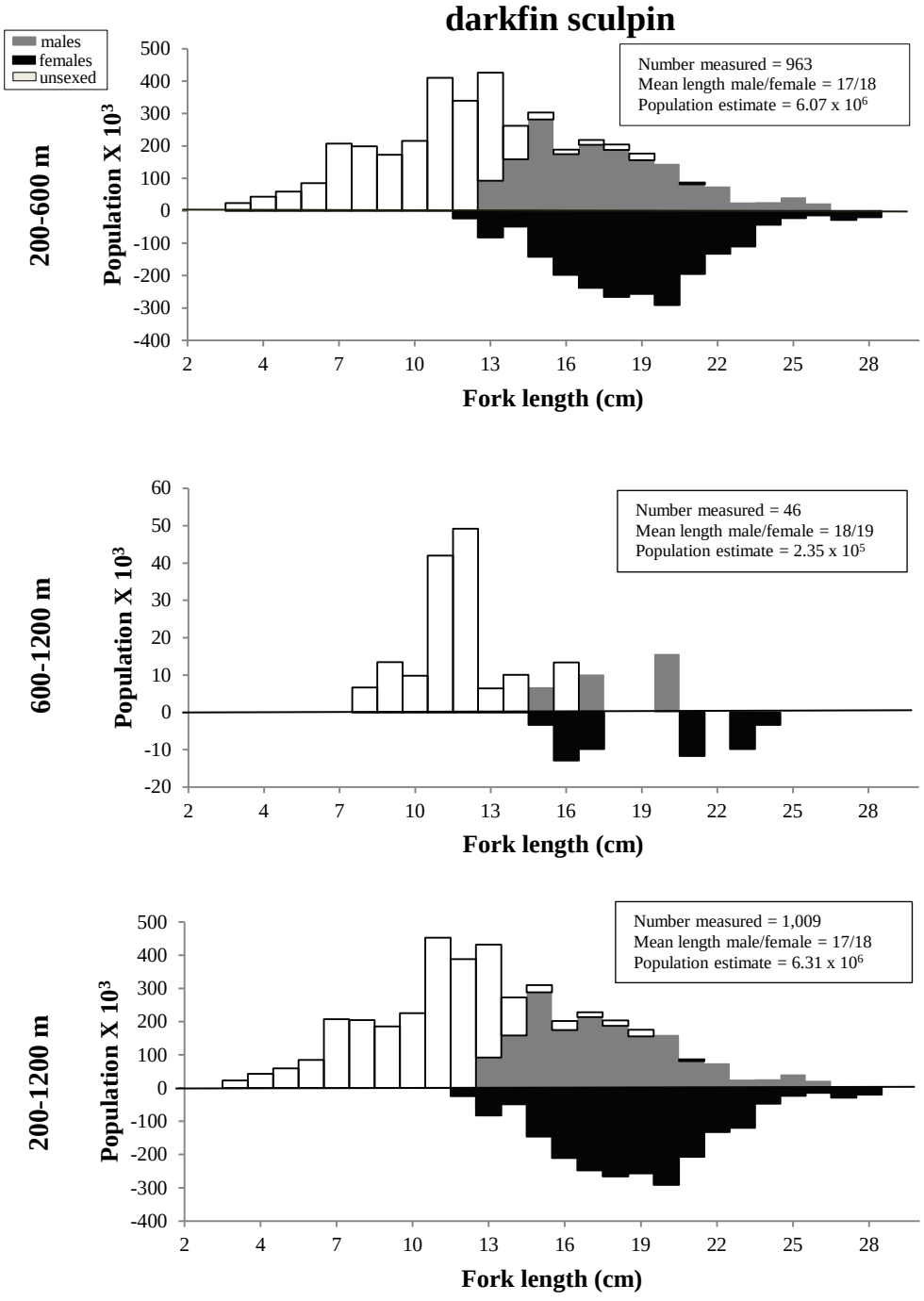

Figure 49. - - Size composition of the estimated darkfin sculpin population from the 2016 EBSS survey for all subareas by depth.

Table 32. - - Abundance estimates by subarea and depth stratum for darkfin sculpin *(Malacocottus zonurus)* from the 2016 EBSS survey.

Malacocottus zonurus **darkfin sculpin**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.55E+02	7.57E+05	4.23E+03	7.89E+10	3.87E-01	1.89E+00
	400-600	8.80E+00	2.58E+05	1.43E+01	1.08E+10	2.17E-02	6.34E-01
	600-800	7.96E+00	1.64E+05	4.48E+01	1.13E+10	4.57E-02	9.42E-01
	800-1,000						
	1,000-1,200						
2	200-400	1.40E+02	1.35E+06	3.65E+03	4.03E+11	1.21E+00	1.16E+01
	400-600	2.37E+01	1.97E+05	2.72E+02	1.76E+10	3.37E-01	2.80E+00
	600-800	3.97E+00	5.39E+04	1.58E+01	2.91E+09	6.72E-02	9.12E-01
	800-1,000	4.30E-01	4.53E+03	1.85E-01	2.05E+07	7.78E-03	8.19E-02
	1,000-1,200						
3	200-400	5.73E+01	5.43E+05	1.73E+03	1.45E+11	6.34E-01	6.01E+00
	400-600	8.15E-01	3.08E+04	4.00E-01	4.90E+08	9.19E-03	3.47E-01
	600-800	1.10E+00	4.99E+03	1.20E+00	2.49E+07	1.21E-02	5.48E-02
	800-1,000						
	1,000-1,200						
4	200-400	2.76E+01	3.18E+05	8.01E+01	1.61E+10	2.24E-01	2.57E+00
	400-600	4.61E+00	1.49E+05	1.06E+01	2.10E+10	6.31E-02	2.05E+00
	600-800	4.17E-01	6.92E+03	1.14E-01	1.79E+07	6.01E-03	9.97E-02
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600	3.24E+00	1.06E+05	1.05E+01	1.13E+10	7.61E-02	2.49E+00
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	2.69E+02	2.47E+06	1.80E+04	1.88E+12	1.04E+00	9.51E+00
	400-600	8.57E+01	7.93E+05	1.74E+03	1.44E+11	5.02E-01	4.65E+00
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**7.90E+02**	**7.20E+06**	**2.98E+04**	**2.74E+12**	**2.41E-01**	**2.20E+00**

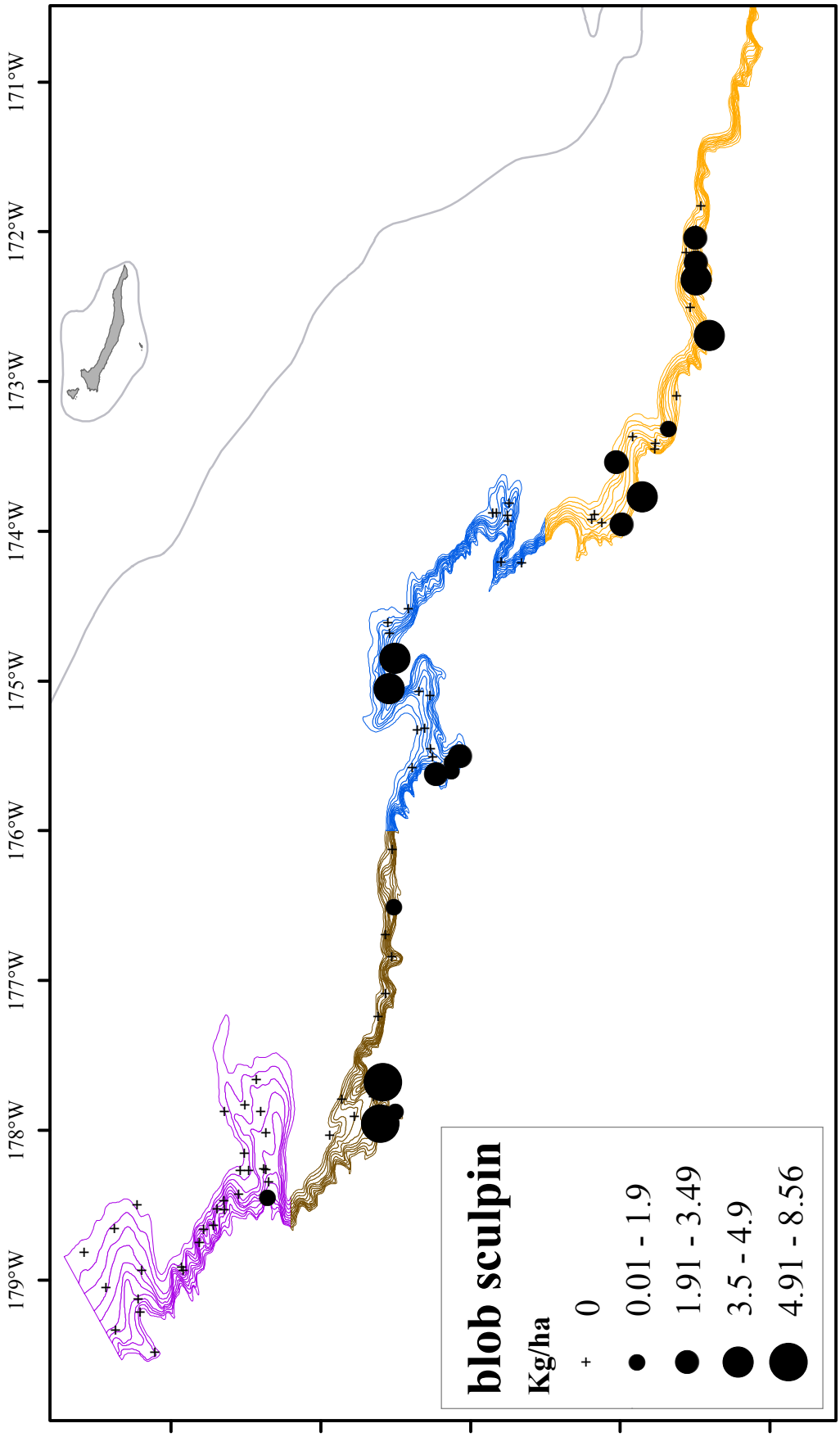

Figure 50. - - Distribution and relative abundance of blob sculpin from the 2016 EBSS survey. Values are CPUE of kg/ha.

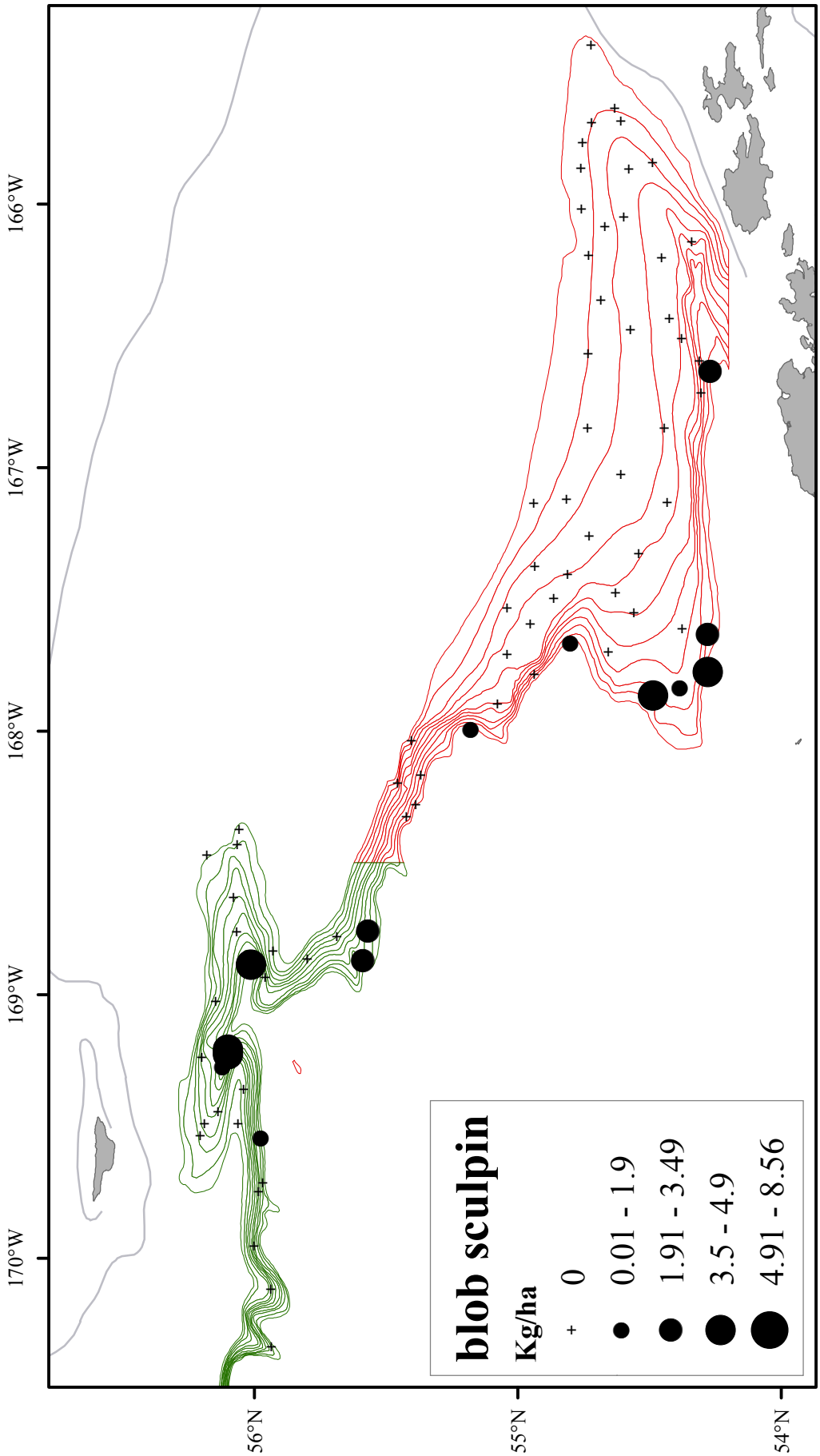

Figure 50. - - continued.

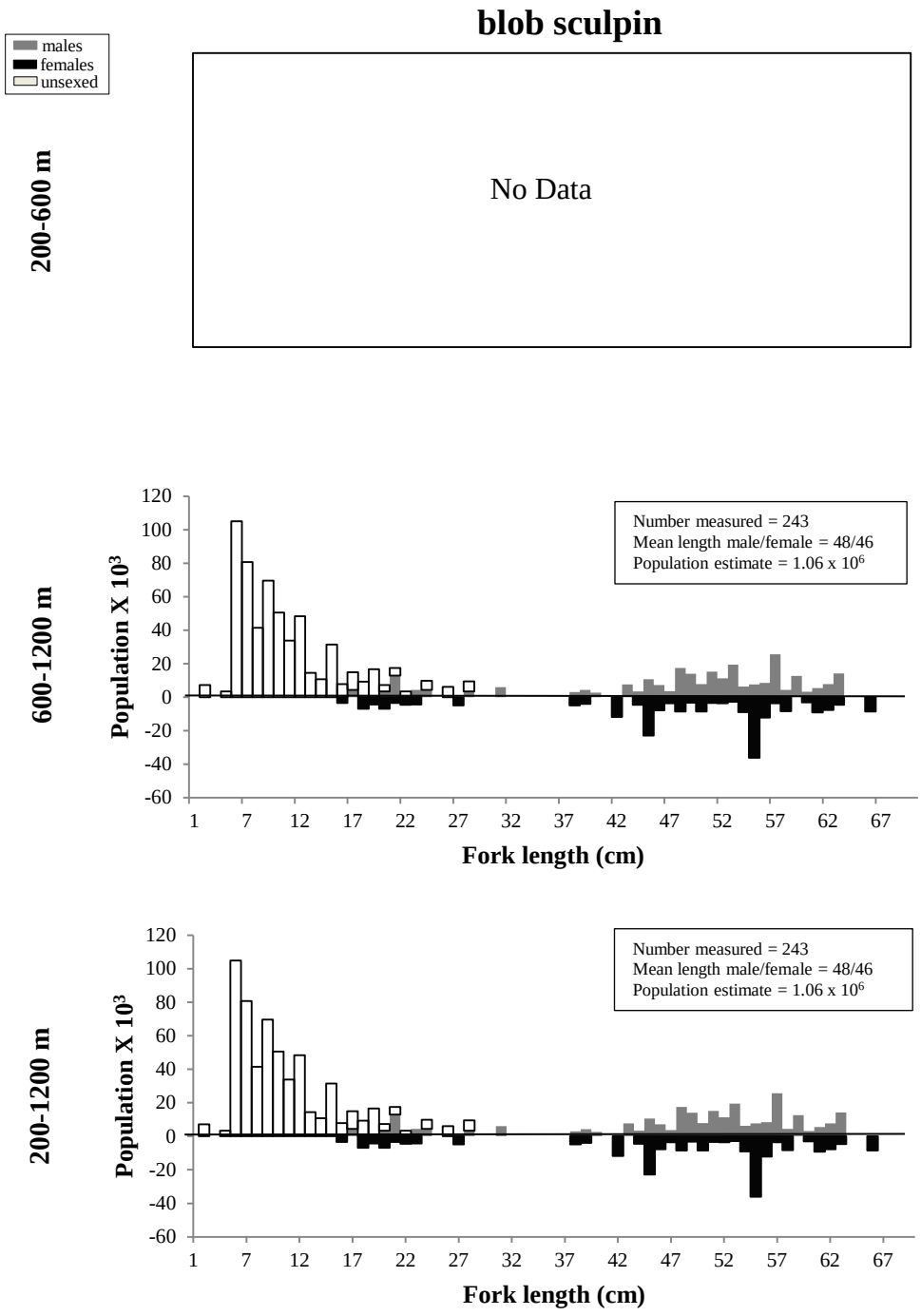

Figure 51. - - Size composition of the estimated blob sculpin population from the 2016 EBSS survey for all subareas by depth.

Table 33. - - Abundance estimates by subarea and depth stratum for blob sculpin *(Psychrolutes phrictus)* from the 2016 EBSS survey.

Psychrolutes phrictus **blob sculpin**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800						
	800-1,000	2.19E+00	2.09E+04	2.04E+00	1.70E+08	1.62E-02	1.54E-01
	1,000-1,200	2.77E+02	1.19E+05	7.96E+03	9.61E+08	2.50E+00	1.08E+00
2	200-400						
	400-600						
	600-800						
	800-1,000	5.91E+01	1.25E+04	9.51E+02	3.30E+07	1.07E+00	2.26E-01
	1,000-1,200	2.11E+02	5.40E+04	6.38E+01	2.05E+08	3.93E+00	1.01E+00
3	200-400						
	400-600						
	600-800	1.05E+02	2.40E+04	4.40E+03	2.25E+08	1.16E+00	2.63E-01
	800-1,000	1.33E+02	3.53E+04	1.53E+03	1.28E+08	1.82E+00	4.82E-01
	1,000-1,200	2.73E+02	7.60E+04	3.73E+02	7.43E+07	4.04E+00	1.12E+00
4	200-400						
	400-600						
	600-800						
	800-1,000	1.11E+02	1.64E+05	3.63E+03	4.66E+09	1.57E+00	2.31E+00
	1,000-1,200	1.56E+02	1.41E+05	1.31E+03	4.99E+09	2.35E+00	2.13E+00
5	200-400						
	400-600						
	600-800						
	800-1,000	1.81E+02	3.21E+05	2.13E+04	2.36E+10	3.29E+00	5.82E+00
	1,000-1,200	2.54E+02	9.19E+04	2.97E+04	2.35E+09	4.46E+00	1.61E+00
6	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200	9.88E+00	4.00E+03	9.76E+01	1.60E+07	1.99E-01	8.06E-02
1-6	**200-1,200**	**1.77E+03**	**1.06E+06**	**7.13E+04**	**3.74E+10**	**5.42E-01**	**3.25E-01**

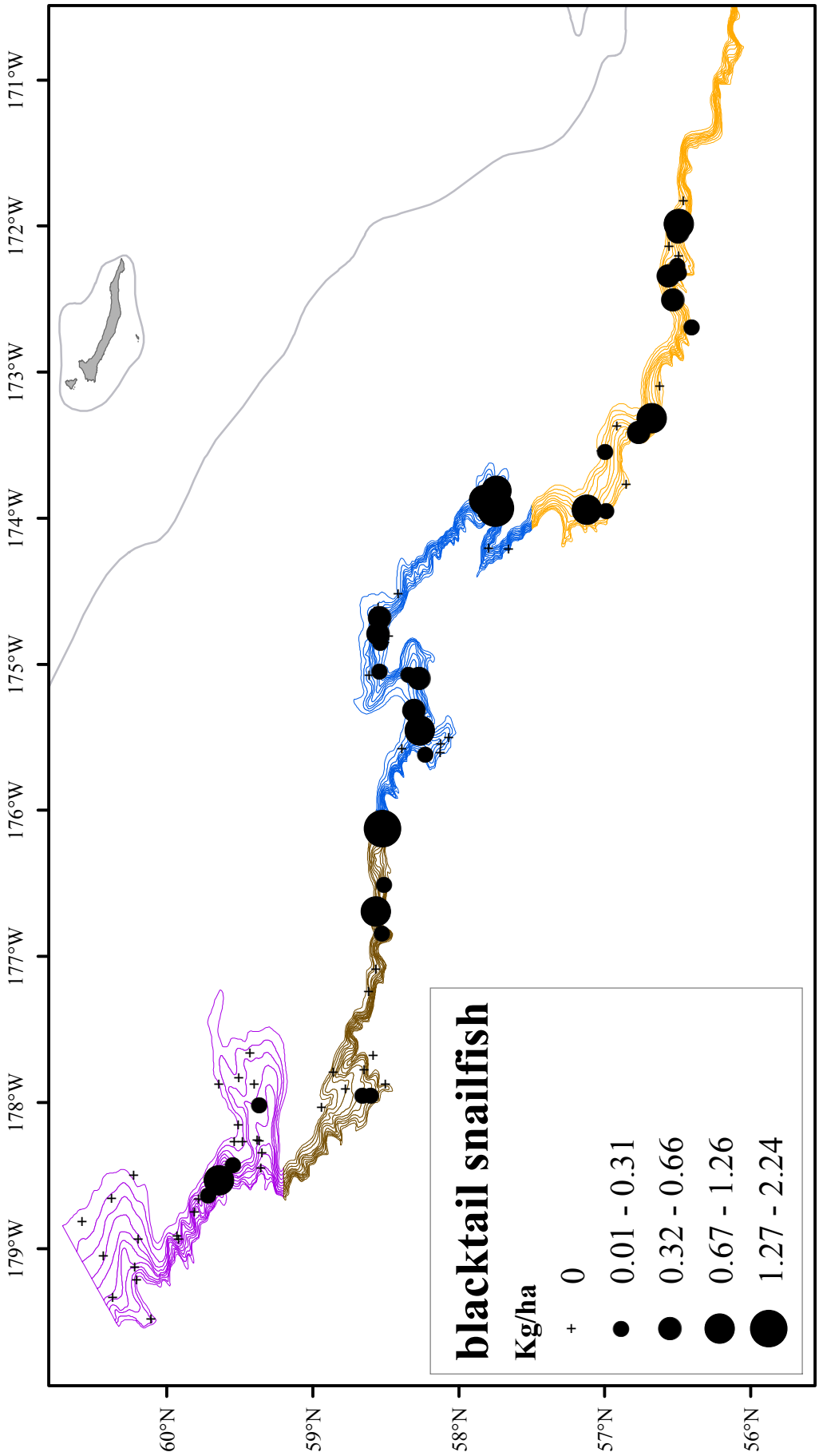

Figure 52. - - Distribution and relative abundance of blacktail snailfish from the 2016 EBSS survey. Values are CPUE of kg/ha.

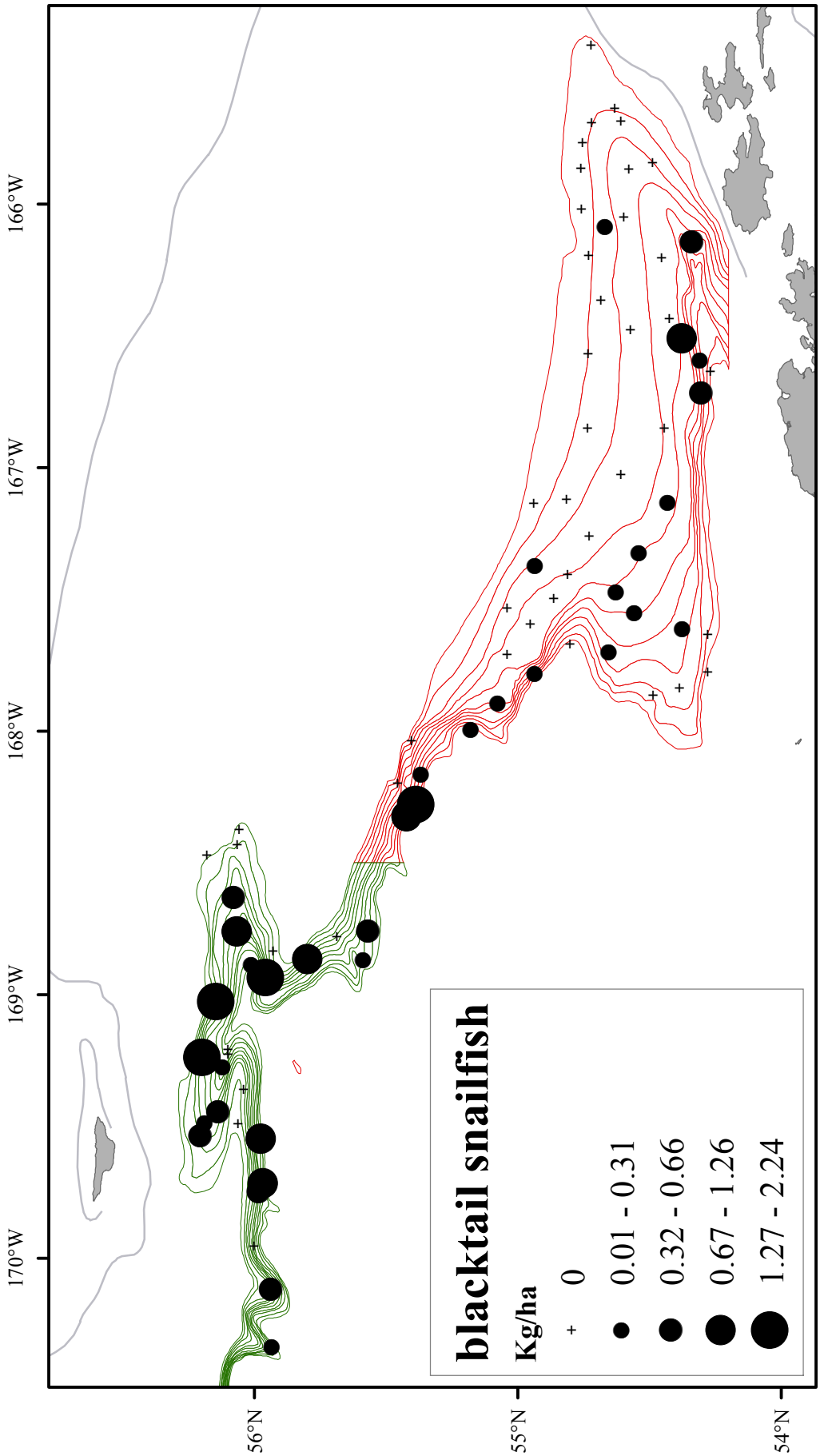

Figure 52. - - continued.

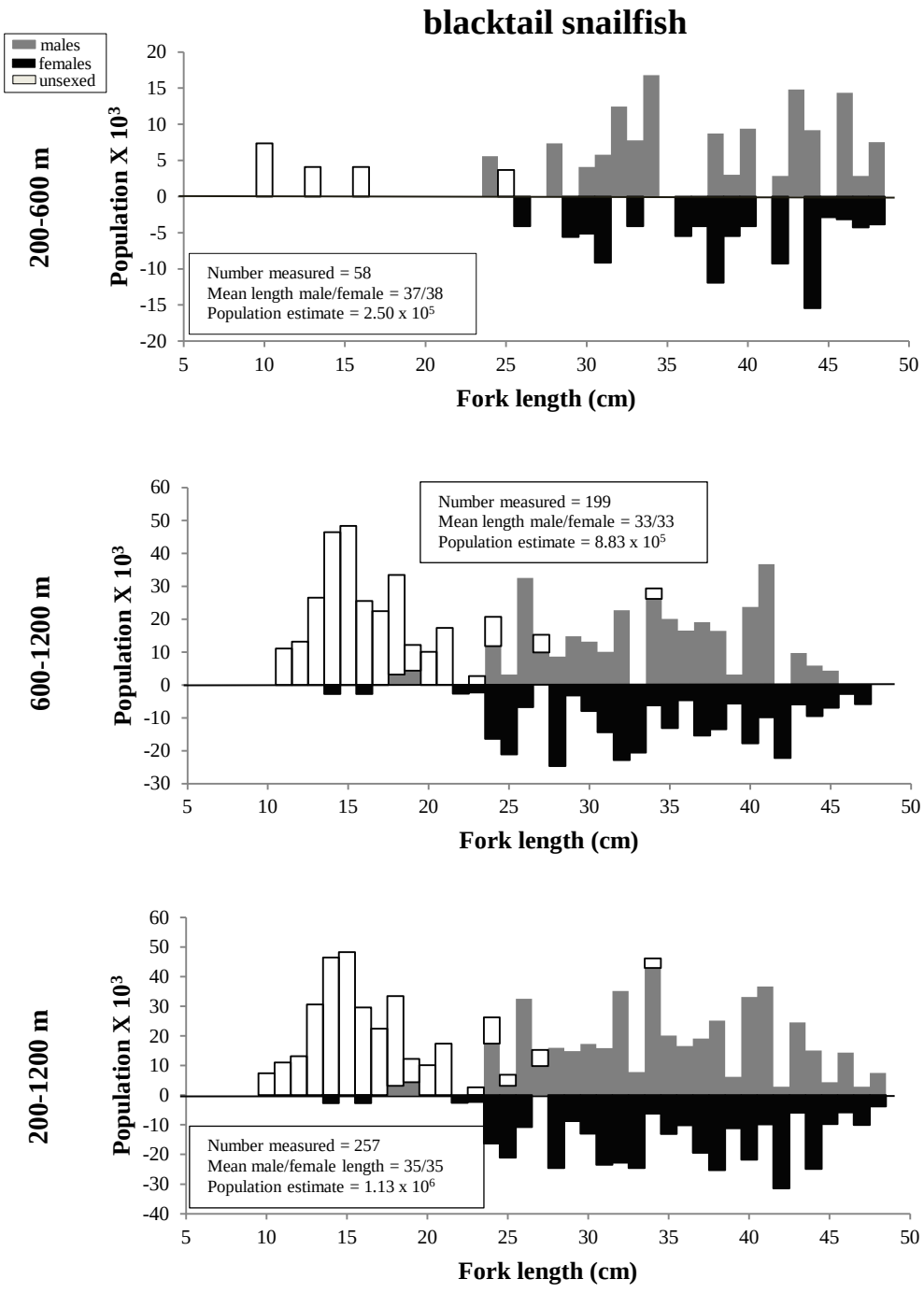

Figure 53. - - Size composition of the estimated blacktail snailfish population from the 2016 EBSS survey for all subareas by depth.

Table 34. - - Abundance estimates by subarea and depth stratum for blacktail snailfish *(Careproctus melanurus)* from the 2016 EBSS survey.

Careproctus melanurus **blacktail snailfish**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.17E+01	1.08E+04	6.61E+01	5.53E+07	2.91E-02	2.70E-02
	400-600	3.17E+01	3.49E+04	4.30E+02	3.32E+08	7.80E-02	8.59E-02
	600-800	1.01E+02	1.41E+05	1.52E+03	1.12E+09	5.81E-01	8.12E-01
	800-1,000	1.73E+01	9.75E+04	9.51E+01	1.69E+09	1.28E-01	7.20E-01
	1,000-1,200	1.48E+00	4.66E+03	2.20E+00	2.18E+07	1.34E-02	4.21E-02
2	200-400						
	400-600	6.39E+01	5.40E+04	4.25E+02	3.67E+08	9.07E-01	7.66E-01
	600-800	4.52E+01	9.15E+04	1.27E+02	2.25E+09	7.64E-01	1.55E+00
	800-1,000	4.25E+01	1.16E+05	4.63E+02	1.31E+09	7.69E-01	2.10E+00
	1,000-1,200	3.83E+00	7.50E+03	5.00E+00	2.02E+07	7.16E-02	1.40E-01
3	200-400						
	400-600	3.50E+01	5.15E+04	3.26E+02	1.50E+09	3.95E-01	5.81E-01
	600-800	3.66E+01	6.78E+04	2.31E+02	1.18E+09	4.02E-01	7.44E-01
	800-1,000	2.54E+01	5.68E+04	1.76E+02	7.16E+08	3.47E-01	7.76E-01
	1,000-1,200	5.64E+00	1.16E+04	1.06E+01	5.21E+07	8.36E-02	1.71E-01
4	200-400	1.39E+01	7.51E+03	1.93E+02	5.63E+07	1.12E-01	6.07E-02
	400-600	3.01E+01	4.63E+04	1.31E+02	6.76E+08	4.12E-01	6.34E-01
	600-800	1.92E+01	5.40E+04	2.35E+01	5.40E+08	2.76E-01	7.78E-01
	800-1,000	3.19E+01	4.62E+04	7.18E+02	6.72E+08	4.51E-01	6.53E-01
	1,000-1,200						
5	200-400						
	400-600	1.35E+01	2.24E+04	1.83E+02	5.00E+08	3.18E-01	5.25E-01
	600-800	2.31E+01	5.02E+04	5.10E+02	1.79E+09	5.35E-01	1.16E+00
	800-1,000	4.71E+00	5.27E+04	8.69E+00	1.54E+09	8.53E-02	9.56E-01
	1,000-1,200						
6	200-400						
	400-600	1.15E+01	2.23E+04	4.13E+01	1.40E+08	6.74E-02	1.31E-01
	600-800	2.68E+01	8.48E+04	5.23E+02	5.61E+09	2.93E-01	9.24E-01
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**5.96E+02**	**1.13E+06**	**6.21E+03**	**2.21E+10**	**1.82E-01**	**3.46E-01**

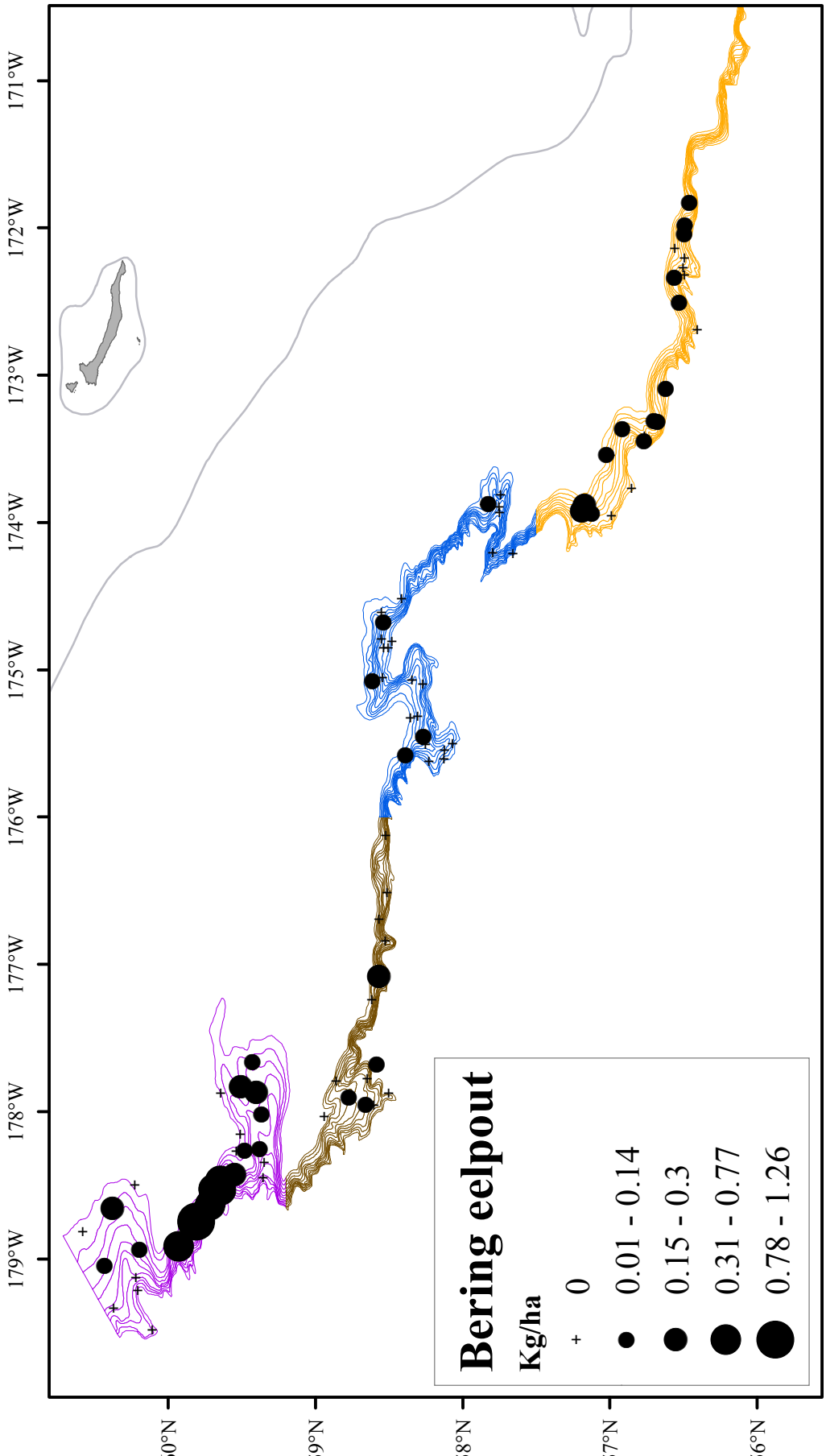

Figure 54. - - Distribution and relative abundance of Bering eelpout from the 2016 EBSS survey. Values are CPUE of kg/ha.

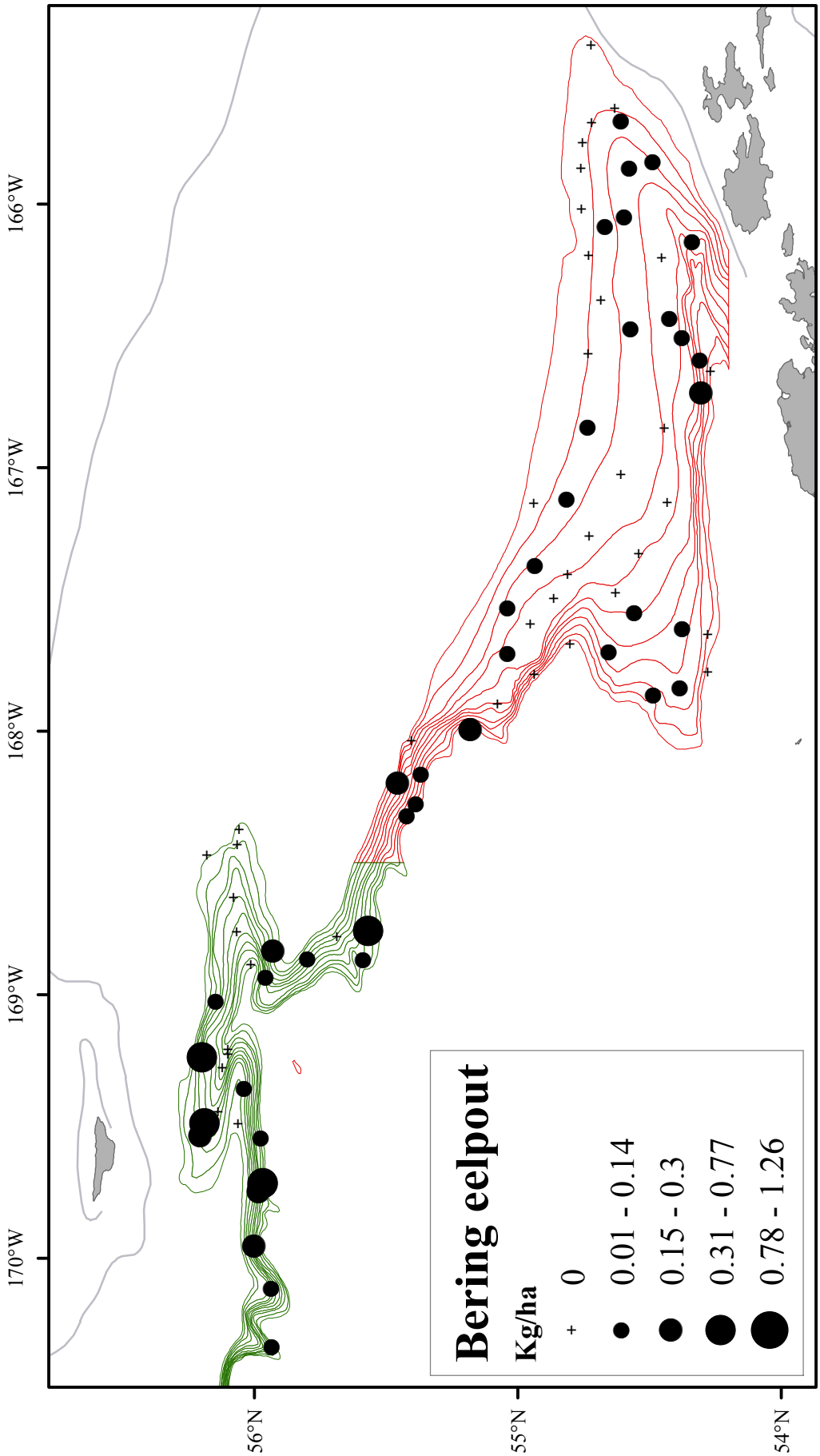

Figure 54. - - continued.

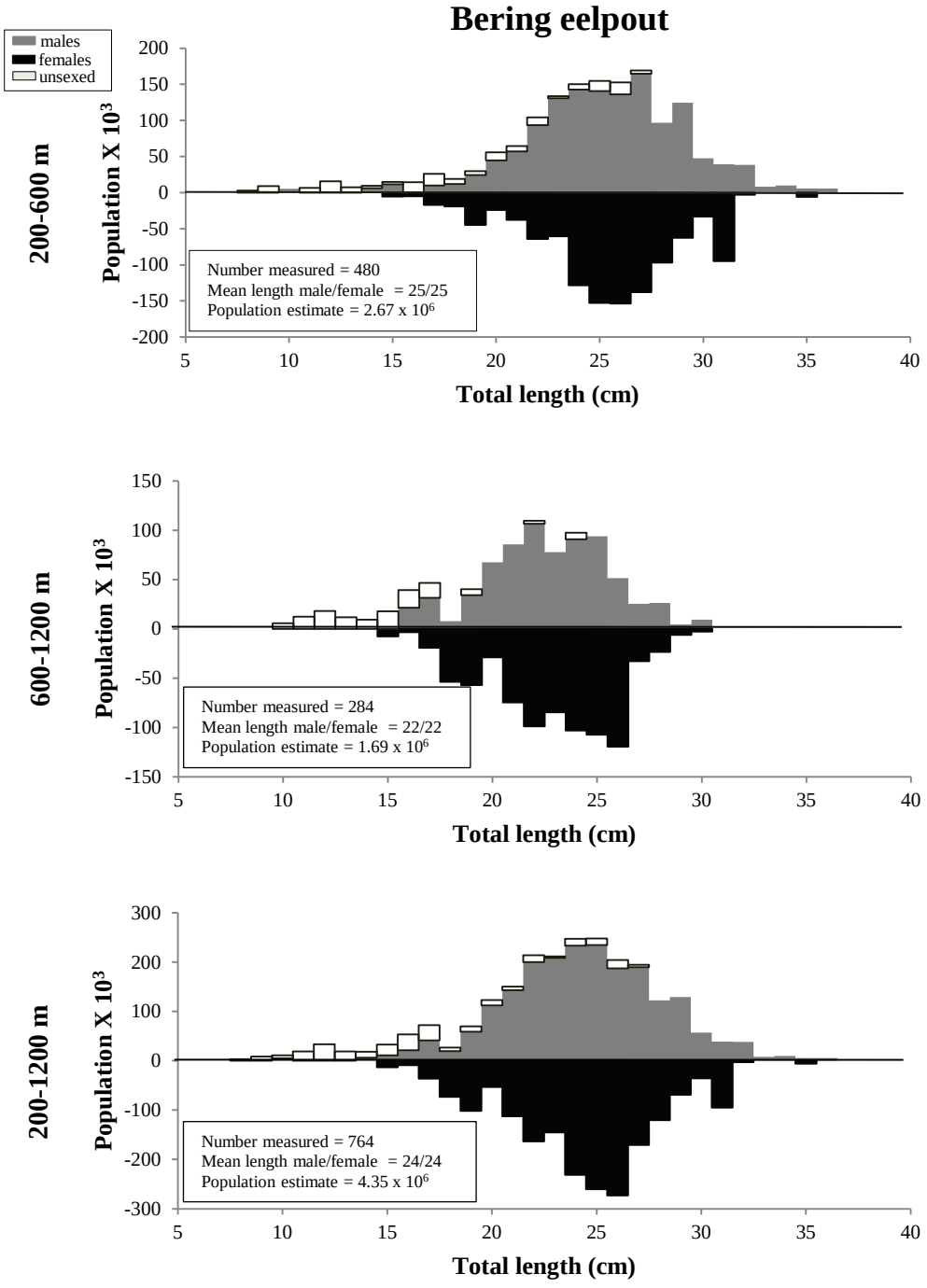

Figure 55. - - Size composition of the estimated Bering eelpout population from the 2016 EBSS survey for all subareas by depth.

Table 35. - - Abundance estimates by subarea and depth stratum for Bering eelpout *(Lycodes beringi)* from the 2016 EBSS survey.

Lycodes beringi **Bering eelpout**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.29E+01	1.40E+05	4.44E+01	2.51E+09	3.22E-02	3.49E-01
	400-600	8.24E+00	1.72E+05	1.11E+01	4.89E+09	2.03E-02	4.23E-01
	600-800	4.92E+00	1.74E+05	2.65E+00	3.48E+09	2.82E-02	9.98E-01
	800-1,000	1.69E+01	4.70E+05	2.02E+01	2.04E+10	1.25E-01	3.47E+00
	1,000-1,200	2.36E-01	3.93E+03	5.55E-02	1.54E+07	2.13E-03	3.55E-02
2	200-400	7.20E+00	1.03E+05	1.79E+01	2.81E+09	6.22E-02	8.87E-01
	400-600	2.03E+01	4.08E+05	3.48E+01	1.86E+10	2.88E-01	5.78E+00
	600-800	5.80E+00	1.15E+05	2.92E+01	1.15E+10	9.80E-02	1.95E+00
	800-1,000	5.37E+00	1.30E+05	1.68E+01	1.14E+10	9.72E-02	2.35E+00
	1,000-1,200	1.06E-01	3.02E+03	1.12E-02	9.11E+06	1.97E-03	5.63E-02
3	200-400	5.56E+00	7.92E+04	1.24E+01	2.44E+09	6.15E-02	8.76E-01
	400-600	6.99E+00	1.22E+05	1.92E+01	3.55E+09	7.89E-02	1.38E+00
	600-800	7.45E+00	1.77E+05	5.45E+00	2.80E+09	8.18E-02	1.95E+00
	800-1,000	1.71E-01	5.69E+03	2.92E-02	3.24E+07	2.33E-03	7.78E-02
	1,000-1,200						
4	200-400	3.55E-01	3.95E+03	1.26E-01	1.56E+07	2.87E-03	3.19E-02
	400-600	2.96E+00	6.14E+04	2.20E+00	9.64E+08	4.05E-02	8.40E-01
	600-800	9.42E-01	2.22E+04	8.87E-01	4.91E+08	1.36E-02	3.19E-01
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600	4.54E+00	5.32E+04	9.93E+00	1.19E+09	1.07E-01	1.25E+00
	600-800						
	800-1,000	1.25E+00	2.32E+04	1.57E+00	5.39E+08	2.27E-02	4.21E-01
	1,000-1,200	5.26E-01	1.17E+04	2.77E-01	1.37E+08	9.23E-03	2.05E-01
6	200-400	3.81E+01	5.82E+05	3.37E+02	8.74E+10	1.47E-01	2.24E+00
	400-600	6.11E+01	1.01E+06	6.19E+02	1.40E+11	3.58E-01	5.95E+00
	600-800	2.35E+01	5.46E+05	1.24E+02	7.34E+10	2.56E-01	5.95E+00
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.35E+02**	**4.42E+06**	**1.31E+03**	**3.88E+11**	**7.20E-02**	**1.35E+00**

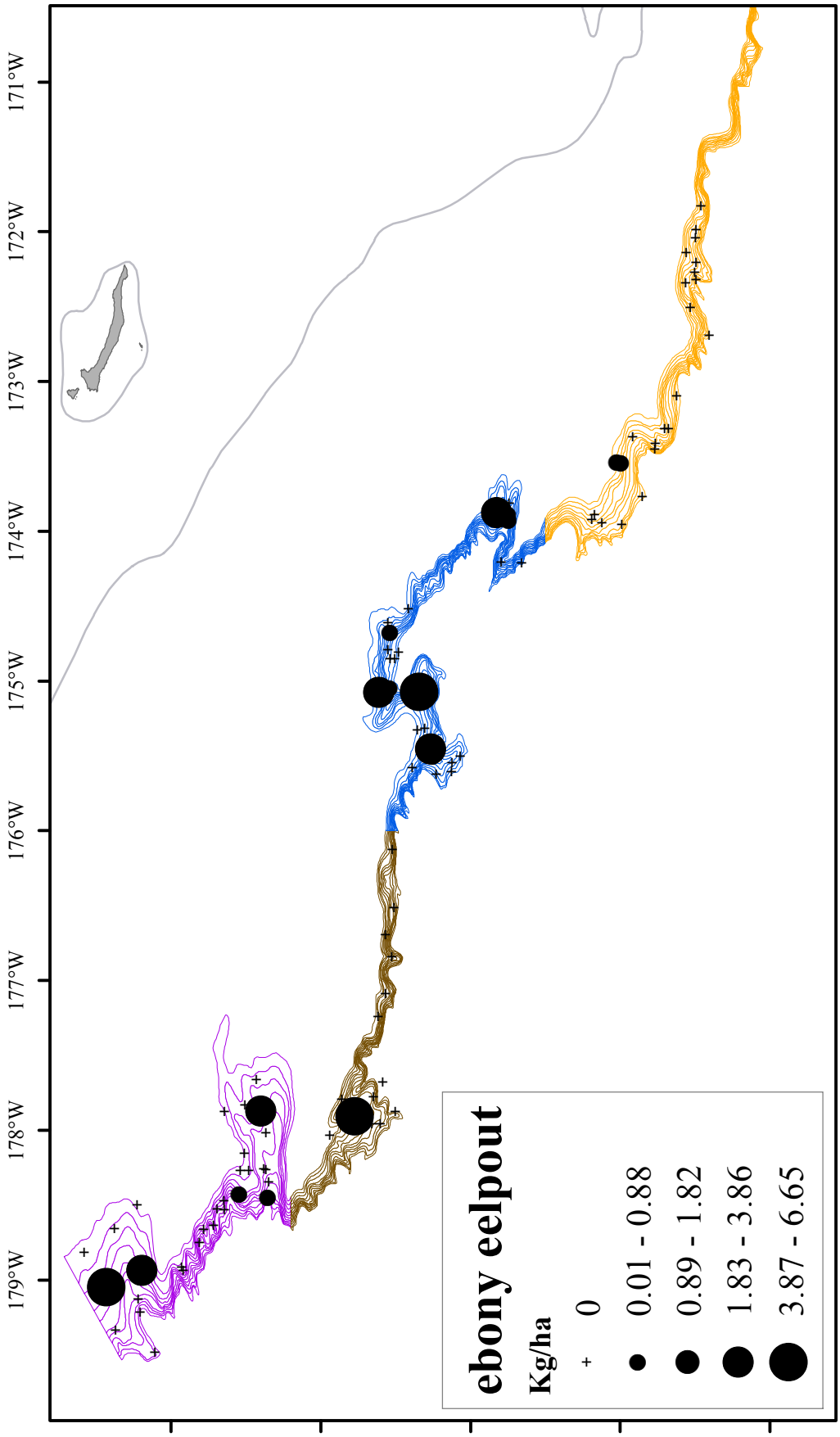

Figure 56. - - Distribution and relative abundance of ebony eelpout from the 2016 EBSS survey. Values are CPUE of kg/ha.

