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The 2009 Eastern Bering Sea Continental Shelf Bottom Trawl Survey: Results for Commercial Crab Species

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E. A. Chilton, C. E. Armistead, and R. J. Foy

U.S. DEPARTMENT OF COMMERCE
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ABSTRACT

The eastern Bering Sea (EBS) bottom trawl survey has been conducted annually since 1975 by the National Marine Fisheries Service's Alaska Fisheries Science Center's Resource Assessment and Conservation Engineering Division. The purpose of this survey is to collect data on the distribution and abundance of crab and groundfish resources in the eastern Bering Sea. These data are used to estimate population abundances for the management of commercially important species in the region. In 2009, 376 standard stations were sampled and an additional 32 stations were resampled in Bristol Bay at the end of the standard survey to adequately account for female red king crab maturity. The 2009 point estimates (± 1.96 SE) for legal-sized males (millions of crab) of commercial crab stocks in the EBS were as follows:

	<u>2009 legal-sized males</u>
Bristol Bay District red king crab (<i>Paralithodes camtschaticus</i>)	8.5 \pm 6.6
Pribilof District red king crab (<i>P. camtschaticus</i>)	0.7 \pm 0.9
Pribilof District blue king crab (<i>P. platypus</i>)	0.07 \pm 0.08
St. Matthew Island Section blue king crab (<i>P. platypus</i>)	1.4 \pm 0.7
Southern Tanner crab (<i>Chionoecetes bairdi</i>), all Districts	6.9 \pm 2.8
Snow crab (<i>C. opilio</i>), all Districts	371.8 \pm 86.4
Snow crab (<i>C. opilio</i>), all Districts \geq 4.0 inches	130.1 \pm 42.4

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INTRODUCTION

Survey History and Purpose

The eastern Bering Sea (EBS) bottom trawl survey has been conducted by the National Marine Fisheries Service's (NMFS), Resource Assessment and Conservation Engineering (RACE) Division of the Alaska Fisheries Science Center (AFSC) since 1971. Since 1975, annual surveys have been conducted and were expanded to include Bristol Bay and the majority of the Bering Sea continental shelf with the original purpose of assessing potential resource impacts of offshore oil development (Pereyra et al. 1976). The annual collection of data on the distribution and abundance of crab and groundfish resources provides fishery-independent estimates of population abundances and biological data for the management of commercially important species in the EBS. The crab species that have historically been assessed during the survey include: red king crab (*Paralithodes camtschaticus*), blue king crab (*P. platypus*), southern Tanner crab (*Chionoecetes bairdi*), snow crab (*C. opilio*), and hair crab (*Erimacrus isenbeckii*). The common name for *C. bairdi* has recently changed from Tanner crab to southern Tanner crab (McLaughlin et al, 2005); hereafter Tanner crab will be used to refer to *C. bairdi* in this document. Golden king crab (*Lithodes aequispina*) are periodically encountered on the bottom trawl survey, although the center of their distribution is at depths beyond the range of this survey. Since 1988, 376 standard stations have been included in the survey covering a 140,350 square nautical mile (nmi²) area of the EBS with station depths ranging from 20 to 150 m (Fig. 1).

In 2001 and from 2004 to 2006, an additional 29 stations were sampled northeast of the standard survey area to assess the northern distributions of snow crab and walleye pollock (*Theragra chalcogramma*). These data were not incorporated into the standard survey assessment in those years. These northeastern 29 stations were not sampled in 2009.

Beginning in the mid-1990s, a station producing ≥ 100 legal-sized male red king or Tanner crab has been considered a "hot spot". At each hot spot, multiple tows were made within the station area and all crab species caught in tows were sampled identical to the standard survey tow protocol described in Methods section.

The annual EBS bottom trawl survey begins in the northeast section of Bristol Bay in early June. Approximately 10 to 12 stations are sampled each day from two vessels. The standard survey is completed in late July at the western edge of the survey grid northwest of St. Matthew Island. In some years when the reproductive cycle of red king crab has not progressed due to colder water temperatures, a small portion of the inner Bristol Bay area is resampled after the conclusion of the standard survey (see Results: Bristol Bay District Red King Crab section).

Eastern Bering Sea Crab Stock Assessment Process

Bering Sea and Aleutian Islands (BSAI) king and Tanner crabs included in the federal fisheries management plan in the eastern Bering Sea are managed by the Alaska Department of Fish and Game (ADF&G) with federal oversight by NMFS (NPFMC 1998). The annual Stock Assessment and Fishery Evaluation (SAFE) report prepared by the North Pacific Fishery Management Council's Crab Plan Team for the king and Tanner crab fisheries of the Bering Sea and Aleutian Islands region provides current biological and economic data associated with these species. The Crab Plan Team reviews the survey, biological, economic, and modeling data to recommend biological reference points associated with the status of stocks. Finally, NMFS determines the procedure for setting overfishing levels (OFLs) and ADF&G sets the annual Total Allowable Catch or Guideline Harvest Level for each crab stock. Crab stocks are defined by ADF&G management units for king crab and Tanner crab species (Bowers et al. 2008). Red king crab are split into Bristol Bay and Pribilof Islands stocks, blue king crab are split into Pribilof Islands and St. Matthew Island stocks for management purposes, while Tanner and snow crab are split into separate management units defined by the ADF&G Board of Fish using 166°W and 173°W as the boundary for each east and west unit, respectively. Results of the 2009 EBS bottom trawl survey are presented for these crab stocks as defined by the management units.

This report summarizes the 2009 survey results for commercially important crab resources in the EBS. Numbers presented are trawl survey estimates of relative population abundance and do not represent absolute abundance. More detailed survey design and fishing gear specifications in addition to the number and weights of the groundfish species sampled at each standard station during this survey will be reported in a separate NOAA Technical Memorandum (e.g., Lauth and Acuna 2009).

METHODS

Survey Area and Sampling Logistics

The 2009 survey was conducted onboard the chartered fishing vessels FV *Arcturus* and FV *Aldebaran*, beginning 2 June in Bristol Bay and moving westward to end at the shelf break on 19 July. The vessels sampled in close proximity during the standard survey and both returned to Bristol Bay to resample 32 stations between 27 and 30 July due to the delaying effects of cold water temperatures on the red king crab reproductive cycle (see Results: Bristol Bay District Red King Crab).

The survey stations are divided into multiple districts, which are defined by ADF&G commercial crab management units (Fig. 2). Management units are defined by registration areas and districts, which are further divided into sections which have standard or high station

densities. Standard-density sections have stations centered in 20×20 nmi (37.04×37.04 km) cells while high-density sections include additional stations at the corners of the 20×20 nmi cells. Total area calculations for each stock management unit uses an area of 401 nmi^2 for each 20×20 nmi cell due to the use of a spherical projection of the grid surface in an area as large as the EBS. The king crab Registration Area T in Bristol Bay (south of $58^\circ 39'N$ and east of $168^\circ W$) is $54,536 \text{ nmi}^2$ and consists of 136 stations. The king crab Registration Area Q in the Bering Sea is divided into the Northern District (north of $58^\circ 39'N$) and the Pribilof District (south of $58^\circ 39'N$ and west of $168^\circ W$). The St. Matthew Island Section of the Northern District is divided into two sampling areas: 1) a high-density $7,218 \text{ nmi}^2$ area with 28 stations and 2) a standard-density $60,551 \text{ nmi}^2$ area with 151 stations. The stations in the Pribilof District are divided into two sampling areas: 1) a high-density $10,025 \text{ nmi}^2$ area with 41 total stations and 2) a standard-density $14,436 \text{ nmi}^2$ area with 36 stations.

The fishing gear used in 2009 was identical to that of EBS annual bottom trawl surveys since 1982 with both vessels fishing a standard 83-112 Eastern otter trawl with an 83 ft (25.3 m) headrope and a 112 ft (34.1 m) footrope (Lauth and Acuna 2009). The trawls on each vessel were rotated every 25 consecutive tows to mitigate potential impacts due to changes in net configuration from fishing. Each tow was approximately 0.5 h in duration and 1.5 nmi (2.8 km) in length at a speed of 3 knots (1.54 m/sec) and conducted in strict compliance with NMFS bottom trawl protocols established by the National Oceanic and Atmospheric Administration (Stauffer 2004).

Net mensuration equipment was used to monitor the net's fishing performance during each tow (Lauth and Acuna 2009). A bottom contact sensor (inclinometer) was attached to the center of the footrope to measure bottom contact of the net at 1-second intervals. The net mensuration system also consisted of an acoustic sensor attached to the headrope and two sensors attached to the port and starboard dandylines to measure net behavior (net height and width) during trawling operations. The bottom contact of the footrope and GPS data were used to calculate distance fished. Fishing power was assumed to be equal between the two vessels.

Surface and bottom water temperatures along with temperature-depth profiles were collected at 6-second intervals throughout the duration of each tow using a Seabird SBE-39 bathythermograph continuous data recorder (Sea-Bird Electronics Inc., Bellevue, WA) attached to the headrope of the net. The temperature measurement range of the SBE-39 is -5 to 35 ± 0.002 °C with pressure sensors measuring to $1,000 \pm 1$ m and calibrated every year by Sea-Bird Electronics. Bottom depth was also derived from this data by adding the net height from the net mensuration system to the headrope depth recorded by the SBE-39.