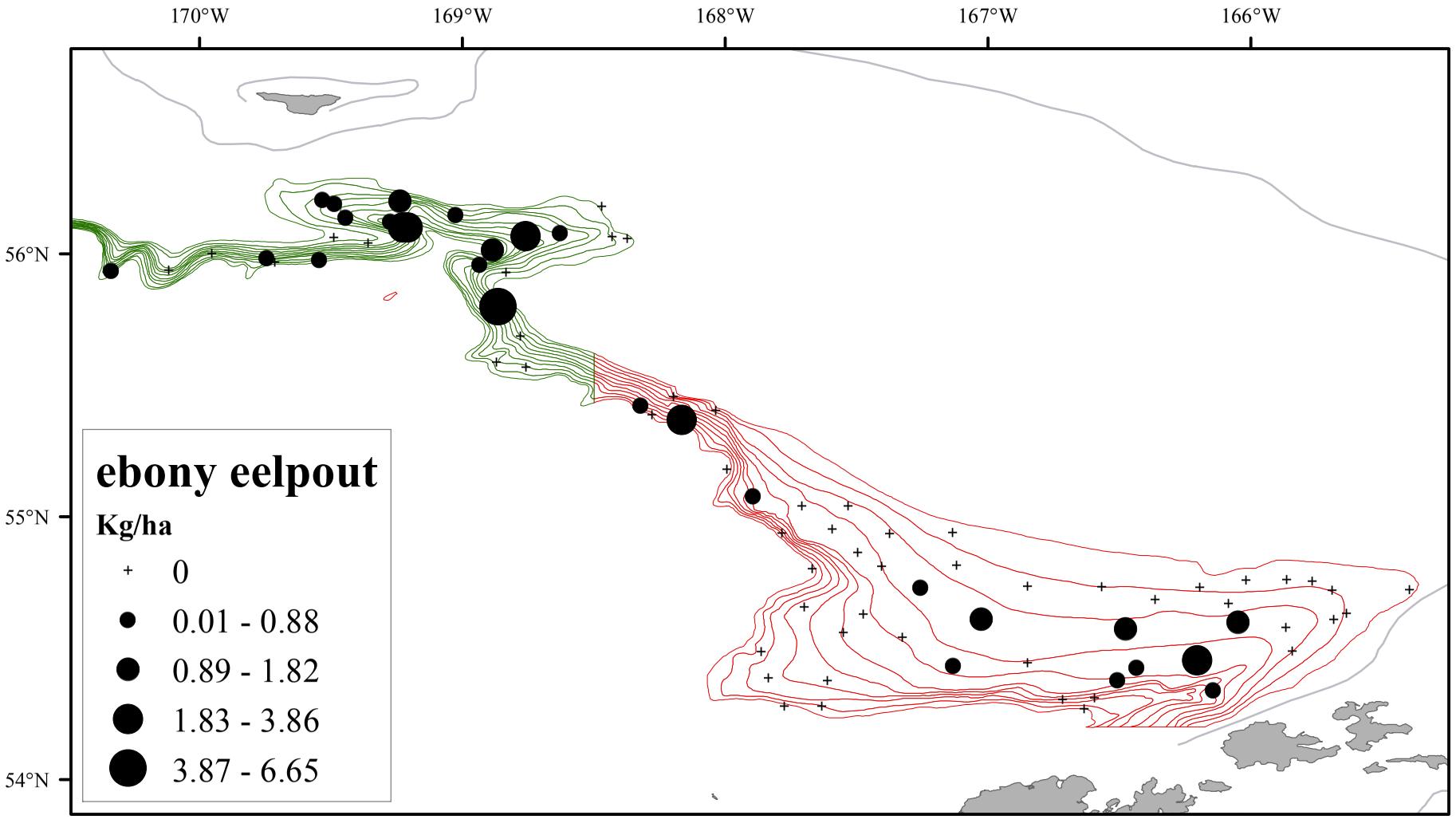

Figure 56. - - continued.

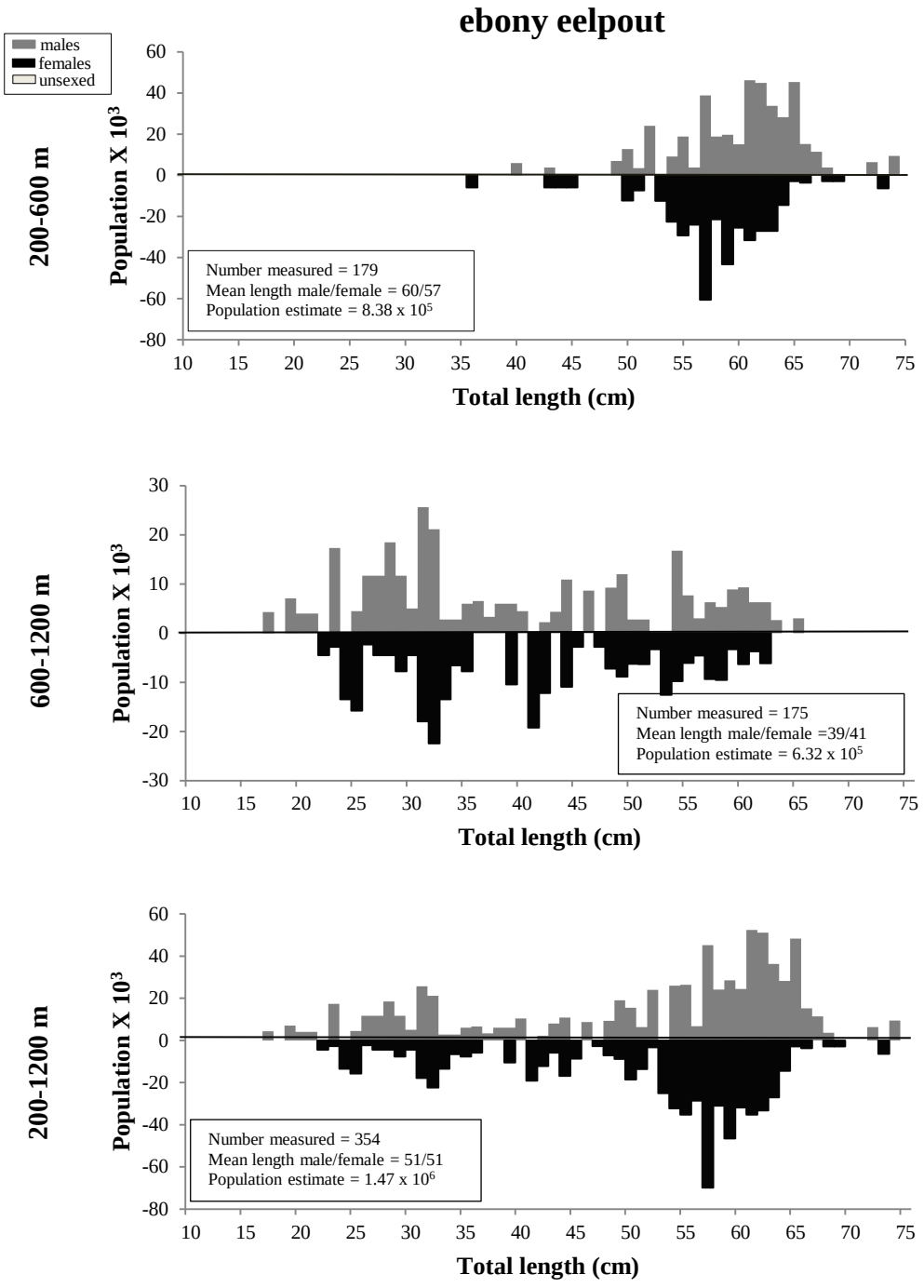

Figure 57. - - Size composition of the estimated ebony eelpout population from the 2016 EBSS survey for all subareas by depth.

Table 36. - - Abundance estimates by subarea and depth stratum for ebony eelpout *(Lycodes concolor)* from the 2016 EBSS survey.

Lycodes concolor **ebony eelpout**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	2.82E+02	2.27E+05	1.01E+04	6.17E+09	6.93E-01	5.58E-01
	600-800	2.33E+01	4.20E+04	1.83E+02	5.72E+08	1.34E-01	2.41E-01
	800-1,000						
	1,000-1,200						
2	200-400						
	400-600	1.22E+02	1.05E+05	5.06E+03	2.95E+09	1.73E+00	1.49E+00
	600-800	5.67E+01	6.26E+04	1.83E+03	1.58E+09	9.60E-01	1.06E+00
	800-1,000	1.48E+01	2.88E+04	5.00E+01	2.57E+08	2.69E-01	5.22E-01
	1,000-1,200	9.76E+01	3.95E+05	1.23E+03	2.59E+10	1.82E+00	7.38E+00
3	200-400						
	400-600						
	600-800	6.99E+00	9.98E+03	4.88E+01	9.96E+07	7.67E-02	1.10E-01
	800-1,000	1.10E+01	2.20E+04	1.21E+02	4.84E+08	1.50E-01	3.00E-01
	1,000-1,200						
4	200-400						
	400-600	1.91E+02	1.78E+05	3.50E+03	3.37E+09	2.62E+00	2.43E+00
	600-800	1.38E+01	3.18E+04	3.41E+01	2.16E+08	1.99E-01	4.58E-01
	800-1,000	6.09E+00	1.94E+04	3.30E+01	1.68E+08	8.61E-02	2.75E-01
	1,000-1,200						
5	200-400						
	400-600	8.26E+01	8.36E+04	6.82E+03	6.99E+09	1.94E+00	1.96E+00
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400						
	400-600	2.65E+02	2.50E+05	1.51E+04	1.32E+10	1.55E+00	1.47E+00
	600-800						
	800-1,000						
	1,000-1,200	1.02E+00	2.00E+04	1.04E+00	4.00E+08	2.05E-02	4.03E-01
1-6	**200-1,200**	**1.17E+03**	**1.47E+06**	**4.41E+04**	**6.24E+10**	**3.59E-01**	**4.51E-01**

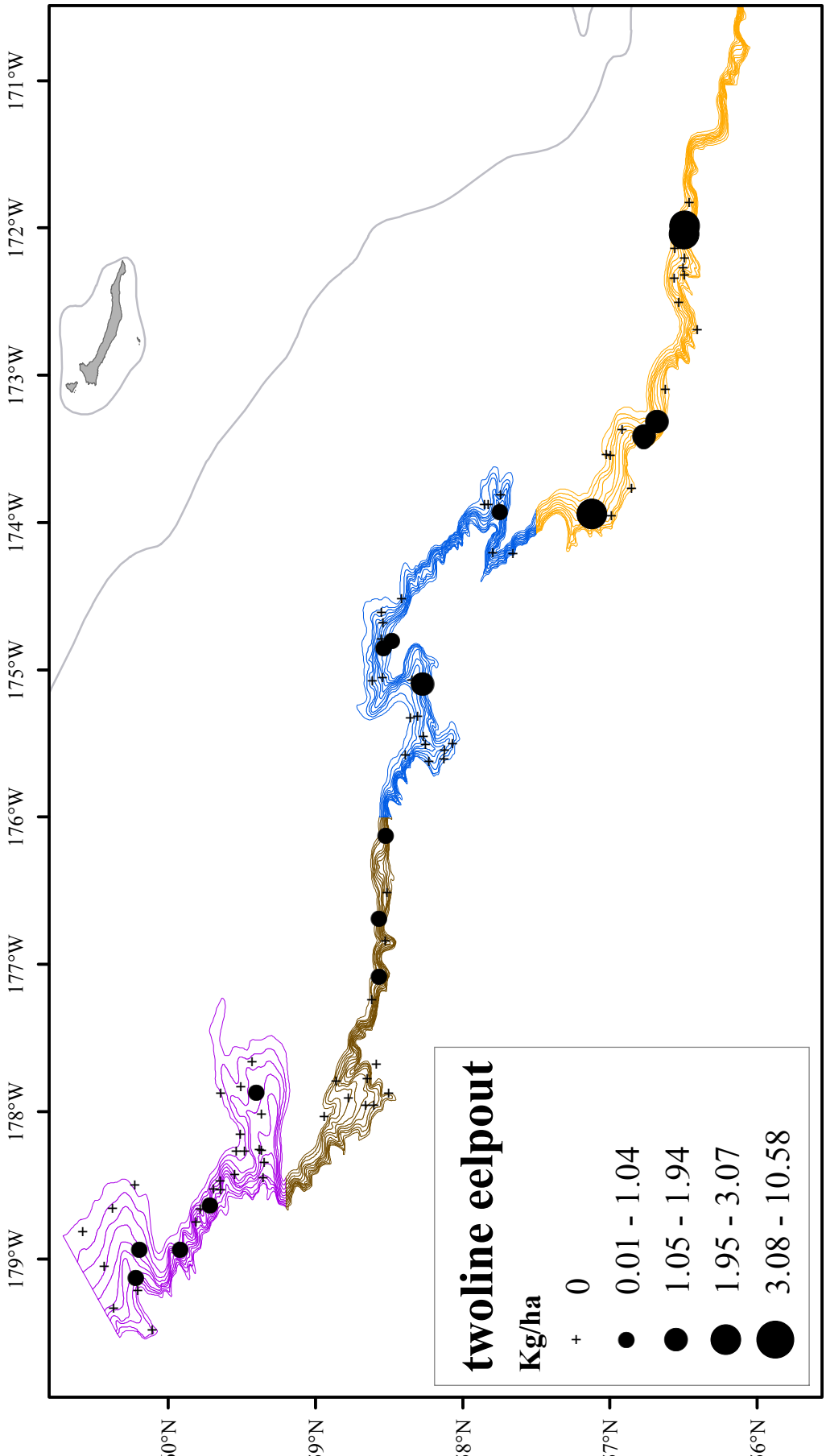

Figure 58. - - Distribution and relative abundance of twoline eelpout from the 2016 EBSS survey. Values are CPUE of kg/ha.

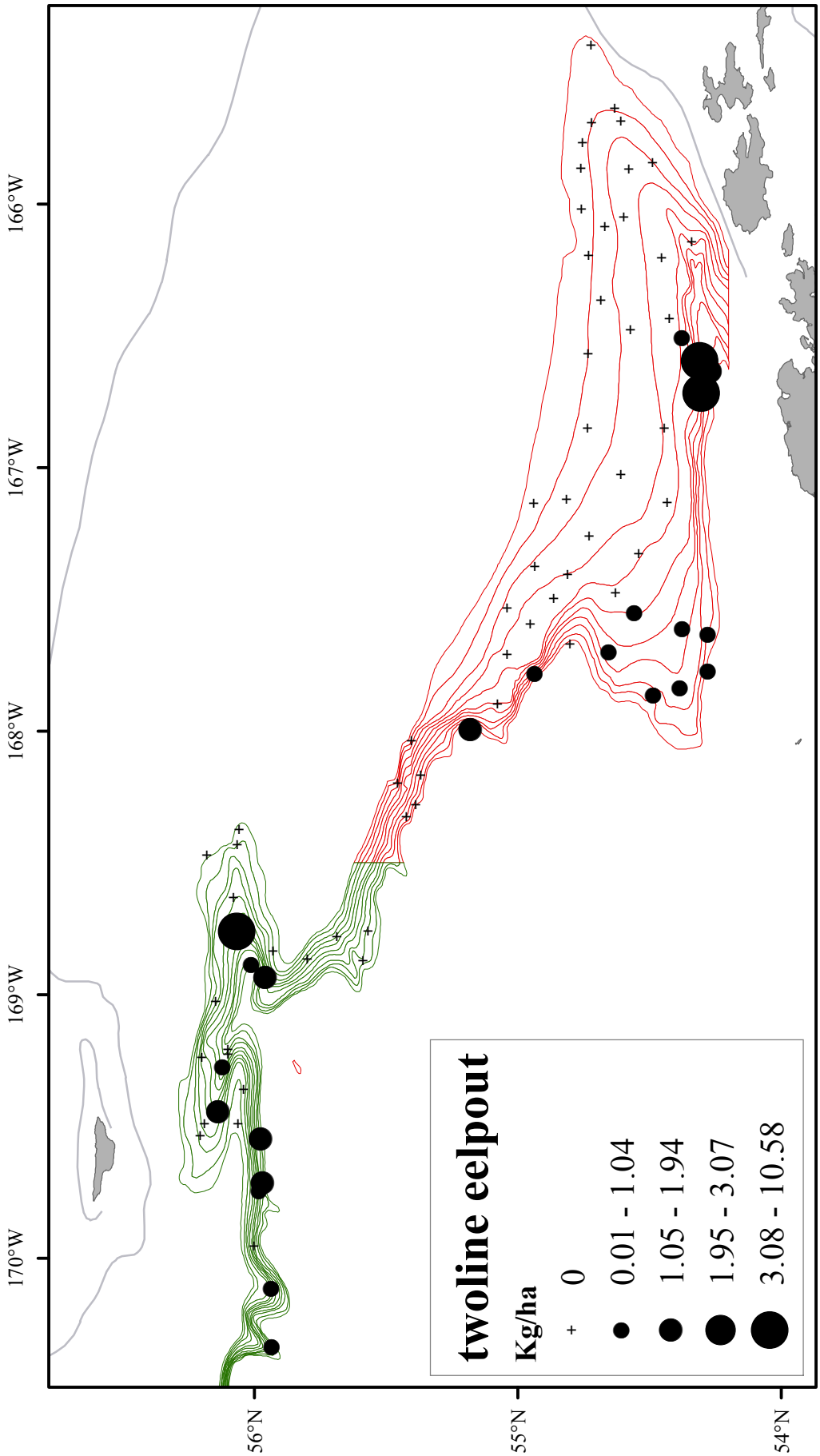

Figure 58. - - continued.

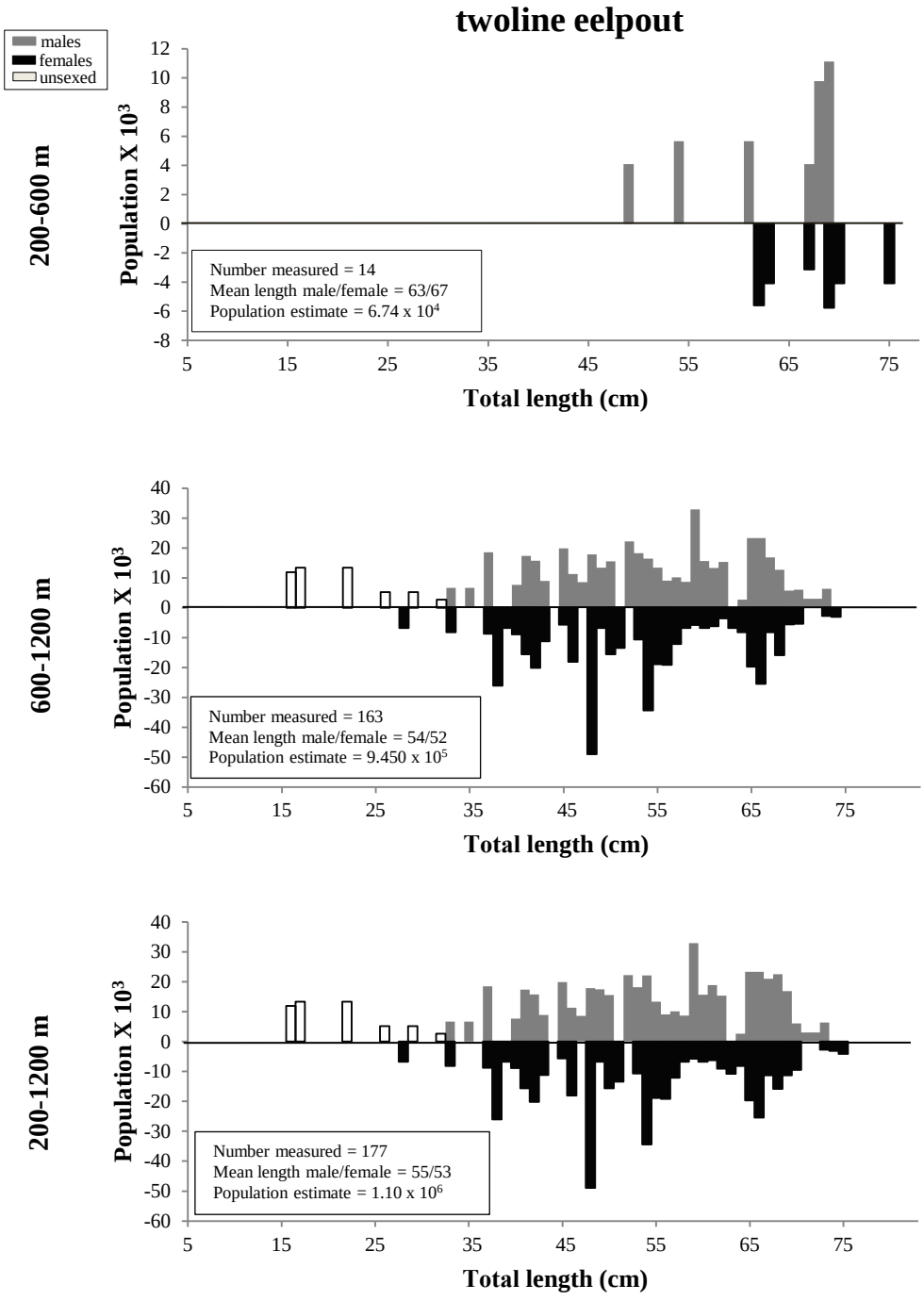

Figure 59. - - Size composition of the estimated twoline eelpout population from the 2016 EBSS survey for all subareas by depth.

Table 37. - - Abundance estimates by subarea and depth stratum for twoline eelpout *(Bothrocara brunneum)* from the 2016 EBSS survey.

Bothrocara brunneum **twoline eelpout**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800	3.25E+01	1.76E+04	2.40E+02	6.89E+07	1.87E-01	1.01E-01
	800-1,000	5.31E+02	6.18E+05	6.86E+04	1.24E+11	3.92E+00	4.56E+00
	1,000-1,200	6.29E+01	6.76E+04	5.40E+02	7.70E+08	5.68E-01	6.11E-01
2	200-400						
	400-600	8.67E+00	3.14E+03	7.51E+01	9.86E+06	1.23E-01	4.45E-02
	600-800	1.19E+02	5.44E+04	5.08E+03	6.73E+08	2.02E+00	9.20E-01
	800-1,000	4.22E+01	3.24E+04	1.71E+02	1.59E+08	7.63E-01	5.86E-01
	1,000-1,200	1.39E+00	4.48E+03	1.93E+00	2.01E+07	2.59E-02	8.36E-02
3	200-400						
	400-600	7.43E+01	3.02E+04	2.44E+03	4.14E+08	8.38E-01	3.41E-01
	600-800	1.08E+02	6.29E+04	3.49E+03	1.22E+09	1.19E+00	6.91E-01
	800-1,000	3.36E+01	2.28E+04	1.13E+03	5.19E+08	4.59E-01	3.11E-01
	1,000-1,200						
4	200-400						
	400-600						
	600-800	2.70E+01	1.74E+04	7.28E+02	3.04E+08	3.89E-01	2.51E-01
	800-1,000	1.23E+01	9.63E+03	1.31E+02	4.15E+07	1.74E-01	1.36E-01
	1,000-1,200	2.53E+00	4.11E+03	6.39E+00	1.69E+07	3.82E-02	6.20E-02
5	200-400						
	400-600	2.49E+01	1.12E+04	1.59E+02	3.13E+07	5.86E-01	2.63E-01
	600-800	1.50E+01	9.60E+03	2.24E+02	9.21E+07	3.47E-01	2.22E-01
	800-1,000						
	1,000-1,200						
6	200-400						
	400-600	4.29E+01	2.26E+04	4.47E+02	1.46E+08	2.52E-01	1.32E-01
	600-800	2.39E+00	7.71E+03	5.71E+00	5.94E+07	2.60E-02	8.40E-02
	800-1,000	9.43E-01	1.57E+04	8.89E-01	2.47E+08	1.46E-02	2.44E-01
	1,000-1,200						
1-6	**200-1,200**	**1.14E+03**	**1.01E+06**	**8.35E+04**	**1.29E+11**	**3.49E-01**	**3.09E-01**

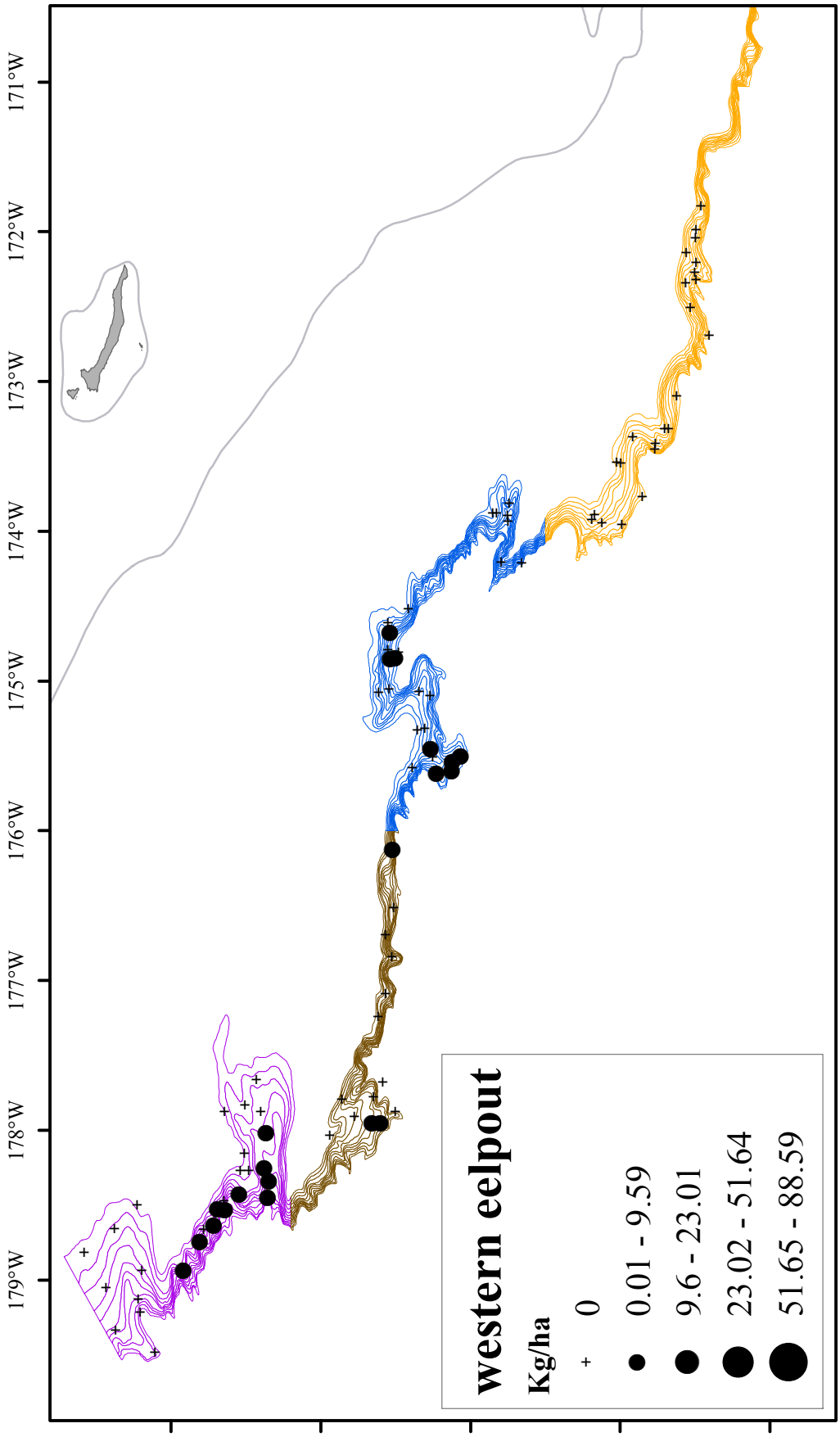

Figure 60. - - Distribution and relative abundance of western eelpout from the 2016 EBSS survey. Values are CPUE of kg/ha.

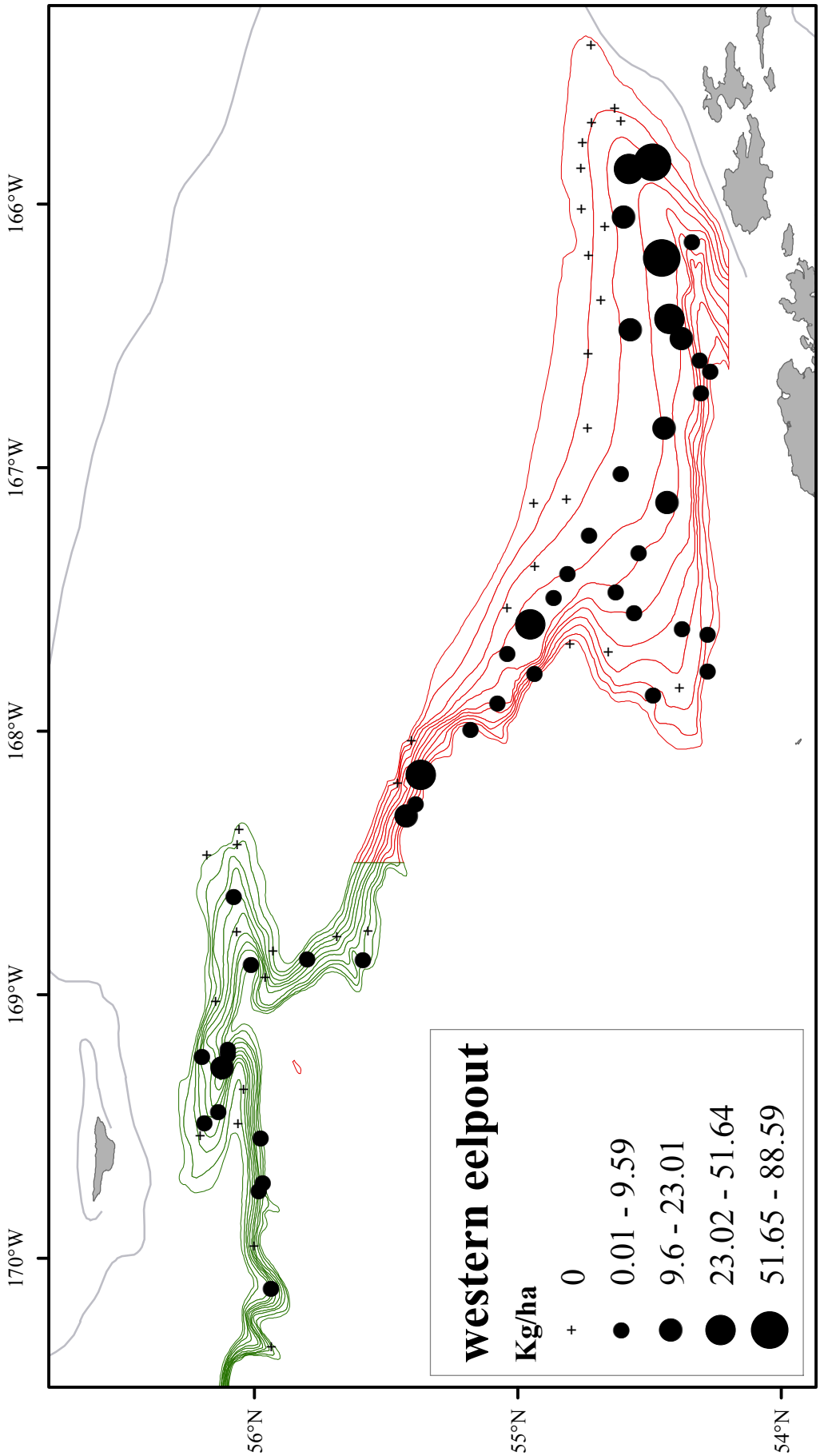

Figure 60. - - continued.

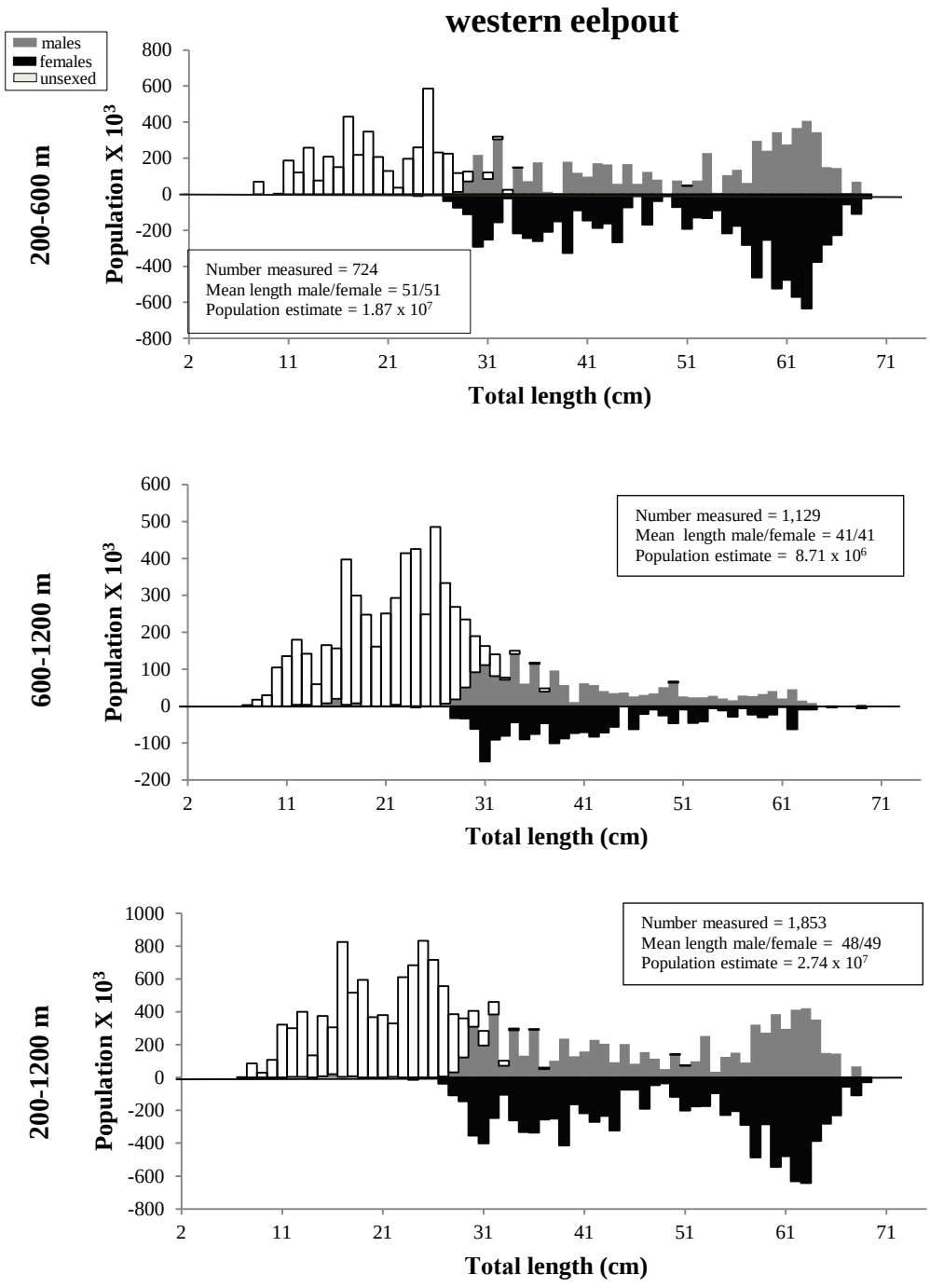

Figure 61. - - Size composition of the estimated western eelpout population from the 2016 EBSS survey for all subareas by depth.

Table 38. - - Abundance estimates by subarea and depth stratum for western eelpout *(Bothrocara zestum*) from the 2016 EBSS survey.

Bothrocara zestum **western eelpout**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	1.02E+04	1.83E+07	6.34E+06	2.02E+13	2.51E+01	4.51E+01
	600-800	6.87E+02	2.83E+06	8.44E+04	1.21E+12	3.94E+00	1.62E+01
	800-1,000	2.27E+02	2.65E+06	3.07E+04	4.19E+12	1.68E+00	1.95E+01
	1,000-1,200	6.80E+01	4.90E+05	1.48E+03	6.30E+10	6.14E-01	4.43E+00
2	200-400						
	400-600	1.28E+01	9.89E+04	2.72E+01	1.24E+09	1.82E-01	1.40E+00
	600-800	1.22E+01	1.68E+05	3.77E+01	1.66E+10	2.06E-01	2.84E+00
	800-1,000	1.49E+02	1.22E+06	1.83E+04	1.02E+12	2.70E+00	2.20E+01
	1,000-1,200	1.09E+02	1.00E+06	8.89E+02	1.03E+11	2.03E+00	1.87E+01
3	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400						
	400-600	5.97E+00	3.69E+03	3.56E+01	1.36E+07	8.17E-02	5.05E-02
	600-800	5.49E+00	3.69E+03	3.01E+01	1.36E+07	7.90E-02	5.32E-02
	800-1,000	2.91E-01	4.54E+04	2.68E-02	6.91E+08	4.11E-03	6.42E-01
	1,000-1,200	1.34E+00	1.81E+04	1.10E+00	7.34E+07	2.02E-02	2.73E-01
5	200-400						
	400-600						
	600-800	6.21E+00	6.40E+03	3.85E+01	4.10E+07	1.44E-01	1.48E-01
	800-1,000	3.99E-01	9.04E+03	9.05E-02	2.05E+07	7.23E-03	1.64E-01
	1,000-1,200						
6	200-400						
	400-600	2.85E+02	2.77E+05	3.88E+04	3.45E+10	1.67E+00	1.62E+00
	600-800	1.73E+02	2.19E+05	2.29E+04	3.00E+10	1.88E+00	2.38E+00
	800-1,000	3.31E-01	6.97E+03	1.10E-01	4.86E+07	5.13E-03	1.08E-01
	1,000-1,200	9.00E-01	5.20E+04	8.10E-01	2.70E+09	1.81E-02	1.05E+00
1-6	**200-1,200**	**1.19E+04**	**2.74E+07**	**6.54E+06**	**2.69E+13**	**3.65E+00**	**8.37E+00**

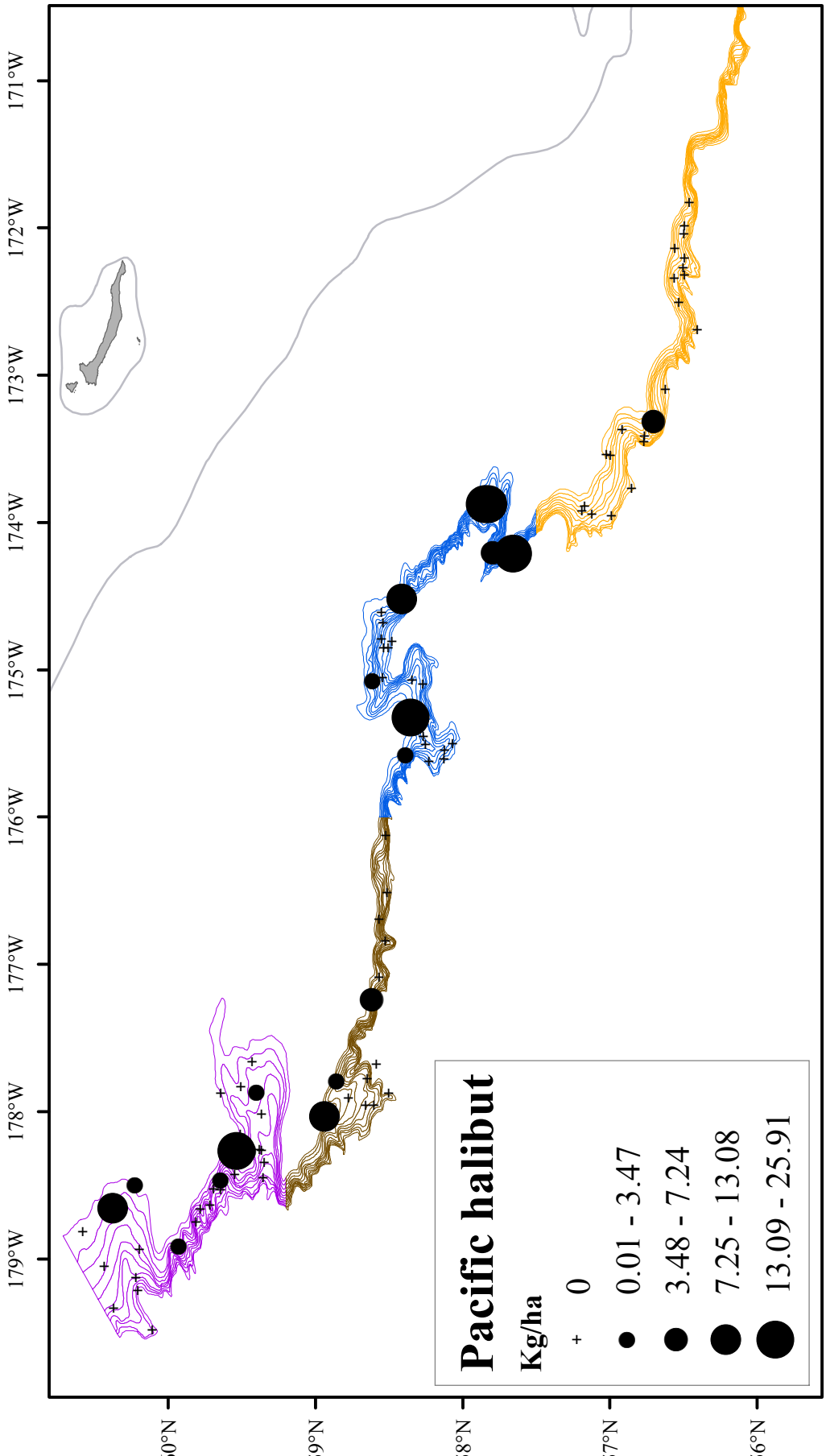

Figure 62. - - Distribution and relative abundance of Pacific halibut from the 2016 EBSS survey. Values are CPUE of kg/ha.

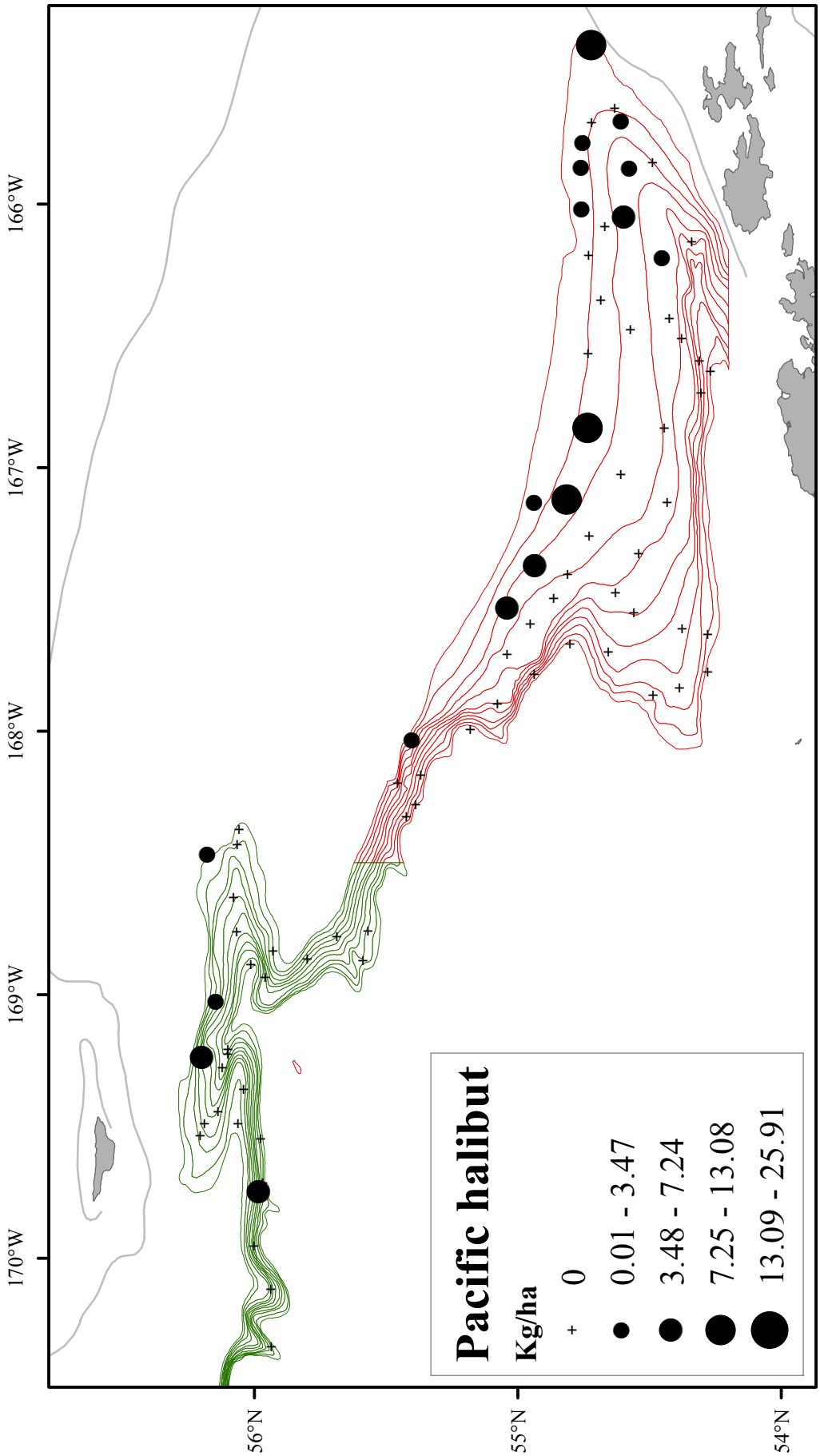

Figure 62. - - continued.

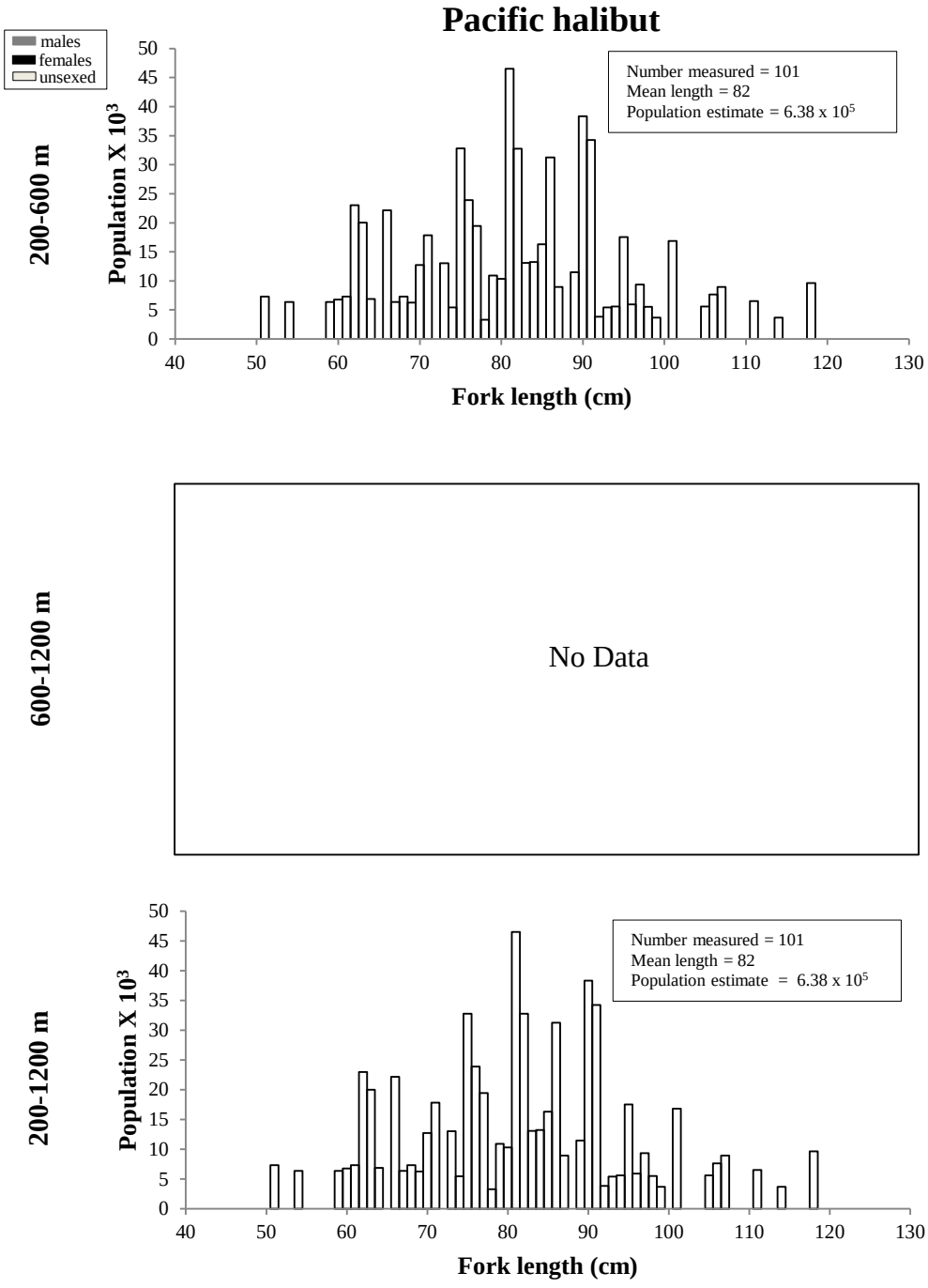

Figure 63. - - Size composition of the estimated Pacific halibut population from the 2016 EBSS survey for all subareas by depth.

Table 39. - - Abundance estimates by subarea and depth stratum for Pacific halibut *(Hippoglossus stenolepis)* from the 2016 EBSS survey.

Hippoglossus stenolepis **Pacific halibut**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.14E+03	1.64E+05	1.25E+05	3.01E+09	2.84E+00	4.10E-01
	400-600	2.62E+02	3.91E+04	3.00E+04	6.97E+08	6.45E-01	9.61E-02
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	1.94E+01	3.30E+03	3.75E+02	1.09E+07	1.67E-01	2.85E-02
	400-600	1.32E+02	1.03E+04	3.66E+03	2.25E+07	1.87E+00	1.46E-01
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	1.31E+02	2.25E+04	1.71E+04	5.05E+08	1.45E+00	2.49E-01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.26E+03	1.54E+05	1.98E+05	2.47E+09	1.02E+01	1.25E+00
	400-600	4.54E+02	3.70E+04	1.13E+05	5.82E+08	6.22E+00	5.07E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	2.99E+02	4.27E+04	1.70E+04	1.92E+08	7.05E+00	1.01E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	8.97E+02	1.59E+05	1.63E+05	3.74E+09	3.45E+00	6.13E-01
	400-600	7.14E+01	5.51E+03	5.10E+03	3.03E+07	4.19E-01	3.23E-02
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**4.67E+03**	**6.38E+05**	**6.72E+05**	**1.13E+10**	**1.43E+00**	**1.95E-01**

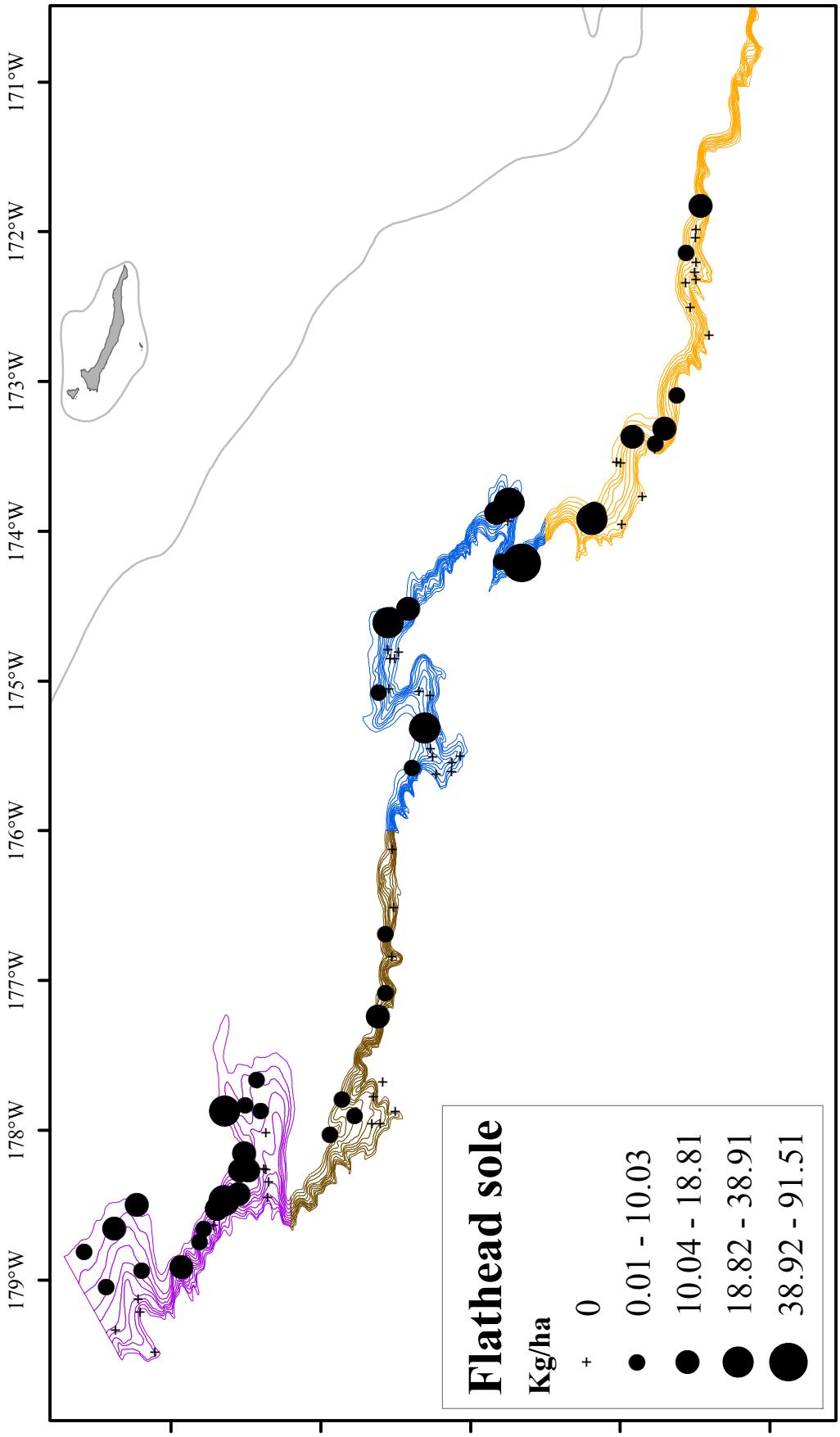

Figure 64. - - Distribution and relative abundance of flathead sole from the 2016 EBSS survey. Values are CPUE of kg/ha.

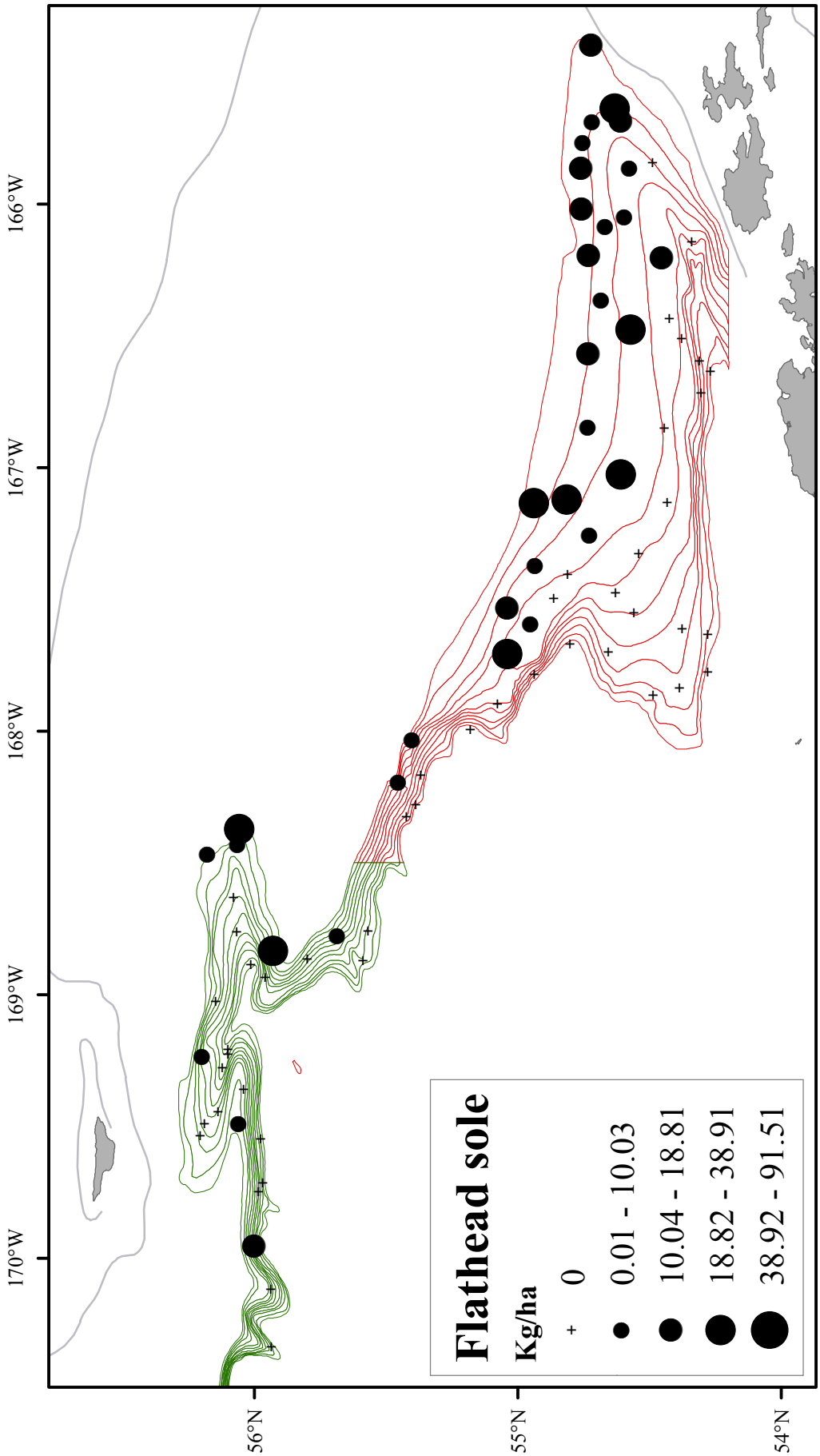

Figure 64. - - continued.

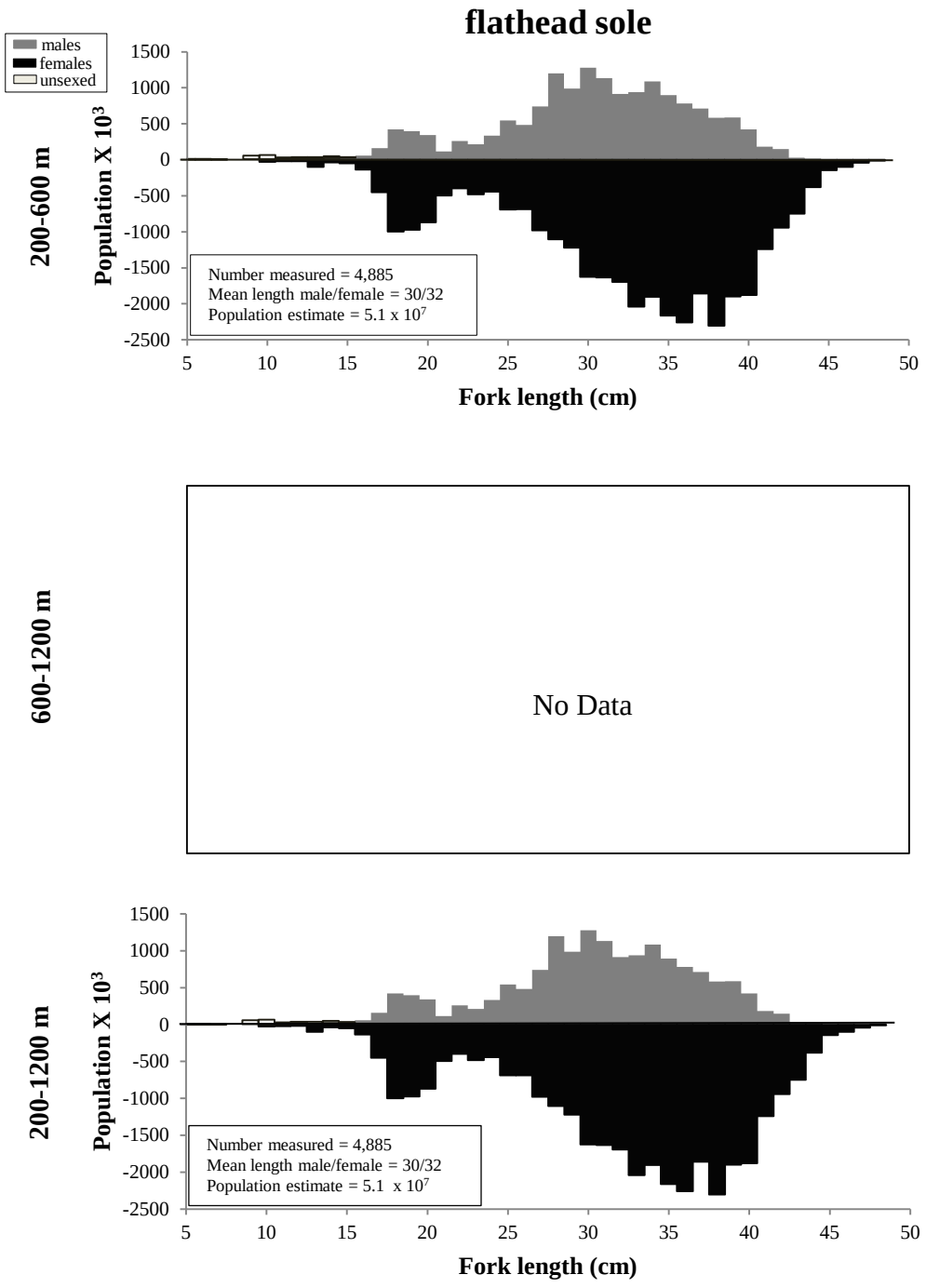

Figure 65. - - Size composition of the estimated flathead sole population from the 2016 EBSS survey for all subareas by depth.

Table 40. - - Abundance estimates by subarea and depth stratum for flathead sole *(Hippoglossoides elassodon)* from the 2016 EBSS survey.

Hippoglossoides elassodon **flathead sole**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	4.74E+03	1.52E+07	6.92E+05	9.91E+12	1.18E+01	3.80E+01
	400-600	2.84E+03	4.59E+06	1.19E+06	3.33E+12	6.98E+00	1.13E+01
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	1.35E+03	2.55E+06	3.64E+05	1.38E+12	1.17E+01	2.20E+01
	400-600	4.74E+01	5.99E+04	2.24E+03	3.58E+09	6.72E-01	8.49E-01
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	1.24E+03	2.92E+06	1.12E+04	6.85E+10	1.37E+01	3.23E+01
	400-600	6.51E+02	9.32E+05	2.16E+05	4.35E+11	7.35E+00	1.05E+01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	2.78E+03	5.72E+06	1.82E+06	4.98E+12	2.25E+01	4.63E+01
	400-600	6.97E+02	1.13E+06	1.13E+05	3.58E+11	9.54E+00	1.55E+01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	4.56E+02	1.45E+06	5.73E+03	5.54E+10	1.08E+01	3.42E+01
	400-600	2.16E+02	4.27E+05	3.74E+03	1.75E+10	5.08E+00	1.00E+01
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	3.14E+03	1.42E+07	2.32E+05	6.70E+12	1.21E+01	5.46E+01
	400-600	1.16E+03	2.23E+06	1.95E+05	6.46E+11	6.79E+00	1.31E+01
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.93E+04**	**5.14E+07**	**4.84E+06**	**2.79E+13**	**5.90E+00**	**1.57E+01**

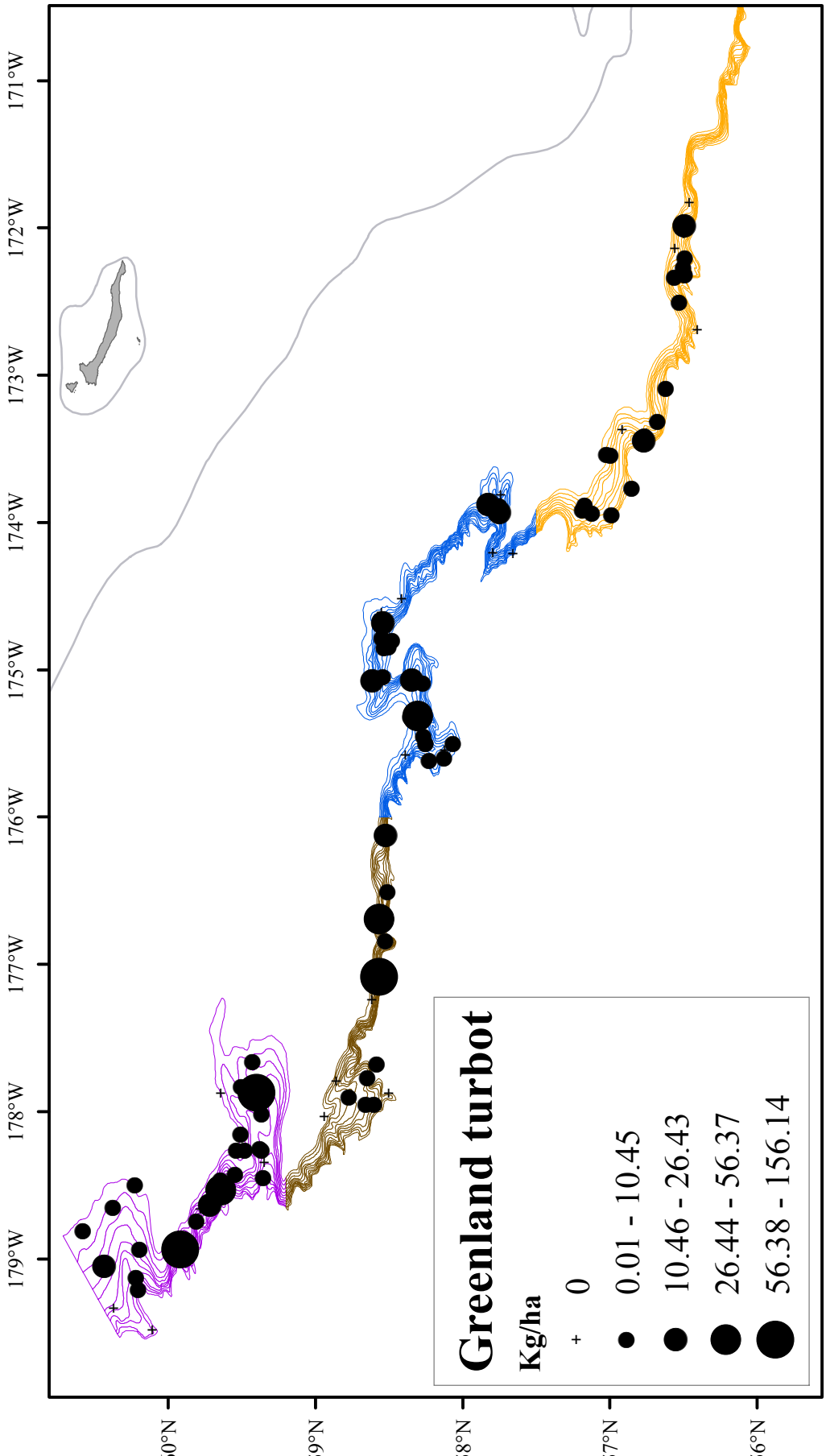

Figure 66. - - Distribution and relative abundance of Greenland turbot from the 2016 EBSS survey. Values are CPUE of kg/ha.

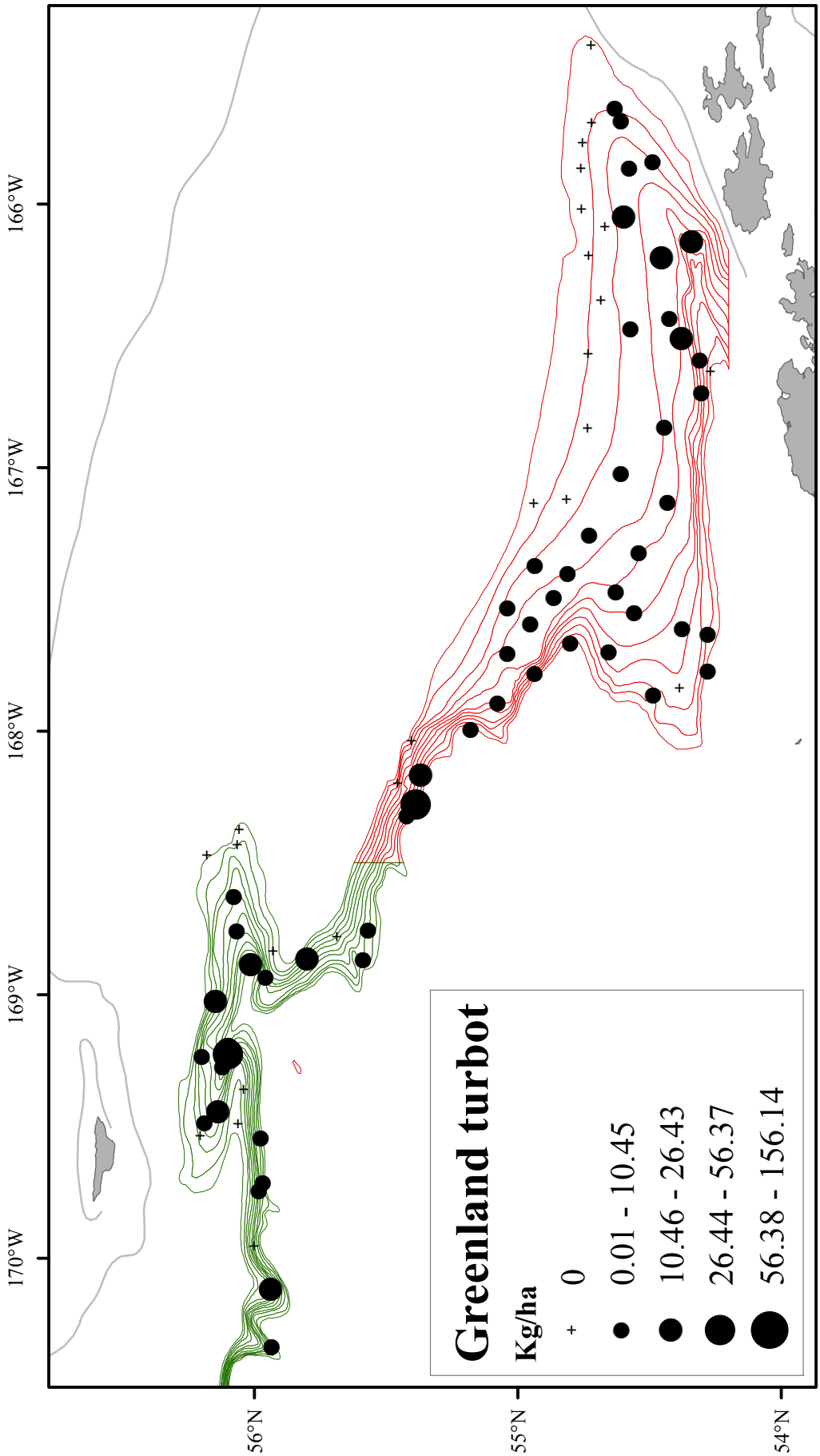

Figure 66. - - continued.

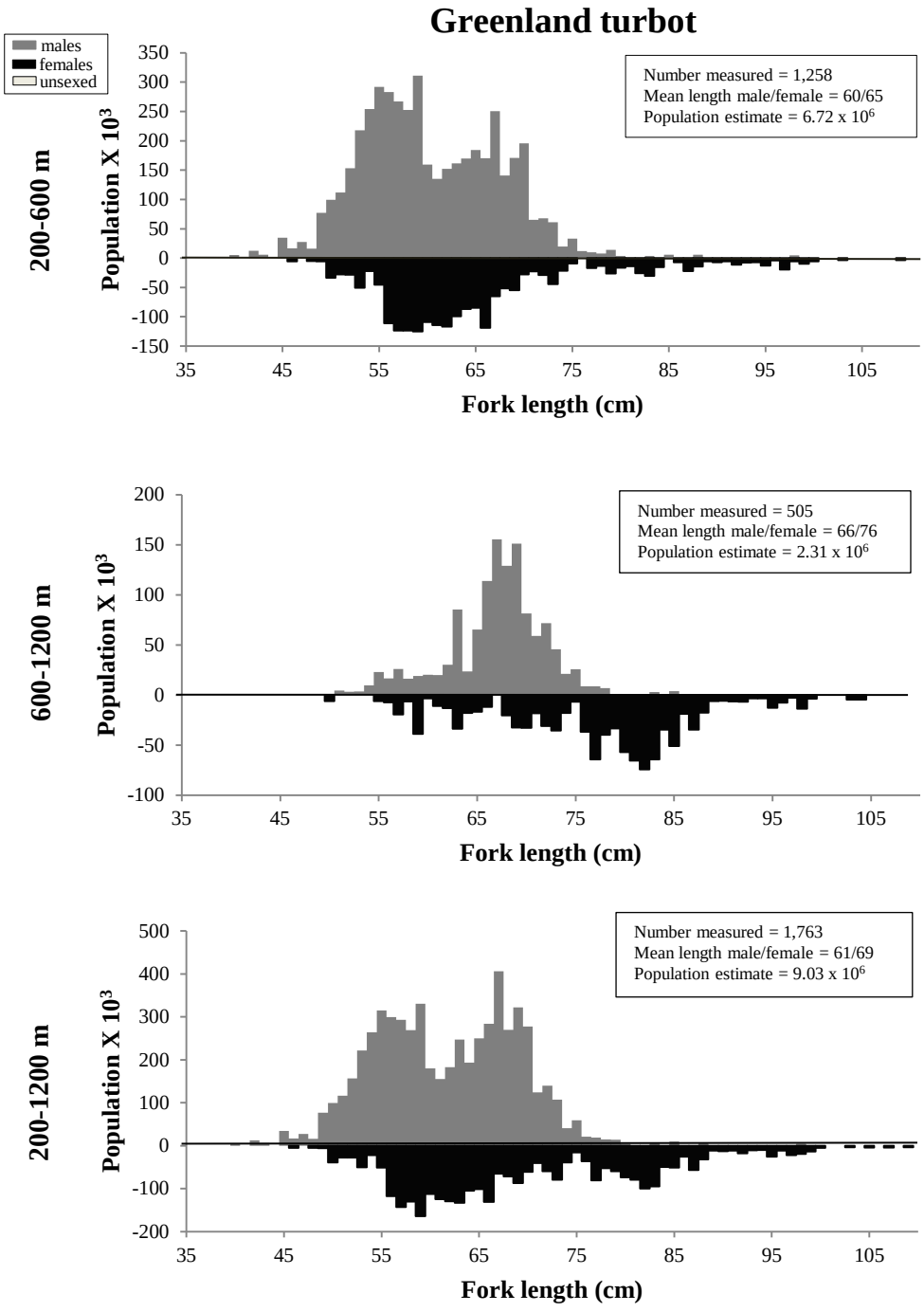

Figure 67. - - Size composition of the estimated Greenland turbot population from the 2016 EBSS survey for all subareas by depth.

Table 41. - - Abundance estimates by subarea and depth stratum for Greenland turbot *(Reinhardtius hippoglossoides)* from the 2016 EBSS survey.

Reinhardtius hippoglossoides **Greenland turbot**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	7.03E+01	2.33E+04	1.11E+03	1.13E+08	1.75E-01	5.82E-02
	400-600	2.61E+03	8.85E+05	2.35E+05	2.49E+10	6.43E+00	2.18E+00
	600-800	2.15E+03	6.60E+05	6.48E+05	8.86E+10	1.24E+01	3.79E+00
	800-1,000	3.51E+02	9.08E+04	1.96E+04	1.28E+09	2.59E+00	6.70E-01
	1,000-1,200	3.39E+02	7.69E+04	1.93E+04	1.01E+09	3.06E+00	6.95E-01
2	200-400						
	400-600	7.48E+02	2.93E+05	7.84E+04	1.22E+10	1.06E+01	4.15E+00
	600-800	5.11E+02	1.81E+05	5.09E+04	6.56E+09	8.64E+00	3.06E+00
	800-1,000	2.36E+02	6.44E+04	2.51E+03	1.53E+08	4.27E+00	1.17E+00
	1,000-1,200	9.41E+02	2.44E+05	9.19E+04	9.05E+09	1.76E+01	4.55E+00
3	200-400	4.53E+01	1.48E+04	2.05E+03	2.18E+08	5.01E-01	1.63E-01
	400-600	5.26E+02	1.38E+05	7.75E+04	1.79E+09	5.93E+00	1.55E+00
	600-800	4.90E+02	1.26E+05	5.43E+04	3.21E+09	5.38E+00	1.39E+00
	800-1,000	1.18E+02	3.56E+04	3.38E+03	1.34E+08	1.61E+00	4.87E-01
	1,000-1,200	8.67E+01	1.57E+04	1.02E+03	4.55E+07	1.28E+00	2.33E-01
4	200-400	5.48E+01	1.21E+04	3.01E+03	1.46E+08	4.44E-01	9.77E-02
	400-600	1.49E+03	5.20E+05	4.52E+05	6.88E+10	2.04E+01	7.12E+00
	600-800	5.25E+02	1.50E+05	1.08E+05	8.65E+09	7.57E+00	2.16E+00
	800-1,000	3.02E+02	9.25E+04	1.98E+04	2.59E+09	4.27E+00	1.31E+00
	1,000-1,200	2.66E+02	5.66E+04	2.08E+04	9.72E+08	4.02E+00	8.55E-01
5	200-400						
	400-600	2.53E+03	1.40E+06	2.66E+06	9.08E+11	5.94E+01	3.28E+01
	600-800	4.12E+02	9.51E+04	3.03E+04	3.01E+09	9.54E+00	2.20E+00
	800-1,000	1.77E+02	3.47E+04	3.94E+03	1.20E+08	3.21E+00	6.29E-01
	1,000-1,200	5.17E+01	1.17E+04	2.67E+03	1.37E+08	9.07E-01	2.05E-01
6	200-400	6.90E+02	2.89E+05	3.16E+04	5.41E+09	2.66E+00	1.11E+00
	400-600	6.50E+03	3.15E+06	1.28E+07	3.38E+12	3.81E+01	1.84E+01
	600-800	1.19E+03	3.47E+05	4.09E+05	4.22E+10	1.29E+01	3.78E+00
	800-1,000	9.39E+01	1.92E+04	2.21E+03	9.46E+07	1.46E+00	2.98E-01
	1,000-1,200	6.71E+01	9.32E+03	1.14E+03	2.30E+07	1.35E+00	1.88E-01
1-6	**200-1,200**	**2.36E+04**	**9.03E+06**	**1.78E+07**	**4.57E+12**	**7.20E+00**	**2.76E+00**

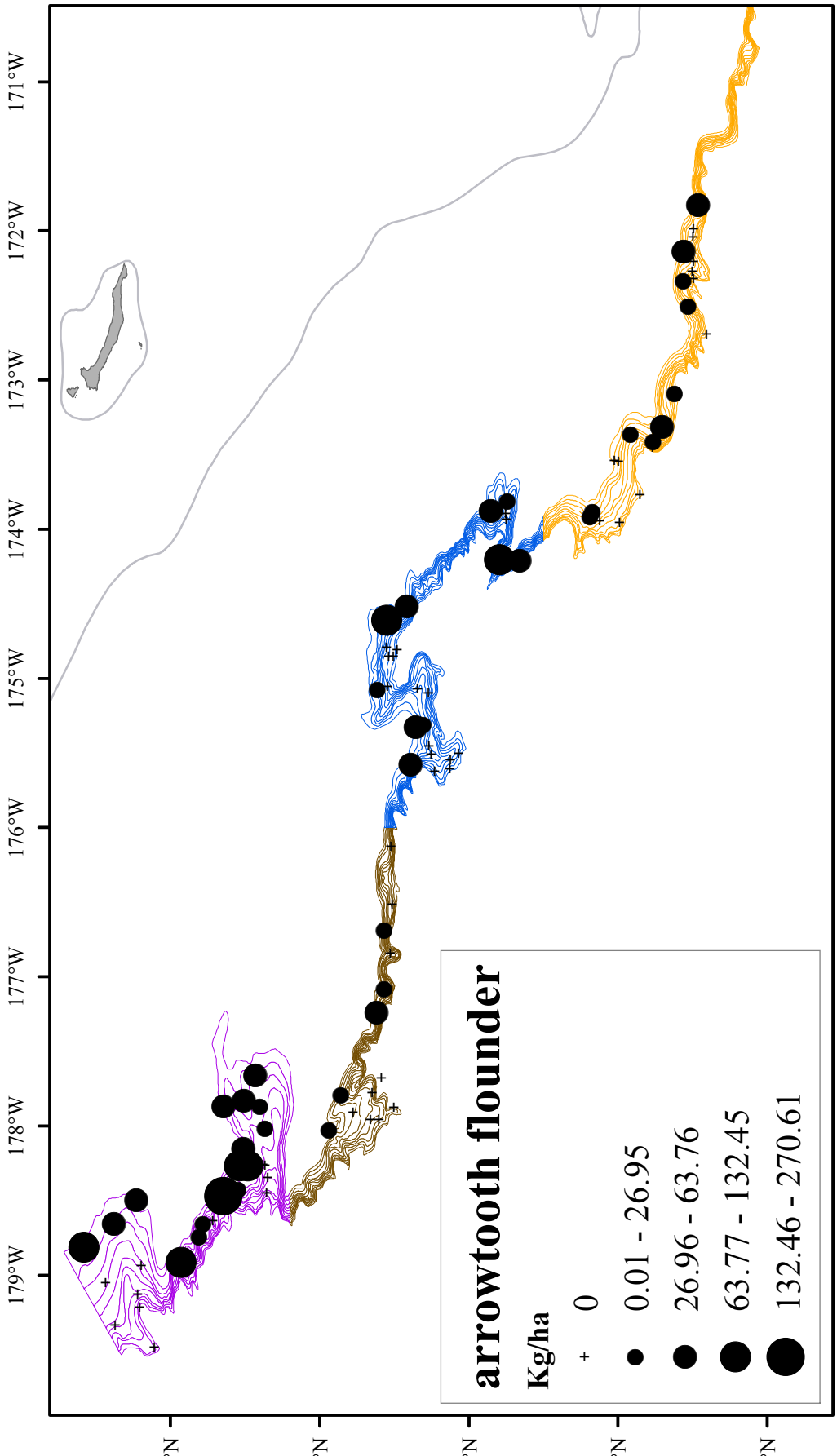

Figure 68. - - Distribution and relative abundance of arrowtooth flounder from the 2016 EBSS survey. Values are CPUE of kg/ha.

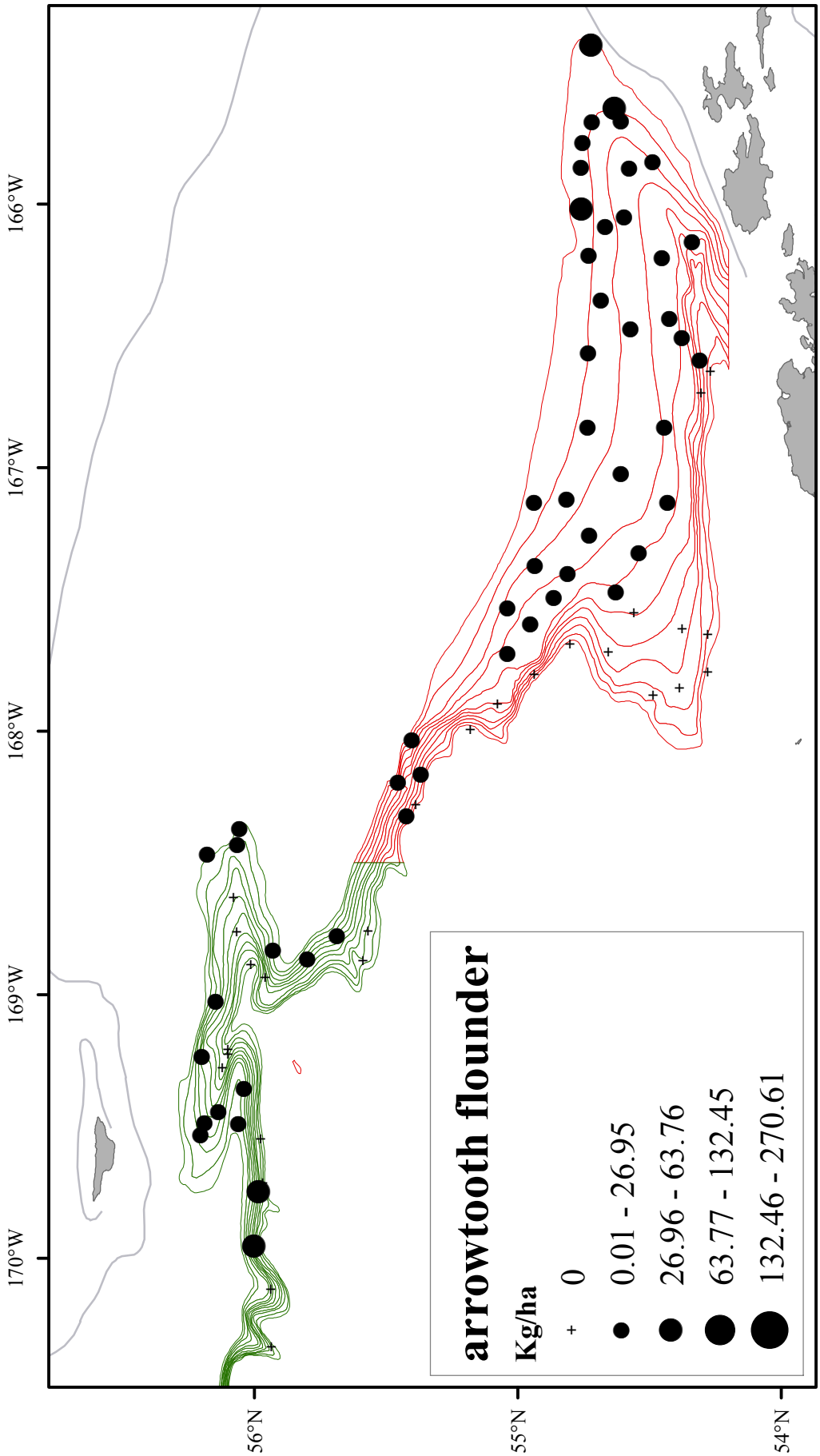

Figure 68. - - continued.

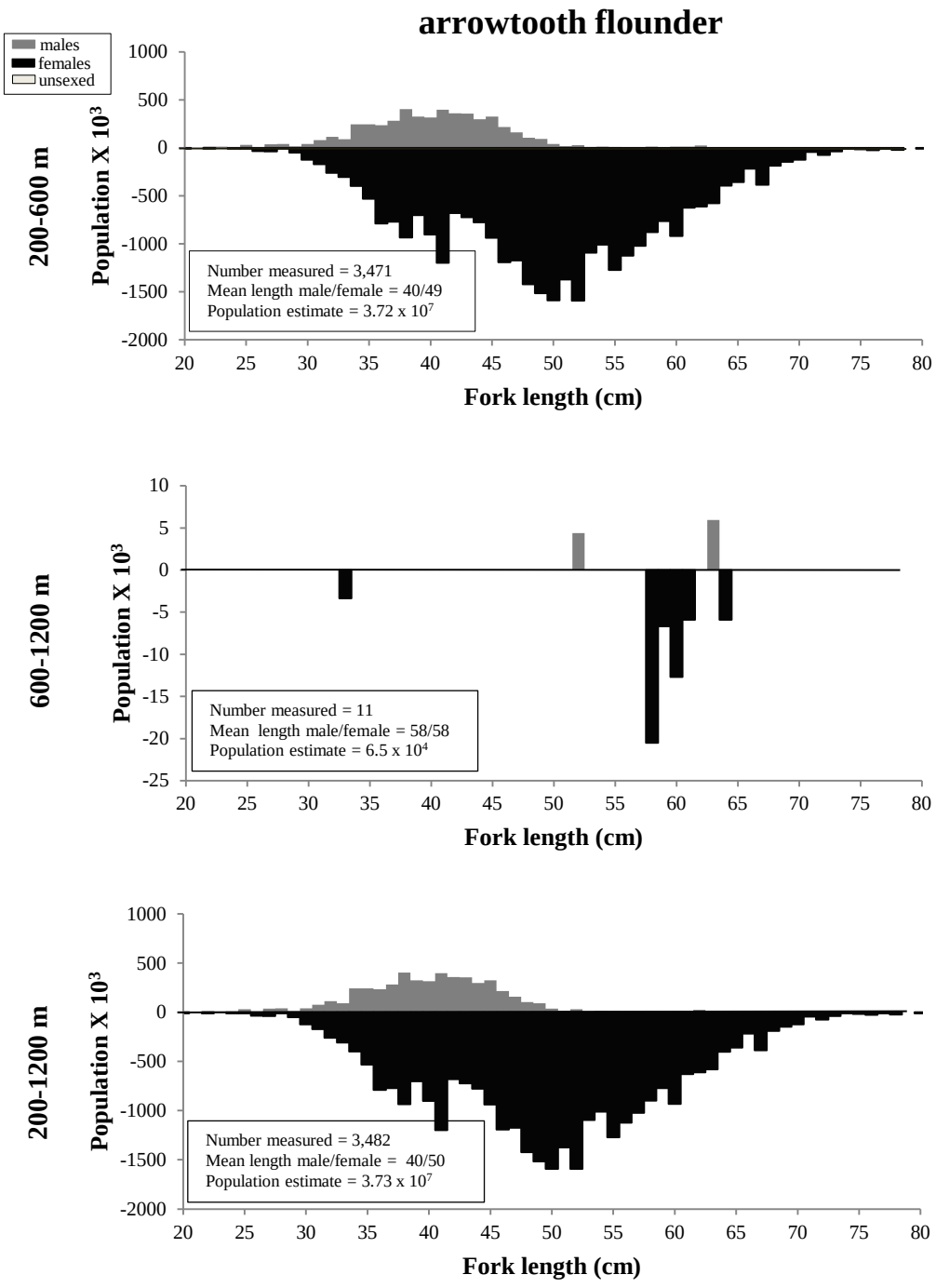

Figure 69. - - Size composition of the estimated arrowtooth flounder population from the 2016 EBSS survey for all subareas by depth.

Table 42. - - Abundance estimates by subarea and depth stratum for arrowtooth flounder *(Atheresthes stomias)* from the 2016 EBSS survey.

Atheresthes stomias **arrowtooth flounder**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	7.22E+03	7.20E+06	9.58E+05	1.38E+12	1.80E+01	1.79E+01
	400-600	2.11E+03	1.07E+06	2.25E+05	5.66E+10	5.20E+00	2.63E+00
	600-800	1.06E+02	4.30E+04	3.84E+03	5.93E+08	6.09E-01	2.47E-01
	800-1,000	2.00E+01	8.69E+03	4.00E+02	7.56E+07	1.48E-01	6.42E-02
	1,000-1,200						
2	200-400	1.45E+03	8.11E+05	2.52E+05	5.05E+10	1.25E+01	7.00E+00
	400-600	8.36E+02	4.03E+05	1.13E+05	2.38E+10	1.19E+01	5.72E+00
	600-800	9.58E-01	3.37E+03	9.17E-01	1.14E+07	1.62E-02	5.70E-02
	800-1,000						
	1,000-1,200						
3	200-400	2.67E+03	1.83E+06	8.59E+05	4.60E+11	2.95E+01	2.03E+01
	400-600	8.15E+02	3.75E+05	8.24E+04	1.69E+10	9.20E+00	4.23E+00
	600-800	5.98E+00	4.40E+03	3.58E+01	1.93E+07	6.57E-02	4.83E-02
	800-1,000						
	1,000-1,200						
4	200-400	6.72E+03	6.79E+06	2.65E+06	1.16E+13	5.44E+01	5.49E+01
	400-600	4.30E+02	1.87E+05	5.71E+04	1.19E+10	5.89E+00	2.56E+00
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	7.79E+02	5.97E+05	1.16E+05	1.18E+11	1.84E+01	1.41E+01
	400-600	5.45E+01	4.48E+04	1.02E+03	8.80E+08	1.28E+00	1.05E+00
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	2.11E+04	1.72E+07	2.34E+07	1.59E+13	8.12E+01	6.62E+01
	400-600	1.22E+03	7.56E+05	2.72E+05	1.27E+11	7.18E+00	4.43E+00
	600-800	1.61E+01	5.93E+03	2.60E+02	3.52E+07	1.76E-01	6.46E-02
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**4.55E+04**	**3.73E+07**	**2.90E+07**	**2.98E+13**	**1.39E+01**	**1.14E+01**

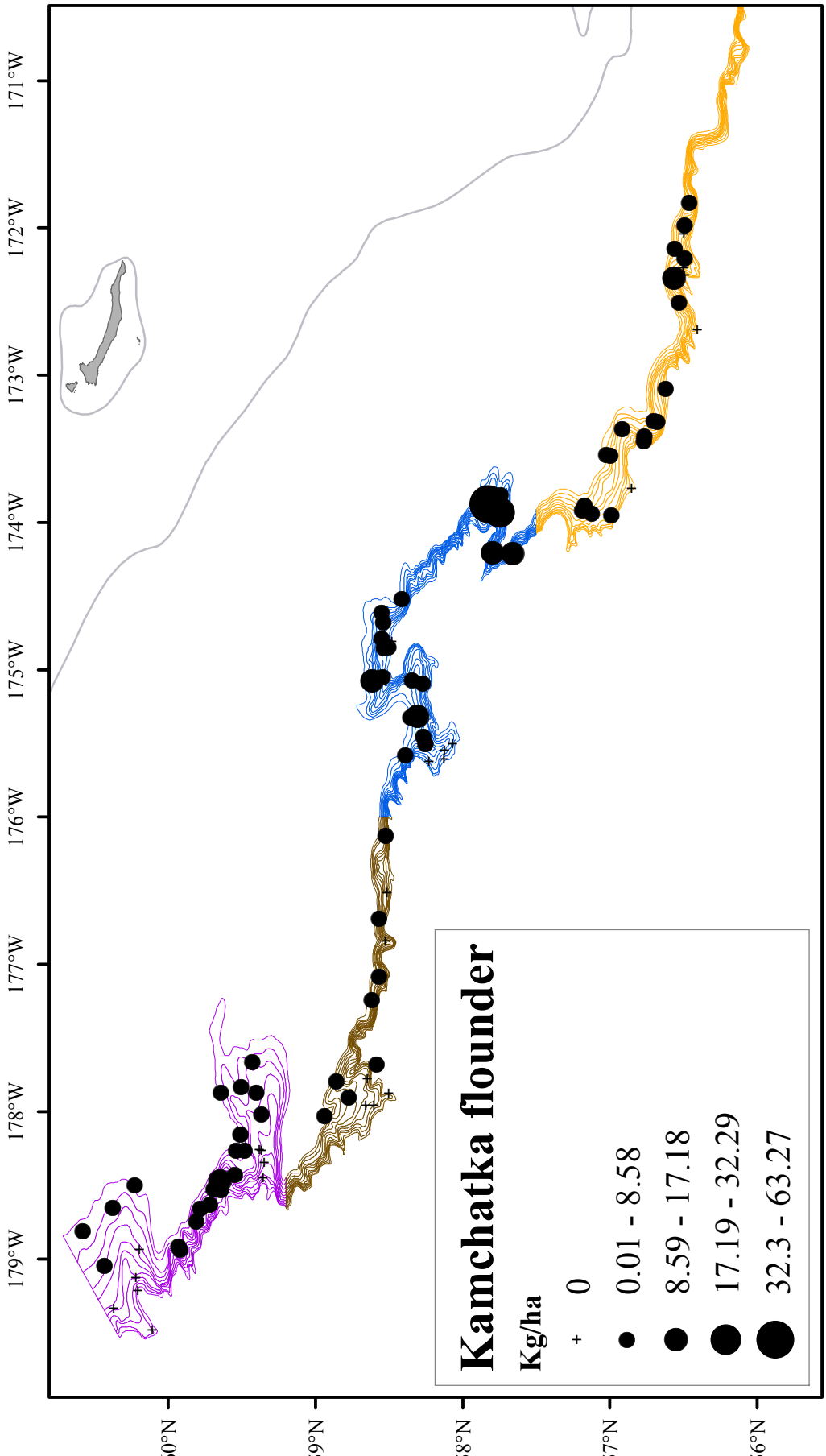

Figure 70. - - Distribution and relative abundance of Kamchatka flounder from the 2016 EBSS survey. Values are CPUE of kg/ha.