Biological Data Collection

All crab were removed from the catch, sorted by species and sex, and a total catch weight was obtained for each species. Tanner and snow crab hybrids are identified by a combination of characteristics including eyestalk color, curve of the epistome margin, and space between or shape of rostrum horns (Karinen and Hoopes 1971, Urban et al. 2002). Subsampling the total

catch of either *Chionoecetes* sp. crab occurred when an exceptionally large number of that species was caught in a tow. The weights of the sampled crab and non-sampled crab were recorded and an expansion factor was calculated to determine the final number of that species in the catch.

Individual crab carapaces were measured (± 1 mm) to provide a size-frequency distribution of each sample. Crab sizes are reported as carapace width excluding spines (CW) for Tanner and snow crab, and carapace length (CL) for all king crab and hair crab (Donaldson and Byersdorfer 2005). Carapace shell condition was assessed for each crab sampled and assigned to one of six classes according to specific criteria (0 = premolt or molting, 1 = soft and pliable, 2 = new hardshell both firm and clean, 3 = oldshell slightly worn, 4 = oldshell worn, 5 = very oldshell). All female crab abdomens were evaluated to determine reproductive condition based on the size of the egg clutch (0 = immature, 1 = mature female no eggs, 2 = trace to 1/8, 3 = 1/4, 4 = 1/2, 5 = 3/4, 6 = full) and the condition (0 = no eggs, 1 = uneyed, 2 = eyed, 3 = dead, 4 = empty egg cases) and color of the eggs (0 = no eggs, 2 = purple, 3 = brown, 4 = orange, 5 = purple-brown, 6 = pink).

Egg condition codes were assigned to assess the stage in the molt-mate cycle of mature female red king crab during the survey, where the presence of eyed embryos, empty egg cases, or absence of eggs (barren, hereafter) in mature sized females were indications of an incomplete cycle while mature females brooding uneyed embryos indicated completion of the cycle. The ratio of females with eyed embryos, empty egg cases, and old shell barren to uneyed embryos was derived as a measurement of the molt-mate cycle progression during the survey.

Chela height and carapace width measurements (± 0.1 mm) were collected from a subsample of male *Chionoecetes* spp. crab caught at each station to determine morphometric molt to functional maturity based on the chela height to carapace width ratio (Stevens et al. 1993, Tamone et al. 2007). Functional maturity in male *Chionoecetes* spp. can be separated into two morphometric groups, small claw and large claw. The historical dataset that defines functional maturity was updated with 1,300 *C. opilio* measurements in 2009.

All crab carapaces were scanned for evidence of bitter crab syndrome or black mat fungus, which was recorded when present, and crabs with bitter crab syndrome were set aside for further testing by the Fisheries Resource Pathology Laboratory at the AFSC in Seattle, WA.

Crab Abundance Estimates

Crab density (number/nmi²) was estimated at each station for legal, pre-recruit, and small males as well as large and small females of each stock (Table 1). The area swept by the trawl (nmi²) was calculated as the product of the distance traveled while the net had bottom contact by the mean net width over the duration of the tow. Prior to 2009, a fixed width of 50 ft (15.2 m; 0.008 nmi) was used in the area swept calculation to maintain consistency with historical calculations of crab abundance. The effective width of the trawl typically ranges from 48-60 ft when towing at a speed of 3 knots (Weinberg 2003), and changes with the depth of the tow due

to changes in scope of the trawl wire (Rose and Walters 1990). Beginning in 2009, crab densities were calculated using the mean net width recorded for the duration of each tow and a mean net width-inverse scope regression relationship was calculated when net width values were not recorded during a tow (Rose and Walters 1990). Distance traveled by the trawl was determined from ship positions recorded at the beginning and end of each tow using GPS equipment.

The crab population abundance within a district was estimated by averaging crab densities from all stations within the defined district and multiplied by the total area of the district specific to that stock. In this document, population abundance estimates are presented based on both the variable and fixed net width to compare with the historical estimates. Total population abundances were calculated using a stratified design based on management units (standard-density, high-density, and ADF&G defined districts). Population abundance estimates were calculated in each stratum and then summed among strata. Variance of the total population abundance estimate was calculated by summing the variance of each stratum. The 95% confidence intervals were calculated using the standard error of the total population multiplied by 1.96.

In the Bristol Bay District, two tows were completed at A04 due to the final position of the Z04 tow which only has limited area within the trawlable depth range. At stations with multiple tows (i.e., station A04 or hot spots), a single estimate of crab density was used by averaging all tows within the station prior to calculating total crab abundance.

In 2009, the additional data from stations resampled in Bristol Bay after the standard survey were handled differently for red king crab males and females. The total population abundance for males included the average of the original standard and the resampled stations. Due to the movements of females into the sampling area between the standard survey and the resampling event, only females from the resampled stations are included in total abundance estimate.

Note that population abundance estimates are point estimates and have substantial uncertainty due to the expanse of the area being sampled and the distributions of the resource. These point estimates are least precise for small crabs due to gear selectivity, and for females of some stocks due to differential crab behavior. However, for consistent analyses and due to a lack of available data, catchability is assumed to be near or equal to one.

Note that this report includes 2 revisions to the historical time series in Tables 3 and 5 through 10: 1) the 1997-2002 abundance estimates reported for all species are approximately 1-5% higher compared to values published prior to 2003 (Rugolo et al. 2003) as a result of a change in the total area specific to the district used in the abundance estimation and 2) a correction was made in the calculation of distance fished for the years 2001-2003 from a curved path to a straight line resulting in a negligible change in abundance estimates compared to values published prior to 2004 (Rugolo et al. 2006).

RESULTS

Survey Overview and Ancillary Data Collection

The 2009 EBS bottom trawl survey consisted of 408 bottom trawls (376 standard survey stations, and 32 resampled stations in Bristol Bay) conducted from 2 June to 30 July 2009 over an area of approximately 140,350 nmi². The latitude and longitude of the midpoint of each successful tow along with the duration (hr), distance fished (km), bottom depth (m) and bottom temperatures (°C) are listed in Appendix A. The mean distance fished was 1.56 nmi (2.88 km, SD = 0.21 nmi) with a range of 0.85 to 1.83 nmi (1.57 to 3.38 km) and the mean fishing time was 31.4 minutes (0.52 hr, SD = 0.04). The fishing depth of the 83/112 otter trawl net ranged from 19 to 171 m with a mean gear depth of 79 m (SD = 33.6). There were no hotspot protocols enacted on any station during the 2009 EBS bottom trawl survey.

Bottom temperatures measured during the survey ranged from -1.7° to 6.3°C (Fig. 3). These temperatures were collected at each station as the survey progressed from east to west, beginning on 2 June 2009 in the northeast corner of Bristol Bay and moving westward towards the shelf edge to finish at station N28 on 19 July 2009. A cold pool of water < 2°C was prevalent between the 50 m and 100 m isobaths in the middle shelf and Bristol Bay area with cool temperatures persisting at the nearshore stations along the Alaska Peninsula. Warmer bottom temperatures were evident at the shelf break in the southwestern area of the survey area and in shallow areas near Nunivak Island, while cold water temperatures persisted in the northwestern area between the 100 m and 200 m isobaths and the waters surrounding St. Matthew Island. In 2009, the mean bottom water temperature during the first survey leg (2 to 16 June 2009) was 1.5°C (SD = 0.5) which was colder than the mean bottom water temperature during the first survey leg in 2008 at 1.4°C (SD = 0.7), as well as 1.8°C (SD = 0.9) and 2.2°C (SD = 0.7) in 2007 and 2006, respectively. The mean water temperatures at the 32 stations resampled in July ranged from 2.3°C to 8.1°C, with an average of 4.5°C (SD = 1.5) (Fig. 4).

In 2009, the mean net width per tow ranged from 46 ft (14.0 m) to 66 ft (20.1 m) and the average mean net width for all 376 successful tows was 56.4 ft (17.2 m) with a standard deviation of 1.05. Only 18 of 376 successful standard tows completed on the 2009 EBS bottom trawl survey fished with a mean net width of 50 ft or less.

Seven special projects were conducted in addition to the assessment survey to collect specific biological data from particular crab species (Table 2). Five of the projects originated from the AFSC Shellfish Assessment Program; investigating the reproductive potential of female red king crab by evaluating egg loss and the presence of non-viable eggs during the incubation period, collecting specimens with rare or unusual pathological conditions, collecting hemolymph samples from *Paralithodes*, *Hyas*, and *Pagurus* spp. at randomly selected stations to monitor bitter crab syndrome and for population genetics, documenting any visual observations of bitter crab or black mat syndrome, and photographing invertebrate species to update the database for educational purposes. Data for two additional projects were collected for ADF&G and University of Alaska Southeast researchers to: 1) evaluate sperm reserves and clutch fullness in

Chionoecetes spp. as indicators of reproductive potential and 2) produce reproductive indices of male *C. opilio*.

A total of 132 egg clutches were collected and 41 live female red king crab were returned to the AFSC Kodiak Laboratory facility to evaluate seasonal and interannual variability in fecundity, assess clutch fullness indices as a tool for estimating fecundity, and determine if egg quality varies among females of different sizes. One *Telmessus cheiragonus* was collected for the rare pathological collection, while 311 male and female *Paralithodes* spp., 356 male and female *Hyas* spp., and 257 *Pagurus* spp. hemolymph samples were collected to monitor bitter crab syndrome and for population genetic assays. Black Mat was visually observed on 52 individual *C. bairdi* during the 2009 EBS trawl survey at stations A04, E18-E20, and G18 (Fig. 1), while digital photographs were taken throughout the survey of numerous invertebrate species for the digital imagery database. *Chionoecetes* spp. (n = 1,037) as well as immature male and female *C. opilio* (n = 291) and mature male *C. opilio* (n = 43) were collected for the ADF&G reproductive potential project to investigate growth and mating. Two hundred and seventy-seven *C. opilio* samples and 82 male *C. opilio* hemolymph samples were collected to support the University of Alaska Southeast crab reproduction project. All collections were completed within the guidelines stipulated by the ADF&G collection permits for each project.