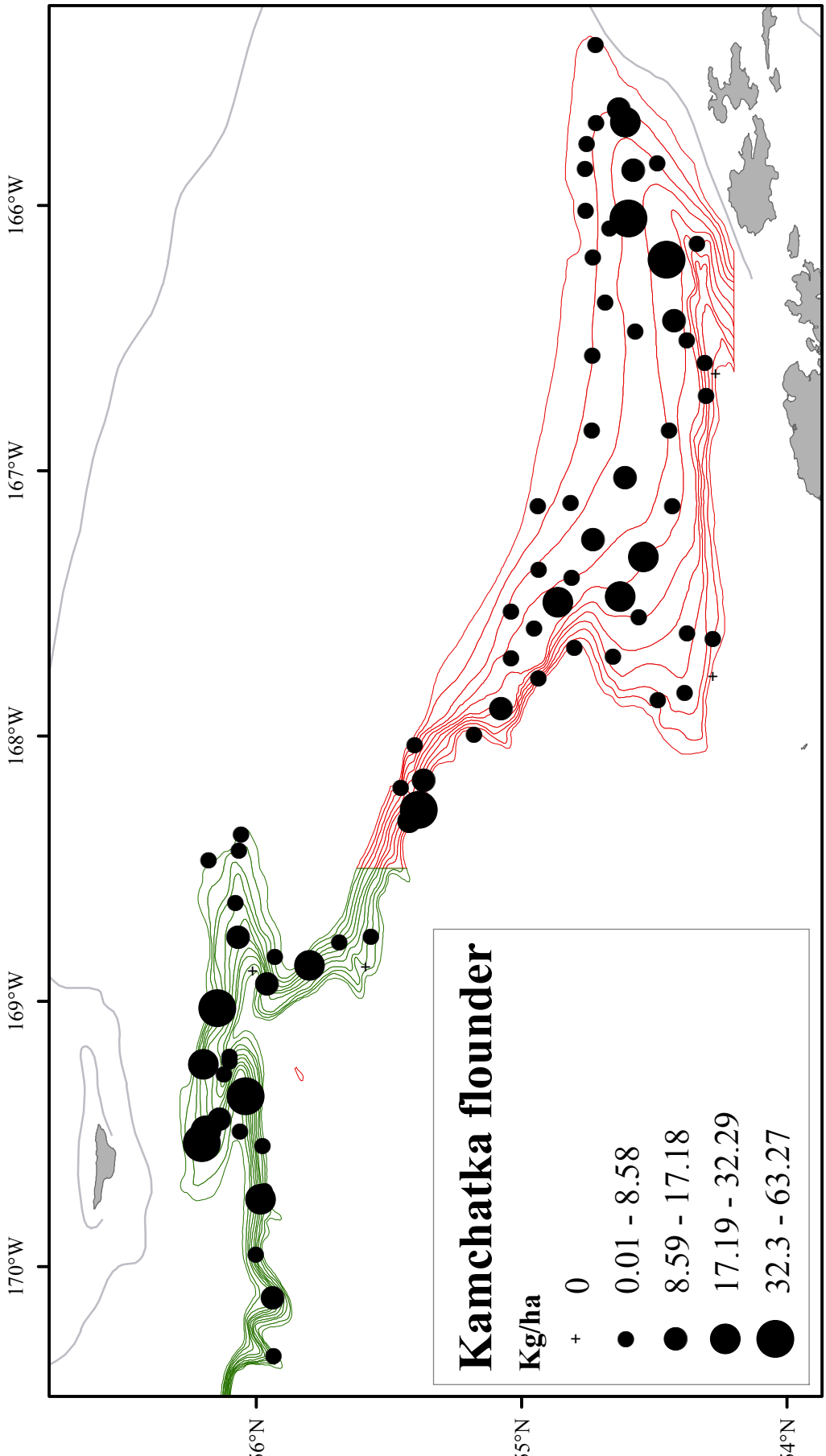

Figure 70. - - continued.

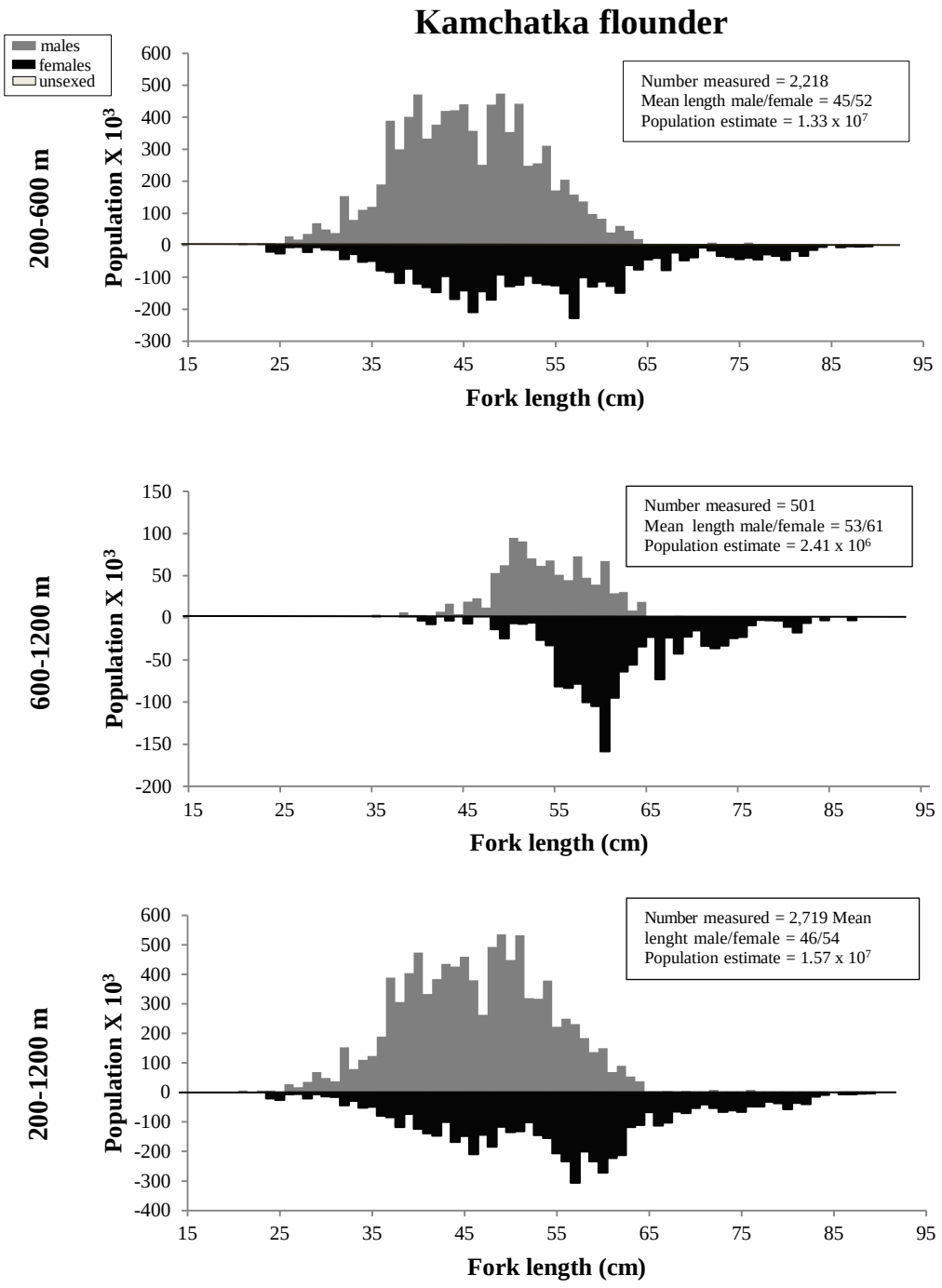

Figure 69. - - Size composition of the estimated Kamchatka flounder population from the 2016 EBSS survey for all subareas by depth.

Table 43. - - Abundance estimates by subarea and depth stratum for Kamchatka flounder *(Atheresthes evermanni)* from the 2016 EBSS survey.

Atheresthes evermanni **Kamchatka flounder**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.72E+03	1.84E+06	2.13E+05	2.37E+11	4.28E+00	4.58E+00
	400-600	6.49E+03	3.92E+06	2.28E+06	4.73E+11	1.60E+01	9.66E+00
	600-800	2.02E+03	8.57E+05	7.41E+05	1.08E+11	1.16E+01	4.92E+00
	800-1,000	4.13E+02	1.85E+05	3.39E+04	8.72E+09	3.05E+00	1.37E+00
	1,000-1,200	9.44E+01	2.83E+04	1.20E+03	1.04E+08	8.53E-01	2.56E-01
2	200-400	9.36E+02	1.21E+06	2.51E+05	2.66E+11	8.09E+00	1.05E+01
	400-600	2.35E+03	1.58E+06	5.37E+04	2.25E+10	3.33E+01	2.25E+01
	600-800	4.79E+02	2.45E+05	6.28E+03	3.16E+09	8.11E+00	4.15E+00
	800-1,000	3.76E+02	1.58E+05	1.81E+04	2.80E+09	6.80E+00	2.86E+00
	1,000-1,200	5.56E+01	3.52E+04	1.20E+03	4.70E+08	1.04E+00	6.58E-01
3	200-400	2.11E+02	2.27E+05	8.54E+03	4.70E+09	2.33E+00	2.51E+00
	400-600	4.99E+02	3.51E+05	8.85E+03	2.03E+09	5.63E+00	3.96E+00
	600-800	5.00E+02	2.73E+05	2.44E+04	7.37E+09	5.50E+00	3.00E+00
	800-1,000	1.98E+02	1.15E+05	2.03E+04	7.30E+09	2.71E+00	1.57E+00
	1,000-1,200	1.13E+01	3.92E+03	1.27E+02	1.54E+07	1.67E-01	5.80E-02
4	200-400	7.05E+02	1.22E+06	2.62E+04	2.56E+11	5.70E+00	9.89E+00
	400-600	1.19E+03	5.45E+05	4.15E+05	7.26E+10	1.63E+01	7.46E+00
	600-800	2.19E+02	1.29E+05	5.78E+03	2.36E+09	3.15E+00	1.86E+00
	800-1,000	3.41E+02	1.95E+05	9.71E+04	3.15E+10	4.82E+00	2.75E+00
	1,000-1,200	8.71E+00	3.40E+03	7.59E+01	1.16E+07	1.32E-01	5.14E-02
5	200-400	2.02E+02	3.66E+05	3.24E+03	3.83E+09	4.76E+00	8.64E+00
	400-600	1.88E+02	9.58E+04	4.27E+03	8.54E+08	4.41E+00	2.25E+00
	600-800	5.50E+01	2.88E+04	3.02E+03	8.29E+08	1.27E+00	6.67E-01
	800-1,000						
	1,000-1,200	3.18E+01	1.17E+04	1.01E+03	1.37E+08	5.58E-01	2.05E-01
6	200-400	1.19E+03	1.52E+06	4.31E+04	8.37E+10	4.57E+00	5.84E+00
	400-600	6.34E+02	3.84E+05	2.90E+04	1.44E+10	3.72E+00	2.25E+00
	600-800	2.56E+02	1.46E+05	2.23E+04	7.19E+09	2.79E+00	1.60E+00
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.14E+04**	**1.57E+07**	**4.31E+06**	**1.62E+12**	**6.53E+00**	**4.79E+00**

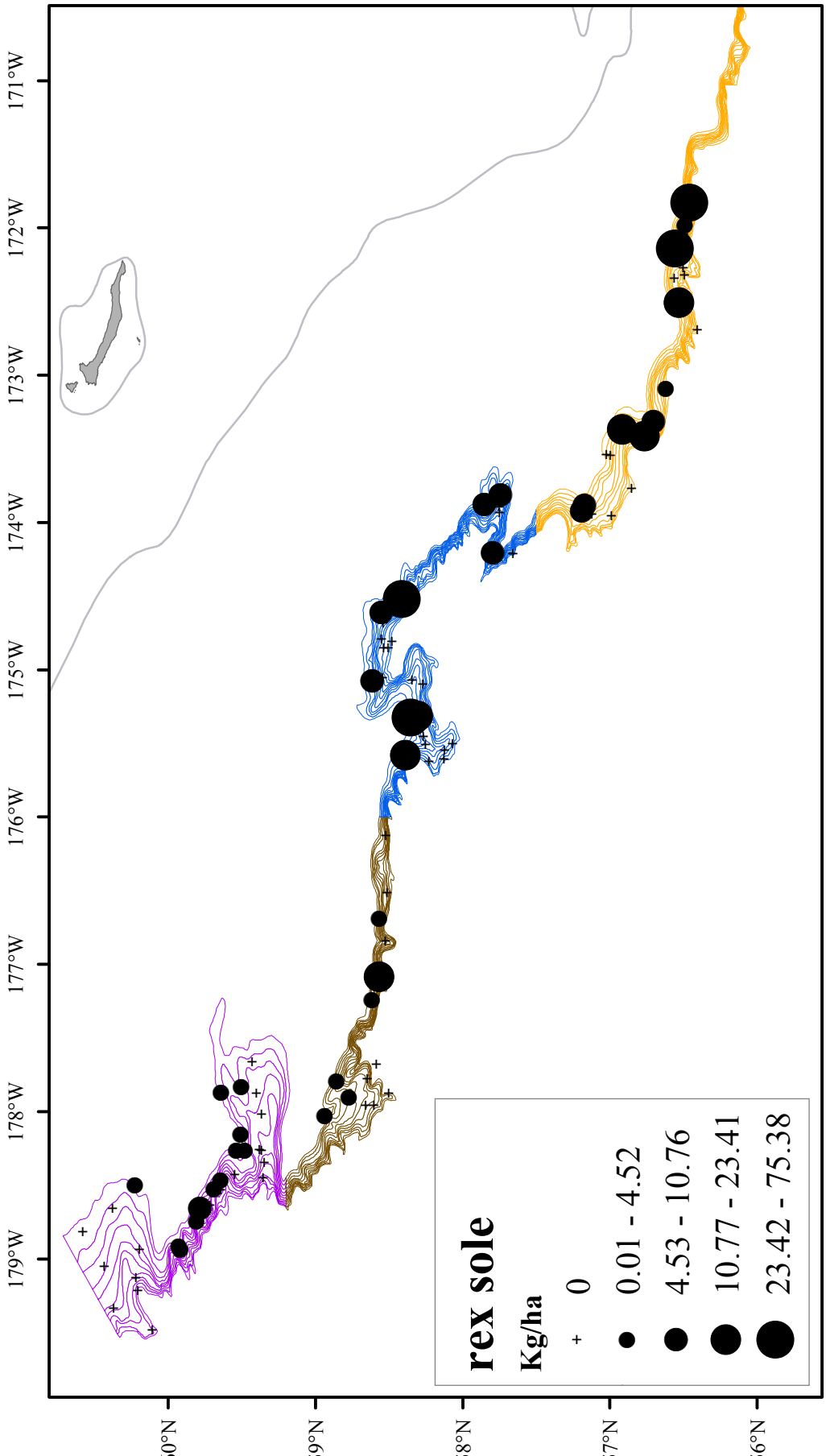

Figure 72. - - Distribution and relative abundance of rex sole from the 2016 EBSS survey. Values are CPUE of kg/ha.

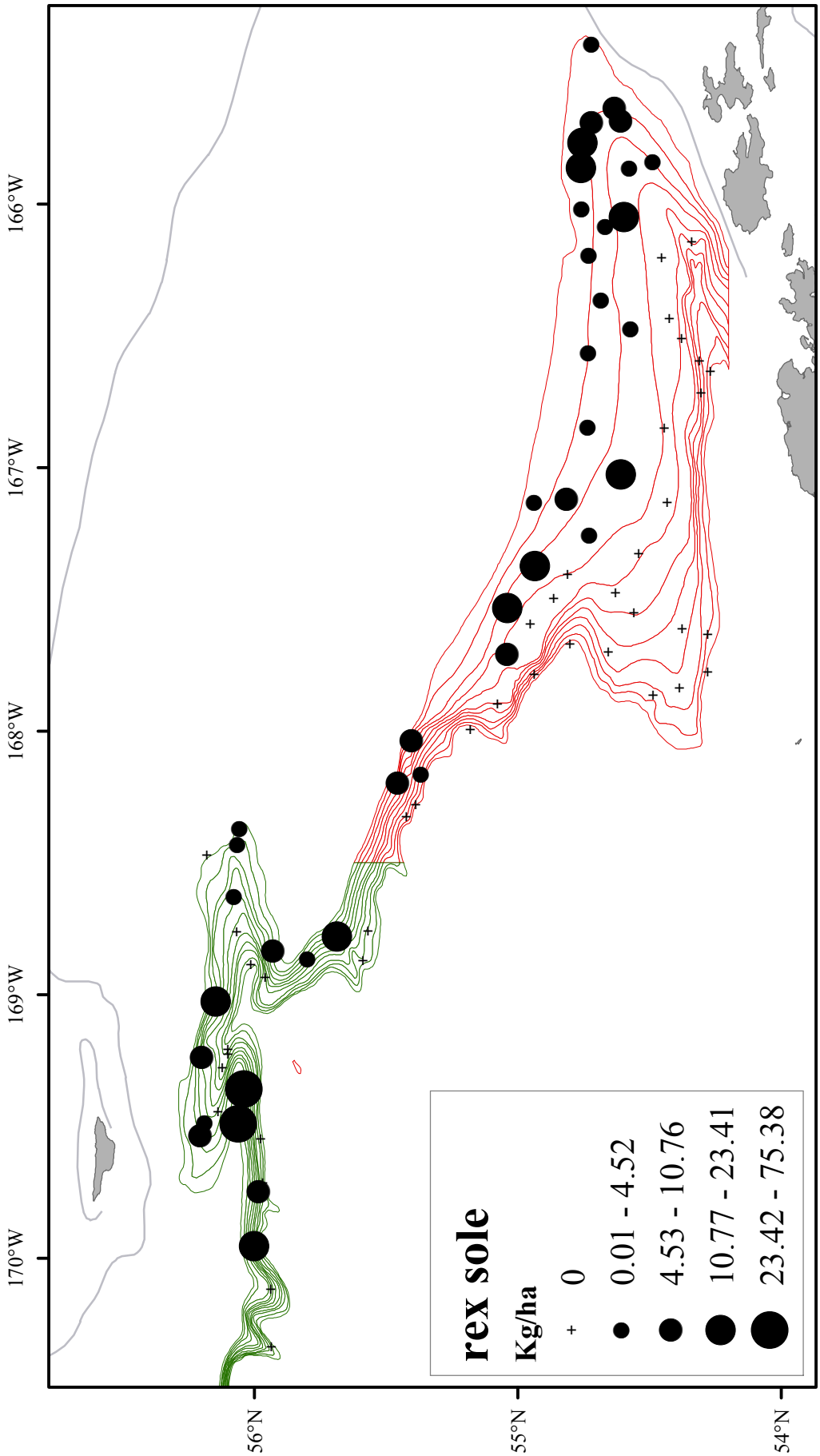

Figure 72. - - continued.

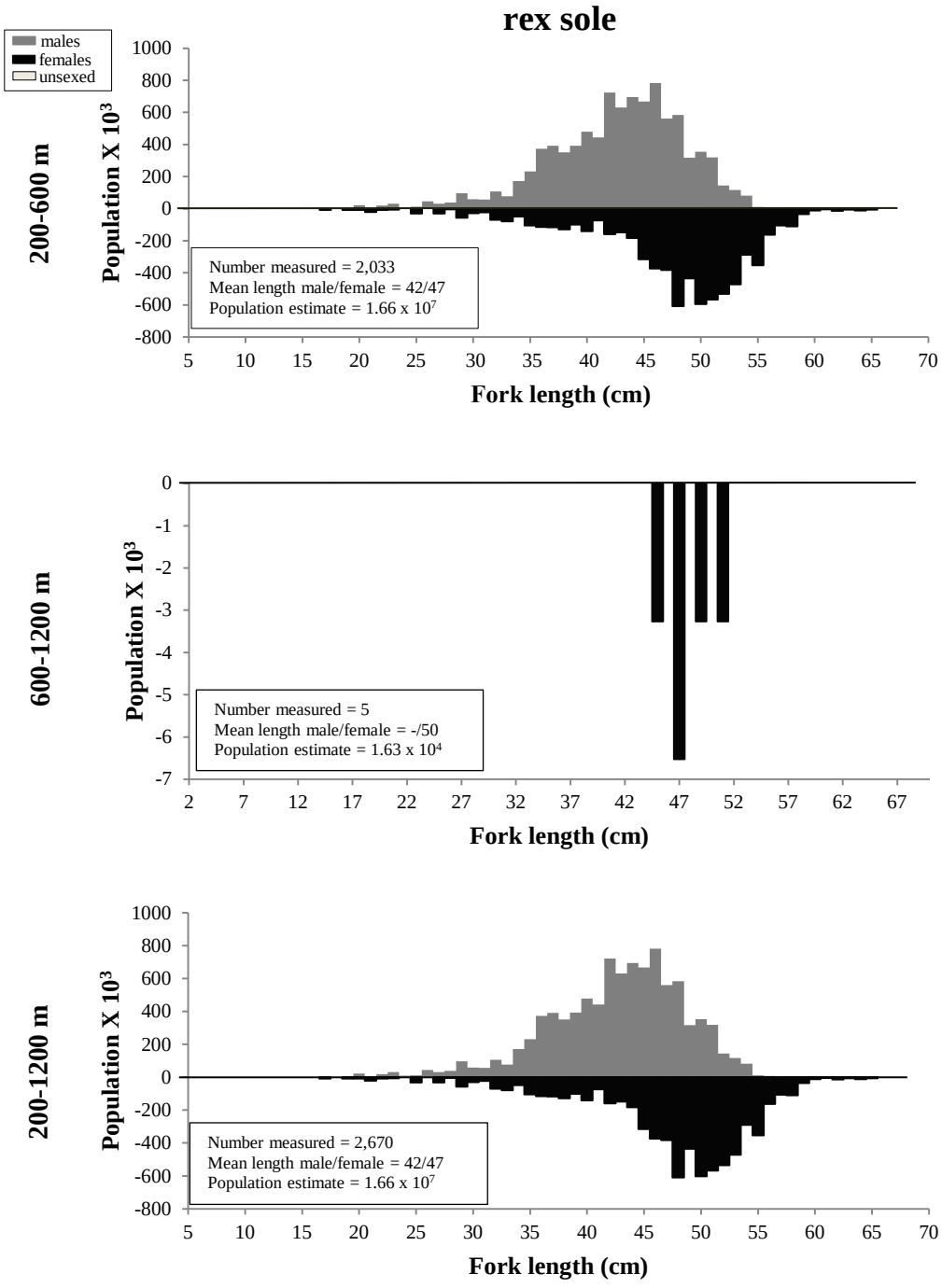

Figure 73. - - Size composition of the estimated rex sole population from the 2016 EBSS survey for all subareas by depth.

Table 44. - - Abundance estimates by subarea and depth stratum for rex sole *(Glyptocephalus zachirus)* from the 2016 EBSS survey.

Glyptocephalus zachirus **rex sole**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	2.69E+03	3.43E+06	3.95E+05	5.58E+11	6.71E+00	8.55E+00
	400-600	1.08E+03	1.22E+06	2.35E+05	3.07E+11	2.65E+00	3.00E+00
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	1.76E+03	2.63E+06	3.62E+05	1.13E+12	1.52E+01	2.27E+01
	400-600	4.58E+02	5.13E+05	2.52E+04	3.09E+10	6.49E+00	7.28E+00
	600-800	1.66E+01	1.63E+04	2.75E+02	2.66E+08	2.80E-01	2.76E-01
	800-1,000						
	1,000-1,200						
3	200-400	2.37E+03	2.71E+06	1.42E+06	1.78E+12	2.62E+01	3.00E+01
	400-600	7.15E+02	9.26E+05	4.42E+04	8.82E+10	8.07E+00	1.05E+01
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.77E+03	2.52E+06	2.90E+05	6.92E+11	1.43E+01	2.04E+01
	400-600	3.56E+02	4.36E+05	5.83E+04	8.81E+10	4.88E+00	5.97E+00
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	5.55E+01	1.29E+05	6.28E+01	6.75E+08	1.31E+00	3.05E+00
	400-600	2.64E+02	2.93E+05	2.93E+04	3.03E+10	6.20E+00	6.89E+00
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	5.10E+02	1.38E+06	1.83E+04	1.38E+11	1.96E+00	5.30E+00
	400-600	1.58E+02	3.95E+05	9.57E+03	8.30E+10	9.26E-01	2.32E+00
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.22E+04**	**1.66E+07**	**2.89E+06**	**4.93E+12**	**3.73E+00**	**5.07E+00**

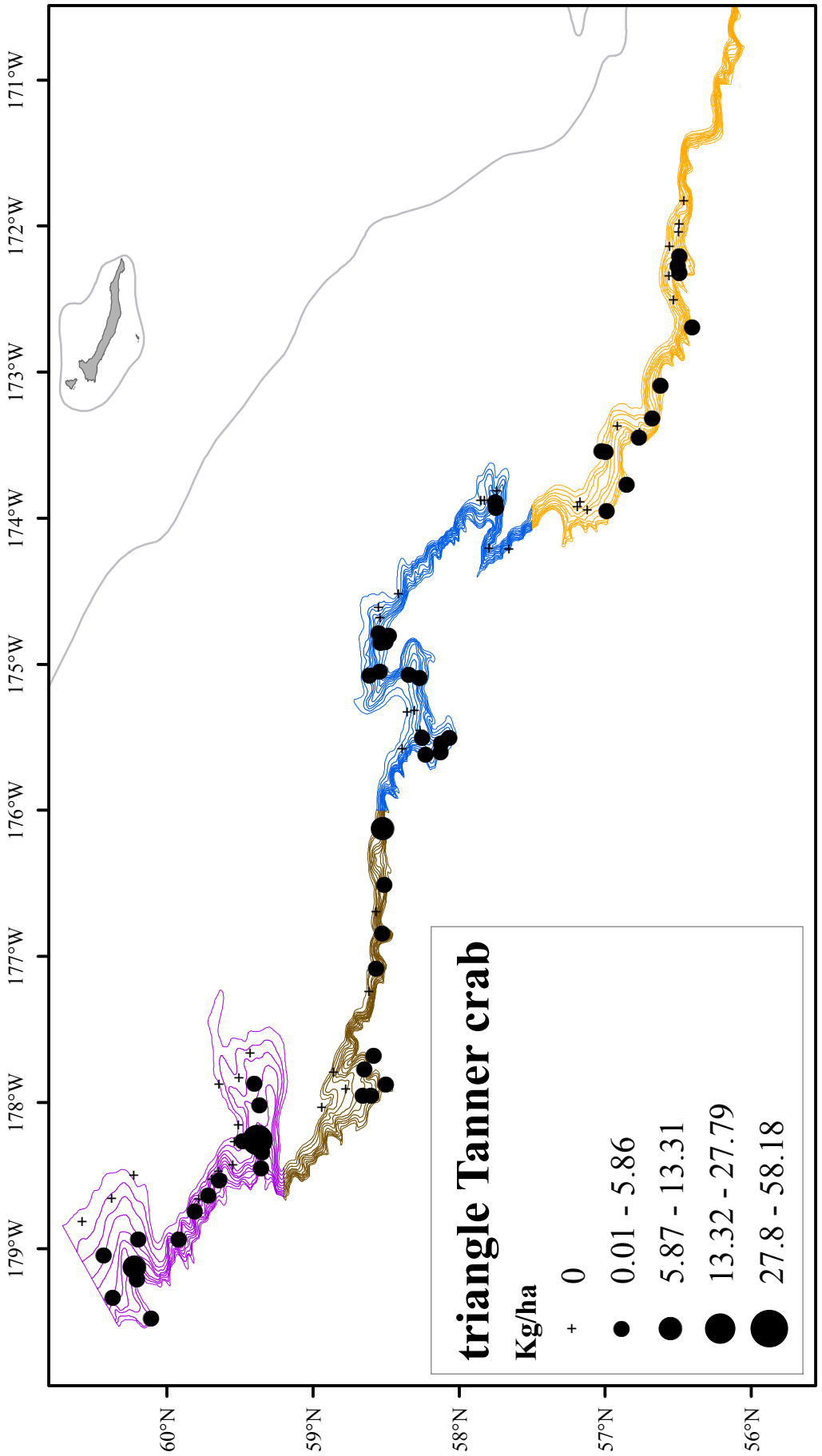

Figure 74. - - Distribution and relative abundance of triangle Tanner crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

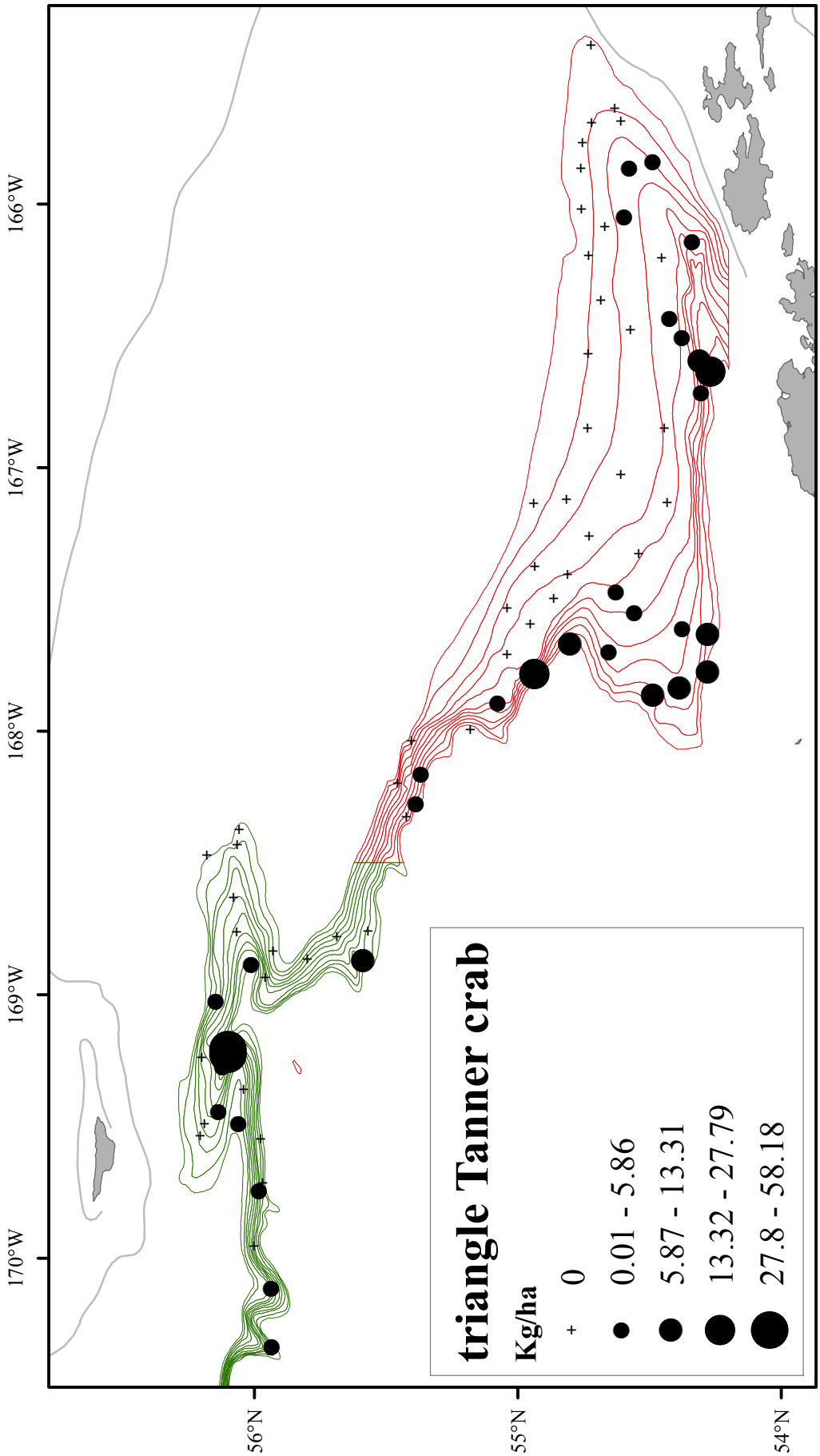

Figure 74. - - continued.

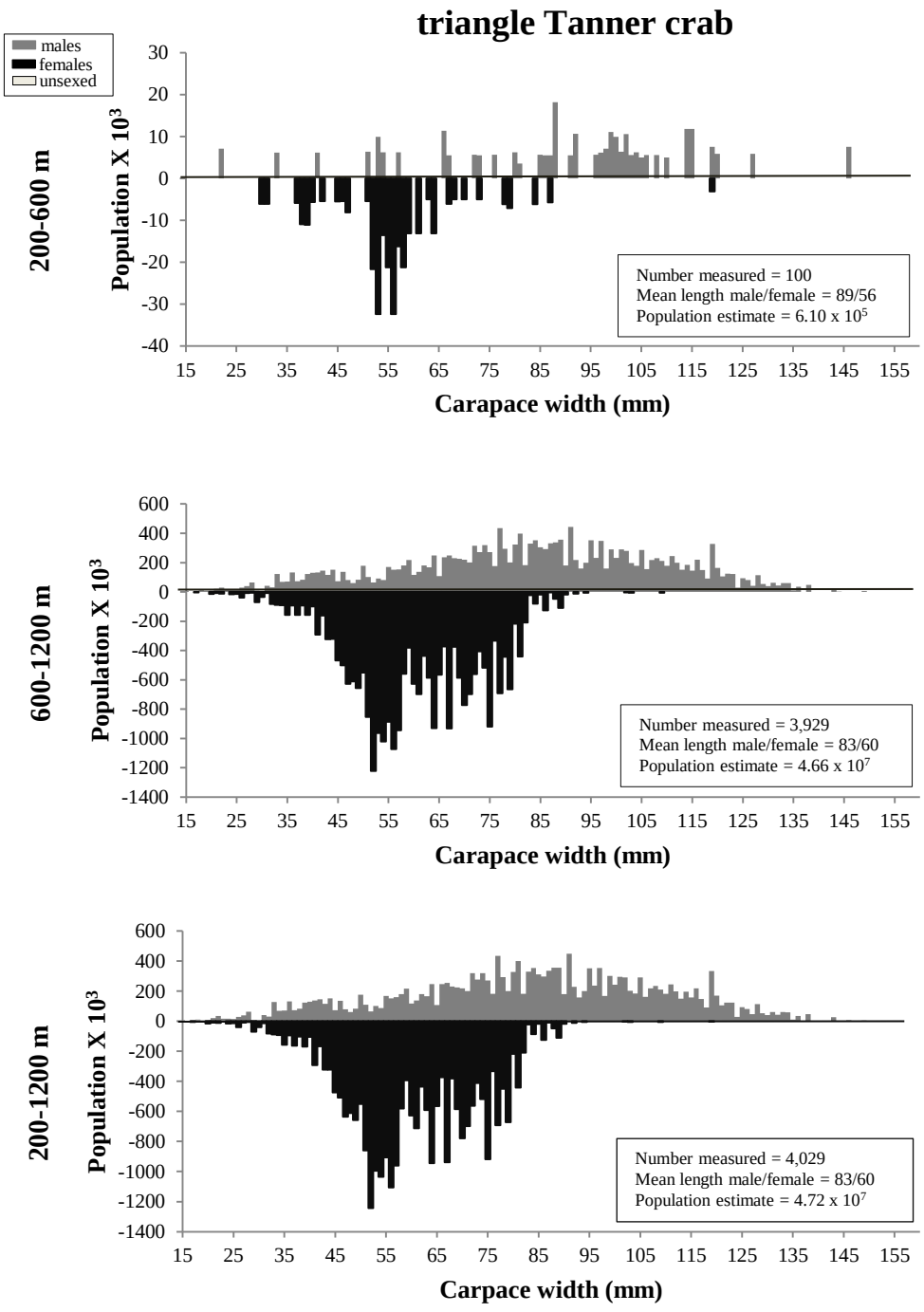

Figure 75. - - Size composition of the estimated triangleTanner crab population from the 2016 EBSS survey for all subareas by depth.

Table 45. - - Abundance estimates by subarea and depth stratum for triangle Tanner crab *(Chionoecetes angulatus)* from the 2016 EBSS survey.

Chionoecetes angulatus **triangle Tanner crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	2.45E+01	1.38E+05	9.96E+01	3.54E+09	6.04E-02	3.41E-01
	600-800	1.24E+02	5.60E+05	5.47E+03	8.88E+10	7.10E-01	3.21E+00
	800-1,000	7.08E+02	4.69E+06	8.95E+04	6.79E+12	5.23E+00	3.46E+01
	1,000-1,200	1.67E+03	1.09E+07	1.05E+05	5.66E+12	1.51E+01	9.87E+01
2	200-400	1.44E+01	3.00E+04	2.07E+02	8.98E+08	1.24E-01	2.59E-01
	400-600	6.95E+00	1.60E+04	2.59E+01	1.58E+08	9.86E-02	2.27E-01
	600-800	2.56E+01	1.48E+05	6.07E+02	2.08E+10	4.33E-01	2.51E+00
	800-1,000	2.28E+01	1.48E+05	4.01E+02	1.92E+10	4.12E-01	2.68E+00
	1,000-1,200	1.63E+03	9.09E+06	5.42E+05	1.16E+13	3.04E+01	1.70E+02
3	200-400						
	400-600	2.98E+00	8.05E+03	8.88E+00	6.49E+07	3.36E-02	9.09E-02
	600-800	3.36E+01	1.25E+05	7.42E+02	9.34E+09	3.70E-01	1.37E+00
	800-1,000	5.92E+01	2.99E+05	4.08E+02	1.60E+10	8.08E-01	4.09E+00
	1,000-1,200	1.59E+01	6.03E+04	2.11E+01	3.23E+08	2.36E-01	8.92E-01
4	200-400						
	400-600	9.19E+00	3.49E+04	7.39E+01	7.29E+08	1.26E-01	4.78E-01
	600-800	2.50E+01	2.39E+05	2.42E+02	2.75E+10	3.60E-01	3.45E+00
	800-1,000	1.27E+02	1.29E+06	5.15E+03	4.42E+11	1.79E+00	1.82E+01
	1,000-1,200	4.45E+01	6.50E+05	5.69E+02	1.10E+11	6.72E-01	9.81E+00
5	200-400						
	400-600	3.03E+00	1.12E+04	9.16E+00	1.26E+08	7.11E-02	2.63E-01
	600-800	1.73E+02	1.01E+06	1.03E+04	6.57E+11	4.02E+00	2.35E+01
	800-1,000	1.76E+02	1.70E+06	4.69E+03	6.10E+11	3.18E+00	3.09E+01
	1,000-1,200	1.14E+02	8.82E+05	1.47E+03	1.77E+10	2.01E+00	1.55E+01
6	200-400	7.94E+00	1.70E+05	6.30E+01	2.89E+10	3.06E-02	6.55E-01
	400-600	2.02E+01	2.10E+05	8.62E+01	7.50E+09	1.18E-01	1.23E+00
	600-800	6.51E+02	9.74E+06	1.90E+05	7.22E+13	7.10E+00	1.06E+02
	800-1,000	3.65E+02	4.51E+06	3.05E+04	5.08E+12	5.66E+00	6.99E+01
	1,000-1,200	8.17E+01	5.02E+05	3.52E+03	7.44E+10	1.64E+00	1.01E+01
1-6	**200-1,200**	**6.13E+03**	**4.72E+07**	**9.90E+05**	**1.03E+14**	**1.87E+00**	**1.44E+01**

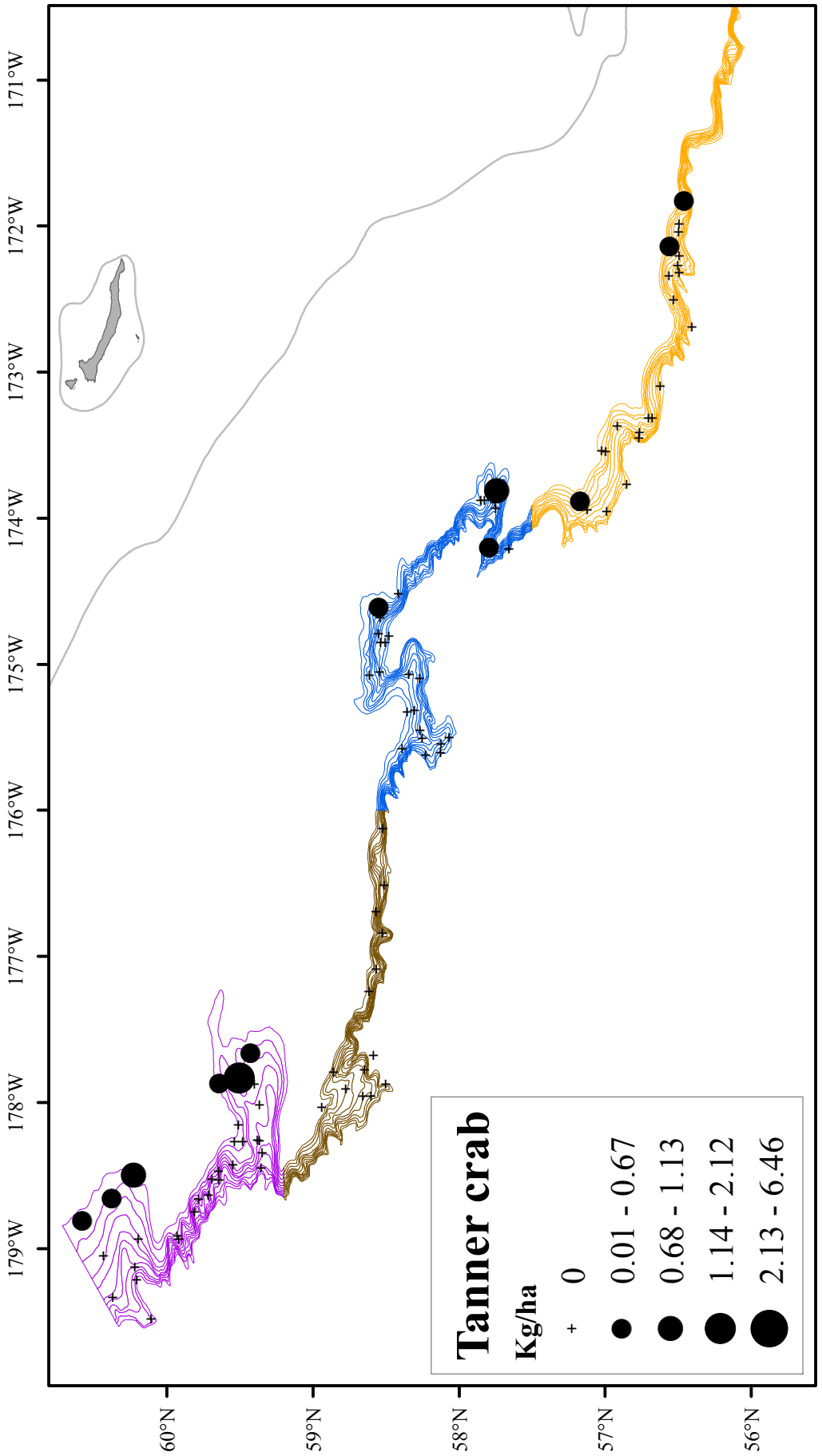

Figure 76. - - Distribution and relative abundance of Tanner crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

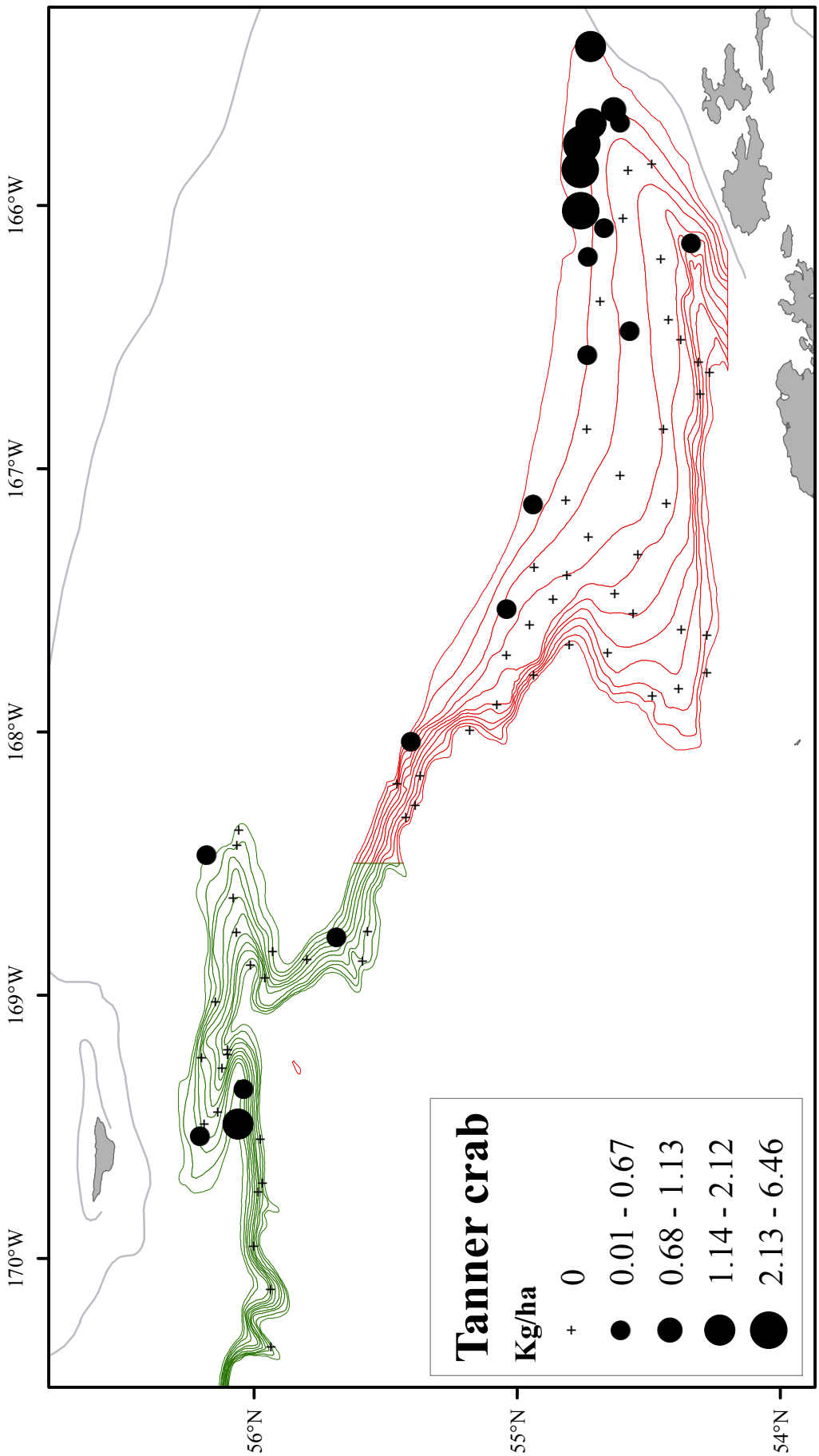

Figure 76. - - continued.