Bristol Bay District Red King Crab

One objective of this multi-species bottom trawl survey is to assess the mature red king crab population by sampling after completion of the molt-mate cycle when mature females are carrying newly extruded, uneyed embryos (Otto 1986). Embryo development and larval hatching in female red king crab, followed by the molting and mating cycle, are delayed in years with cold bottom water temperatures (Shirley et al. 1990, Stevens and Swiney 2007). A delay in the molting and mating cycle is apparent in June, at the beginning of the EBS bottom trawl survey, by high numbers of oldshell mature females either brooding eyed embryos, which were fertilized from the previous season, or exhibiting pleopods with empty egg cases. In years with relatively warmer water temperatures, 94%-99% of the mature females in June carried uneyed embryos.

In years with colder than average bottom water temperatures, (1999, 2000, 2006, 2007, and 2008) a number of standard Bristol Bay stations were sampled in early June and again in late July to assess the percentage of ovigerous red king crab females which had recently completed the molting and mating cycle and extruded a new clutch of uneyed embryos. In 2009, it was necessary to resample 32 Bristol Bay stations in late July due to the low number of newly molted, ovigerous female with clutches of uneyed embryos encountered in early June. These resample stations were selected based on female red king crab abundance at these stations during the first sampling event and from expected distributions based on previous Bristol Bay surveys.

Red king crab were caught at 66 of the 136 stations in the Bristol Bay management district in 2009. The density of legal-sized male crab caught at a station ranged from 71 to 8,291 crab/nmi² (Appendix A). Legal-sized male Bristol Bay red king crab were caught at 48 stations (Appendix A), resulting in a total estimate of 8.5 ± 6.6 million crab in the Bristol Bay District

(Table 3). The majority of these males were concentrated in the central Bristol Bay area with some large catches in the southwest section of Bristol Bay, such as station B08 (Figs. 5 and 6). The 2009 estimate is lower than the 9.6 million crab average for the previous 20 years (Table 3).

Pre-recruit male red king crabs were encountered at 43 stations, estimated at 11.0 ± 7.3 million crab and represented 44% of the total male abundance in 2009 while the small male red king crab abundance estimate of 5.3 ± 2.5 million crab represented 21% of the total male abundance (Table 3). The majority of both size categories were centrally located in the Bristol Bay District, with a high number of pre-recruit and small males caught in the southeast nearshore stations (Figs. 5 and 6).

The 2007 male red king crab 100 to 105 mm CL cohort appears in 2008 at 110 to 115 mm CL and at approximately 125 to 130 mm CL size class in 2009 (Fig. 7). The 70 mm CL cohort of 2002, which grew to 140-150 mm CL range in 2007, declined in abundance in 2008 and aged as indicated by increasing old and older shell condition classes for 2008 and 2009. In 2009, one legal-sized male crab was in molting or softshell condition while 64% were hardshell crabs and 36% were oldshell and very oldshell crabs.

The 2009 large female red king crab abundance estimate of 36.1 ± 21.7 million crab represented 97% of the total female abundance with small female red king crab abundance estimated at 1.3 ± 0.9 million crab (Table 3). The majority of the large female red king crab were caught at depths less than 50 m while the small females were centrally located in the Bristol Bay District at deeper depths (Figs. 5 and 6).

Similar to the previous 3 years, the cold water temperatures in 2009 delayed the molting and mating cycle and only 52% of the 804 mature females sampled during the standard survey had extruded a new clutch of uneyed embryos. Among resurveyed female crab in late July of 2009, 94% were mature and 99% of these were new hardshell females that had extruded new, uneyed embryos (Fig. 8).

During years with colder than average bottom temperatures, such as 1999, 2000, 2006, 2007, 2008, and 2009, the ratio of eyed to uneyed embryos encountered on the EBS bottom trawl survey in June is high compared to years with warmer bottom temperatures (2001-2005). The eyed to uneyed embryo ratio ranges from 6.54 to 0.42 in cold years, compared to 0.06 to 0.01 in the warmer years, indicating a high number of females within the survey area have not completed the molting and mating cycle in early June. When the 32 Bristol Bay stations were resampled in late July of 1999, 2000, 2006, 2007, and 2008, the ratio of eyed to uneyed embryos decreases dramatically, ranging from 0.02 to 0.01, indicating the majority of mature females have completed the mating and molting cycle (Table 4).