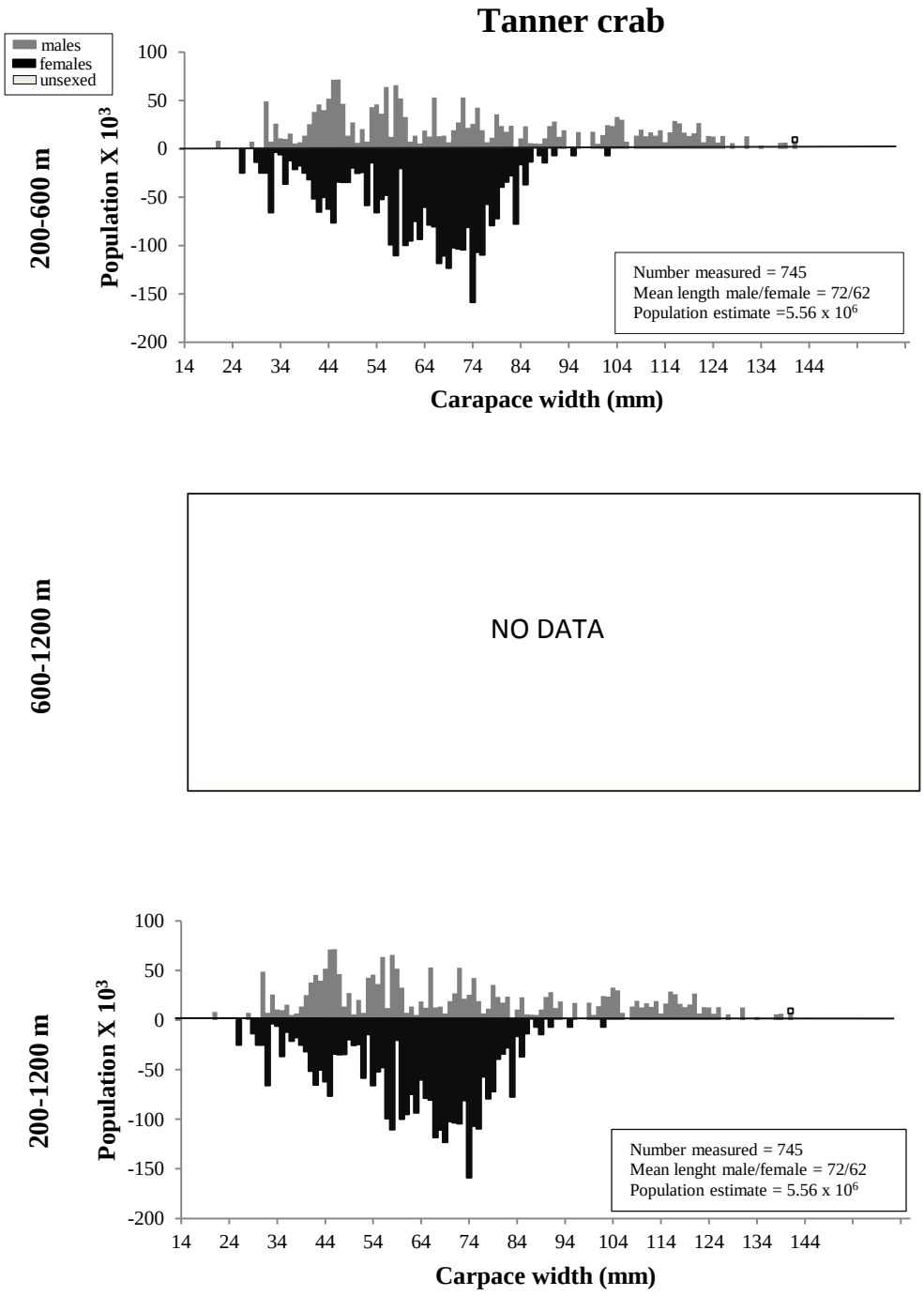

Figure 77. - - Size composition of the estimated Tanner crab population from the 2016 EBSS survey for all subareas by depth.

Table 46. - - Abundance estimates by subarea and depth stratum for Tanner crab *(Chionoecetes bairdi)* from the 2016 EBSS survey.

Chionoecetes bairdi **Tanner crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	4.96E+02	4.22E+06	3.34E+04	3.30E+12	1.24E+00	1.05E+01
	400-600	9.37E-02	9.37E+03	8.78E-03	8.78E+07	2.31E-04	2.31E-02
	600-800	9.61E-01	6.01E+03	9.23E-01	3.61E+07	5.52E-03	3.45E-02
	800-1,000						
	1,000-1,200						
2	200-400	2.97E+01	3.45E+05	4.49E+02	8.64E+10	2.57E-01	2.98E+00
	400-600	1.75E-01	1.05E+04	3.07E-02	1.11E+08	2.49E-03	1.49E-01
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	1.12E+01	1.07E+05	6.31E+01	6.23E+09	1.24E-01	1.19E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.93E+01	1.99E+05	2.99E+02	3.17E+10	1.56E-01	1.61E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	8.54E+01	7.14E+05	1.51E+03	1.13E+11	3.29E-01	2.75E+00
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**6.43E+02**	**5.61E+06**	**3.57E+04**	**3.54E+12**	**1.96E-01**	**1.71E+00**

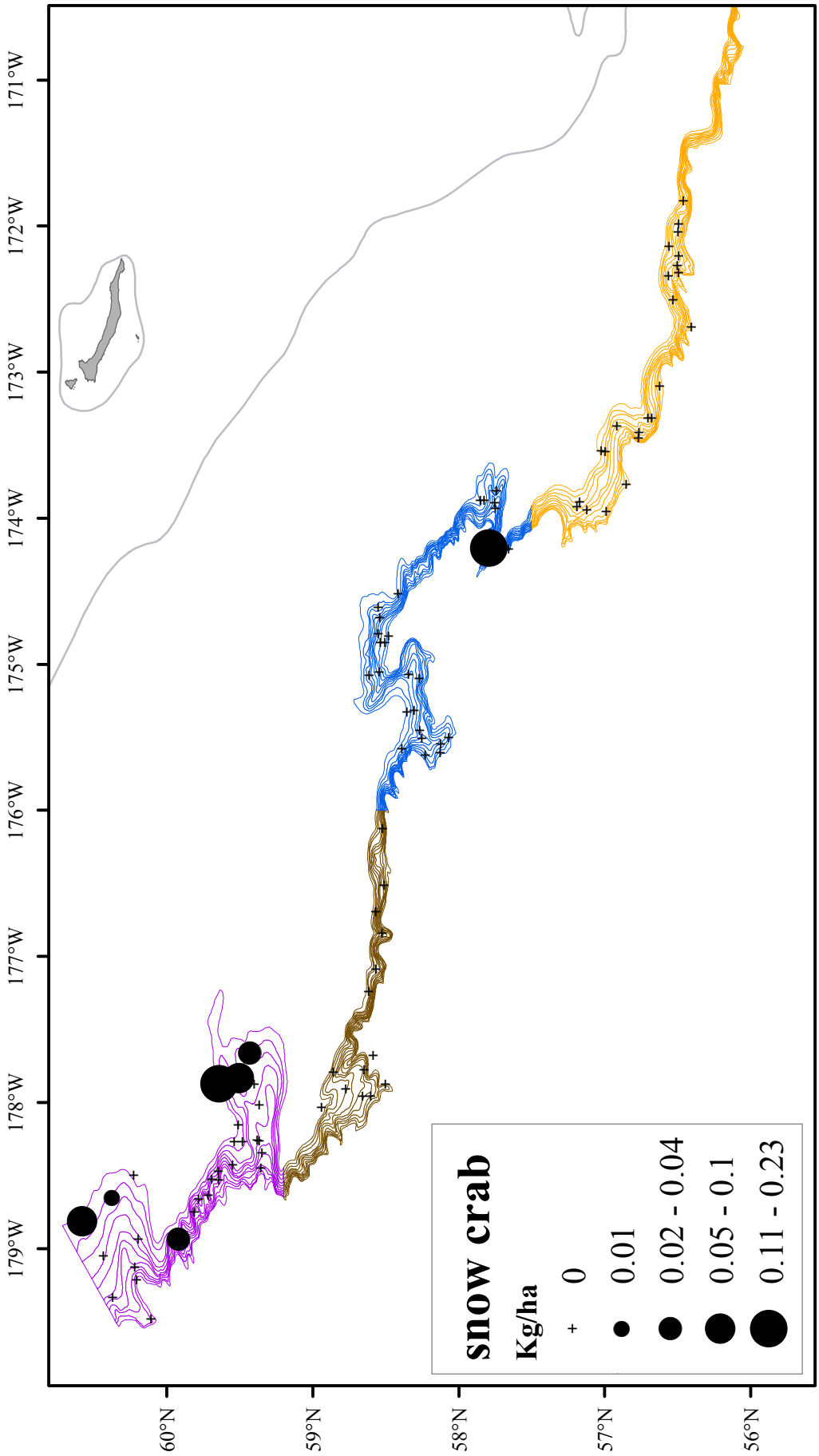

Figure 78. - - Distribution and relative abundance of snow crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

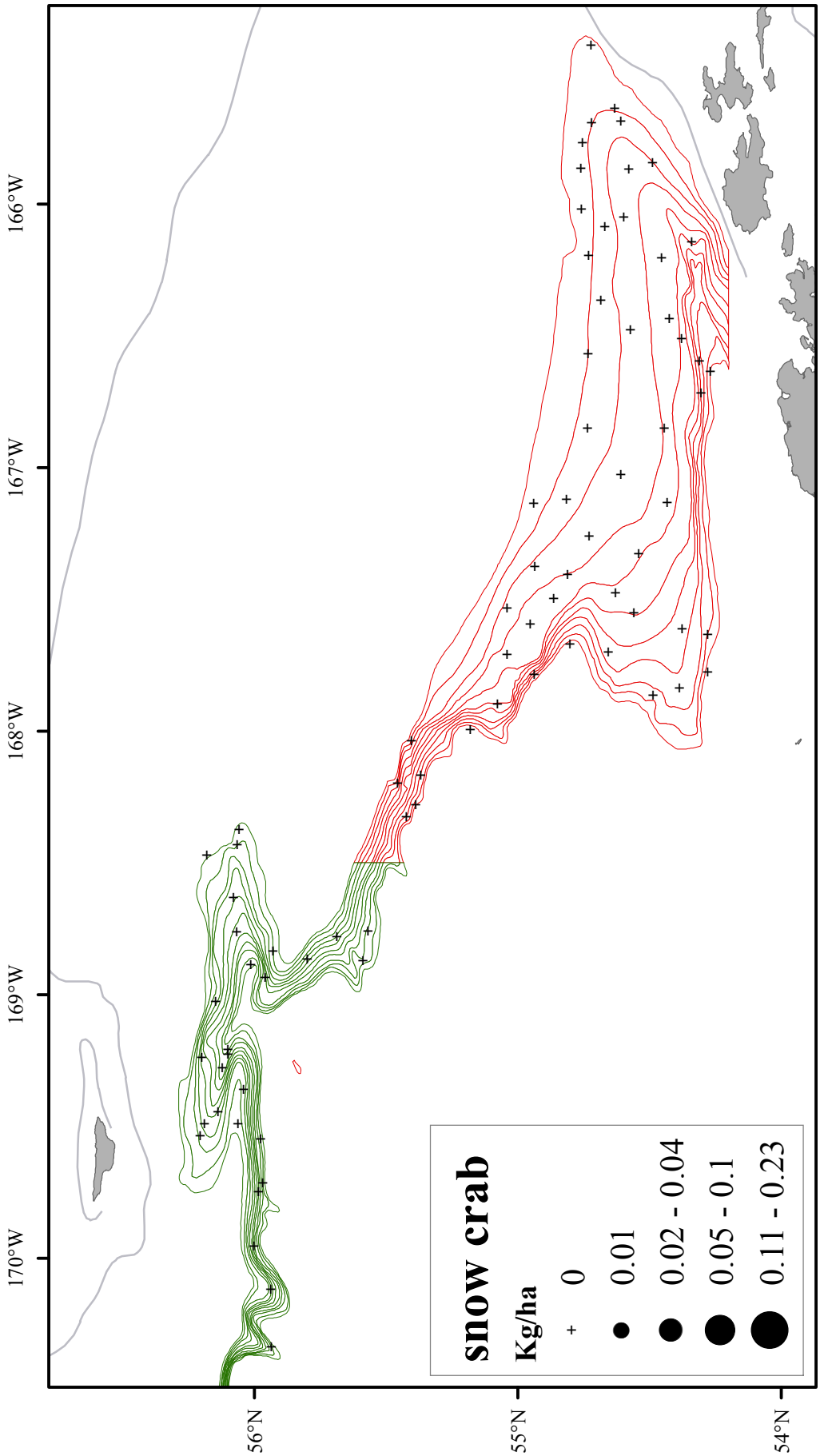

Figure 78. - - continued.

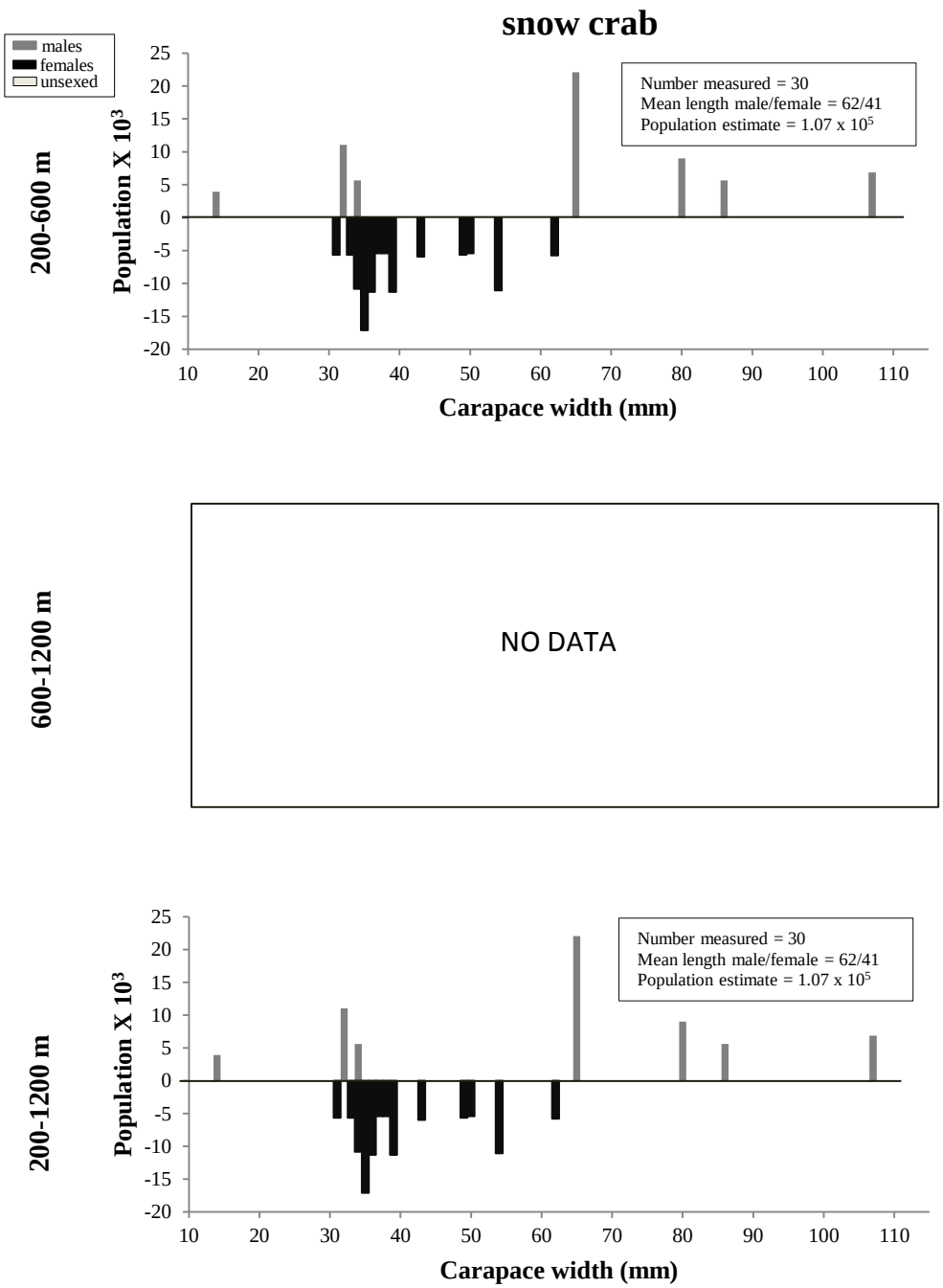

Figure 79. - - Size composition of the estimated snow crab population from the 2016 EBSS survey for all subareas by depth.

Table 47. - - Abundance estimates by subarea and depth stratum for snow crab *(Chionoecetes opilio)* from the 2016 EBSS survey.

Chionoecetes opilio **snow crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	3.61E+00	1.08E+04	1.27E+01	5.51E+07	2.92E-02	8.75E-02
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400						
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	8.62E+00	1.75E+05	1.76E+01	7.59E+09	3.32E-02	6.73E-01
	400-600	5.73E-01	1.13E+04	2.63E-01	5.44E+07	3.36E-03	6.60E-02
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.28E+01**	**1.97E+05**	**3.06E+01**	**7.70E+09**	**3.91E-03**	**6.01E-02**

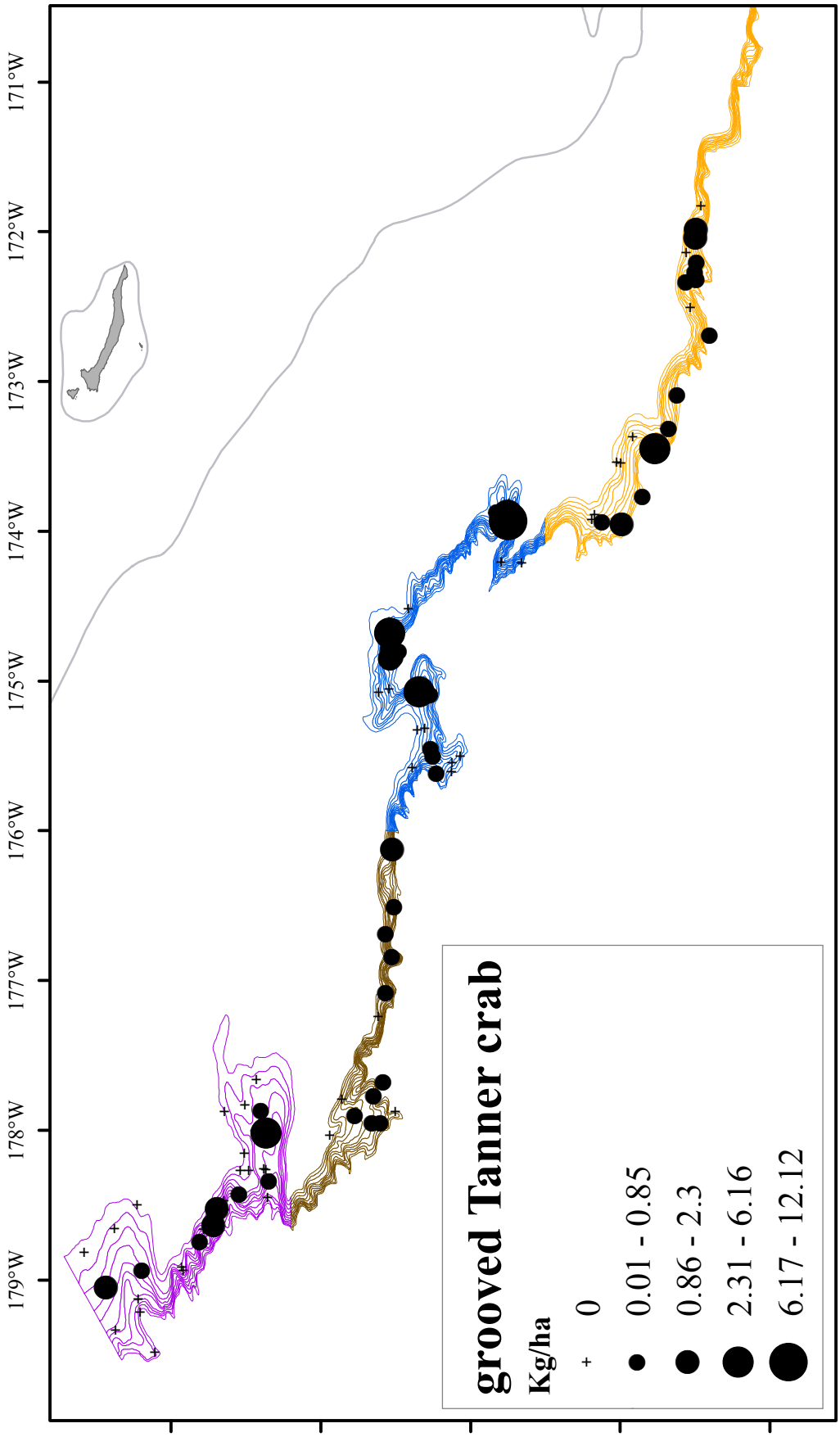

Figure 80. - - Distribution and relative abundance of grooved Tanner crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

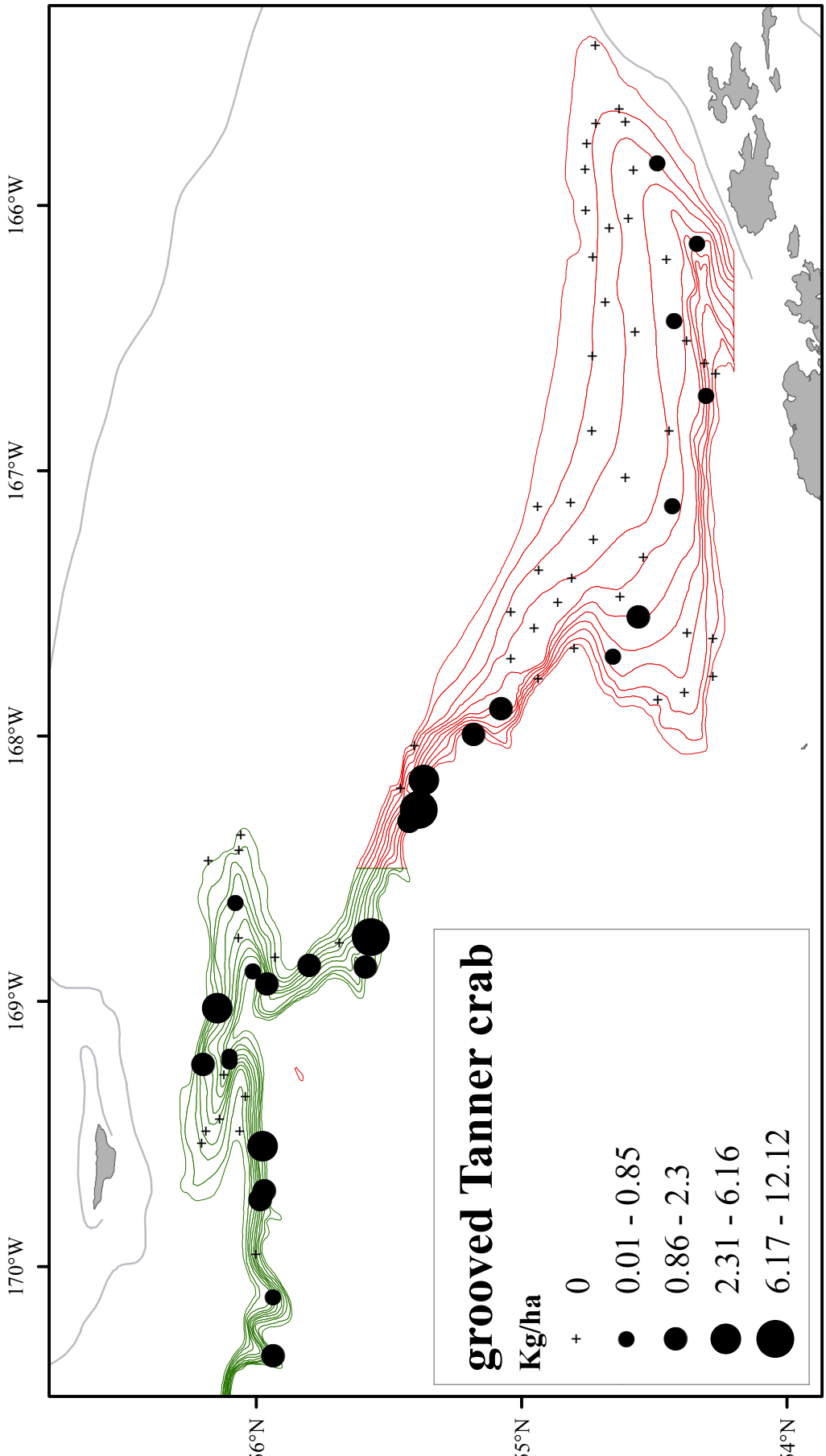

Figure 80. - - continued.

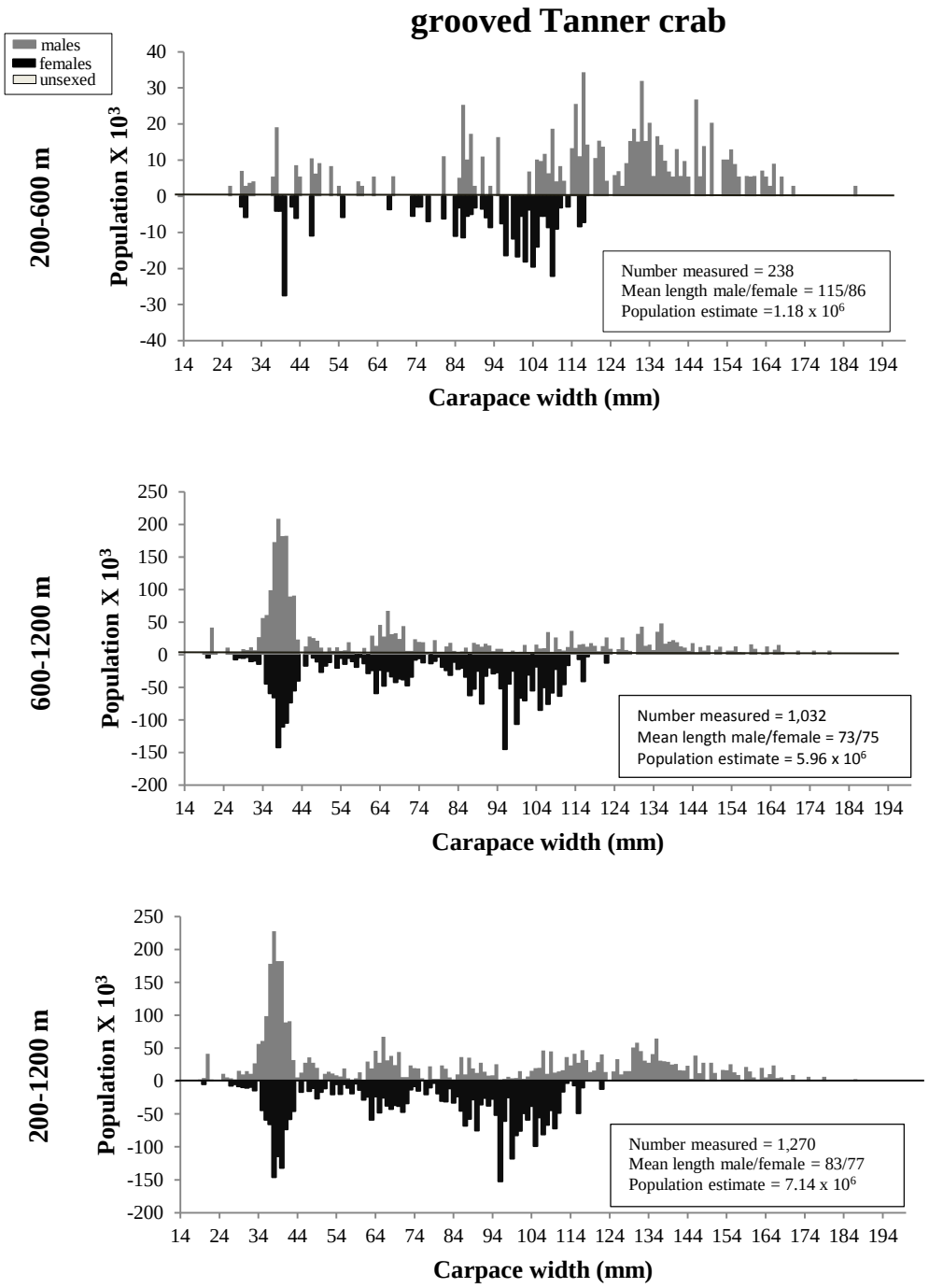

Figure 81. - - Size composition of the estimated grooved Tanner crab population from the 2016 EBSS survey for all subareas by depth.

Table 48. - - Abundance estimates by subarea and depth stratum for grooved Tanner crab *(Chionoecetes tanneri)* from the 2016 EBSS survey.

Chionoecetes tanneri **grooved Tanner crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600	1.61E+02	2.91E+05	9.50E+03	3.37E+10	3.96E-01	7.16E-01
	600-800	3.88E+02	1.01E+06	8.55E+04	6.79E+11	2.23E+00	5.79E+00
	800-1,000	5.72E+01	3.72E+05	1.47E+03	7.81E+10	4.22E-01	2.75E+00
	1,000-1,200						
2	200-400						
	400-600	9.38E+01	2.38E+05	1.22E+03	7.24E+09	1.33E+00	3.38E+00
	600-800	2.47E+01	1.74E+05	2.71E+02	2.11E+10	4.18E-01	2.94E+00
	800-1,000	1.73E+02	1.80E+06	8.96E+03	1.18E+12	3.13E+00	3.26E+01
	1,000-1,200	2.73E+01	2.08E+05	2.62E+02	1.27E+10	5.10E-01	3.89E+00
3	200-400						
	400-600	3.04E+01	1.06E+05	4.98E+02	7.63E+09	3.43E-01	1.20E+00
	600-800	9.91E+01	6.48E+05	2.22E+03	1.66E+11	1.09E+00	7.12E+00
	800-1,000	4.21E+01	1.69E+05	5.47E+02	7.18E+09	5.75E-01	2.30E+00
	1,000-1,200	7.14E+00	1.19E+05	1.63E+01	4.32E+09	1.06E-01	1.76E+00
4	200-400						
	400-600	5.82E+01	9.65E+04	3.08E+03	5.52E+09	7.97E-01	1.32E+00
	600-800	1.53E+02	6.51E+05	6.39E+03	1.05E+11	2.20E+00	9.38E+00
	800-1,000	1.58E+02	5.80E+05	1.65E+04	1.60E+11	2.23E+00	8.20E+00
	1,000-1,200	8.78E+00	6.88E+04	5.30E+01	4.02E+09	1.33E-01	1.04E+00
5	200-400						
	400-600	2.43E+01	6.56E+04	2.50E+01	3.76E+08	5.72E-01	1.54E+00
	600-800	1.93E+01	4.49E+04	1.64E+02	1.95E+08	4.48E-01	1.04E+00
	800-1,000	5.57E+00	5.71E+04	8.56E-01	1.38E+09	1.01E-01	1.04E+00
	1,000-1,200	5.85E+00	4.68E+04	3.42E+01	2.19E+09	1.03E-01	8.21E-01
6	200-400						
	400-600	1.51E+02	3.86E+05	4.93E+03	2.90E+10	8.85E-01	2.26E+00
	600-800	3.68E+01	7.71E+04	1.35E+03	5.94E+09	4.01E-01	8.40E-01
	800-1,000	1.39E+00	6.97E+03	1.94E+00	4.86E+07	2.16E-02	1.08E-01
	1,000-1,200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-6	**200-1,200**	**1.73E+03**	**7.22E+06**	**1.43E+05**	**2.51E+12**	**5.27E-01**	**2.21E+00**

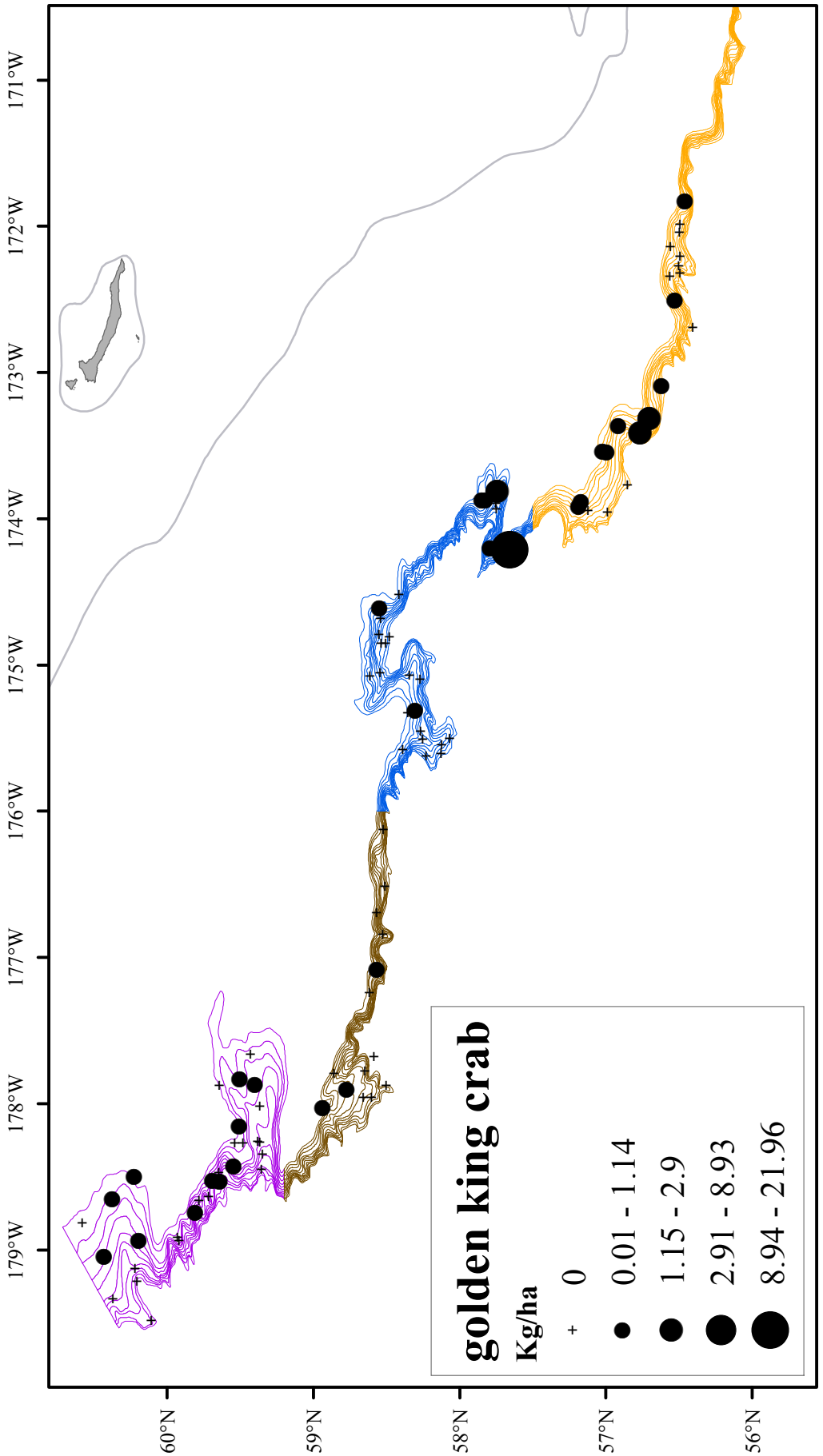

Figure 82. - - Distribution and relative abundance of golden king crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

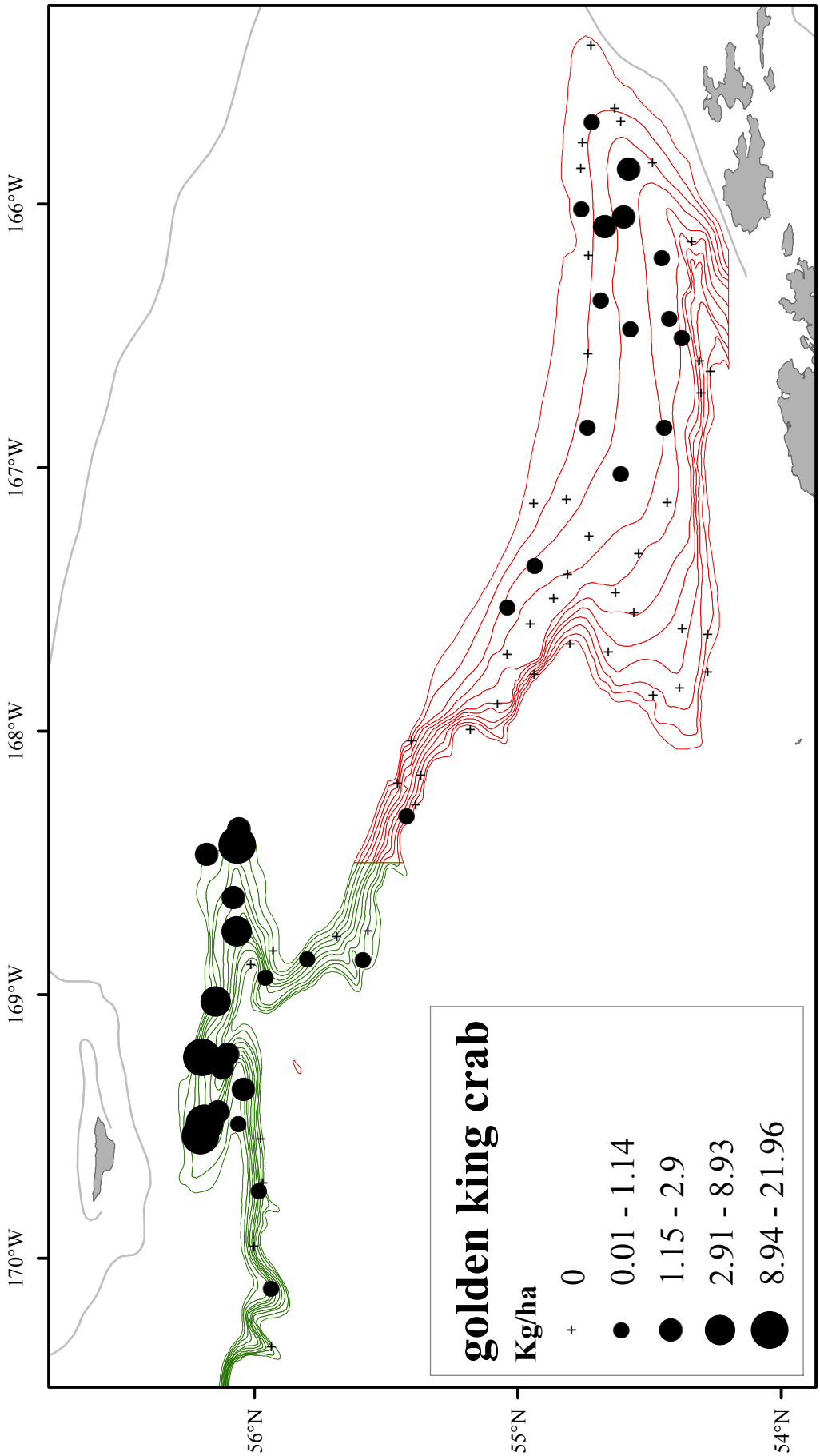

Figure 82. - -continued.

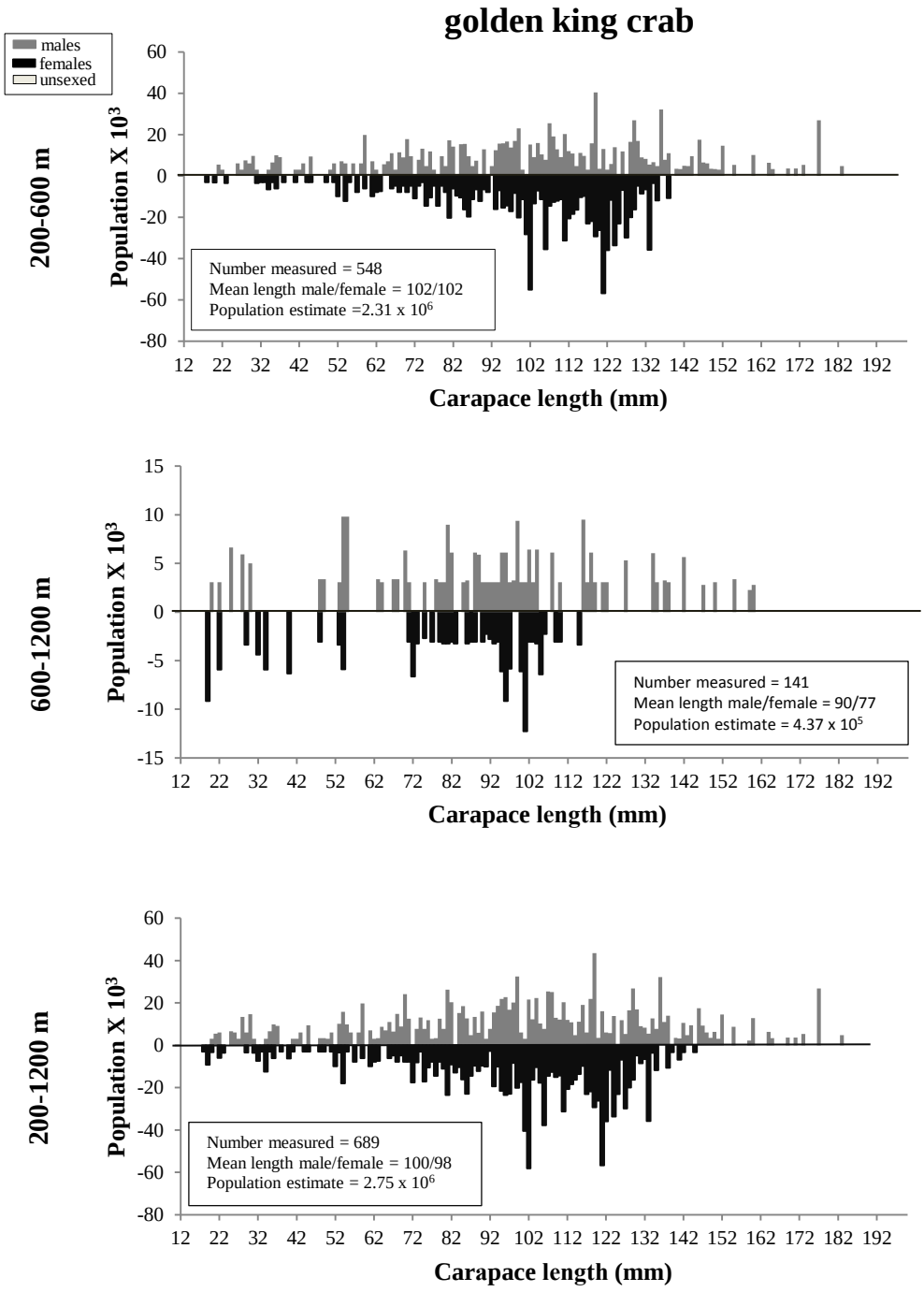

Figure 83. - - Size composition of the estimated golden king crab population from the 2016 EBSS survey for all subareas by depth.

Table 49. - - Abundance estimates by subarea and depth stratum for golden king crab *(Lithodes aequispinus)* from the 2016 EBSS survey.

Lithodes aequispinus **golden king crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.06E+02	9.68E+04	3.11E+03	1.48E+09	2.63E-01	2.41E-01
	400-600	1.39E+02	2.37E+05	3.37E+03	5.99E+09	3.42E-01	5.82E-01
	600-800	2.71E+00	1.18E+04	7.37E+00	1.39E+08	1.56E-02	6.78E-02
	800-1,000						
	1,000-1,200						
2	200-400	3.41E+02	3.16E+05	5.55E+04	5.93E+10	2.94E+00	2.73E+00
	400-600	7.62E+02	1.28E+06	6.97E+04	2.34E+11	1.08E+01	1.81E+01
	600-800	1.62E+02	3.82E+05	9.00E+03	4.36E+10	2.75E+00	6.46E+00
	800-1,000	1.59E+01	1.40E+04	2.27E+02	1.20E+08	2.87E-01	2.54E-01
	1,000-1,200	2.45E+01	1.97E+04	4.56E+02	2.53E+08	4.58E-01	3.67E-01
3	200-400	6.24E+01	5.20E+04	8.67E+02	3.70E+08	6.90E-01	5.75E-01
	400-600	4.83E+01	5.11E+04	5.45E+02	4.89E+08	5.45E-01	5.77E-01
	600-800	9.98E-02	4.99E+03	9.96E-03	2.49E+07	1.10E-03	5.48E-02
	800-1,000	8.80E-02	4.40E+03	7.74E-03	1.93E+07	1.20E-03	6.01E-02
	1,000-1,200						
4	200-400	2.74E+02	2.37E+05	4.61E+04	3.33E+10	2.21E+00	1.92E+00
	400-600	2.00E+01	2.60E+04	2.61E+02	4.63E+08	2.74E-01	3.56E-01
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	6.51E+00	5.81E+03	4.23E+01	3.38E+07	1.54E-01	1.37E-01
	400-600	1.37E+01	1.95E+04	4.86E+01	1.47E+08	3.22E-01	4.59E-01
	600-800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	800-1,000						
	1,000-1,200						
6	200-400	2.56E+01	3.21E+04	2.00E+02	2.01E+08	9.87E-02	1.24E-01
	400-600	2.50E+01	5.11E+04	6.47E+01	2.89E+08	1.46E-01	3.00E-01
	600-800	1.90E+00	2.37E+04	3.60E+00	5.63E+08	2.07E-02	2.59E-01
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**2.03E+03**	**2.86E+06**	**1.89E+05**	**3.81E+11**	**6.20E-01**	**8.74E-01**

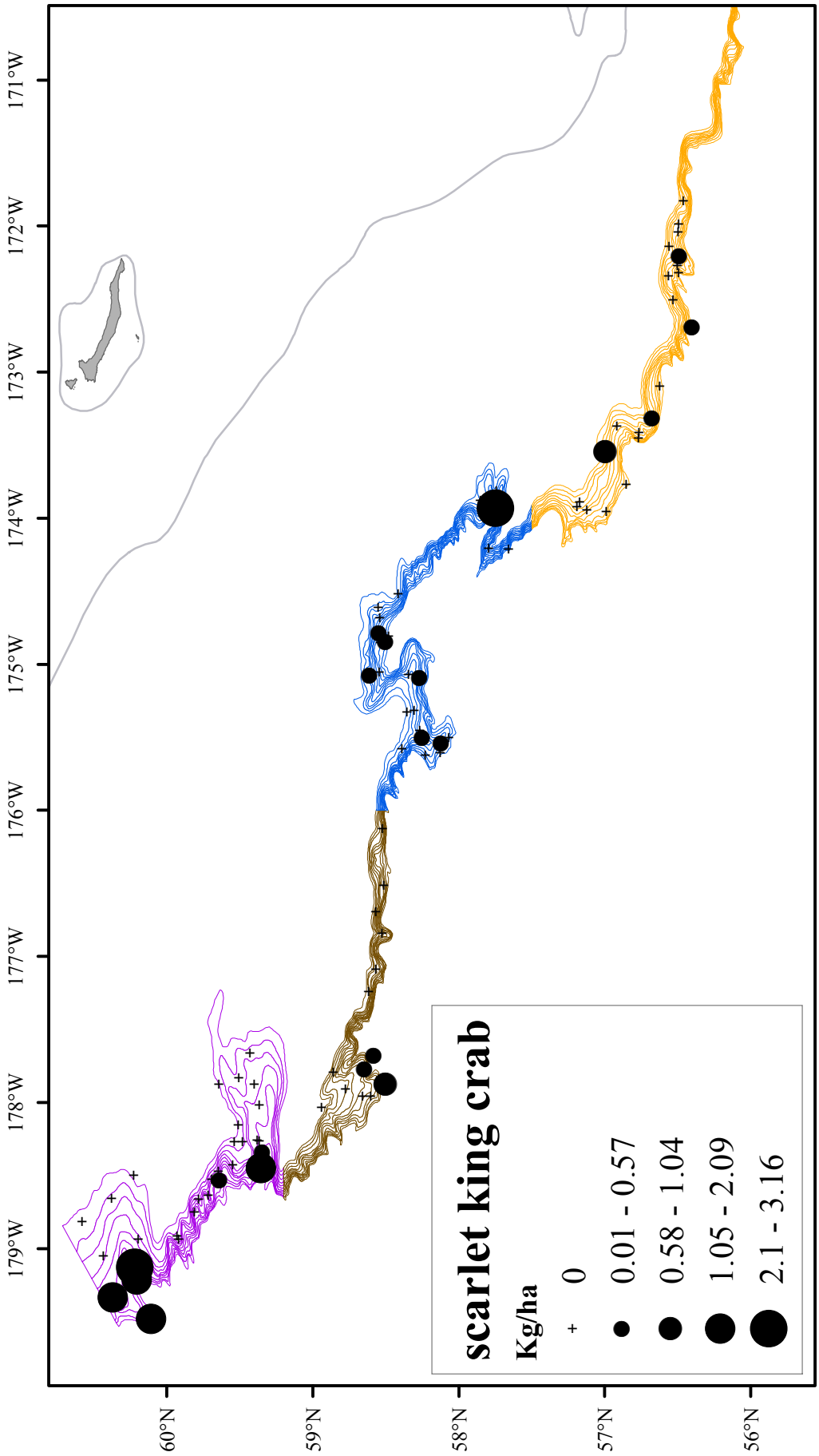

Figure 84. - - Distribution and relative abundance of scarlet king crab from the 2016 EBSS survey. Values are CPUE of kg/ha.