Pribilof District Red King Crab

Historically, red king crab were not abundant in the Pribilof District and landings were taken incidentally during the blue king crab fishery. The red king crab fishery first opened in

1993 while fishing for blue king crab was closed. A combined fishery for red and blue king crab occurred in the Pribilof District from 1995 through 1998, but due to low abundance of blue king crab, the combined fishery and the red king crab fishery have both remained closed since the 1998/1999 season (Gish 2006).

Red king crab were caught at 7 of the 41 stations in the Pribilof District high-density sampling area in 2009. The density of legal-sized males caught at a station ranged from 66 to 1,745 crab/nmi² (Appendix A). Legal-sized male red king crab were caught at 6 stations in the Pribilof District high-density sampling area and were estimated at 0.7 ± 0.9 million crab, representing 73% of the total male abundance but below the average of 1.1 million crab from the previous 12 years (Table 5). The majority of the legal-sized males were distributed directly south of St. Paul Island at station G-21 (Figs. 9 and 10).

Pre-recruit males were encountered at 2 of the 41 stations with an abundance estimate of 0.3 ± 0.4 million crab which represents the remaining 27% of the total male abundance as no small male red king crab were captured on the 2009 survey. Pre-recruit males were distributed south and west of St. Paul Island in the nearshore shallow water stations (Table 5, Figs. 9 and 10).

Thirty percent of the legal-sized males were in molting or softshell condition while 53% were evaluated as new hardshell crabs and 17% as oldshell and very oldshell condition crabs. The 2009 size-frequency for red king crab males shows a decrease in the number of oldshell and very oldshell legal-sized males in comparison to the 2007 and 2008 shell conditions (Fig. 11).

The 2009 abundance estimate of large red king crab females was 0.3 ± 0.4 million crab, representing 100% of the total female abundance as no small red king crab females were caught on the 2009 survey (Table 5). Female abundance estimates are imprecise due to the limited number of tows with positive crab catches (Appendix A, Figs. 9 and 10). Less than one percent of the total female red king crab caught were immature while 75% of the mature females were brooding uneyed embryos, 24% were barren or had empty egg cases and no mature females were carrying eyed embryos. The majority of mature females with uneyed embryos were in the 140 mm CL to 160 mm CL size class (Fig. 12)

Pribilof District Blue King Crab

Blue king crab were caught at 6 of the 41 stations in Pribilof District high-density sampling area in 2009. Male abundance estimates are imprecise due to the limited number of tows with positive crab catches. Legal-sized males were caught at three stations east of St. Paul Island, with a density ranging from 73 to 131 crab/nmi² (Appendix A, Figs. 13 and 14). The 2009 abundance estimate of legal-sized males was 0.07 ± 0.08 million crab, representing 15% of the total male abundance and below the average of 0.56 million crab for the previous 20 years (Table 6).

Pre-recruit blue king crab males were caught at four stations in the Pribilof District high-density sampling area with an abundance estimate of 0.3 ± 0.4 million crab representing 51% of the total male abundance. Small male blue king crab were caught at four stations with an abundance estimate of 0.2 ± 0.3 million crab in 2009 representing the remaining 35% of the total male abundance (Table 6, Figs. 13 and 14).

Four legal-sized male blue king crab were captured on the 2009 survey in the Pribilof District; one in molting or softshell condition and one in new hardshell condition, while two were in very oldshell condition. The 2008 male blue king crab cohort at the 95 to 100 mm CL size class advanced to approximately the 125 to 130 mm CL size class in 2009 (Fig. 15).

Large female blue king crab were caught at three stations in the Pribilof District high-density sampling area with an abundance estimate of 0.6 ± 0.9 million crab representing 95% of the total female abundance (Table 6, Figs. 13 and 14). Small female blue king crab were caught at two stations northeast of St. Paul Island in the Pribilof District high-density sampling area with an abundance estimate of 0.07 ± 0.09 million crab for 2009 (Table 6, Figs. 13 and 14). Estimates of female abundance are imprecise due to the preference of these crab for rocky habitat which is not sampled well by trawls. Blue king crab females are predominantly biennial spawners with only a portion of the female population carrying eyed embryos in a given year, while the remainder is in a non-embryo-bearing phase (Somerton and MacIntosh 1985). Fourteen of the 29 large female blue king crab sampled during the survey were brooding uneyed or eyed embryos. Among sampled mature females, 24% were new hardshell crab all with newly extruded embryos while 76% were oldshell females of which 24% were brooding eyed embryos and 52% had empty egg cases (Fig. 16).