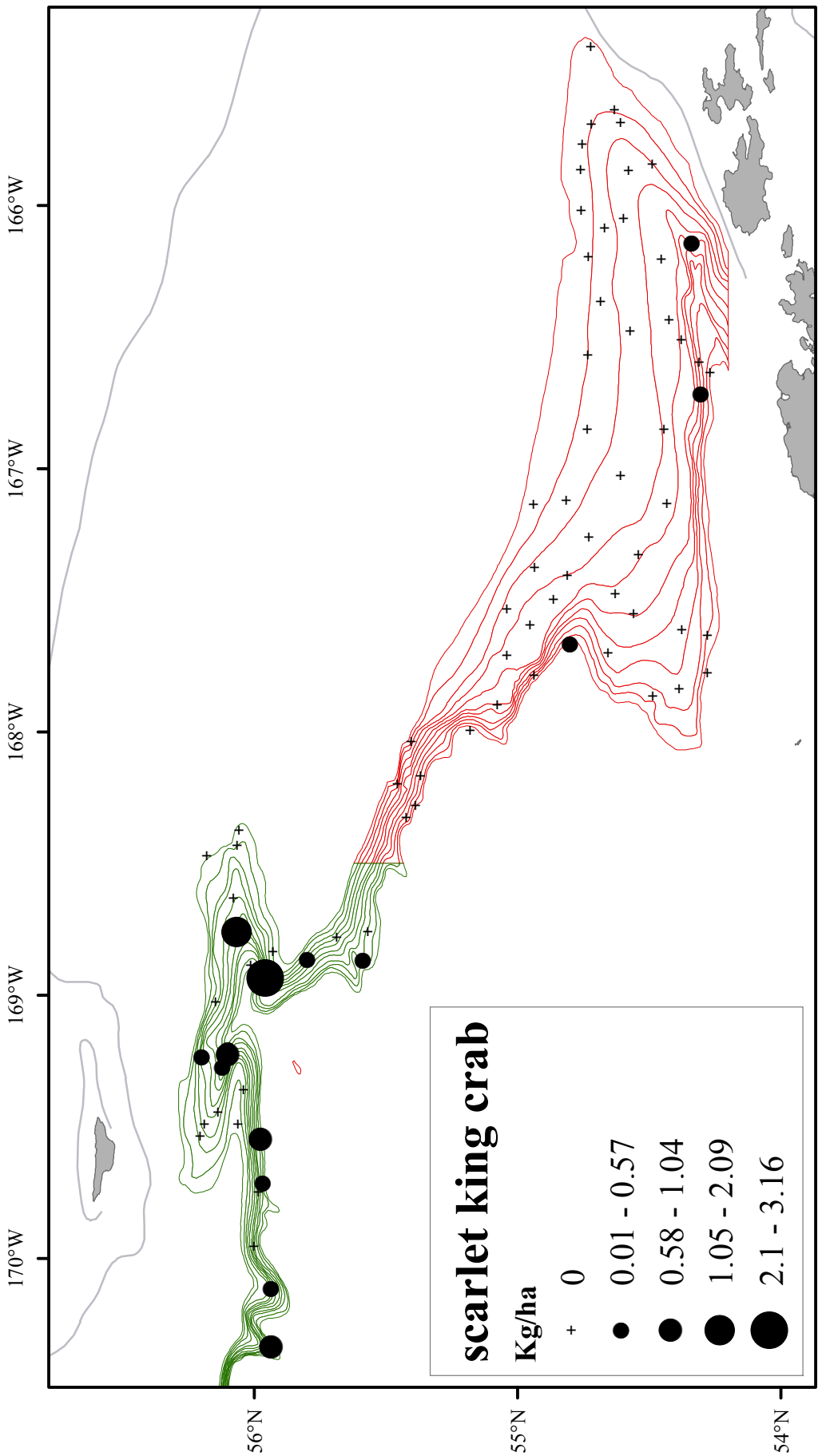

Figure 84. - - continued.

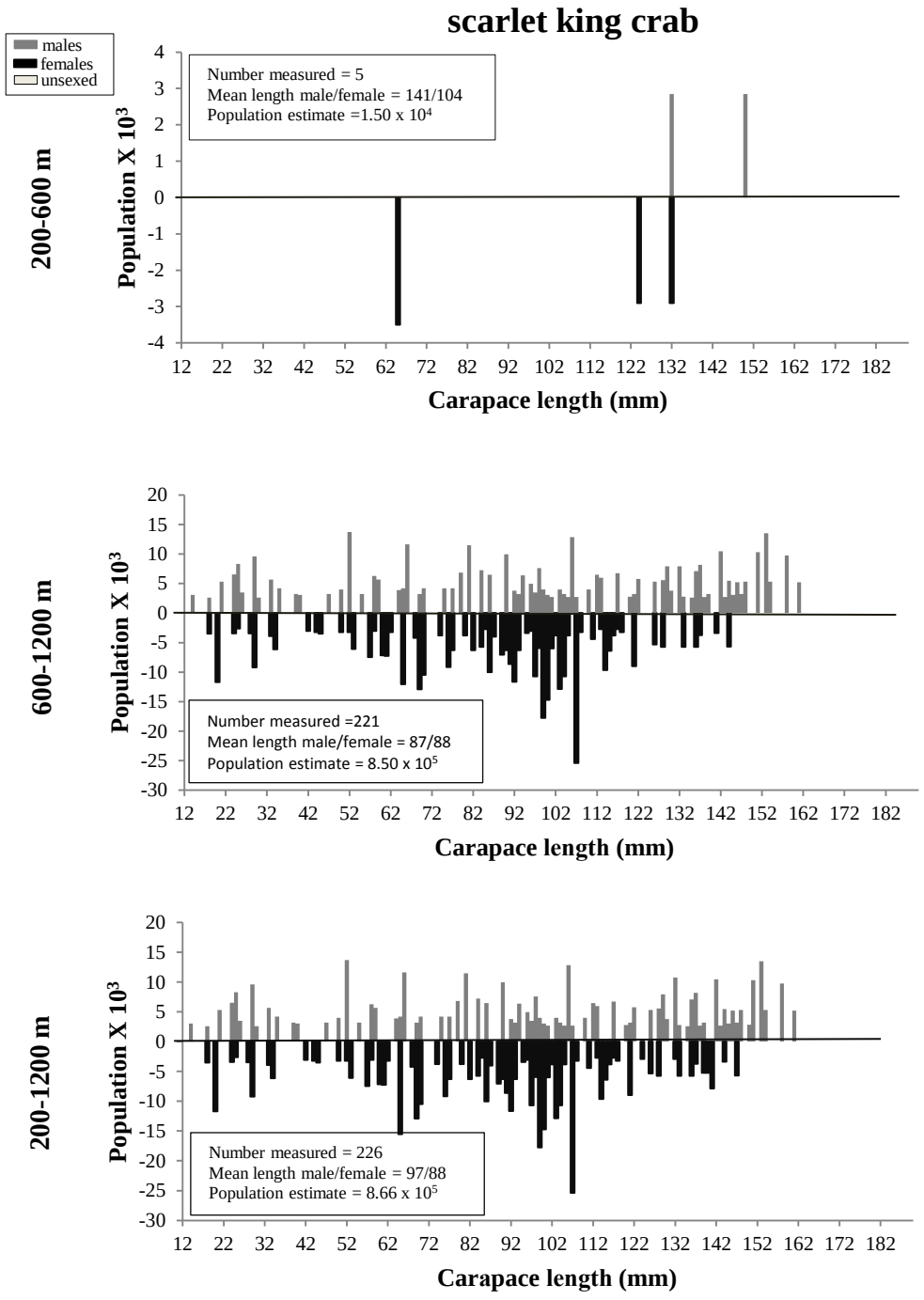

Figure 85. - - Size composition of the estimated scarlet king crab population from the 2016 EBSS survey for all subareas by depth.

Table 50. - - Abundance estimates by subarea and depth stratum for scarlet king crab *(Lithodes couesi)* from the 2016 EBSS survey.

Lithodes couesi **scarlet king crab**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400						
	400-600						
	600-800	1.05E+01	2.40E+04	1.10E+02	5.77E+08	6.03E-02	1.38E-01
	800-1,000	2.88E+00	1.34E+04	8.32E+00	1.80E+08	2.13E-02	9.90E-02
	1,000-1,200	2.77E+00	1.84E+04	7.65E+00	3.40E+08	2.50E-02	1.67E-01
2	200-400						
	400-600	1.23E+01	1.15E+04	6.03E+01	5.30E+07	1.74E-01	1.63E-01
	600-800	2.91E+01	9.77E+04	4.23E+02	4.90E+09	4.93E-01	1.65E+00
	800-1,000	5.60E+01	9.79E+04	9.21E+02	2.86E+09	1.01E+00	1.77E+00
	1,000-1,200	1.97E+01	2.69E+04	7.03E+01	9.88E+07	3.69E-01	5.02E-01
3	200-400						
	400-600						
	600-800						
	800-1,000	2.77E+01	4.35E+04	3.26E+02	6.88E+08	3.78E-01	5.94E-01
	1,000-1,200	4.29E+00	2.33E+04	6.91E+00	3.49E+08	6.35E-02	3.45E-01
4	200-400						
	400-600	3.85E-01	3.50E+03	1.48E-01	1.23E+07	5.27E-03	4.80E-02
	600-800	1.41E+01	8.45E+04	7.39E+01	2.65E+09	2.03E-01	1.22E+00
	800-1,000	4.47E+01	1.29E+05	1.99E+03	1.56E+10	6.32E-01	1.83E+00
	1,000-1,200	1.33E+00	3.40E+03	1.76E+00	1.16E+07	2.00E-02	5.14E-02
5	200-400						
	400-600						
	600-800	3.91E+00	6.41E+03	1.53E+01	4.11E+07	9.05E-02	1.48E-01
	800-1,000						
	1,000-1,200	1.96E+01	4.07E+04	3.76E+02	2.99E+08	3.44E-01	7.14E-01
6	200-400						
	400-600						
	600-800	3.84E+01	4.05E+04	8.31E+02	1.09E+09	4.19E-01	4.41E-01
	800-1,000	6.74E+01	6.63E+04	4.33E+03	3.74E+09	1.04E+00	1.03E+00
	1,000-1,200	8.39E+01	1.41E+05	1.01E+02	2.01E+09	1.69E+00	2.83E+00
1-6	**200-1,200**	**4.39E+02**	**8.72E+05**	**9.65E+03**	**3.55E+10**	**1.34E-01**	**2.66E-01**

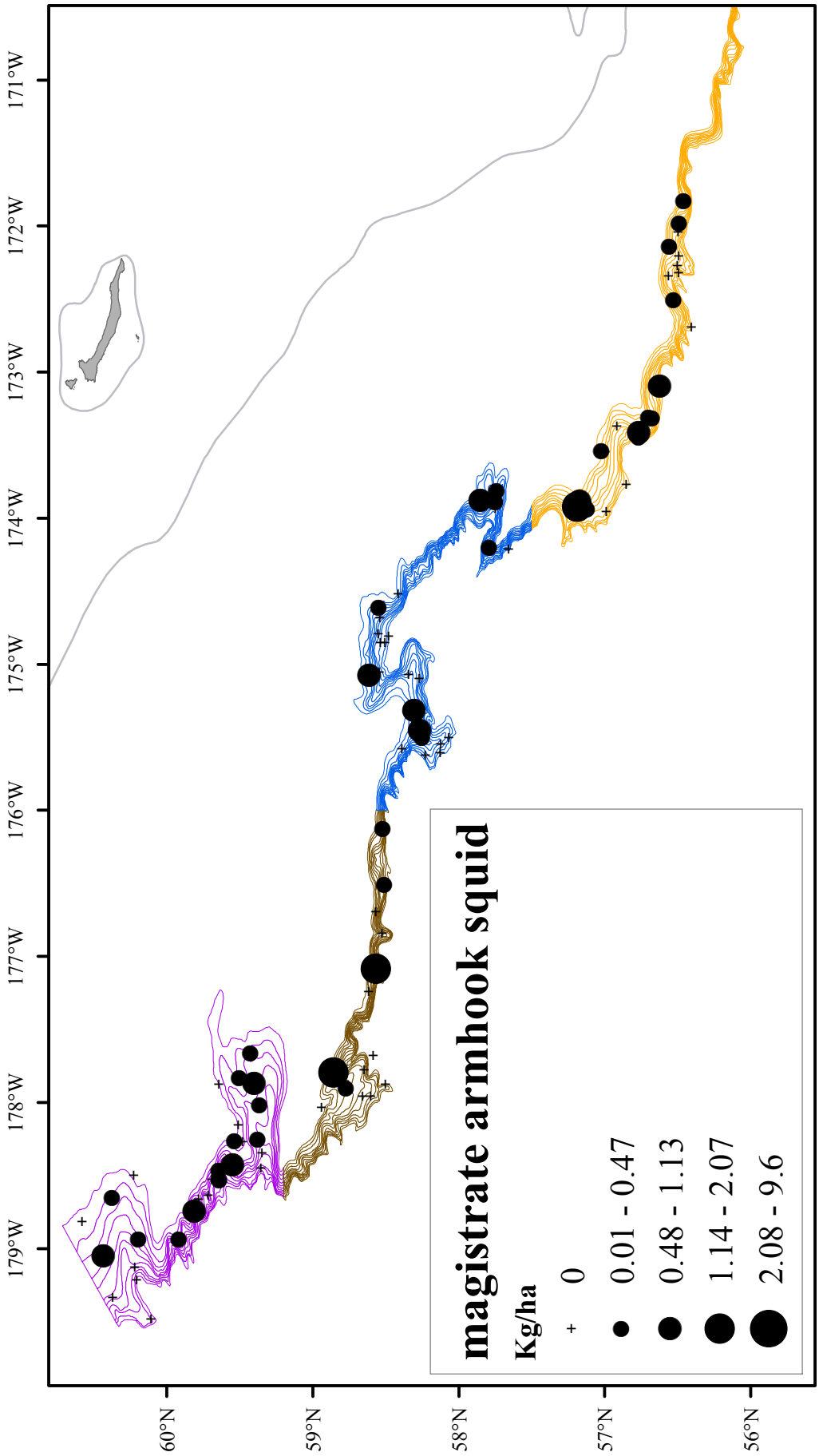

Figure 86. - - Distribution and relative abundance of magistrate armhook squid from the 2016 EBSS survey. Values are CPUE of kg/ha.

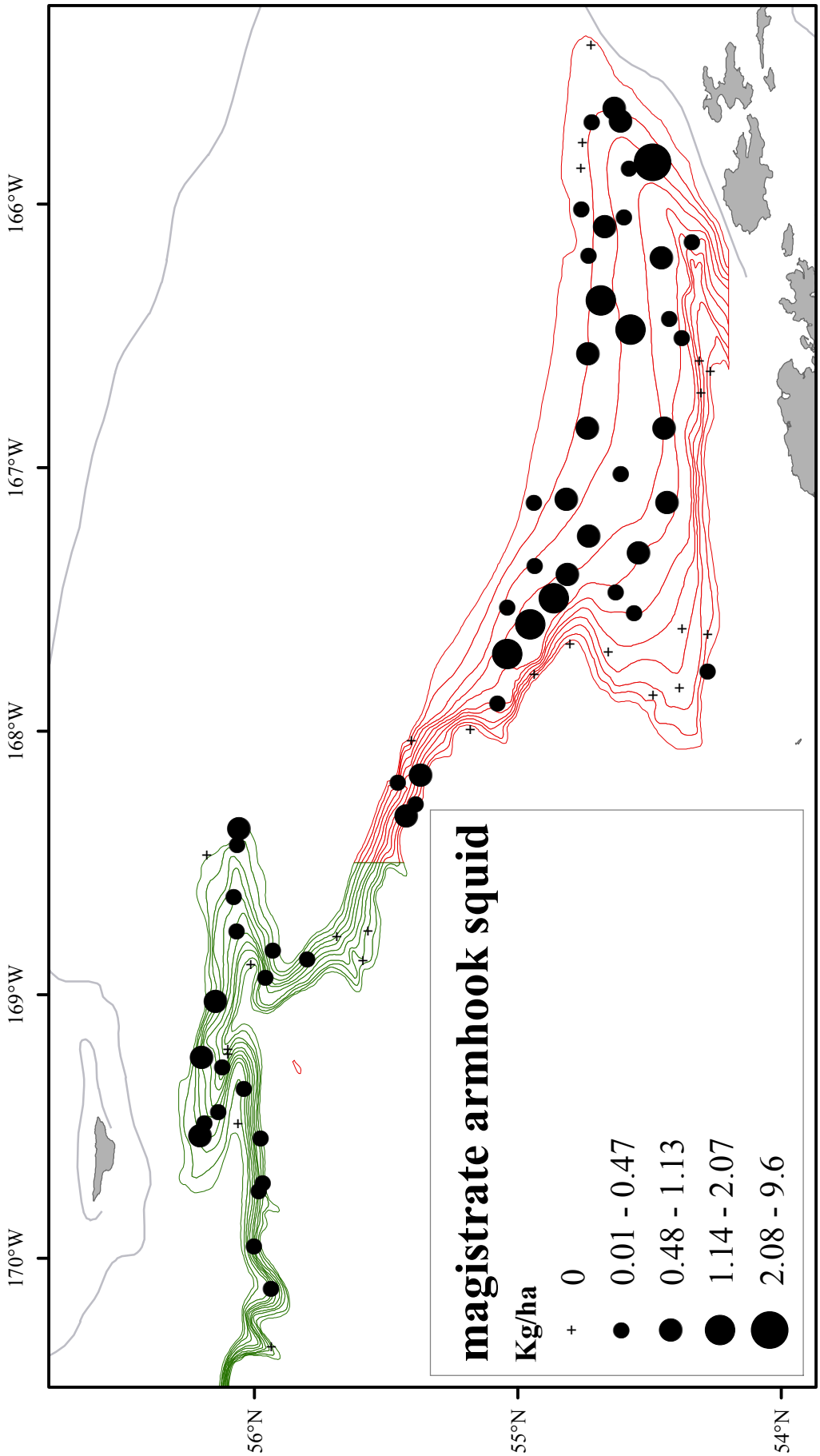

Figure 86. - -continued.

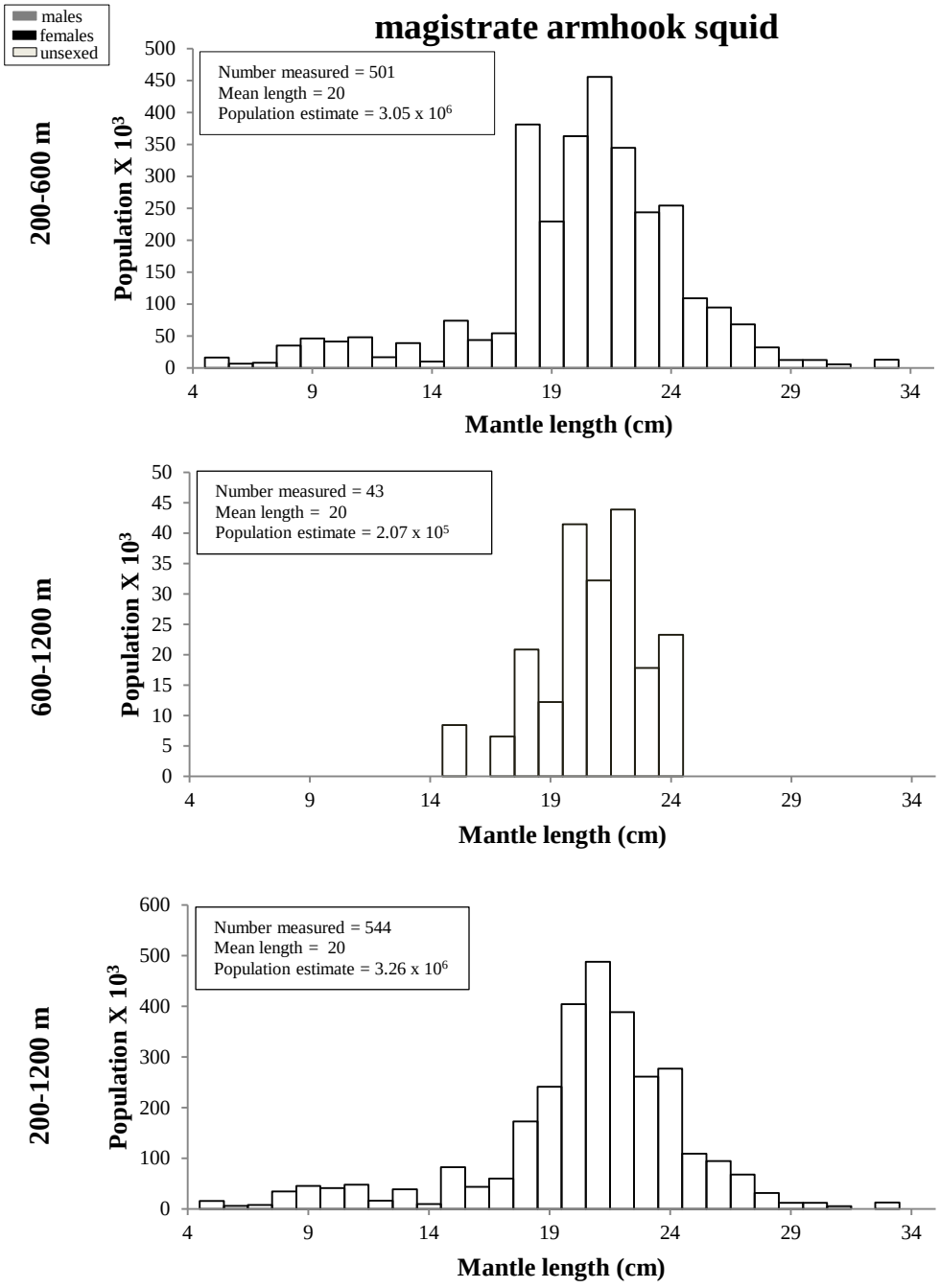

Figure 87. - - Size composition of the estimated magistrate armhook squid population from the 2016 EBSS survey for all subareas by depth.

Table 51. - - Abundance estimates by subarea and depth stratum for magistrate armhook squid *(Berryteuthis magister)* from the 2016 EBSS survey.

Berryteuthis magister **magistrate armhook squid**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	1.76E+02	4.81E+05	2.23E+03	1.93E+10	4.39E-01	1.20E+00
	400-600	5.61E+02	1.39E+06	4.71E+04	2.08E+11	1.38E+00	3.42E+00
	600-800	3.29E+01	9.45E+04	1.11E+02	1.10E+09	1.89E-01	5.43E-01
	800-1,000						
	1,000-1,200	7.30E-01	4.56E+03	5.33E-01	2.08E+07	6.60E-03	4.12E-02
2	200-400	1.88E+01	5.22E+04	5.07E+01	6.12E+08	1.63E-01	4.51E-01
	400-600	3.70E+01	9.66E+04	1.12E+02	6.64E+08	5.25E-01	1.37E+00
	600-800	1.00E+01	3.28E+04	4.80E+00	4.96E+07	1.69E-01	5.55E-01
	800-1,000	3.02E+00	7.67E+03	1.65E+00	9.96E+06	5.46E-02	1.39E-01
	1,000-1,200						
3	200-400	3.21E+01	1.20E+05	1.54E+02	2.22E+09	3.56E-01	1.32E+00
	400-600	6.36E+01	2.26E+05	4.77E+02	1.15E+10	7.18E-01	2.55E+00
	600-800	4.91E+00	1.58E+04	5.18E+00	4.21E+07	5.39E-02	1.74E-01
	800-1,000	1.88E+00	5.69E+03	3.53E+00	3.24E+07	2.57E-02	7.78E-02
	1,000-1,200						
4	200-400	2.07E+01	6.52E+04	1.13E+02	1.41E+09	1.68E-01	5.28E-01
	400-600	2.78E+01	9.28E+04	1.08E+02	1.67E+09	3.81E-01	1.27E+00
	600-800	1.92E+00	7.22E+03	1.41E+00	1.96E+07	2.76E-02	1.04E-01
	800-1,000						
	1,000-1,200						
5	200-400	1.74E+01	4.56E+04	3.03E+02	2.08E+09	4.11E-01	1.08E+00
	400-600	2.27E+01	6.79E+04	2.39E+02	1.97E+09	5.33E-01	1.59E+00
	600-800	3.25E+00	9.60E+03	1.05E+01	9.21E+07	7.52E-02	2.22E-01
	800-1,000	1.75E+00	5.46E+03	3.06E+00	2.98E+07	3.17E-02	9.90E-02
	1,000-1,200						
6	200-400	1.90E+01	5.47E+04	5.00E+01	4.34E+08	7.33E-02	2.11E-01
	400-600	6.24E+01	1.91E+05	3.36E+02	2.34E+09	3.66E-01	1.12E+00
	600-800	7.66E+00	2.34E+04	1.96E+01	1.82E+08	8.34E-02	2.55E-01
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**1.13E+03**	**3.09E+06**	**5.14E+04**	**2.54E+11**	**3.44E-01**	**9.43E-01**

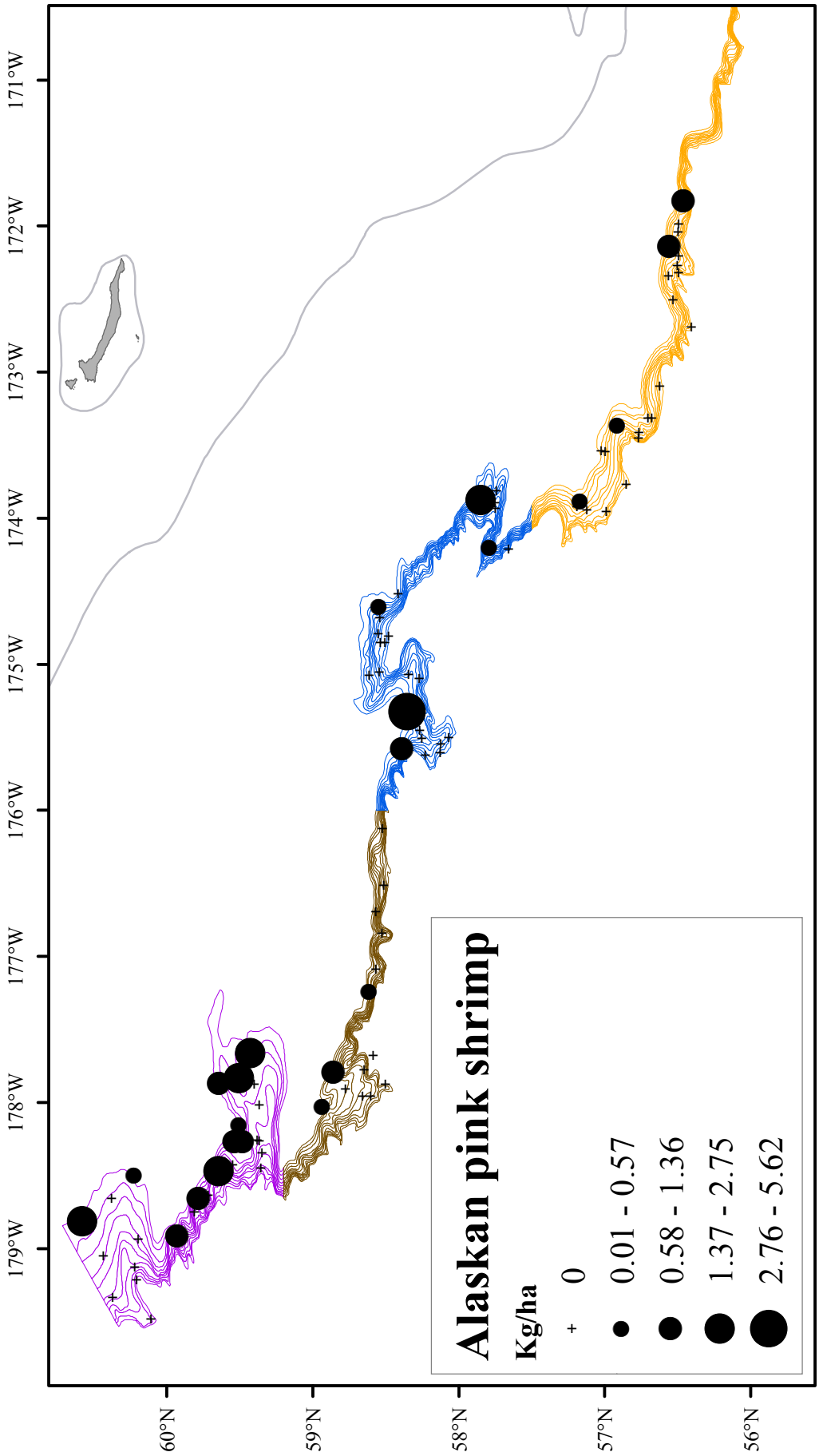

Figure 88. - - Distribution and relative abundance of Alaskan pink shrimp from the 2016 EBSS survey. Values are CPUE of kg/ha.

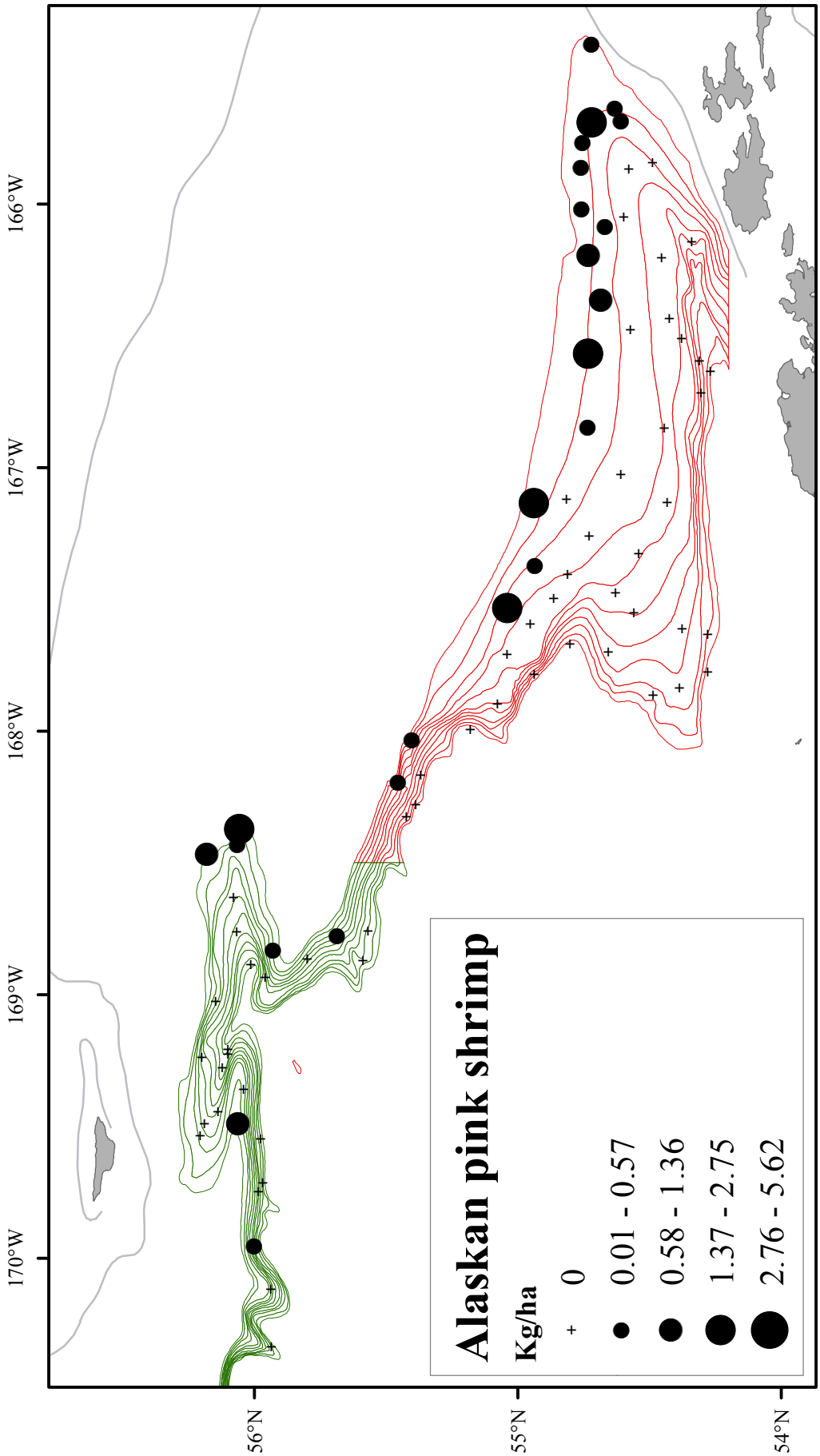

Figure 88. - - continued.

Table 52. - - Abundance estimates by subarea and depth stratum for Alaskan shrimp *(Pandalus eous*) from the 2016 EBSS survey.

Pandalus eous **Alaskan pink shrimp**

Subarea	Depth stratum (m)	Biomass (t)	Population	Biomass variance	Population variance	Average CPUE (kg/ha)	Average CPUE (no./ha)
1	200-400	2.38E+02	3.87E+07	4.07E+03	1.12E+14	5.92E-01	9.64E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
2	200-400	5.94E+01	1.06E+07	6.30E+02	1.89E+13	5.13E-01	9.15E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
3	200-400	3.34E+01	5.85E+06	2.21E+02	7.66E+12	3.70E-01	6.47E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
4	200-400	1.30E+02	2.25E+07	7.07E+03	2.30E+14	1.05E+00	1.82E+02
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
5	200-400	1.75E+01	2.96E+06	1.04E+02	3.00E+12	4.13E-01	6.99E+01
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
6	200-400	3.11E+02	4.02E+07	4.05E+03	6.11E+13	1.20E+00	1.55E+02
	400-600						
	600-800						
	800-1,000						
	1,000-1,200						
1-6	**200-1,200**	**7.89E+02**	**1.21E+08**	**1.62E+04**	**4.33E+14**	**2.41E-01**	**3.69E+01**

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ACKNOWLEDGMENTS

I would like to sincerely thank all the scientific survey participants for all their hard work during the 2016 EBSS survey. Thanks also go to the skipper Per Ostegard and crew of the FV *Cape Flattery*. Their cooperation and knowledge was greatly appreciated.

APPENDICES

Haul Log

The haul log details the location, depth, time, temperature and net mensuration parameters of each haul conducted during the 2016 EBSS survey as well as each haul's catch by weight (kg), with a breakdown of the species composition and the individual species weight or a grouped weight for less abundant species. Appendix A describes the trawl warp/bottom depth scope ratio used for each trawl. Appendix B lists the number of hauls completed by trawl performance code during the survey. Zero and positive performance codes are considered successful tows and were used for the standard abundance estimates, while negative performance tows were not included in abundance calculations. Appendix C is the detailed haul log for every haul completed with data during the survey. For quick reference, the unsuccessful tows not used for abundance estimates are shaded in gray.

Appendix A. - - Scope table used during the 2016 EBSS survey

Bottom Depth		Warp Length	
Minimum (m)	**Maximum (m)**	**Meters**	**Fathoms**
146	176	550	301
177	206	600	328
207	237	650	355
238	267	700	383
269	298	750	410
299	328	800	437
330	358	850	465
360	389	900	492
390	420	950	519
421	450	1000	547
451	481	1050	574
482	511	1100	601
512	542	1150	628
543	572	1200	656
573	603	1250	683
604	633	1300	710
634	664	1350	738
665	694	1400	765
695	725	1450	792
726	755	1500	820
756	786	1550	847
787	816	1600	874
817	847	1650	901
848	877	1700	930
878	908	1750	957
909	938	1800	984
939	969	1850	1012
970	999	1900	1039
1000	1030	1950	1066
1031	1060	2000	1094
1061	1091	2050	1121
1091	1121	2100	1148
1122	1152	2150	1176
1152	1182	2200	1203
1183	1213	2250	1230
1213	1243	2300	1258
1244	1274	2350	1285

Appendix B. - - Performance codes assigned to trawl hauls conducted on the 2016 EBSS survey. Performance codes zero or greater are considered successful hauls, and codes less than zero are unsuccessful hauls.

Performance code	Description	Number of hauls
6	Satisfactory performance, unspecified problems	1
5.1	Satisfactory performance, net came off bottom	2
4.2	Satisfactory performance, caught large quantity of mud	1
4.1	Satisfactory performance, caught large rock	2
3.3	Satisfactory performance, caught trawl gear	2
3.2	Satisfactory performance, caught longline gear	1
3.13	Satisfactory performance, Alaskan crab pot	1
3.11	Satisfactory performance, sablefish pot	1
2.1	Satisfactory performance, wing damaged	1
1.2	Satisfactory performance, major hang, stopped forward progress of vessel	1
1.12	Satisfactory performance, hauled back early due to hang(s)	2
1.11	Satisfactory performance, completed tow	2
1.1	Satisfactory performance, minor hang(s)	1
0	Good performance	157
-1.1	Unsatisfactory performance, minor hang(s)	1
-1.2	Unsatisfactory performance, major hang, stopped forward progress of vessel	1
-2.1	Unsatisfactory performance, wing damaged	1
-2.4	Unsatisfactory performance, belly damaged	2
-2.7	Unsatisfactory performance, net completely destroyed	1
-4.1	Unsatisfactory performance, caught large rock	1

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Appendix C. - - Haul Log.

Haul	1	2	3	4	5	6	7	8
Haul date	16-Jun-16	16-Jun-16	16-Jun-16	16-Jun-16	16-Jun-16	17-Jun-16	17-Jun-16	17-Jun-16
Start latitude (N)	56.041		55.985	55.939	55.972	56.567	56.504	56.495
Start longitude (W)	-169.357		-169.746	-170.117	-170.138	-172.339	-172.272	-172.206
End latitude (N)	56.045		55.984	55.943	55.967	56.567	56.508	56.492
End longitude (W)	-169.395		-169.785	-170.078	-170.109	-172.378	-172.312	-172.248
Stratum	21		22	23	21	33	34	35
Station ID	21-08		22-05	23-04	21-09	33-03	34-04	35-01
Duration (hour)	0.54		0.54	0.55	0.44	0.55	0.56	0.60
Distance fished (km)	2.46		2.49	2.49	1.94	2.46	2.51	2.77
Net width (m)	13.36		15.06	14.07	16.28	16.83	17.74	15.59
Performance code	6.0	Incomplete haul	0.0	0.0	-1.1	0.0	0.0	0.0
Bottom depth (m)	328		517	657	316	612	965	1042
Surface temperature (°C)	8.7		8.4	8.4	8.3	8.2	8.7	8.5
Bottom temperature (°C)	4.0		3.8	3.4	4.2	3.5	2.9	2.8
Pacific sleeper shark							8.92	
Bering skate								
mud skate	1.78				4.60			
roughtail skate							8.22	22.88
Alaska skate								
Aleutian skate	11.70			30.60	84.20	20.80	0.90	3.06
Commander skate				4.96		20.40	15.82	0.13
whiteblotched skate	16.18				4.40			
whitebrow skate						14.80		0.46
deepsea skate								
other elasmobranchs & eggs					2.44			
arrowtooth flounder	27.76		116.76		53.50	1.36		
Kamchatka flounder	125.42		116.94	33.36	26.30	44.20		2.88
Greenland turbot			16.64	72.00		38.90	2.82	7.24
Pacific halibut			15.49		6.58			
flathead sole								
rex sole	107.60		31.20		24.10			
other flatfishes			1.29	3.08				
other fishes				0.82	0.53		0.92	
poachers			0.03	0.04	0.24	0.23		
mesopelagic fishes	0.82		0.31	0.56		0.50	0.81	1.07
blacktail snailfish			1.52	1.33		2.75	0.82	
smooth lumpsucker			0.21	0.03				
other snailfishes			0.01	0.03		0.57	0.13	0.66
Pacific grenadier							34.40	50.34
giant grenadier	53.00		30.30	491.92		1062.00	1295.40	1105.90
popeye grenadier			2.86	32.78		272.20	205.90	155.90
Pacific cod	3.30				79.00			
walley pollock	4.04			0.88				
other grenadiers & cods							0.83	
darkfin sculpin	0.73				47.28			
spinyhead sculpin								
blob sculpin							3.12	14.66
bigmouth sculpin	18.80		5.48					
other sculpins			0.01		0.20	0.08	0.01	0.00
twoline eelpout			2.76	2.68				
western eelpout			0.49	0.47				
ebony eelpout			2.02					
Bering eelpout	0.21		0.66	0.10		0.29		
other eelpouts								0.02
shortspine thornyhead	1.35		200.30	73.44	145.80	153.80	4.24	5.00
rougheye rockfish								
blackspotted rockfish	6.56				35.90			
Pacific ocean perch	0.82				112.00			
shortraker rockfish	1.80		0.50		75.90			
other rockfish					0.15			
Alaskan pink shrimp								
other shrimps & barnacles	43.53			0.01	0.24		0.03	0.04
grooved Tanner crab			4.94	0.72		3.52	2.51	0.10
Tanner crab	0.06							
triangle Tanner crab			0.58	0.23	0.26		3.12	1.76
snow crab								
scarlet king crab				1.28				0.41
golden king crab	9.54		2.16	0.23	2.82			
hermit crabs			8.15	4.08	0.00	0.41		0.10
other crabs					0.05			12.50
jellyfishes	0.88		8.15	4.08		0.41		0.10
coral & anemones	3.04		10.52	0.87	1.83			0.04
gastropods				0.86	0.35	0.64	0.22	0.78
clams								
giant octopus					41.06	0.18		
other octopus			2.55			0.15		0.32
magistrate armhook squid	0.91		1.28	0.61				
other squid							0.15	
seastars, brittlestars, sea cucumbers	77.74		5.53	26.87	23.27	79.57	7.96	1.04
sponges	177.59		0.34	1.50	1284.00		4.42	38.06
other invertebrates	0.17		0.07	0.26	0.23	0.20	0.03	0.14
Haul total weight (kg)	695.30	0.00	590.00	790.64	2057.19	1717.91	1601.67	1425.56

Appendix C. - - Haul Log.

Haul	9	10	11	12	13	14	15	16
Haul date	17-Jun-16	18-Jun-16	18-Jun-16	18-Jun-16	18-Jun-16	18-Jun-16	19-Jun-16	19-Jun-16
Start latitude (N)	56.563	56.856	56.993	57.127	57.175	57.192	57.751	
Start longitude (W)	-172.141	-173.770	-173.953	-173.943	-173.886	-173.922	-173.932	
End latitude (N)	56.559	56.878	57.007	57.143	57.156	57.213	57.764	
End longitude (W)	-172.116	-173.795	-173.973	-173.956	-173.874	-173.918	-173.974	
Stratum	31	35	34	33	31	32	44	Incomplete haul
Station ID	31-03	35-03	34-01	33-08	31-08	32-06	44-01	
Duration (hour)	0.36	0.64	0.43	0.42	0.51	0.51	0.72	
Distance fished (km)	1.62	2.89	1.95	1.94	2.31	2.34	2.92	
Net width (m)	15.86	16.26	16.59	16.27	15.92	15.63	15.04	
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	5.1	
Bottom depth (m)	285	1077	831	658	332	412	834	
Surface temperature (°C)	8.4	8.3	7.8	8.2	8.1	8.1	7.8	
Bottom temperature (°C)	4.2	2.8	3.0	3.3	4.1	4.0	3.2	
Pacific sleeper shark						15.70	11.56	
Bering skate	0.27							
mud skate					7.50			
roughtail skate		15.10	1.14				22.96	
Alaska skate								
Aleutian skate	7.30	0.35	14.50	22.40		16.50	73.30	
Commander skate		2.41	15.50	11.30		11.10	15.14	
whiteblotched skate						6.00		
whitebrow skate		0.48				2.71	3.82	
deepsea skate								
other elasmobranchs & eggs	0.04		0.06	0.13				
arrowtooth flounder	151.50				24.20	31.20		
Kamchatka flounder	8.20		3.90	15.60	3.80	10.10	98.30	
Greenland turbot		5.80	3.20	11.50	9.20	14.10	51.40	
Pacific halibut								
flathead sole	25.80				44.80	98.50		
rex sole	82.00				18.60	22.00		
other flatfishes								
other fishes		2.03		0.30				
poachers	2.40		0.13	0.34	0.05		0.40	
mesopelagic fishes		0.62	0.50	0.10		0.39	0.22	
blacktail snailfish			0.86	2.43			8.60	
smooth lumpsucker			0.05			2.46		
other snailfishes	1.02	0.39	0.40				4.71	
Pacific grenadier		57.70	5.40				1.90	
giant grenadier		823.50	737.10	1172.40		144.90	2325.90	
popeye grenadier		203.60	133.80	633.80			956.70	
Pacific cod	6.50							
walleye pollock	35.10				2.90	3.90		
other grenadiers & cods								
darkfin sculpin	0.16				0.37			
spinyhead sculpin	0.63							
blob sculpin		20.10	10.50					
bigmouth sculpin	4.70					3.60		
other sculpins			0.01	0.01		0.02	0.07	
twoline eelpout				9.70			3.60	
western eelpout								
ebony eelpout							1.80	
Bering eelpout				0.44	0.79	0.99		
other eelpouts				0.01				
shortspine thornyhead			5.30	53.10	10.30	19.60	28.10	
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch	241.90				266.90	4.70		
shortraker rockfish					9.00			
other rockfish							0.51	
Alaskan pink shrimp	1.94				0.19			
other shrimps & barnacles	1.94	0.31	0.01	0.03	0.86	0.11		
grooved Tanner crab		1.33	4.76	1.34			41.33	
Tanner crab	0.36				1.69			
triangle Tanner crab		0.70	4.64				1.53	
snow crab								
scarlet king crab							13.84	
golden king crab					1.29	0.79		
hermit crabs	0.62			0.00			0.19	
other crabs		1.30						
jellyfishes	0.62	0.72	0.31		0.52	0.84	0.19	
coral & anemones	0.33	30.21		0.10	4.39	6.08		
gastropods	0.43	0.08	0.17	2.12			0.15	
clams								
giant octopus	2.76					0.58		
other octopus	0.05		0.25				1.64	
magistrate armhook squid	1.08			0.42	2.92	5.20		
other squid		0.14	0.01	0.05				
seastars, brittlestars, sea cucumbers	23.89	1.87	0.18	5.82	4.73	2.50	0.99	
sponges	0.98	2.10					13.90	
other invertebrates	0.05	0.74	0.13			0.04		
Haul total weight (kg)	602.53	1171.54	942.77	1943.40	414.98	424.59	3682.73	0.00

Appendix C. - - Haul Log.

Haul	17	18	19	20	21	22	23	24
Haul date	19-Jun-16	19-Jun-16	19-Jun-16	20-Jun-16	20-Jun-16	20-Jun-16	20-Jun-16	21-Jun-16
Start latitude (N)	57.746	57.828	57.755	57.759	57.798	57.662	57.853	57.028
Start longitude (W)	-173.814	-173.876	-173.893	-174.011	-174.203	-174.212	-173.875	-173.540
End latitude (N)	57.738	57.844	57.736	57.759	57.803	57.658	57.850	57.010
End longitude (W)	-173.799	-173.901	-173.899	-174.010	-174.225	-174.210	-173.862	-173.516
Stratum	41	42	43	45	41	41	41	33
Station ID	41-03	42-02	43-01	45-09	41-01	41-12	41-04	33-01
Duration (hour)	0.28	0.54	0.48	0.06	0.32	0.09	0.35	0.55
Distance fished (km)	1.27	2.38	2.16	0.15	1.44	0.38	1.51	2.45
Net width (m)	16.22	16.60	16.98	16.30	15.64	15.13	13.34	14.88
Performance code	0.0	0.0	0.0	-1.2	0.0	0.0	1.1	4.1
Bottom depth (m)	359	496	714	1121	314	274	351	732
Surface temperature (°C)	7.8	7.8	7.8	8.0	7.9	7.7	8.1	8.2
Bottom temperature (°C)	4.1	3.9	3.2	2.7	4.1	4.1	4.1	3.0
Pacific sleeper shark	5.67							
Bering skate		0.04					0.20	
mud skate		3.00			2.70		6.40	0.02
roughtail skate								
Alaska skate								
Aleutian skate	4.50	19.60	4.20			2.90	58.20	16.10
Commander skate		27.80	4.00					77.10
whiteblotched skate	20.00	41.50	0.04		6.00			
whitebrow skate			0.17				4.80	2.50
deepsea skate								
other elasmobranchs & eggs	0.36	0.06	0.12					0.02
arrowtooth flounder	17.00	24.40			297.80	34.30	65.90	
Kamchatka flounder	15.90	199.20	21.90		24.00	5.70	13.70	24.50
Greenland turbot		47.40	13.40					2.50
Pacific halibut		96.02			14.19	9.41	45.39	
flathead sole	58.60	74.00			1.80	52.60	0.58	
rex sole	20.00	0.86			16.50		14.70	
other flatfishes								
other fishes	0.36	0.19				0.97		10.70
poachers		0.02			0.74		0.15	
mesopelagic fishes	0.01	0.18	0.24	1.13				0.03
blacktail snailfish	1.85	2.94	1.14					
smooth lumpsucker								
other snailfishes		1.92	1.13	0.01				0.62
Pacific grenadier				2.56				
giant grenadier	19.30	693.00	841.80	12.12				958.60
popeye grenadier			499.90	21.28				101.10
Pacific cod					5.60	2.40		
walleye pollock	7.30	1.84			5.80	4.20	6.70	
other grenadiers & cods								
darkfin sculpin		0.35			0.34		0.16	0.22
spinyhead sculpin								
blob sculpin								12.50
bigmouth sculpin					12.40		6.50	
other sculpins		0.15	0.01		0.06			0.67
twoline eelpout								
western eelpout								
ebony eelpout		9.60	0.16					1.40
Bering eelpout		0.10						0.03
other eelpouts			0.01					
shortspine thornyhead		56.20	2.96					15.90
rougheye rockfish	9.20						1.84	
blackspotted rockfish								
Pacific ocean perch	639.10				243.50	9219.18	57.50	
shortraker rockfish	96.80	29.80			119.20	43.60	47.02	
other rockfish								
Alaskan pink shrimp					0.96		3.14	
other shrimps & barnacles	1.76	0.24			3.54		4.19	0.02
grooved Tanner crab		0.49	12.68					
Tanner crab	2.33				0.22			
triangle Tanner crab			0.22	0.41				5.63
snow crab					0.52			
scarlet king crab			1.95					
golden king crab	4.68	4.51			0.94	8.18	0.60	0.02
hermit crabs		0.25	0.14					0.01
other crabs		0.02		1.35				
jellyfishes		0.25	0.14	1.16	0.04		0.52	0.01
coral & anemones		1.93	0.24	0.19	0.53		1.81	
gastropods			0.55		0.21			
clams								
giant octopus					0.78			
other octopus		0.28						0.10
magistrate armhook squid	0.58	0.31	0.28		0.39		1.43	0.24
other squid				0.15				
seastars, brittlestars, sea cucumbers		2.81	1.17	0.09	8.08	0.56	3.63	0.21
sponges		5.17		0.33	10.80		0.25	4.85
other invertebrates	0.05			0.14	0.12			0.05
Haul total weight (kg)	925.33	1346.37	1408.53	40.91	777.73	9384.00	345.28	1235.62

Appendix C. - - Haul Log.