St. Matthew Island Section, Northern District Blue King Crab

Blue king crab were caught at 38 of the 56 total stations in the St. Matthew Island Section; 27 stations in the high-density sampling area and 11 stations in the standard-density sampling area. Abundance estimates in the St. Matthew Island Section are imprecise due to a large portion of the stock occupying inshore rocky untrawlable habitat. The density of legal-sized males caught at a station ranged from 60 to 739 crab/nmi² and were captured primarily south and west of St. Matthew Island (Appendix A, Figs. 17 and 18). Twenty legal-sized male blue king crab were caught in 2009 with an abundance estimate of 1.4 ± 0.7 million crab and representing 19% of the total male abundance but below the average of 1.9 million crab from the previous 20 years (Table 7).

In 2009, the pre-recruit male crab abundance estimate was 2.2 ± 1.5 million crab and represents 32% of the total male abundance, while the small male abundance estimate of 3.4 ± 2.0 million crab made up the remaining 49% of the total male abundance (Table 7). The majority of the pre-recruit and small male blue king crab were distributed southwest of St. Matthew Island (Figs. 17 and 18).

The 2007 100 mm CL mm male blue king crab cohort appears in 2008 at approximately 120 mm CL and is increasing in age in 2009 with old and older shell condition classes, although an 85 mm CL cohort from 2008 appears at approximately the 100 to 110 mm CL range in 2009 (Fig. 19). In 2009, 3 legal-sized male crab were in molting or softshell condition, 10 were new hardshell crabs and 7 were oldshell condition crabs while 59 of the 112 pre-recruit males were new hard shell crabs.

The 2009 large female blue king crab abundance estimate was 0.4 ± 0.3 million crab, representing 40% of the female abundance, while the small female blue king crab abundance estimate of 0.6 ± 0.6 million crab represented 60% of the female abundance (Table 7). Large and small females were primarily caught at stations southwest of St. Matthew Island (Figs. 17 and 18). Thirteen of the 18 mature females caught were in new hardshell condition and brooding uneyed embryos, while 1 mature female was softshell with newly extruded embryos and all within the 75 mm to 95 mm CL size class. The remaining 4 mature females were in oldshell condition with empty egg cases in both the 55 mm to 65 mm CL and 90 mm to 95 mm CL size classes (Fig. 20).

Tanner Crab

Tanner crab were caught at 183 of the 376 stations in the combined areas of the Bristol Bay District, Pribilof District, and Northern District. Tanner crab occurred at 41 stations in the Pribilof District high-density sampling area and 21 stations in the high-density sampling area of the St. Matthew Island Section in the Northern District (Appendix A).

Legal-sized male Tanner crab were caught at 64 stations, ranging from 63 to 1,992 crab/nmi² per tow (Appendix A). The 2009 abundance estimate for legal male Tanner crab was 6.9 ± 2.8 million crab, with high abundance regions occurring along the Alaska Peninsula in Bristol Bay District and west of St. Paul Island in the Pribilof District (Table 8, Figs. 21 and 22). Legal-sized male crab represented only 4% of the total male abundance in 2009 with 54% of legal males occurring east of 166°W in the ADF&G Eastern management district compared to 69% in 2008 and 45% in 2007 (Table 8).

Pre-recruit males represented 23% of the total male abundance with an estimate of 45.3 ± 13.2 million crab and the remaining 73% was comprised of small males with an abundance estimate of 144.0 ± 39.8 million crab (Table 8). High abundances of pre-recruit males occurred northwest and south of the Pribilof Islands and in the southwest area of the Bristol Bay District while small male Tanner crab were distributed throughout the eastern Bering Sea shelf (Figs. 21 and 22).

In 2008, a total of 1,783 male Tanner crab chela height and carapace width measurements were collected on the EBS bottom trawl survey. The scatterplot of the allometric relationship between chela height and carapace width graphically represents two distinct maturity groups; immature males (small claw) with a ratio of less than 0.17 and mature males (large claw) with a

ratio greater than or equal to 0.17 (Fig 23). The carapace widths for small claw males ranged from 17.0 to 145.8 mm compared to 59.5 to 166.8 mm for large claw males.

The 2006 male size-frequency revealed a prominent size class in the 70 mm CW range, which persisted to 90 to 95 mm CW in 2007, the 95 to 100 mm CW range in 2008, and appears at approximately the 110 to 120 mm CW in 2009 (Fig. 24). Old and very oldshell crab remain a relatively large proportion in the male size distribution at 80 mm carapace width and greater; these males will not molt to legal-size in the future. Morphometrically mature oldshell male *Chionoecetes* spp. crab will not molt again during their lifespan (Tamone et al. 2007).