Haul	25	26	27	28	29	30	31	32
Haul date	21-Jun-16	21-Jun-16	21-Jun-16	22-Jun-16	22-Jun-16	22-Jun-16	22-Jun-16	23-Jun-16
Start latitude (N)	56.999	56.920	56.769	56.681	56.707	56.772	56.626	56.408
Start longitude (W)	-173.545	-173.369	-173.412	-173.316	-173.312	-173.450	-173.096	-172.693
End latitude (N)	56.976	56.900	56.750	56.672	56.698	56.753	56.619	56.393
End longitude (W)	-173.546	-173.362	-173.398	-173.290	-173.293	-173.454	-173.078	-172.662
Stratum	34	31	32	34	31	33	32	35
Station ID	34-07	31-07	32-03	34-06	31-09	33-06	32-09	35-04
Duration (hour)	0.57	0.52	0.52	0.42	0.34	0.50	0.30	0.58
Distance fished (km)	2.56	2.25	2.28	1.89	1.51	2.19	1.37	2.58
Net width (m)	16.24	15.23	15.92	17.04	15.95	16.46	16.12	17.53
Performance code	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	820	210	422	834	308	692	443	1028
Surface temperature (°C)	7.9	9.0	8.3	8.1	8.1	8.3	8.5	8.1
Bottom temperature (°C)	3.0	3.9	3.8	3.1	4.1	3.3	3.8	2.7
Pacific sleeper shark								
Bering skate		2.70						
mud skate		6.60			1.80			
roughtail skate	3.80			16.50				9.40
Alaska skate		62.90						
Aleutian skate	26.10	29.60	13.00	4.20		21.80		0.22
Commander skate	84.10		3.90	7.70		13.70		0.46
whiteblotched skate			5.00					
whitebrow skate	1.80					3.80		
deepsea skate								16.00
other elasmobranchs & eggs		28.77		0.05		0.02		0.01
arrowtooth flounder		20.10	48.60		95.80		41.30	
Kamchatka flounder	35.30	3.20	26.90	3.70	1.29	18.60	16.00	
Greenland turbot	3.50		8.30	12.80		47.50	2.80	
Pacific halibut					17.48			
flathead sole		51.60	34.80		40.60		0.42	
rex sole		42.10	49.30		15.60		8.60	
other flatfishes			1.70				1.70	
other fishes	0.18	6.20					0.88	
poachers	0.01	0.09	0.06	0.02	0.10	0.12	0.02	
mesopelagic fishes	0.04		0.10	0.32		0.32	0.04	0.17
blacktail snailfish	0.27		1.45	2.82				0.73
smooth lumpsucker								0.17
other snailfishes	1.08			0.03		0.02		0.32
Pacific grenadier				0.77				61.80
giant grenadier	594.40		1296.80	808.50		507.40	1070.00	1398.60
popeye grenadier	48.40			242.90		293.40		196.80
Pacific cod		44.90			3.30			
walley pollock		4.20	3.40		1.10			0.84
other grenadiers & cods								
darkfin sculpin		8.40			1.22		0.02	
spinyhead sculpin		0.23					0.01	
blob sculpin	6.00			6.10				17.10
bigmouth sculpin		7.60	6.80				5.40	
other sculpins	1.27	0.06		0.01			0.01	
twoline eelpout			5.10	5.90		1.60		
western eelpout								
ebony eelpout	2.50							
Bering eelpout		0.11		0.03	0.11	0.51	0.12	
other eelpouts	0.02							
shortspine thornyhead	11.80		91.10	30.60	55.80	60.60	42.90	
rougheye rockfish								
blackspotted rockfish			10.80		1.22			
Pacific ocean perch		2842.60			519.80			
shortraker rockfish			238.60		44.00		34.40	
other rockfish					0.49			
Alaskan pink shrimp		1.00						
other shrimps & barnacles	0.02	1.00	0.05	0.25	0.23		0.05	
grooved Tanner crab				0.86		10.82	0.92	0.24
Tanner crab								
triangle Tanner crab	4.10			0.37		1.10	0.37	1.26
snow crab								
scarlet king crab	4.32			1.52				0.72
golden king crab	0.02	0.90	5.54		4.34		1.24	
hermit crabs	0.20	0.00		0.00				0.00
other crabs	0.88			0.10				4.16
jellyfishes	0.20					0.02	0.89	
coral & anemones		1.47	10.50	1.37	4.17		4.10	
gastropods	0.06	1.90	0.28	0.15		0.06		0.22
clams								
giant octopus		9.16	0.28		0.22		0.46	
other octopus								0.10
magistrate armhook squid			2.17	0.33	1.04	0.26	2.48	
other squid	0.17	0.15	0.04	0.07				0.01
seastars, brittlestars, sea cucumbers	0.18	15.65	2.41	1.35	0.97	0.60	4.06	2.83
sponges	0.71	1.75		88.19	11.70		2.42	1.19
other invertebrates	0.01	0.30					0.02	
Haul total weight (kg)	831.41	3195.20	1866.96	1237.48	822.35	982.22	1241.60	1713.32

Appendix C. - - Haul Log.

Haul	33	34	35	36	37	38	39	40
Haul date	23-Jun-16	25-Jun-16	25-Jun-16	26-Jun-16	26-Jun-16	26-Jun-16	26-Jun-16	26-Jun-16
Start latitude (N)	56.495	58.418	58.542	58.570	58.530	58.570	58.620	58.653
Start longitude (W)	-172.323	-174.521	-174.680	-176.695	-176.844	-177.086	-177.244	-177.775
End latitude (N)	56.502	58.421	58.559	58.566	58.524	58.576	58.626	58.653
End longitude (W)	-172.358	-174.527	-174.701	-176.669	-176.820	-177.110	-177.281	-177.798
Stratum	35	41	43	52	53	52	51	53
Station ID	35-02	41-05	43-07	52-02	53-02	52-06	51-06	53-03
Duration (hour)	0.54	0.11	0.50	0.35	0.36	0.36	0.52	0.28
Distance fished (km)	2.30	0.50	2.27	1.55	1.58	1.55	2.28	1.32
Net width (m)	17.85	16.04	16.59	16.42	16.96	16.29	15.48	17.02
Performance code	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0
Bottom depth (m)	1024	325	629	484	757	462	260	718
Surface temperature (°C)	8.1	8.3	8.2	8.1	8.0	8.1	8.4	8.7
Bottom temperature (°C)	2.8	4.1	3.4	3.7	3.2	3.8	4.2	3.3
Pacific sleeper shark								
Bering skate		0.13					2.86	
mud skate								
roughtail skate	4.20				4.64			
Alaska skate							17.16	
Aleutian skate	0.22	2.60	24.02	11.72	3.10		120.44	3.80
Commander skate			30.78		1.38			4.50
whiteblotched skate							17.14	
whitebrow skate			1.40		0.25		2.62	
deepsea skate								
other elasmobranchs & eggs	0.03				0.14	0.03		0.19
arrowtooth flounder		33.84		3.16		6.58	121.60	
Kamchatka flounder		0.91	19.00	7.68		18.92	21.84	
Greenland turbot	9.10		99.30	91.90	21.86	340.04		7.52
Pacific halibut		6.58					18.03	
flathead sole		10.00		10.38		20.02	50.64	
rex sole		25.80		4.04		35.96	5.84	
other flatfishes			1.92		2.94			4.74
other fishes				0.76				
poachers			0.13	0.02		0.02	0.93	0.11
mesopelagic fishes	0.58			1.16	0.60	0.27		0.63
blacktail snailfish	0.71		1.28	2.42	0.07			
smooth lumpsucker								0.04
other snailfishes	1.27			0.26		3.76		0.02
Pacific grenadier	51.70				0.62			0.49
giant grenadier	599.70		4205.22	527.62	2286.20	156.32		815.80
popeye grenadier	146.10		567.12		39.36			41.80
Pacific cod							8.32	
walley pollock		29.48	0.68				4.22	1.06
other grenadiers & cods								
darkfin sculpin		0.45		0.58				
spinyhead sculpin		0.19				0.12		
blob sculpin	19.30							
bigmouth sculpin						7.12	5.96	
other sculpins			0.02	0.01		0.02	0.99	
twoline eelpout				2.04		2.42		
western eelpout			1.49					
ebony eelpout			1.72					
Bering eelpout			0.26			0.63		
other eelpouts	0.03		0.00		0.07			
shortspine thornyhead			83.08	61.88	14.22	58.82		36.98
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch		449.06					0.84	
shortraker rockfish		0.44		5.62				
other rockfish			0.52					
Alaskan pink shrimp							0.80	
other shrimps & barnacles		1.50		0.09	0.01	0.48	0.80	0.02
grooved Tanner crab	0.26		23.16	2.04	0.21	1.07		0.52
Tanner crab								
triangle Tanner crab	0.44				9.84	0.54		0.29
snow crab								
scarlet king crab								0.61
golden king crab						1.09		
hermit crabs	0.04	0.92	0.00		0.41		0.00	
other crabs	4.98							
jellyfishes	0.04	0.92			0.41	0.19		0.17
coral & anemones	0.48	0.94	1.13	27.49	1.43	27.92	2.15	
gastropods	0.19	0.04	0.19	0.41	0.81		0.19	0.12
clams								
giant octopus		0.33		3.50		0.78	37.54	
other octopus				7.12		0.26		
magistrate armhook squid						3.11		
other squid	0.30			0.09			0.48	
seastars, brittlestars, sea cucumbers	6.14	2.96	6.34	15.58	8.81	3.32	9.46	4.37
sponges	8.62	0.50		0.02				
other invertebrates	0.09	0.23		0.56	0.01	0.40	1.67	0.40
Haul total weight (kg)	854.47	567.77	5068.73	788.12	2397.35	690.19	452.49	924.14

Appendix C. - - Haul Log.

Haul	41	42	43	44	45	46	47	48
Haul date	27-Jun-16	27-Jun-16	27-Jun-16	27-Jun-16	27-Jun-16	28-Jun-16	28-Jun-16	28-Jun-16
Start latitude (N)	59.719	59.784	59.813	59.923	59.934	60.111	60.223	60.373
Start longitude (W)	-178.636	-178.661	-178.747	-178.938	-178.917	-179.483	-179.130	-179.335
End latitude (N)	59.706	59.790	59.830	59.906	59.949	60.091	60.245	60.357
End longitude (W)	-178.617	-178.669	-178.776	-178.915	-178.935	-179.463	-179.126	-179.309
Stratum	63	61	62	62	61	65	64	63
Station ID	63-04	61-08	62-07	62-08	61-10	65-03	64-02	63-06
Duration (hour)	0.41	0.18	0.56	0.50	0.44	0.58	0.55	0.51
Distance fished (km)	1.75	0.80	2.55	2.25	1.96	2.51	2.48	2.28
Net width (m)	17.03	16.56	16.69	16.43	16.01	17.39	16.58	17.52
Performance code	0.0	0.0	0.0	0.0	1.1	0.0	4.1	0.0
Bottom depth (m)	639	216	458	414	293	1116	823	742
Surface temperature (°C)	8.5	8.8	8.3	8.9	9.0	9.0	8.1	8.7
Bottom temperature (°C)	3.4	2.6	3.8	3.9	4.1	2.6	3.2	3.1
Pacific sleeper shark								
Bering skate		5.66			45.68			
mud skate					0.71			
roughtail skate						8.82	19.02	3.06
Alaska skate		12.04		16.46	229.18			
Aleutian skate	2.84		83.62	28.92	75.22		2.08	12.18
Commander skate	19.44		14.40	15.98			27.04	6.24
whiteblotched skate			25.46	33.62	58.90			
whitebrow skate				10.46	2.06	0.13		0.32
deepsea skate								
other elasmobranchs & eggs	0.03				0.03	0.08	0.05	0.02
arrowtooth flounder		35.52	41.46	79.96	225.42			
Kamchatka flounder	14.92	7.16	28.81	20.05	7.37			
Greenland turbot	54.88		31.24	578.33	2.40		8.78	
Pacific halibut					10.88			
flathead sole		8.08	34.32	37.08	49.48			
rex sole		7.02	1.37	13.72	10.84			
other flatfishes							0.40	
other fishes	0.53		2.28	0.22		1.81		0.49
poachers	0.56	0.70	0.33	0.01	1.06			
mesopelagic fishes	0.37		0.30	0.29		2.05	0.07	1.44
blacktail snailfish	0.41							
smooth lumpsucker		1.72	1.39	1.39	1.04		1.00	0.56
other snailfishes			3.83	5.56	1.54	0.52	7.33	0.16
Pacific grenadier						18.93	6.94	
giant grenadier	1205.36		1325.26	151.76		787.91	3120.38	159.25
popeye grenadier	187.02					103.45	94.80	12.22
Pacific cod		11.76						
walleye pollock		77.98			35.20	0.77		
other grenadiers & cods								
darkfin sculpin			2.23	3.77	1.69			
spinyhead sculpin		0.05	0.65	0.09	0.73			
blob sculpin								
bigmouth sculpin		2.46	8.54	1.66	8.54			
other sculpins		0.30			0.19		0.01	
twoline eelpout	0.31			2.52			0.18	
western eelpout	2.11		7.97	1.08				
ebony eelpout								
Bering eelpout	1.39	0.04	5.35	1.06	2.42			
other eelpouts	1.28		0.00			0.01		
shortspine thornyhead	10.56		58.98	66.16			1.94	9.76
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch					13.68			
shortraker rockfish			2.54	3.08				
other rockfish								
Alaskan pink shrimp		1.18			3.98			
other shrimps & barnacles	0.00	1.18	0.57	2.79	3.98	0.01		0.00
grooved Tanner crab	4.77		1.08					
Tanner crab								
triangle Tanner crab	0.01		1.74	0.06		17.52	44.38	18.45
snow crab				0.09				
scarlet king crab						6.22	12.66	5.30
golden king crab			1.36					
hermit crabs	0.43	0.00	0.89	1.32	0.00		0.47	
other crabs				0.18	0.04			
jellyfishes	0.43		0.89	1.32		1.40	0.47	1.82
coral & anemones		0.59	3.55	53.53	3.61	1.99	2.64	
gastropods	2.03	0.34	3.10	1.53	3.21	1.15	0.05	0.15
clams								
giant octopus			2.53	0.38				
other octopus	0.03		15.28	6.34		3.19	3.16	
magistrate armhook squid			2.16	0.87				
other squid	0.12	0.49	0.08			0.33	0.11	0.02
seastars, brittlestars, sea cucumbers	152.19	0.46	176.31	20.82	8.72	4.68	9.52	2.54
sponges			0.02		3.82		0.93	0.07
other invertebrates	0.88	1.81	0.47	1.48	0.49	0.16	0.08	0.05
Haul total weight (kg)	1662.86	176.51	1890.30	1163.91	812.06	961.10	3364.46	234.06

Appendix C. - - Haul Log.

Haul	49	50	51	52	53	54	55	56
Haul date	28-Jun-16	29-Jun-16	29-Jun-16	29-Jun-16	29-Jun-16	29-Jun-16	30-Jun-16	30-Jun-16
Start latitude (N)	60.436	60.210	60.200	60.229	60.379	60.582	59.646	59.693
Start longitude (W)	-179.049	-179.211	-178.938	-178.500	-178.657	-178.814	-178.534	-178.528
End latitude (N)	60.426	60.226	60.213	60.247	60.399	60.595	59.632	59.681
End longitude (W)	-179.014	-179.215	-178.904	-178.495	-178.673	-178.818	-178.504	-178.518
Stratum	62	65	62	61	61	61	63	62
Station ID	62-12	65-02	62-10	61-13	61-14	61-16	63-09	62-06
Duration (hour)	0.51	0.41	0.53	0.43	0.52	0.34	0.53	0.51
Distance fished (km)	2.25	1.89	2.35	1.98	2.33	1.47	2.26	1.95
Net width (m)	16.09	16.48	16.03	14.97	15.63	16.32	17.09	17.49
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Bottom depth (m)	472	1041	532	213	299	236	629	506
Surface temperature (°C)	9.0	8.9	8.6	8.1	7.9	8.2	8.7	8.7
Bottom temperature (°C)	3.5	2.8	3.7	3.8	4.0	3.7	3.4	3.7
Pacific sleeper shark								
Bering skate				18.58	1.68			1.19
mud skate	0.33		3.50	9.78	5.54			
roughtail skate		2.86						
Alaska skate				176.78	14.92	270.84		
Aleutian skate	8.96		1.88	64.24	698.00	16.78	6.86	9.29
Commander skate	5.52	15.84	8.58		2.80		39.08	19.62
whiteblotched skate	22.04		21.86	32.68	106.38	5.50		4.92
whitebrow skate			5.56	1.82	1.76			9.47
deepsea skate								
other elasmobranchs & eggs		0.06	0.14	0.10				0.04
arrowtooth flounder				152.97	164.52	196.84	2.72	19.16
Kamchatka flounder	2.16			6.30	24.47	13.96	23.76	23.74
Greenland turbot	61.56	5.90	19.14	2.00	10.70	13.88	116.16	25.28
Pacific halibut				8.20	41.61			
flathead sole	0.58		4.18	36.58	42.44	7.58		63.78
rex sole				2.18				11.56
other flatfishes			1.86	0.49				
other fishes		0.45						0.78
poachers				0.31	0.10	0.46	0.33	0.39
mesopelagic fishes	0.16	0.64						0.40
blacktail snailfish							4.00	0.82
smooth lumpsucker	2.07						2.41	2.03
other snailfishes		1.76	0.66		2.36	0.79	0.02	9.68
Pacific grenadier		4.28						
giant grenadier	592.52	786.63	5854.38				3844.75	234.46
popeye grenadier		28.28					749.76	6.36
Pacific cod				47.76		15.52		
walley pollock	0.81			455.57	176.16	415.82		
other grenadiers & cods		0.08						
darkfin sculpin	0.22		7.38		8.78	0.20		
spinyhead sculpin						0.27		0.02
blob sculpin								
bigmouth sculpin				12.44	0.55			0.40
other sculpins	0.02		0.25	0.54	0.02	0.35		
twoline eelpout			2.84					
western eelpout							26.30	32.78
ebony eelpout	16.69		14.54					
Bering eelpout	0.16		0.28		0.78		1.78	2.25
other eelpouts						0.08	0.88	
shortspine thornyhead	7.84		36.54				19.94	89.12
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch					3.82			
shortraker rockfish								4.12
other rockfish								
Alaskan pink shrimp				0.60		5.12		
other shrimps & barnacles		0.02		0.61	1.52	5.12		0.04
grooved Tanner crab	3.64		0.53					4.00
Tanner crab				2.91	2.06	1.33		
triangle Tanner crab	0.01	0.69	0.85				10.46	
snow crab					0.04	0.19		
scarlet king crab		4.84					1.34	
golden king crab	0.18		0.23	0.35	0.49		0.32	0.67
hermit crabs				0.00	0.00	0.00	0.00	0.00
other crabs				0.09	0.37			
jellyfishes		0.02						
coral & anemones	2.59	3.24	5.63	6.65	10.06	27.37	0.41	19.37
gastropods		0.23		0.12	0.25	0.30	1.79	3.78
clams								
giant octopus			0.86					
other octopus	0.49	1.31	27.18	1.28			0.62	8.58
magistrate armhook squid	2.17		0.52		0.50		0.63	
other squid				0.23		0.06		0.14
seastars, brittlestars, sea cucumbers	1.42	16.69	3.00	4.91	2.94	184.36	15.17	77.16
sponges		0.97	0.65	4.71		3.64		0.51
other invertebrates	0.76	1.19	0.14	0.69	1.07	1.85	0.72	2.44
Haul total weight (kg)	732.86	875.96	6023.14	1052.42	1326.66	1188.18	4870.18	688.31

Appendix C. - - Haul Log.

Haul	57	58	59	60	61	62	63	64
Haul date	30-Jun-16	1-Jul-16	1-Jul-16	1-Jul-16	1-Jul-16	1-Jul-16	2-Jul-16	2-Jul-16
Start latitude (N)	59.647	59.358	59.368	59.483	59.549	59.542	59.353	59.514
Start longitude (W)	-178.472	-178.452	-178.265	-178.270	-178.428	-178.267	-178.345	-178.156
End latitude (N)	59.630	59.346	59.362	59.494	59.570	59.525	59.356	59.516
End longitude (W)	-178.451	-178.416	-178.242	-178.288	-178.425	-178.241	-178.402	-178.129
Stratum	61	65	64	61	62	61	64	61
Station ID	61-07	65-05	64-03	61-06	62-05	61-05	64-01	61-22
Duration (hour)	0.52	0.55	0.32	0.34	0.51	0.52	0.70	0.35
Distance fished (km)	2.30	2.42	1.48	1.63	2.32	2.38	3.24	1.60
Net width (m)	16.56	17.08	16.64	16.38	17.86	16.67	19.06	16.90
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	323	1040	849	267	465	228	955	223
Surface temperature (°C)	8.6	8.6	8.6	8.7	8.7	8.8	9.1	8.9
Bottom temperature (°C)	4.1	2.7	3.0	3.8	3.7	3.5	2.8	2.4
Pacific sleeper shark								
Bering skate	0.52			1.78	0.12	8.04		3.94
mud skate								
roughtail skate		1.40					6.70	
Alaska skate	27.86			62.32		121.58		25.66
Aleutian skate	242.74			39.90	54.06			
Commander skate	2.12	5.06					6.04	
whiteblotched skate	13.92			17.72				
whitebrow skate	17.24	0.49			8.08			
deepsea skate								
other elasmobranchs & eggs	0.06	0.03	0.05				0.20	
arrowtooth flounder	1032.00			312.94	7.62	373.18		130.57
Kamchatka flounder	40.62			14.14	4.86	18.78		0.88
Greenland turbot	7.46	8.92	5.48	5.40	15.16	5.02		14.22
Pacific halibut	6.58			13.99		66.55		
flathead sole	88.28			37.25	62.32	50.84		32.66
rex sole	4.14			12.08		9.34		7.90
other flatfishes								
other fishes	0.28	0.51					0.43	
poachers	1.06			0.17	0.06	0.18		0.56
mesopelagic fishes		0.38	0.66	0.03	0.12		0.63	
blacktail snailfish					0.28			
smooth lumpsucker	1.71	0.23	1.89	2.64	0.41	1.68	1.22	
other snailfishes	3.94	1.77	0.18		1.21		1.18	0.09
Pacific grenadier		28.42	3.10				62.44	
giant grenadier		751.62	466.66		807.66		1802.85	
popeye grenadier		77.99	196.04				576.38	
Pacific cod				5.22		34.42		7.56
walleye pollock	45.22	1.06		384.34		7.08	0.83	318.78
other grenadiers & cods		1.42						
darkfin sculpin	3.91			0.15				
spinyhead sculpin	0.25				0.24	0.48		
blob sculpin		2.47						
bigmouth sculpin	23.94			2.52	0.29			
other sculpins	0.03			0.07		0.38		0.42
twoline eelpout								
western eelpout		0.23			2.88		0.10	
ebony eelpout		0.26			2.04			
Bering eelpout	1.80			0.07	0.98			
other eelpouts							0.13	0.08
shortspine thornyhead	7.96	4.08			92.35			
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch				454.66				
shortraker rockfish								
other rockfish								
Alaskan pink shrimp	8.06			2.70		3.56		0.52
other shrimps & barnacles	8.99	0.05	0.01	2.70	0.04	3.56	0.03	0.52
grooved Tanner crab					0.46		0.40	
Tanner crab								
triangle Tanner crab		2.86	4.01	0.98			27.97	
snow crab								
scarlet king crab		8.64					0.31	
golden king crab					1.05			1.65
hermit crabs	0.21		0.07	0.00	0.81	0.00		0.00
other crabs								
jellyfishes	0.21	0.01	0.07		0.81			
coral & anemones	7.74	6.22		7.10	2.27	4.27	2.13	4.65
gastropods	5.83	0.02	0.03	2.50	3.09	2.66	0.14	0.73
clams						0.08		
giant octopus	2.42			4.46				
other octopus					1.77	0.08		
magistrate armhook squid	0.51				2.05	0.68		
other squid		0.28	0.20	0.06	0.20		0.35	0.36
seastars, brittlestars, sea cucumbers	43.99	4.21	0.32	78.25	221.80	4.86	2.48	1.00
sponges	2.34	1.14	0.58				0.71	0.07
other invertebrates	2.63	2.00	0.96	0.89	0.13	3.13	0.39	3.71
Haul total weight (kg)	1656.52	911.72	680.27	1467.00	1295.18	720.38	2494.00	556.51

Appendix C. - - Haul Log.

Haul	65	66	67	68	69	70	71	72
Haul date	2-Jul-16	2-Jul-16	3-Jul-16	3-Jul-16	3-Jul-16	3-Jul-16	4-Jul-16	4-Jul-16
Start latitude (N)	59.509	59.644	59.382	59.370	59.403	59.433	58.505	58.608
Start longitude (W)	-177.833	-177.871	-178.258	-178.021	-177.872	-177.663	-177.877	-177.957
End latitude (N)	59.513	59.659	59.371	59.360	59.387	59.410	58.517	58.606
End longitude (W)	-177.792	-177.840	-178.222	-177.984	-177.843	-177.666	-177.843	-177.915
Stratum	61	61	63	62	62	61	55	54
Station ID	61-04	61-03	63-10	62-15	62-02	61-23	55-02	54-04
Duration (hour)	0.53	0.51	0.53	0.51	0.51	0.58	0.53	0.52
Distance fished (km)	2.42	2.42	2.39	2.39	2.41	2.58	2.38	2.45
Net width (m)	16.54	15.85	16.65	16.38	16.05	16.03	16.50	17.11
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	310	205	789	546	447	316	1162	869
Surface temperature (°C)	8.9	8.9	9.4	9.2	9.3	8.8	9.5	(blank)
Bottom temperature (°C)	4.0	3.3	2.9	3.5	3.7	3.9	2.6	2.9
Pacific sleeper shark								
Bering skate	2.96	24.54			1.23	0.03		
mud skate					1.24	5.04		
roughtail skate			1.70				3.76	11.88
Alaska skate		21.80				7.30		
Aleutian skate	171.62		7.64	5.96	9.16	3.40		
Commander skate			4.78	6.28				2.52
whiteblotched skate				12.98	31.73	7.20		
whitebrow skate	1.27		0.08				0.49	
deepsea skate								
other elasmobranchs & eggs	0.04		0.01			2.02		
arrowtooth flounder	227.21	172.48		0.70	71.46	263.32		
Kamchatka flounder	12.94	7.56		13.16	21.18	25.41		
Greenland turbot	27.60		13.10	6.28	412.86	17.76		4.74
Pacific halibut					12.97			
flathead sole	16.60	86.79			4.86	29.18		
rex sole	8.52	3.92						
other flatfishes								5.72
other fishes			0.66					
poachers	0.61	3.35	0.20	0.14	0.07	0.74		
mesopelagic fishes			0.99	0.11	0.53		0.57	1.33
blacktail snailfish				0.91				0.10
smooth lumpsucker				0.02				0.26
other snailfishes	1.17	0.06	0.76	3.41	0.67	1.57		2.55
Pacific grenadier			3.24				35.31	13.40
giant grenadier			384.86	1503.42	664.52		759.22	1132.52
popeye grenadier			238.94	230.81			255.63	54.70
Pacific cod		21.58						
walleye pollock	19.70	1003.15			1.31	9.88		
other grenadiers & cods							1.71	
darkfin sculpin	9.20	0.19			1.78	24.68		
spinyhead sculpin	1.34	1.46						
blob sculpin							5.64	35.84
bigmouth sculpin	0.43	5.74				2.24		
other sculpins		1.38		0.09	0.40	1.78		
twoline eelpout					2.24			
western eelpout			0.08	3.52				0.08
ebony eelpout					13.28			
Bering eelpout	0.93		0.39	0.30	0.92	0.07		
other eelpouts		0.05						
shortspine thornyhead			3.90	41.48	3.86			3.64
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch	1.52					10.28		
shortraker rockfish							2.48	
other rockfish								
Alaskan pink shrimp	6.17	5.23				11.34		
other shrimps & barnacles	7.68	5.23	0.03	0.01	0.21	13.10	0.02	2.73
grooved Tanner crab				13.84	3.31			0.38
Tanner crab	6.48	0.23				0.68		
triangle Tanner crab			83.74	0.93	0.21		10.54	18.28
snow crab	0.39	0.67			0.01	0.15		
scarlet king crab							2.69	
golden king crab	1.28				1.13			
hermit crabs	0.00	0.00	0.14	1.15	1.56	0.00		
other crabs	0.67	0.12						
jellyfishes			0.14	1.15	1.56		1.47	0.80
coral & anemones	118.21	1.19	0.18	15.07	945.81	18.93	33.46	1.53
gastropods	1.06	3.70	1.45	0.69	0.53	0.02		0.35
clams								
giant octopus		5.62						
other octopus							6.08	
magistrate armhook squid	0.85		0.69	0.29	3.41	0.95		
other squid	0.12	0.69	0.35	0.01	0.16	0.12	0.22	0.47
seastars, brittlestars, sea cucumbers	39.72	4.19	10.90	4.49	6.18	4.66	17.90	2.59
sponges	0.07		2.63		0.55	3.60		4.44
other invertebrates	1.47	5.42	2.08	0.37	1.12	2.01	1.58	2.90
Haul total weight (kg)	687.79	1386.30	763.61	1867.53	2221.96	467.42	1138.75	1303.72

Appendix C. - - Haul Log.

Haul	73	74	75	76	77	78	79	80
Haul date	4-Jul-16	5-Jul-16	5-Jul-16	5-Jul-16	5-Jul-16	6-Jul-16	6-Jul-16	6-Jul-16
Start latitude (N)	58.660	58.589	58.778	58.941	58.861	58.513	58.524	58.233
Start longitude (W)	-177.958	-177.679	-177.909	-178.033	-177.795	-176.512	-176.127	-175.624
End latitude (N)	58.649	58.601	58.790	58.944	58.878	58.515	58.524	58.251
End longitude (W)	-177.926	-177.687	-177.944	-178.061	-177.817	-176.480	-176.085	-175.643
Stratum	54	55	52	51	51	54	53	44
Station ID	54-03	55-01	52-03	51-02	51-08	54-02	53-01	44-04
Duration (hour)	0.50	0.32	0.51	0.36	0.51	0.42	0.50	0.50
Distance fished (km)	2.27	1.39	2.39	1.64	2.26	1.84	2.43	2.35
Net width (m)	17.45	17.53	17.02	14.80	16.43	18.28	18.48	18.41
Performance code	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
Bottom depth (m)	829	1019	508	223	228	816	677	850
Surface temperature (°C)	9.2	9.5	9.2	9.4	9.6	9.4	9.6	9.6
Bottom temperature (°C)	3.0	2.8	3.7	3.7	3.6	3.1	3.4	3.1
Pacific sleeper shark								
Bering skate								
mud skate					6.86			
roughtail skate	5.48	17.66				2.90		9.06
Alaska skate				9.12	9.26			
Aleutian skate	0.35	0.10	17.88	4.58	20.26	0.28	4.80	
Commander skate	9.70						1.20	
whiteblotched skate								
whitebrow skate	0.76		1.54		7.02			1.72
deepsea skate								
other elasmobranchs & eggs		0.02		0.07	0.07		0.02	
arrowtooth flounder				24.25	40.00			
Kamchatka flounder		2.72	11.12	5.05	22.37		17.18	
Greenland turbot	13.72	4.42	31.78			17.00	76.98	16.30
Pacific halibut				31.80	10.95			
flathead sole			13.20	21.78	33.47			
rex sole			11.38	2.46	4.68			
other flatfishes						1.87	1.66	0.02
other fishes				16.72	5.09		0.35	
poachers			0.21		1.28		0.20	
mesopelagic fishes	0.54	0.98	0.02			1.12	0.31	1.08
blacktail snailfish	0.17					0.65	7.12	0.18
smooth lumpsucker	0.04	1.32	0.55			0.11	1.30	0.29
other snailfishes	0.78	0.67	1.30			0.24	0.22	0.19
Pacific grenadier	5.00	14.88				4.08	0.01	3.94
giant grenadier	3375.83	288.72	2656.65			446.64	1081.40	700.76
popeye grenadier	70.20	21.73				12.46	288.36	86.18
Pacific cod					5.24			
walleye pollock	3.20	0.91			458.05	1.49		
other grenadiers & cods		0.10						
darkfin sculpin								
spinyhead sculpin								
blob sculpin	4.02	18.22				0.96		12.50
bigmouth sculpin					3.56			
other sculpins			0.02	1.95	6.72	0.01		0.01
twoline eelpout							4.68	
western eelpout	0.02						1.94	0.03
ebony eelpout			23.70					
Bering eelpout	0.27	0.05	0.29					
other eelpouts						0.08	0.08	0.01
shortspine thornyhead	3.42		35.38			11.92	43.94	12.92
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch				35.68	3.98			
shortraker rockfish								
other rockfish				0.35				
Alaskan pink shrimp				0.30	3.31			
other shrimps & barnacles		0.33		0.31	3.31	0.78	0.07	0.59
grooved Tanner crab	0.31	0.50	1.99			0.45	4.65	1.97
Tanner crab								
triangle Tanner crab	17.75	3.25				2.37	37.10	2.87
snow crab								
scarlet king crab		0.01						
golden king crab			2.18	1.12				
hermit crabs	0.00		1.12	0.00	0.00		0.00	
other crabs				0.02	0.01			
jellyfishes		0.55	1.12			0.14		
coral & anemones		2.21	0.18	1.51	1.20	0.97	3.33	4.92
gastropods	0.71		0.14	0.96	0.71	0.58	0.34	1.32
clams								
giant octopus			1.72	0.05				
other octopus		2.42	3.48					
magistrate armhook squid			1.52		4.58	0.32	1.02	
other squid		0.20		0.05	0.40	0.41		
seastars, brittlestars, sea cucumbers	6.58	13.92	8.36	2.67	17.43	4.02	0.88	2.30
sponges				0.58	1.39	3.37	1.56	
other invertebrates	0.11	128.04	0.08	1.38	1.46	1.00	1.62	0.55
Haul total weight (kg)	3518.93	523.89	2826.87	162.71	672.59	516.16	1582.29	859.69

Appendix C. - - Haul Log.

Haul	81	82	83	84	85	86	87	88
Haul date	6-Jul-16	7-Jul-16	7-Jul-16	7-Jul-16	7-Jul-16	8-Jul-16	8-Jul-16	8-Jul-16
Start latitude (N)	58.393	58.071	58.126	58.254	58.309	58.129	58.270	58.356
Start longitude (W)	-175.581	-175.504	-175.547	-175.506	-175.313	-175.605	-175.455	-175.326
End latitude (N)	58.379	58.064	58.143	58.272	58.310	58.147	58.266	58.356
End longitude (W)	-175.550	-175.453	-175.573	-175.529	-175.352	-175.611	-175.416	-175.339
Stratum	41	45	44	43	42	45	42	41
Station ID	41-10	45-01	44-03	43-04	42-05	45-08	42-01	41-09
Duration (hour)	0.50	0.68	0.52	0.54	0.50	0.44	0.50	0.17
Distance fished (km)	2.36	3.10	2.38	2.42	2.28	1.94	2.34	0.77
Net width (m)	16.59	17.48	17.29	16.74	16.73	17.66	16.92	16.64
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	294	1040	916	645	416	1017	583	274
Surface temperature (°C)	9.2	9.6	9.8	(blank)	(blank)	9.9	10.0	10.2
Bottom temperature (°C)	4.2	2.8	3.6	4.2	3.0	2.9	3.6	4.1
Pacific sleeper shark								
Bering skate								1.00
mud skate	1.88							
roughtail skate						5.78		
Alaska skate	8.76							
Aleutian skate	2.46			1.44	2.52		14.60	3.10
Commander skate	3.58			46.72			26.76	
whiteblotched skate								4.42
whitebrow skate	2.66			0.06			0.04	
deepsea skate								
other elasmobranchs & eggs	0.11	0.09	0.02	0.44		0.01		0.02
arrowtooth flounder	137.31				20.52			63.84
Kamchatka flounder	5.33			13.62	45.04		9.04	6.64
Greenland turbot		9.56		5.02	214.78	3.34	16.90	4.54
Pacific halibut	9.23				18.52			33.15
flathead sole	15.60				83.08			7.67
rex sole	62.28				64.22			43.52
other flatfishes				14.26			9.16	
other fishes				0.19	0.27			
poachers	2.55			0.57	0.07		0.25	0.30
mesopelagic fishes		0.21	0.53	0.11	0.01	0.65	0.18	
blacktail snailfish					1.93		2.88	
smooth lumpsucker			0.54			0.19		
other snailfishes	0.49	0.29	2.40	0.14		0.14	0.01	0.28
Pacific grenadier		47.35	79.37			12.40		
giant grenadier		1847.95	804.41	795.95	609.12	1484.44	785.40	
popeye grenadier		250.26	86.08	96.60		49.88	76.56	
Pacific cod								4.92
walley pollock	30.82	0.74			1.12			25.30
other grenadiers & cods		0.07						
darkfin sculpin	1.32			0.02	0.87			0.31
spinyhead sculpin	0.02							
blob sculpin		12.63	0.86			5.62		
bigmouth sculpin	7.22				14.94			
other sculpins	0.34				0.06		0.02	0.07
twoline eelpout								
western eelpout		0.01	0.01			0.05	1.62	
ebony eelpout				0.76			10.85	
Bering eelpout	0.09						0.38	
other eelpouts		0.01	0.05	0.09		0.02		
shortspine thornyhead	3.10			23.02	59.36		20.38	
rougheye rockfish								
blackspotted rockfish					1.38			
Pacific ocean perch	243.14				0.71			1011.76
shortraker rockfish								
other rockfish								
Alaskan pink shrimp	3.02							7.19
other shrimps & barnacles	3.03		7.86		2.30	1.53		7.23
grooved Tanner crab				0.58			0.11	
Tanner crab								
triangle Tanner crab		9.23	7.18	0.16		1.48		
snow crab	0.01							
scarlet king crab			0.01	0.01				
golden king crab					0.87			
hermit crabs							0.01	
other crabs					0.08			
jellyfishes	0.33		0.67	0.82		0.17	0.01	0.53
coral & anemones	1.61	14.76	46.49		18.94	4.91	0.66	1.48
gastropods			3.66			1.00	0.09	
clams								
giant octopus	6.78				0.87			
other octopus	0.04	3.26		0.06	2.72	3.56	0.27	
magistrate armhook squid				0.25	2.52		2.55	
other squid	0.05	0.13	0.21			0.12		
seastars, brittlestars, sea cucumbers	9.12	93.46	50.78	204.48	3.82	34.94	32.61	340.16
sponges		0.08	1.25	0.79			0.02	
other invertebrates	0.27	199.66	140.38	25.97	0.77	2.65	2.01	0.67
Haul total weight (kg)	562.52	2489.71	1232.73	1232.10	1171.36	1612.84	1013.32	1568.06

Appendix C. - - Haul Log.

Haul	89	90	91	92	93	94	95	96
Haul date	8-Jul-16	8-Jul-16	9-Jul-16	9-Jul-16	9-Jul-16	9-Jul-16	10-Jul-16	10-Jul-16
Start latitude (N)	58.274	58.348	58.485	58.540	58.552	58.616	58.506	58.546
Start longitude (W)	-175.098	-175.072	-174.808	-174.853	-174.791	-175.076	-174.850	-175.053
End latitude (N)	58.295	58.362	58.467	58.521	58.558	58.620	58.495	58.533
End longitude (W)	-175.087	-175.070	-174.787	-174.831	-174.822	-175.036	-174.890	-175.075
Stratum	43	42	45	44	43	42	45	44
Station ID	43-03	42-04	45-02	44-02	43-05	42-08	45-03	44-05
Duration (hour)	0.51	0.33	0.53	0.55	0.42	0.50	0.61	0.46
Distance fished (km)	2.40	1.54	2.38	2.52	1.93	2.40	2.73	1.91
Net width (m)	16.59	17.06	16.93	17.69	17.02	17.38	17.84	17.18
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Bottom depth (m)	652	579	1128	952	779	450	1041	977
Surface temperature (°C)	10.1	10.3	10.2	10.0	9.9	9.7	10.0	9.9
Bottom temperature (°C)	3.4	3.6	2.8	2.9	3.1	3.8	2.8	2.9
Pacific sleeper shark								
Bering skate						0.02		
mud skate								
roughtail skate				19.60	6.76		9.44	3.78
Alaska skate								
Aleutian skate	11.18	28.18		6.24	10.98	223.02	3.44	6.92
Commander skate	24.10	10.86		3.04	16.86	6.48	5.86	3.04
whiteblotched skate						11.76		
whitebrow skate		5.00		1.25	1.96	14.98	0.59	0.46
deepsea skate								
other elasmobranchs & eggs	0.61				0.06	0.04		
arrowtooth flounder						74.68		
Kamchatka flounder	3.20	8.20		4.58	1.78	57.90	2.56	2.12
Greenland turbot	9.41	34.56	11.64	16.76	13.62	66.74	50.82	6.94
Pacific halibut						8.19		
flathead sole						29.90		
rex sole						30.50		
other flatfishes	12.70	4.08						
other fishes	0.74			0.61		0.75		
poachers	0.33	0.11			0.22	0.47		
mesopelagic fishes	1.64	0.30	2.01	0.82	0.64	0.07	0.74	
blacktail snailfish	1.45	0.23		0.80	1.21			0.25
smooth lumpsucker			2.93	2.58	0.03		1.22	
other snailfishes	0.15	0.85	0.54	2.75	1.22		2.58	0.44
Pacific grenadier			60.13	18.24			78.57	7.54
giant grenadier	466.11	1465.70	1299.54	1294.92	999.26	3730.55	2155.37	967.54
popeye grenadier	17.85	34.64	77.25	301.68	199.60		239.76	152.41
Pacific cod								
walley pollock				0.61		19.62	1.09	
other grenadiers & cods							0.02	
darkfin sculpin	0.10							
spinyhead sculpin						0.56		
blob sculpin			6.18	2.23			18.98	13.98
bigmouth sculpin						9.36		
other sculpins				0.01	0.02	0.17		
twoline eelpout	7.74		0.62	0.22				
western eelpout				0.06			0.33	
ebony eelpout	1.22	13.36				11.80		0.07
Bering eelpout						0.34		
other eelpouts	0.08				0.35		0.03	
shortspine thornyhead	62.66	53.06		2.72	9.48	81.68		
rougheye rockfish								
blackspotted rockfish						1.24		
Pacific ocean perch								
shortraker rockfish		1.06				86.84		
other rockfish								
Alaskan pink shrimp								
other shrimps & barnacles	2.07			0.17	0.02	0.05	0.11	0.04
grooved Tanner crab	2.36	10.04	0.29	5.73	2.12		2.23	
Tanner crab								
triangle Tanner crab	2.13	1.56	0.14	2.16	3.84	0.14	2.52	18.75
snow crab								
scarlet king crab	0.01				1.58	0.11	0.39	
golden king crab								
hermit crabs				0.01	0.03	0.000	0.62	0.03
other crabs						0.26	2.57	
jellyfishes	24.84			0.01	0.03		0.62	0.03
coral & anemones		2.35	23.78	5.53	0.78	9.75	7.23	1.52
gastropods	0.60	0.61	0.87	0.96	0.70	9.39	0.90	0.22
clams								0.01
giant octopus								
other octopus	0.09	0.15	4.05		0.15	3.59	2.37	
magistrate armhook squid						2.19		
other squid	0.27		0.30	0.22				
seastars, brittlestars, sea cucumbers	2656.29	8.54	69.89	35.39	46.15	22.71	47.58	0.66
sponges	0.02				1.83		1.14	
other invertebrates	2.07	0.07	367.87	0.43	0.58	0.78	0.39	0.21
Haul total weight (kg)	3312.00	1683.50	1928.00	1730.28	1321.82	4516.60	2640.01	1186.92

Appendix C. - - Haul Log.

Haul	97	98	99	100	101	102	103	104
Haul date	10-Jul-16	11-Jul-16	11-Jul-16	11-Jul-16	11-Jul-16	15-Jul-16	16-Jul-16	16-Jul-16
Start latitude (N)	58.554	56.533	56.499	56.496	56.464	54.380	55.589	55.571
Start longitude (W)	-174.610	-172.508	-172.042	-171.986	-171.827	-166.510	-168.870	-168.759
End latitude (N)	58.539	56.546	56.491	56.487	56.464	54.381	55.577	55.578
End longitude (W)	-174.597	-172.490	-172.009	-171.950	-171.789	-166.474	-168.834	-168.777
Stratum	41	32	33	32	31	13	25	24
Station ID	41-06	32-02	33-02	32-01	31-02	13-02	25-01	24-01
Duration (hour)	0.40	0.39	0.47	0.53	0.51	0.50	0.57	0.32
Distance fished (km)	1.84	1.81	2.20	2.48	2.33	2.36	2.61	1.40
Net width (m)	16.54	17.20	17.77	17.48	16.20	17.89	17.00	16.37
Performance code	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.1
Bottom depth (m)	322	447	788	580	315	615	1026	881
Surface temperature (°C)	10.0	10.1	10.2	10.2	10.7	11.0	11.3	11.1
Bottom temperature (°C)	4.1	3.9	3.2	3.6	4.1	3.4	2.8	3.1
Pacific sleeper shark								
Bering skate								
mud skate	1.44							
roughtail skate			7.94				16.90	23.86
Alaska skate								
Aleutian skate	20.58		1.92	9.62	2.96		13.06	6.30
Commander skate			4.26	4.26		6.10		
whiteblotched skate	3.72							
whitebrow skate				7.58			0.07	
deepsea skate								
other elasmobranchs & eggs								0.06
arrowtooth flounder	228.52	16.40			138.36	10.58		
Kamchatka flounder	8.64	23.00		14.34	22.54	12.80		2.18
Greenland turbot		12.18		79.46		58.32	15.66	13.54
Pacific halibut								
flathead sole	110.08				53.76			
rex sole	25.76	43.36		12.66	284.22			
other flatfishes			0.84					1.51
other fishes		0.41	0.91			0.53		0.34
poachers	1.73	0.18	0.01	0.21	1.09	0.07	0.01	0.28
mesopelagic fishes		0.17	0.42	0.23		1.05	0.70	0.87
blacktail snailfish		1.44	2.26	4.82		4.12	0.57	1.12
smooth lumpsucker				0.45			0.16	
other snailfishes			0.37	7.16		0.05	1.60	0.85
Pacific grenadier			0.12				6.38	
giant grenadier		1435.02	1139.46	2150.80		452.08	355.73	449.03
popeye grenadier			294.33	80.92		1.92	216.02	130.56
Pacific cod					2.74			
walleye pollock	6.08	1.26			137.02		0.90	
other grenadiers & cods							0.71	
darkfin sculpin	1.30	0.12			0.22			
spinyhead sculpin	0.30				0.17			
blob sculpin			9.22				15.50	6.60
bigmouth sculpin	2.46	1.64			37.94			
other sculpins	0.02	0.03	0.01	0.05	0.01		0.00	
twoline eelpout			9.42	12.06		2.04		
western eelpout						46.81	2.19	
ebony eelpout						2.22		
Bering eelpout		0.04	0.21	0.26	0.07	0.13	0.04	0.90
other eelpouts				0.02				0.02
shortspine thornyhead		107.22	62.10	146.48	6.30	52.46	10.58	22.40
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch	931.60				384.43			
shortraker rockfish		38.92			1.32			
other rockfish								
Alaskan pink shrimp	0.15				2.84			
other shrimps & barnacles	1.11	0.03	0.12		3.43	0.01	1.84	0.27
grooved Tanner crab			4.55	5.62			6.06	22.12
Tanner crab	0.05				0.08			
triangle Tanner crab						3.08	47.28	
snow crab								
scarlet king crab							2.00	
golden king crab	1.51	1.30			3.92	0.46	0.82	
hermit crabs	0.00		0.01	0.01		0.37	0.74	2.61
other crabs					0.03			
jellyfishes			0.01	0.01	1.45	0.37	0.74	2.61
coral & anemones	5.92	6.96		0.44	5.49		0.04	
gastropods	0.33	0.27	0.90	0.70		4.48	2.44	0.39
clams								
giant octopus		1.45		1.19	2.73			
other octopus		3.99				1.22	0.21	
magistrate armhook squid	0.57	0.25		1.57	0.51	0.94		
other squid			0.09		0.11		0.22	0.17
seastars, brittlestars, sea cucumbers		5.78		6.84	0.54	143.37	32.71	0.84
sponges			0.12		0.67			
other invertebrates	0.42	0.46	0.29	0.15	0.03	5.76	2.53	1.25
Haul total weight (kg)	1352.28	1701.83	1539.85	2547.88	1094.93	811.33	754.39	690.64

Appendix C. - - Haul Log.

Haul	105	106	107	108	109	110	111	112
Haul date	16-Jul-16	16-Jul-16	16-Jul-16	17-Jul-16	17-Jul-16	17-Jul-16	17-Jul-16	18-Jul-16
Start latitude (N)	55.688	55.801	55.930	55.960	56.015	56.069	56.080	55.937
Start longitude (W)	-168.780	-168.864	-168.834	-168.934	-168.887	-168.760	-168.629	-170.336
End latitude (N)	55.697	55.816	55.937	55.966	56.015	56.065	56.086	55.950
End longitude (W)	-168.794	-168.888	-168.799	-168.970	-168.857	-168.796	-168.663	-170.304
Stratum	21	22	21	24	25	23	23	24
Station ID	21-01	22-01	21-02	24-05	25-02	23-02	23-08	24-04
Duration (hour)	0.29	0.51	0.51	0.51	0.41	0.49	0.50	0.55
Distance fished (km)	1.35	2.30	2.34	2.38	1.85	2.27	2.22	2.55
Net width (m)	12.93	17.54	15.33	17.16	16.19	17.08	16.32	16.61
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	215	550	309	810	1172	762	623	854
Surface temperature (°C)	10.9	11.2	11.3	10.7	11.0	10.9	10.9	11.2
Bottom temperature (°C)	4.4	3.6	4.1	3.0	2.6	3.3	3.3	3.0
Pacific sleeper shark								
Bering skate	1.34							
mud skate			5.64			1.43	0.04	
roughtail skate								
Alaska skate	15.94		8.62					
Aleutian skate	39.46	2.60		65.04	1.20	69.84	61.34	3.04
Commander skate		3.36		22.80	47.40	188.34	26.12	
whiteblotched skate	27.62	3.54	5.78			2.19	213.06	
whitebrow skate			4.18	6.86	2.52	2.65	5.46	1.25
deepsea skate								
other elasmobranchs & eggs	0.08		0.45	0.02	0.04	0.03	0.03	0.06
arrowtooth flounder	8.68	8.06	61.74					
Kamchatka flounder	7.58	111.01	1.83	58.50		38.25	29.94	8.62
Greenland turbot		85.02		17.30	41.58	5.24	21.88	7.86
Pacific halibut								
flathead sole	5.86		139.54					
rex sole	38.84	4.00	21.24				5.08	
other flatfishes				2.81				4.36
other fishes	7.31			1.16		1.08		
poachers	0.72	0.15	0.04	0.03				0.03
mesopelagic fishes		0.38		0.52	0.10	0.42	0.12	0.50
blacktail snailfish		3.78		9.16	0.47	4.64	1.89	0.81
smooth lumpsucker		1.72			1.28	0.01	0.27	3.17
other snailfishes			1.77	0.41	0.55	0.77	0.26	0.47
Pacific grenadier					242.10			
giant grenadier		339.08		1013.49	1252.95	363.52	14.98	810.06
popeye grenadier		1.84		246.72	331.68	10.74	66.80	232.27
Pacific cod	157.78		34.00					
walley pollock	460.94		59.92					
other grenadiers & cods					0.02			
darkfin sculpin	0.36		3.04					
spinyhead sculpin	0.28							
blob sculpin					12.02			
bigmouth sculpin	4.82	2.94	5.88					
other sculpins				0.02		2.91		0.02
twoline eelpout				5.50	0.31	26.10		2.85
western eelpout		1.56			5.77		0.46	
ebony eelpout		26.90		1.28	5.44	14.64	3.06	0.00
Bering eelpout		0.38	1.00	0.17				0.03
other eelpouts				0.01	0.13			0.08
shortspine thornyhead	3.79	215.84	0.56	89.42		203.06	8.06	78.96
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch	1498.75		33.56					
shortraker rockfish								
other rockfish								3.42
Alaskan pink shrimp	0.74		0.20					
other shrimps & barnacles	0.74	0.02	0.39	0.36	0.06	2.65		0.13
grooved Tanner crab		6.06		4.02	1.52		1.42	8.20
Tanner crab	0.01							
triangle Tanner crab					9.58			0.88
snow crab								
scarlet king crab		2.00		12.88		7.18		2.94
golden king crab		0.82		0.24		33.94	7.60	
hermit crabs	0.09	1.47		1.96	1.74	2.20	0.02	0.17
other crabs	0.02			14.92	2.28	0.96		1.78
jellyfishes	0.09	1.47	4.30	1.96	1.74	2.20	0.02	0.17
coral & anemones	0.01	2.62	4.80		0.11	0.12	0.05	85.38
gastropods	0.40	0.75		0.17	0.06	0.25		0.11
clams								
giant octopus	1.20		0.54			0.85		
other octopus		3.26	0.05	0.09			0.06	
magistrate armhook squid		1.18	0.70	0.47		1.09	0.26	
other squid	0.17		0.30			0.88	0.06	0.24
seastars, brittlestars, sea cucumbers	2.04	22.31	7.67	3.36	0.43	3.33	0.23	6.76
sponges	0.09	0.91	2.83	4.16	0.61	88.98	2.23	37.68
other invertebrates	0.05	0.60	0.03	1.08		0.22	0.32	0.73
Haul total weight (kg)	2285.74	855.58	410.54	1586.89	1963.70	1080.72	471.13	1303.03

Appendix C. - - Haul Log.

Haul	113	114	115	116	117	118	119	120
Haul date	18-Jul-16	18-Jul-16	18-Jul-16	19-Jul-16	19-Jul-16	19-Jul-16	19-Jul-16	20-Jul-16
Start latitude (N)	56.003	55.969	55.977	56.103	56.064	56.138	56.123	56.190
Start longitude (W)	-169.953	-169.716	-169.547	-169.208	-169.490	-169.446	-169.277	-169.487
End latitude (N)	56.000	55.974	55.986	56.079	56.057	56.151	56.103	56.172
End longitude (W)	-169.934	-169.685	-169.513	-169.191	-169.505	-169.475	-169.249	-169.506
Stratum	21	23	24	25	21	23	24	22
Station ID	21-11	23-06	24-02	25-04	21-07	23-03	24-06	22-04
Duration (hour)	0.28	0.45	0.51	0.68	0.26	0.51	0.68	0.53
Distance fished (km)	1.26	2.02	2.34	2.93	1.19	2.27	2.81	2.34
Net width (m)	15.80	16.76	17.47	14.07	16.20	15.47	17.35	16.55
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	263	768	827	1116	247	638	959	487
Surface temperature (°C)	11.3	11.0	10.4	11.7	11.4	11.3	11.5	11.5
Bottom temperature (°C)	3.9	3.3	3.1	2.3	4.0	3.3	2.9	3.5
Pacific sleeper shark								20.10
Bering skate					1.33			
mud skate				0.44	2.22	9.26		0.57
roughtail skate		7.12	3.84					
Alaska skate								
Aleutian skate	5.20	15.33	21.70	34.38	32.60	92.48	9.30	4.18
Commander skate						131.06	7.88	8.52
whiteblotched skate						7.84		17.56
whitebrow skate		5.26	3.58	5.30		6.12	3.82	1.41
deepsea skate				16.82				
other elasmobranchs & eggs	0.06	0.35		0.23	0.02	0.56		0.70
arrowtooth flounder	78.26				33.61	0.28		1.50
Kamchatka flounder	11.44	9.76	35.14	6.14	6.59	35.02	39.72	97.66
Greenland turbot		3.42	11.16	96.96		50.02	32.26	19.00
Pacific halibut								
flathead sole	31.94				4.72			
rex sole	46.58				66.92			1.44
other flatfishes		2.74	1.86					
other fishes	7.20				0.33	1.12		
poachers	0.33	0.05	0.37		1.75			0.03
mesopelagic fishes		0.48	0.72	0.12		0.70	0.06	0.09
blacktail snailfish		4.24	3.38			1.63	0.48	0.86
smooth lumpsucker		0.86	0.04				3.87	
other snailfishes		0.03	0.14	0.19		1.22	1.57	0.08
Pacific grenadier		0.03		231.93			2.46	
giant grenadier		373.46	597.36	117.84		262.88	1774.19	375.36
popeye grenadier		362.60	331.17	539.96			46.86	0.40
Pacific cod	27.52				17.28			
walleye pollock	105.98				95.34	12.28		6.00
other grenadiers & cods								
darkfin sculpin	8.42				5.18	1.18	0.19	5.36
spinyhead sculpin								
blob sculpin			7.24	17.02			3.37	
bigmouth sculpin	3.42							
other sculpins	0.01	0.02			0.25	3.61	0.14	1.17
twoline eelpout		4.32	4.80			4.54	3.04	
western eelpout		0.55	4.34	12.24		2.12	60.82	0.63
ebony eelpout			1.40	12.40		0.60	3.36	1.12
Bering eelpout	0.31	1.56	0.19					2.46
other eelpouts		0.01	0.01	0.04		0.01		
shortspine thornyhead	350.74	53.46	64.40	3.24		24.90	19.06	125.60
rougheye rockfish								
blackspotted rockfish	8.76							
Pacific ocean perch	2009.83				677.95			
shortraker rockfish	12.96							28.38
other rockfish								
Alaskan pink shrimp	0.06				1.55			
other shrimps & barnacles	0.06	0.02	0.15	0.02	1.61	2.80	0.03	0.05
grooved Tanner crab		5.04	12.52	0.28				
Tanner crab					2.76			
triangle Tanner crab				239.60	1.92	7.36	9.04	
snow crab								
scarlet king crab		0.82	2.64	1.14			2.80	
golden king crab					0.01	9.80	6.72	56.04
hermit crabs	0.00	1.87	2.96	0.11	1.58	4.28	0.85	1.59
other crabs	0.01	1.06		2.80	0.06		20.94	0.05
jellyfishes		1.87	2.96	0.11	1.58	4.28	0.85	1.59
coral & anemones	0.62				0.09	0.32	0.02	0.30
gastropods	0.67	1.62	0.54	7.30	0.53		2.20	0.28
clams	0.01		0.11					
giant octopus			0.78					
other octopus	0.01			0.84			0.10	5.26
magistrate armhook squid	0.41	0.37	0.34			0.74	0.37	0.29
other squid	0.36		0.38		0.12			
seastars, brittlestars, sea cucumbers	1.24	104.34	27.41	2.30	3.58	1.09	69.63	764.14
sponges	1.35			6.22	2.84	6.80	5.84	72.55
other invertebrates	0.07	0.25	0.20	0.06	0.05	0.04	4.97	28.08
Haul total weight (kg)	2713.83	962.91	1143.82	1356.02	964.37	686.94	2136.79	1650.40

Appendix C. - - Haul Log.

Haul	121	122	123	124	125	126	127	128
Haul date	20-Jul-16	20-Jul-16	20-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16	22-Jul-16
Start latitude (N)	56.207	56.202		56.101	56.148	56.182	56.058	55.390
Start longitude (W)	-169.535	-169.237		-169.226	-169.026	-168.468	-168.372	-168.279
End latitude (N)	56.210	56.195		56.082	56.142	56.171	56.038	55.377
End longitude (W)	-169.570	-169.199		-169.200	-169.004	-168.435	-168.387	-168.246
Stratum	22	22		25	22	21	21	13
Station ID	22-09	22-03		25-05	22-07	21-10	21-03	13-10
Duration (hour)	0.48	0.53		0.58	0.33	0.52	0.53	0.52
Distance fished (km)	2.18	2.53		2.70	1.57	2.43	2.41	2.53
Net width (m)	15.38	16.27		17.87	17.46	18.03	16.56	15.45
Performance code	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	434	530		1055	515	208	225	605
Surface temperature (°C)	11.4	11.4		10.9	10.9	11.7	10.9	11.0
Bottom temperature (°C)	3.7	3.6		3.7	3.7	4.4	4.6	3.5
Pacific sleeper shark								
Bering skate								
mud skate	0.29	0.56						
roughtail skate								
Alaska skate						25.38		
Aleutian skate	25.32	75.78		21.08	29.34	77.34	46.30	2.68
Commander skate	14.26	61.18		3.93	8.66			
whiteblotched skate	20.64	70.18		0.41	20.42			
whitebrow skate		3.52		2.70	2.42		2.16	
deepsea skate				39.24				
other elasmobranchs & eggs	0.25			0.21	0.08	0.93	1.12	
arrowtooth flounder	19.76	75.50			36.57	15.15	25.22	
Kamchatka flounder	160.70	133.12		12.84	97.36	20.53	10.82	142.22
Greenland turbot		38.32		141.34	65.98			150.06
Pacific halibut		17.34			7.91	5.86		
flathead sole		16.62				2.08	113.54	
rex sole	26.24	24.90			42.24		3.94	
other flatfishes	1.43	7.56			7.34			
other fishes		0.48			0.42			0.71
poachers	0.04	0.02				0.15	0.03	0.12
mesopelagic fishes	0.01	0.23		0.24	0.07			0.08
blacktail snailfish	1.30	8.39			4.00			6.86
smooth lumpsucker								
other snailfishes	0.01	1.04		1.04	0.01		0.72	0.84
Pacific grenadier				226.00				
giant grenadier	174.80	805.85		252.04	84.68			215.92
popeye grenadier		3.56		571.26	22.70			5.98
Pacific cod						10.16	19.78	
walley pollock	37.20	4.64		1.36	6.08	20.18	43.68	
other grenadiers & cods								
darkfin sculpin	2.14					0.27	3.31	
spinyhead sculpin						0.01		
blob sculpin				19.74				
bigmouth sculpin						2.98		
other sculpins	0.07					1.65	0.14	
twoline eelpout								
western eelpout		1.71		13.06				36.81
ebony eelpout	2.26	7.34		11.86	1.19			
Bering eelpout	0.99	1.67			0.34			0.05
other eelpouts				2.02				0.01
shortspine thornyhead	107.00	130.30			389.60	7.36		228.60
rougheye rockfish								
blackspotted rockfish					2.26			
Pacific ocean perch	0.68					106.30	465.06	
shortraker rockfish	108.32	1.72			1.03			
other rockfish								
Alaskan pink shrimp						5.64	5.99	
other shrimps & barnacles	0.05	0.00		0.01	0.02	5.64	5.99	
grooved Tanner crab		8.26		0.48	8.68			47.36
Tanner crab	0.05					2.64		
triangle Tanner crab				238.58	1.20			0.40
snow crab								
scarlet king crab		2.26		3.60				
golden king crab	62.65	90.52		7.94	24.54	8.60	7.12	
hermit crabs	1.03	0.34		0.70	0.45	1.88		1.43
other crabs				2.90		0.76	0.26	
jellyfishes	1.03	0.34		0.70	0.45	1.88	2.51	1.43
coral & anemones	0.22	20.56		0.12	5.40	0.11		0.06
gastropods	0.11	0.17		7.83		0.18	0.01	2.29
clams							0.03	
giant octopus						1.51		
other octopus	0.27	0.03		0.37	0.11			1.34
magistrate armhook squid	2.17	2.82			3.05		2.00	0.30
other squid						0.16	0.07	
seastars, brittlestars, sea cucumbers	863.09	4.23		3.60	1.33	2.69	5.63	55.50
sponges	2.50			1.98		0.46	3.28	
other invertebrates	0.05	36.18		0.04	0.02	0.02	0.30	0.06
Haul total weight (kg)	1636.92	1657.24	0.00	1589.21	875.94	328.51	769.01	901.11

Incomplete haul

Appendix C. - - Haul Log.

Haul	129	130	131	132	133	134	135	136
Haul date	22-Jul-16	22-Jul-16	22-Jul-16	22-Jul-16	23-Jul-16	23-Jul-16	23-Jul-16	23-Jul-16
Start latitude (N)	55.370	55.424	55.457	55.405	54.939	55.079	55.181	55.042
Start longitude (W)	-168.166	-168.323	-168.197	-168.036	-167.783	-167.896	-167.996	-167.707
End latitude (N)	55.379	55.409	55.445	55.393	54.922	55.097	55.195	55.026
End longitude (W)	-168.199	-168.296	-168.169	-168.006	-167.764	-167.910	-168.009	-167.679
Stratum	12	12	11	11	15	13	14	12
Station ID	12-14	12-34	11-35	11-10	15-08	13-08	14-10	12-39
Duration (hour)	0.51	0.52	0.52	0.50	0.52	0.50	0.41	0.52
Distance fished (km)	2.33	2.41	2.25	2.31	2.32	2.24	1.75	2.51
Net width (m)	17.59	18.14	17.08	16.99	17.05	17.25	17.42	18.28
Performance code	0.0	0.0	0.0	0.0	3.2	0.0	1.1	0.0
Bottom depth (m)	504	535	244	230	1017	608	883	424
Surface temperature (°C)	11.0	10.9	10.8	10.9	10.2	10.0	10.4	9.9
Bottom temperature (°C)	3.6	3.7	4.2	4.2	2.8	3.5	3.0	4.1
Pacific sleeper shark								
Bering skate		0.33	2.52	7.12				
mud skate						1.30		
roughtail skate					36.62		3.06	
Alaska skate			16.70	48.60				
Aleutian skate	2.24	9.24	63.42	44.60	1.38	15.04	0.08	60.22
Commander skate		9.68						
whiteblotched skate	3.28		14.86	25.10				7.98
whitebrow skate		10.00	5.02	2.60				
deepsea skate								
other elasmobranchs & eggs	0.03	0.03	0.05			0.06		0.04
arrowtooth flounder	71.62	34.17	14.42	55.96				9.07
Kamchatka flounder	66.76	58.53	3.12	14.14	7.04	60.88	3.66	30.77
Greenland turbot	60.20	45.10			16.98	16.54	12.28	26.66
Pacific halibut				7.91				
flathead sole			9.66	34.22				136.72
rex sole	14.66		23.24	24.30				27.24
other flatfishes	11.84			0.19				
other fishes	0.34							2.31
poachers	0.05	0.09	0.27	0.44		0.004	0.03	0.11
mesopelagic fishes	0.03	0.10			1.13	0.12	0.38	0.05
blacktail snailfish	0.79	3.74			0.32	1.10	0.22	
smooth lumpsucker						1.10		
other snailfishes	0.94		0.82	1.11	2.47	0.04	1.32	0.57
Pacific grenadier					1.73			
giant grenadier	49.20	133.46			402.31	111.36	586.34	
popeye grenadier	0.19	1.34			199.19	3.00	369.99	
Pacific cod			37.86	57.08				
walley pollock			1303.37	1121.10				35.94
other grenadiers & cods								
darkfin sculpin		0.01	4.77	4.67		0.18		0.34
spinyhead sculpin			0.47	0.33				
blob sculpin							0.16	
bigmouth sculpin			5.32					
other sculpins			0.12		0.01			
twoline eelpout					0.90		4.86	
western eelpout	128.66	72.04			0.91	9.64	2.07	2.22
ebony eelpout	13.46	1.00				0.44		
Bering eelpout	0.02	0.08	1.11				0.52	0.22
other eelpouts					0.03		0.01	0.00
shortspine thornyhead	297.96	160.82			12.20	26.70	51.02	152.36
rougheye rockfish			0.33					
blackspotted rockfish				0.53				
Pacific ocean perch			930.95	97.64				4.38
shortraker rockfish								2.60
other rockfish					0.65			
Alaskan pink shrimp			0.53	2.22				
other shrimps & barnacles			0.53	2.22	1.18		0.24	
grooved Tanner crab	15.78	7.30				3.98	4.66	
Tanner crab				0.08				
triangle Tanner crab	1.08				72.52	0.24		
snow crab								
scarlet king crab								
golden king crab		0.01						
hermit crabs	1.46	1.44			1.91	0.80	1.87	3.01
other crabs			0.02					
jellyfishes	1.46	1.44	0.70	1.13	1.91	0.80	1.87	3.01
coral & anemones	0.72	1.91	0.27	2.24				31.40
gastropods	4.46	1.16	6.90	5.07	0.99	1.93	0.65	0.78
clams								
giant octopus	1.03			2.01				
other octopus	0.51	0.23			0.44	0.92	0.12	12.76
magistrate armhook squid	3.50	3.92	0.71			1.84		7.40
other squid		0.18				0.17		
seastars, brittlestars, sea cucumbers	53.33	59.74	35.43	22.98	40.86	248.22	13.75	10.61
sponges			0.63	0.12		0.80		
other invertebrates	0.08	0.19	0.42	0.51		0.35	0.02	0.33
Haul total weight (kg)	805.65	617.30	2484.53	1586.22	803.68	507.55	1059.17	569.11

Appendix C. - - Haul Log.

Haul	137	138	139	140	141	142	143	144
Haul date	24-Jul-16	24-Jul-16	24-Jul-16	24-Jul-16	24-Jul-16	25-Jul-16	25-Jul-16	25-Jul-16
Start latitude (N)	54.630	54.813	54.731	54.817	54.941	54.657	54.489	54.388
Start longitude (W)	-167.474	-167.405	-167.260	-167.120	-167.136	-167.700	-167.865	-167.837
End latitude (N)	54.650	54.828	54.712	54.828	54.951	54.640	54.466	54.366
End longitude (W)	-167.474	-167.426	-167.254	-167.150	-167.168	-167.720	-167.877	-167.842
Stratum	13	12	12	11	11	14	15	14
Station ID	13-06	12-48	12-01	11-26	11-30	14-06	15-06	14-04
Duration (hour)	0.52	0.48	0.48	0.50	0.50	0.50	0.58	0.53
Distance fished (km)	2.22	2.21	2.16	2.31	2.40	2.32	2.65	2.50
Net width (m)	16.76	17.43	16.58	17.26	17.28	17.74	17.70	18.06
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	612	487	457	348	220	821	1019	923
Surface temperature (°C)	10.6	10.7	10.5	10.7	10.6	9.3	9.8	10.2
Bottom temperature (°C)	3.2	3.7	3.8	4.1	4.1	3.2	2.8	2.9
Pacific sleeper shark								
Bering skate			1.74	2.26	2.58			
mud skate								
roughtail skate						6.88	33.10	13.30
Alaska skate					15.70			
Aleutian skate	12.74	7.12	1.94	3.92	47.52	3.24	0.65	0.17
Commander skate								
whiteblotched skate		9.52	2.03	5.98				
whitebrow skate	4.24					0.35		
deepsea skate								
other elasmobranchs & eggs	0.03			0.01	0.16	0.31	0.14	0.29
arrowtooth flounder	4.00	1.90	7.24	24.40	106.66			
Kamchatka flounder	71.10	28.10	48.70	33.84	16.65	2.38	2.82	3.38
Greenland turbot	35.56	12.02	4.46			2.62	16.20	
Pacific halibut				48.03	11.45			
flathead sole			22.78	92.64	137.71			
rex sole			5.02	42.83	0.69			
other flatfishes				6.64		9.46		
other fishes				0.79	0.30			
poachers	0.07	0.04	0.06	0.10		0.05	0.01	
mesopelagic fishes	0.04	0.02		0.13	0.11	2.26	3.27	4.35
blacktail snailfish	0.65					0.15		
smooth lumpsucker	1.45	4.66				0.08	2.30	0.22
other snailfishes	0.01					1.07	4.60	1.46
Pacific grenadier							19.26	
giant grenadier	1115.33	81.68	71.28			663.20	432.48	363.48
popeye grenadier	11.62	1.12				23.14	118.08	107.95
Pacific cod					25.84			
walleye pollock		2.38	1.38	150.80	186.40			
other grenadiers & cods							1.39	
darkfin sculpin	1.01	0.21		0.84	0.04			
spinyhead sculpin					1.84			
blob sculpin							19.26	0.13
bigmouth sculpin				4.12				
other sculpins					0.37			0.002
twoline eelpout						3.96	2.48	2.08
western eelpout	5.94	23.26	23.56				0.03	
ebony eelpout			1.05					
Bering eelpout				0.21		0.53	0.06	0.00
other eelpouts		0.01					0.03	
shortspine thornyhead	34.16	51.64	105.98	88.78	0.29	38.74	2.84	
rougheye rockfish								
blackspotted rockfish				1.80	1.52			
Pacific ocean perch			0.55	27.10	435.32			
shortraker rockfish			1.32					
other rockfish					0.47			
Alaskan pink shrimp					6.35			
other shrimps & barnacles		0.00	0.00	0.06	6.35	0.28	2.60	1.16
grooved Tanner crab						1.20		
Tanner crab					1.52			
triangle Tanner crab	0.11					2.27	34.26	51.60
snow crab								
scarlet king crab								
golden king crab								
hermit crabs	2.07	2.06	0.85	0.42	3.15	1.85	4.58	2.77
other crabs		0.03		0.04				
jellyfishes	2.07	2.06	0.85	0.42	3.15	1.85	4.58	2.77
coral & anemones	20.32	0.07	0.05	7.22	3.33	0.04		
gastropods	16.29	1.85	2.31	3.03	4.00	2.59	1.92	1.94
clams								
giant octopus			0.69					
other octopus		1.04	6.71			2.35		0.65
magistrate armhook squid	0.60	1.96	3.72	3.54	1.10			
other squid	0.22	0.18	0.13			0.08		0.08
seastars, brittlestars, sea cucumbers	526.71	517.30	244.32	81.12	2.13	7.17	5.52	0.16
sponges	58.33	15.67	0.76	1.71	0.02	0.22		
other invertebrates	41.76	0.12	1.53	0.69	0.39	0.15	0.19	0.25
Haul total weight (kg)	1966.43	766.02	561.03	633.45	1023.09	778.47	712.66	558.21

Appendix C. - - Haul Log.

Haul	145	146	147	148	149	150	151	152
Haul date	26-Jul-16	26-Jul-16	26-Jul-16	26-Jul-16	27-Jul-16	27-Jul-16	27-Jul-16	27-Jul-16
Start latitude (N)	54.281	54.280	54.377	54.560	54.543	54.434	54.445	54.610
Start longitude (W)	-167.775	-167.633	-167.612	-167.552	-167.325	-167.133	-166.850	-167.026
End latitude (N)	54.277	54.281	54.394	54.579	54.526	54.430	54.443	54.625
End longitude (W)	-167.739	-167.670	-167.634	-167.568	-167.303	-167.099	-166.884	-167.005
Stratum	15	15	13	13	12	12	12	12
Station ID	15-10	15-04	13-14	13-12	12-31	12-03	12-04	12-50
Duration (hour)	0.50	0.55	0.51	0.50	0.48	0.49	0.51	0.47
Distance fished (km)	2.40	2.45	2.40	2.30	2.34	2.29	2.26	2.12
Net width (m)	16.81	16.85	18.69	17.71	17.67	15.27	15.82	14.71
Performance code	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	1022	1012	800	687	569	542	521	430
Surface temperature (°C)	10.1	9.4	9.4	10.5	11.2	11.0	11.2	11.5
Bottom temperature (°C)	2.8	2.7	3.2	3.3	3.5	3.5	3.6	3.9
Pacific sleeper shark								
Bering skate					2.38		2.70	2.10
mud skate								
roughtail skate	2.40	17.64						
Alaska skate								
Aleutian skate		0.67	0.22		1.82	2.80		7.40
Commander skate								
whiteblotched skate								
whitebrow skate	0.93	0.73				0.79	4.50	
deepsea skate								
other elasmobranchs & eggs	0.32	0.14	0.03	0.01				
arrowtooth flounder					25.88	19.58	9.58	10.28
Kamchatka flounder		6.06	17.44	11.60	77.58	15.44	12.44	53.59
Greenland turbot	5.60	34.65	21.08	12.66	15.00	22.24	8.90	3.24
Pacific halibut								
flathead sole								73.02
rex sole								53.18
other flatfishes				1.35	3.54			1.82
other fishes	2.18							
poachers			0.02	0.02	0.03	0.08	0.02	0.05
mesopelagic fishes	2.54	1.12	1.72	0.64	0.34	0.13	0.06	0.29
blacktail snailfish			1.00	0.63	0.43	0.60		
smooth lumpsucker				2.04		0.02		
other snailfishes	4.01	3.01	1.29	1.00	0.11	0.12	0.27	
Pacific grenadier	17.73	17.17						
giant grenadier	516.07	999.66	584.31	206.18	489.20	71.44	98.62	49.78
popeye grenadier	252.12	357.80	126.28	24.90	6.30	0.95	0.68	
Pacific cod								
walley pollock								2.96
other grenadiers & cods	16.98	4.16						
darkfin sculpin					0.19			0.004
spinyhead sculpin								0.02
blob sculpin	19.79	12.90						
bigmouth sculpin								
other sculpins			0.03					
twoline eelpout	2.07	2.64	2.02	1.52				
western eelpout	6.10	7.78	0.92	2.82	26.81	46.88	82.08	23.00
ebony eelpout						0.68		4.08
Bering eelpout			0.18	0.23				
other eelpouts	0.01	0.01						
shortspine thornyhead			10.50	52.50	25.24	37.24	34.98	95.30
rougheye rockfish								
blackspotted rockfish								
Pacific ocean perch								1.21
shortraker rockfish								
other rockfish		0.47						
Alaskan pink shrimp								
other shrimps & barnacles	1.18	0.96	0.40	0.004				1.46
grooved Tanner crab				9.34		0.93		
Tanner crab								
triangle Tanner crab	53.82	47.22	13.96	0.08				
snow crab								
scarlet king crab								
golden king crab							1.60	2.49
hermit crabs	1.38	3.94	2.96	4.79		4.64	1.10	7.40
other crabs								
jellyfishes	1.38	3.94	2.96	4.79	0.55	4.64	1.10	7.40
coral & anemones								0.37
gastropods	1.93	1.47	2.21	2.27	1.19	2.95	5.50	4.23
clams							0.48	0.01
giant octopus								0.80
other octopus			2.56	0.31	1.99	0.70	4.68	10.85
magistrate armhook squid	0.16			1.20	2.91	3.76	2.13	0.38
other squid		0.24	0.41				0.27	
seastars, brittlestars, sea cucumbers	29.93	52.71	1.58	2.44	119.72	274.52	246.57	367.87
sponges				1.43	4.48	105.48	95.72	0.96
other invertebrates	0.15	0.15	0.65	1.13	0.87	17.26	1.58	1.46
Haul total weight (kg)	938.77	1577.24	794.70	345.89	806.57	633.88	615.52	786.99

Appendix C. - - Haul Log.

Haul	153	154	155	156	157	158	159	160
Haul date	27-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	28-Jul-16	29-Jul-16	29-Jul-16	29-Jul-16
Start latitude (N)	54.738	54.270	54.306	54.313	54.427	54.579	54.610	54.723
Start longitude (W)	-166.848	-166.636	-166.718	-166.595	-166.435	-165.866	-165.687	-165.398
End latitude (N)	54.725	54.266	54.311	54.314	54.429	54.576	54.590	54.744
End longitude (W)	-166.820	-166.654	-166.753	-166.567	-166.469	-165.830	-165.684	-165.411
Stratum	11	15	14	14	12	12	11	11
Station ID	11-33	15-01	14-02	14-01	12-30	12-25	11-18	11-03
Duration (hour)	0.49	0.30	0.50	0.41	0.50	0.49	0.49	0.49
Distance fished (km)	2.28	1.31	2.33	1.85	2.20	2.41	2.26	2.41
Net width (m)	17.24	17.40	17.33	16.84	15.31	16.22	15.73	14.55
Performance code	0.0	1.2	3.3	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	329	1095	830	806	555	423	354	204
Surface temperature (°C)	11.4	11.3	11.0	10.9	11.4	10.3	11.3	11.5
Bottom temperature (°C)	4.2	2.7	3.1	3.1	3.5	3.9	4.1	4.2
Pacific sleeper shark								
Bering skate	4.62				11.16			2.24
mud skate							9.26	4.50
roughtail skate		10.62	20.82					
Alaska skate								22.84
Aleutian skate	31.02	1.44	4.00	0.15	4.58	3.92	20.62	57.70
Commander skate					16.52			
whiteblotched skate								
whitebrow skate		0.56	4.16		4.38	1.58		
deepsea skate								
other elasmobranchs & eggs			0.10	0.07			14.62	
arrowtooth flounder	51.92			2.30	2.24	20.07	41.67	125.58
Kamchatka flounder	18.38		26.76	19.02	31.92	49.81	68.01	1.66
Greenland turbot			22.45	8.54	28.46	3.18	2.14	
Pacific halibut	35.00					4.78	4.02	30.42
flathead sole	19.00					14.06	43.84	49.28
rex sole	12.12					8.40	28.62	5.34
other flatfishes						9.42	1.68	62.44
other fishes	1.00	1.20			0.45	1.44	0.89	
poachers	0.35	0.04	0.09	0.21	0.02	0.02	2.17	0.70
mesopelagic fishes	3.24	0.30	0.84	1.53	0.04	0.04		0.18
blacktail snailfish			1.63	0.40				
smooth lumpsucker		1.73						
other snailfishes		1.59	0.70	0.44			1.38	
Pacific grenadier		3.35						
giant grenadier		337.64	231.24	130.06	263.00			
popeye grenadier		111.71	228.34	71.47				
Pacific cod								96.42
walley pollock	103.66			0.96	0.48	70.23	75.34	284.58
other grenadiers & cods								
darkfin sculpin	0.84					0.00	0.56	
spinyhead sculpin	0.29					0.17	4.24	0.09
blob sculpin		5.68						
bigmouth sculpin	4.88					5.72	11.88	
other sculpins							0.01	15.84
twoline eelpout		3.41	42.72	18.70				
western eelpout		0.12	3.68	21.19	174.01	135.31		
ebony eelpout					2.98			
Bering eelpout	0.07		0.78	0.42	0.004	0.12	0.13	
other eelpouts		0.02		0.00				
shortspine thornyhead	128.28	3.00	74.70	54.36	74.70	9.83		
rougheye rockfish	8.38							
blackspotted rockfish								2.42
Pacific ocean perch	29.68					3.20	3.44	62.22
shortraker rockfish								
other rockfish			0.35	0.56				
Alaskan pink shrimp	0.01						0.27	0.02
other shrimps & barnacles	0.51	0.59	0.18	0.08		0.004	0.31	0.02
grooved Tanner crab			1.19		2.60			
Tanner crab							2.03	7.42
triangle Tanner crab		63.14	23.67	25.80	0.40	0.69		
snow crab								
scarlet king crab			0.43					
golden king crab	0.25				1.62	7.32		
hermit crabs	0.94		6.52	3.90	0.69	0.58	8.49	4.12
other crabs	0.04					0.10	0.06	
jellyfishes	0.94	6.53	6.52	3.90	0.69	0.58	8.49	4.12
coral & anemones	6.66					62.13	27.64	0.27
gastropods	3.62	1.88	7.12	4.82	22.01	8.64	0.83	0.10
clams		0.03						
giant octopus								
other octopus	0.23	0.87	4.32	2.84	0.97	11.86	2.63	
magistrate armhook squid	2.60				0.26	0.71	1.92	
other squid	0.13		0.06	0.46		0.01		
seastars, brittlestars, sea cucumbers	22.70	0.69	0.42	1.47	188.52	9.87	5.20	2.67
sponges	2.31			0.29	240.81	0.03	1.16	
other invertebrates	1.66	0.33	1.42	0.39	6.88	0.62	0.26	0.03
Haul total weight (kg)	495.33	556.47	715.21	374.33	1080.39	444.44	393.78	843.21

Appendix C. - - Haul Log.

Haul	161	162	163	164	165	166	167	168
Haul date	29-Jul-16	29-Jul-16	30-Jul-16	30-Jul-16	30-Jul-16	30-Jul-16	30-Jul-16	2-Aug-16
Start latitude (N)	54.720	54.762	54.598	54.670	54.734	54.687	54.736	54.341
Start longitude (W)	-165.691	-165.863	-166.049	-166.086	-166.196	-166.365	-166.567	-166.145
End latitude (N)	54.720	54.764	54.602	54.671	54.733	54.689	54.743	54.331
End longitude (W)	-165.726	-165.884	-166.012	-166.122	-166.233	-166.402	-166.602	-166.177
Stratum	11	11	12	11	11	11	11	13
Station ID	11-04	11-05	12-22	11-22	11-07	11-31	11-42	13-18
Duration (hour)	0.49	0.30	0.52	0.51	0.52	0.51	0.52	0.49
Distance fished (km)	2.29	1.37	2.41	2.37	2.38	2.36	2.44	2.39
Net width (m)	16.13	15.86	15.51	17.74	17.18	17.27	17.52	17.35
Performance code	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	266	210	403	316	242	298	277	743
Surface temperature (°C)	11.0	11.4	11.2	10.4	11.9	11.7	11.2	12.1
Bottom temperature (°C)	4.2	4.4	3.9	4.2	4.2	4.2	4.2	3.1
Pacific sleeper shark								
Bering skate	10.34	5.79		2.54	15.32	4.22	5.50	2.70
mud skate								
roughtail skate								
Alaska skate		9.50						
Aleutian skate	48.78		0.08	5.62	101.00	14.24	43.08	8.90
Commander skate								2.50
whiteblotched skate								
whitebrow skate				3.76	5.18			
deepsea skate								
other elasmobranchs & eggs		0.25	0.22	0.15		0.03		0.03
arrowtooth flounder	63.08	47.35	57.52	73.28	76.00	67.50	44.61	2.80
Kamchatka flounder	12.11	2.38	161.70	9.86	1.08	4.34	2.59	0.94
Greenland turbot			64.56					52.20
Pacific halibut		3.51	25.46					
flathead sole	12.28	25.30	33.58	5.36	76.94	33.02	61.46	
rex sole	33.42	32.62	46.86	3.54	0.43	0.72	0.11	
other flatfishes			44.64	0.24				
other fishes							1.14	1.02
poachers	15.39	2.45	0.51	0.11	0.16	0.19		
mesopelagic fishes	0.44		0.12	0.05			0.37	9.83
blacktail snailfish				0.92				2.07
smooth lumpsucker			2.70					
other snailfishes	2.56	0.44	0.24		0.78		0.12	3.28
Pacific grenadier								14.50
giant grenadier								572.70
popeye grenadier								383.50
Pacific cod	18.86	17.22			0.99	3.64		
walleye pollock	198.78	719.24	42.92	23.58	43.20	105.04	50.84	
other grenadiers & cods								0.53
darkfin sculpin	0.41		0.02	0.01			0.40	
spinyhead sculpin	6.90	2.02	0.91	2.35	14.48	3.17	4.10	
blob sculpin								
bigmouth sculpin	6.82	7.06				4.96	6.02	
other sculpins				0.01	0.18	0.09	0.04	0.01
twoline eelpout								
western eelpout			43.97					8.70
ebony eelpout			5.12					1.23
Bering eelpout			0.43	0.22				0.25
other eelpouts								0.07
shortspine thornyhead			60.81	36.60		7.46	0.34	51.30
rougheye rockfish				2.68		3.08	4.72	
blackspotted rockfish					3.95	0.96	1.19	
Pacific ocean perch	9.06	24.06	7.58		62.28	75.84	11.72	
shortraker rockfish								
other rockfish								
Alaskan pink shrimp	6.02	0.61		1.74	4.34	2.84	6.44	
other shrimps & barnacles	6.03	0.61	0.07	1.87	4.36	3.87	6.47	0.10
grooved Tanner crab								0.68
Tanner crab	6.47	8.68		1.02	2.75		1.67	0.16
triangle Tanner crab			0.75					3.76
snow crab								
scarlet king crab								1.75
golden king crab	1.92		6.14	10.30		2.02		
hermit crabs	9.31	6.36	3.64	8.03	7.99	1.24	1.48	0.98
other crabs	0.06	0.01	0.04			0.01		
jellyfishes	9.31	6.36	3.64	8.03	7.99	1.24	1.48	0.98
coral & anemones	9.00	1.35	44.68	8.37	11.89	4.04	4.52	
gastropods	0.68	2.91	26.76	1.69	3.08	8.96	1.90	0.49
clams								
giant octopus			0.95	0.54	1.01	10.86	0.28	
other octopus			17.46	3.75	0.56	0.09	0.48	0.07
magistrate armhook squid	1.12		1.05	2.91	1.68	8.17	2.77	0.37
other squid								1.05
seastars, brittlestars, sea cucumbers	0.50	0.40	19.71	6.72	2.55	0.93	1.32	21.40
sponges			0.58		1.51	7.66	0.32	0.09
other invertebrates	1.24	0.77	0.41	0.77	0.27	5.21	0.33	0.10
Haul total weight (kg)	490.91	927.25	725.84	226.65	451.95	385.63	267.81	1151.01

Appendix C. - - Haul Log.

Haul	169	170	171	172	173	174	175	176
Haul date	2-Aug-16	3-Aug-16	3-Aug-16	3-Aug-16	3-Aug-16	3-Aug-16	4-Aug-16	4-Aug-16
Start latitude (N)	54.456	54.803	54.864	54.955	55.042	54.938	54.574	54.760
Start longitude (W)	-166.205	-167.669	-167.495	-167.595	-167.533	-167.373	-166.477	-166.020
End latitude (N)	54.458	54.818	54.879	54.970	55.028	54.924	54.576	54.762
End longitude (W)	-166.238	-167.686	-167.520	-167.618	-167.507	-167.345	-166.452	-165.990
Stratum	12	15	12	12	11	11	12	11
Station ID	12-08	15-07	12-36	12-40	11-37	11-41	12-19	11-14
Duration (hour)	0.47	0.44	0.48	0.47	0.48	0.48	0.37	0.42
Distance fished (km)	2.15	2.09	2.28	2.25	2.32	2.31	1.63	1.97
Net width (m)	15.11	14.38	17.32	17.79	17.68	17.41	15.63	16.59
Performance code	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Bottom depth (m)	518	1065	504	455	292	323	411	210
Surface temperature (°C)	11.9	11.1	11.8	11.9	11.9	12.1	12.0	11.0
Bottom temperature (°C)	3.6	2.8	3.7	3.8	4.2	4.2	3.9	4.1
Pacific sleeper shark								
Bering skate	18.20		2.00	2.60	11.00	21.80	4.50	12.40
mud skate								
roughtail skate		16.30						
Alaska skate						7.30		
Aleutian skate	19.30	0.90	18.90	5.80	43.80	282.70	7.20	9.00
Commander skate	27.30							
whiteblotched skate					6.50	19.40		
whitebrow skate	12.80	1.40			2.34		2.70	
deepsea skate								
other elasmobranchs & eggs			0.06		0.03	0.66	0.38	0.14
arrowtooth flounder	17.50		7.70	5.90	62.70	32.50	7.70	120.80
Kamchatka flounder	205.46	3.80	79.40	30.80	25.30	24.70	20.70	3.60
Greenland turbot	42.24	2.50	10.50	22.70	4.70	2.80	13.80	
Pacific halibut	9.50				25.32	19.73		6.83
flathead sole	46.72			1.36	52.00	9.30	81.00	50.00
rex sole					89.50	67.80	5.20	4.70
other flatfishes				3.96			0.60	
other fishes	0.34						0.42	
poachers	0.15			0.02	0.04	0.11	0.08	0.40
mesopelagic fishes	0.03	1.46	0.11	0.08			0.05	0.05
blacktail snailfish						1.23		
smooth lumpsucker			2.66					
other snailfishes	0.03	1.60		0.13	2.77	1.11		0.79
Pacific grenadier								
giant grenadier	148.90	550.90	91.50	6.30			12.70	
popeye grenadier		191.70						
Pacific cod					20.30	6.40		15.60
walley pollock	2.08		8.80	45.70	326.70	55.40	21.20	1980.59
other grenadiers & cods		0.21						
darkfin sculpin			0.18	0.55	10.45	4.31		
spinyhead sculpin	0.16				0.31	0.45	0.11	10.20
blob sculpin		1.11						
bigmouth sculpin								
other sculpins		0.01						0.01
twoline eelpout								
western eelpout	287.70		12.60	145.40			35.30	
ebony eelpout	8.48						4.10	
Bering eelpout					0.46	0.09	0.18	
other eelpouts	0.01	0.04	0.01	0.01			0.01	
shortspine thornyhead	280.10	3.80	67.20	94.80	5.00	60.30	61.20	
rougheye rockfish					3.30			
blackspotted rockfish					1.60			
Pacific ocean perch					36.40	20.60	1.49	202.60
shortraker rockfish								
other rockfish								
Alaskan pink shrimp					8.51	0.05		1.71
other shrimps & barnacles	0.08	0.95		0.01	8.81	0.30		1.74
grooved Tanner crab								
Tanner crab					0.01		0.01	15.96
triangle Tanner crab		36.90						
snow crab								
scarlet king crab		0.45						
golden king crab	1.64				2.94	1.01	0.17	0.77
hermit crabs	0.62	0.48	3.90	1.85	3.38	2.91	0.63	0.38
other crabs						0.03		
jellyfishes	0.62	0.48	3.90	1.85	3.38	2.91	0.63	0.38
coral & anemones			0.36	6.62	8.01	14.46	0.86	3.39
gastropods	27.43	1.01	2.34	1.16	1.50	4.93	24.31	1.08
clams								
giant octopus								1.92
other octopus	3.43	0.72	0.62	13.50	1.28		13.70	
magistrate armhook squid	1.64		8.20	6.60	0.27	0.63	4.34	0.53
other squid	0.19		0.04					
seastars, brittlestars, sea cucumbers	36.36	0.86	291.63	18.61	11.87	10.47	63.93	1.79
sponges	124.54		17.40			0.32		
other invertebrates	1.78		0.22	0.20	0.10	0.39	5.53	
Haul total weight (kg)	1325.30	817.54	630.20	416.49	780.55	677.05	394.71	2447.34

Appendix C. - - Haul Log.

Haul	177	178	179	180	181
Haul date	4-Aug-16	4-Aug-16	4-Aug-16	4-Aug-16	9-Aug-16
Start latitude (N)	54.756	54.633	54.490		56.068
Start longitude (W)	-165.767	-165.639	-165.841		-168.432
End latitude (N)	54.756	54.612	54.469		56.045
End longitude (W)	-165.733	-165.640	-165.846		-168.432
Stratum	11	11	12	Incomplete haul	21
Station ID	11-06	11-15	12-09		21-99
Duration (hour)	0.48	0.49	0.49		0.55
Distance fished (km)	2.17	2.33	2.36		2.60
Net width (m)	15.17	15.66	16.40		17.04
Performance code	0.0	0.0	0.0		0.0
Bottom depth (m)	224	330	453		299
Surface temperature (°C)	11.0	11.4	11.5		12.7
Bottom temperature (°C)	4.2	4.1	3.8		4.1
Pacific sleeper shark					
Bering skate	9.40				
mud skate			1.40		4.80
roughtail skate					
Alaska skate	7.90				
Aleutian skate	16.60	118.10	2.90		57.60
Commander skate					
whiteblotched skate					9.20
whitebrow skate	2.50				2.00
deepsea skate					
other elasmobranchs & eggs	0.68	0.72	1.07		1.91
arrowtooth flounder	39.10	142.20	29.50		12.50
Kamchatka flounder	5.30	44.30	22.90		23.00
Greenland turbot		2.60	28.10		
Pacific halibut	2.62				
flathead sole	8.20	85.40			16.10
rex sole	45.30	21.30	1.60		6.30
other flatfishes					1.74
other fishes		1.00	0.86		0.24
poachers	1.28	4.46	0.29		0.11
mesopelagic fishes		0.02	9.77		
blacktail snailfish					
smooth lumpsucker					
other snailfishes	0.20	10.56	0.25		
Pacific grenadier					
giant grenadier			15.60		
popeye grenadier					
Pacific cod	45.90				30.70
walley pollock	7.00	333.40	68.60		375.80
other grenadiers & cods					
darkfin sculpin		0.43	0.01		2.69
spinyhead sculpin	3.55	2.23	0.23		
blob sculpin					
bigmouth sculpin		7.40			
other sculpins	0.50				0.01
twoline eelpout					
western eelpout			289.50		
ebony eelpout					
Bering eelpout			0.23		
other eelpouts					
shortspine thornyhead			13.30		
rougheye rockfish					
blackspotted rockfish					
Pacific ocean perch	3.40	6.30	0.96		573.00
shortraker rockfish					
other rockfish					
Alaskan pink shrimp	0.14	0.38			0.02
other shrimps & barnacles	0.14	0.38	0.60		0.03
grooved Tanner crab			0.65		
Tanner crab	21.24	2.80			
triangle Tanner crab			1.03		
snow crab					
scarlet king crab					
golden king crab					74.96
hermit crabs	14.00		4.90		
other crabs	0.10	0.06			
jellyfishes	14.00	3.83	4.90		3.34
coral & anemones	4.34	5.06	40.50		
gastropods	7.76	0.06	1.32		0.15
clams					
giant octopus					
other octopus			4.71		
magistrate armhook squid		3.37	37.10		0.54
other squid			0.07		
seastars, brittlestars, sea cucumbers	1.54	1.06	6.31		5.24
sponges					0.72
other invertebrates	0.69	0.14	0.06		
Haul total weight (kg)	263.34	797.53	589.20	0.00	1202.66

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