The 2009 large female Tanner crab abundance estimate was 20.6 ± 9.8 million crab, representing 14% of the total female abundance while the small female Tanner crab abundance of 129.5 ± 41.3 million crab comprised the majority of the total female abundance (Table 8). Fifty-four percent of the large female population was distributed east of 166°W in the ADF&G Eastern management district in the southwest Bristol Bay District with a few large catches in the Pribilof Islands area, while the small females were distributed throughout the 50 to 200 m shelf of the eastern Bering Sea (Figs. 21 and 22). Among sampled mature females, 2% were softshells, 18% were new-hardshells, and 81% were oldshell and very oldshell. Eighty-two percent of the mature females carried newly extruded embryos while 13% had not produced a new clutch and 5% had were barren (Fig. 25).

Two small Tanner crab were caught at station I-26 that were too small to identify the gender. One was 11 mm in carapace width and one was 14 mm CW. The abundance estimate for these two crab was 0.03 million crab, less than 0.01% of the total Tanner crab population.

Snow Crab

Snow crab were caught at 277 of the 376 stations in the combined areas of the Bristol Bay District, Pribilof District, and Northern District. Snow crab occurred at 40 stations in the Pribilof District high-density sampling area, and 27 stations in the high-density sampling area of the St. Matthew Island Section of the Northern District (Appendix A).

Although the legal minimum size limit for male snow crab is 3.1 inches CW (78 mm), processors currently prefer a minimum size of 4.0 inches CW (102 mm). The abundance estimates reported for legal-sized male snow crab in this report combines both size groups (Table 9). The density of legal-sized male snow crab are listed by station in Appendix A and are separated into legal (≥ 3.1 in. CW) and preferred (≥ 4.0 in. CW) size categories.

Legal-sized male snow crab were caught at 247 stations, throughout all Districts combined, resulting in an abundance estimate of 371.8 ± 86.4 million crab and representing 30% of the total male abundance. Thirty-two percent of those legal males were ≥ 4 inches in carapace width, with an abundance estimate of 130.1 ± 42.4 million crab and approximately 79% of all legal male snow crab were east of 173°W in the ADF&G Eastern management district as

compared to 72% (265.4 million crab) in 2008. In 2009, 76% of the legal males were distributed between 166°W and 173°W with the remaining balance of 21% distributed west of 173°W. These legal-sized male snow crab were distributed throughout the eastern Bering Sea shelf with higher concentrations around the Pribilof Islands and southwest of St. Matthew Island (Table 9, Figs. 26 and 27).

The 2009 pre-recruit male snow crab abundance estimate of 879.9 ± 295.4 million crab, represented the remaining 70% of the total male abundance (Table 9). Fifty-two percent of these males were distributed east of 173°W in the ADF&G Eastern management district compared to 63% in 2008 (Table 9, Figs. 26 and 27). In 2009, less than 1% of the pre-recruit males were east of 166°W, 52% were distributed between 166°W and 173°W, and 48% were west of 173°W (Table 9).

In 2009, a total of 1,353 male snow crab chela height and carapace width measurements were collected on the EBS bottom trawl survey. The scatterplot of the allometric relationship between chela height and carapace width for snow crab graphically represents two distinct maturity groups; immature males (small claw) with a ratio of less than 0.20 and mature males (large claw) with a ratio greater than or equal to 0.20 (Fig 28). The carapace widths for small claw males ranged from 27.0 to 121.2 mm compared to 40.0 to 151.5 mm for large claw males.

The 50 to 55 mm CW size class of 2007 male crab recruited to the 60 to 65 mm CW in 2008 and appears at approximately the 70 to 75 mm CW size class in 2009. Among legal-sized male crab, 16% were in molting or softshell condition, 56% were in new-hardshell condition indicating a recent molt, and 28% were oldshell and very oldshell condition (Fig. 29).

The large female snow crab abundance estimate of 828.0 ± 340.7 million crab comprised 46% of the total female abundance and the small female crab abundance estimate of 979.5 ± 483.3 million crab comprised the remaining 54% of the total female abundance (Table 9). Fifty-three percent of the total abundance of small female crab and 75% of the total abundance of large female snow crab were caught east of 173°W in the ADF&G Eastern management district with 47% small females and 25% large females distributed west of 173°W (Table 9, Figs. 26 and 27). The female reproductive stock had high frequencies of old shell and very old shell condition crabs which is of concern in terms of expected reproductive output. Among sampled mature females; 27% were new-hardshells and 99% brooding newly extruded embryos, 73% were oldshell and very oldshell condition with 84% brooding new embryos, 7% had not produced a new clutch, and less than 1% of the mature females were barren (Fig. 30).

***Chionoecetes bairdi/opilio* hybrid**

Chionoecetes spp. hybrid crab were caught at 123 of the 165 stations in the combined areas of the Bristol Bay District, Pribilof District, and Northern District. *C.* hybrid crab occurred at 18 stations in the Pribilof District high-density sampling area, and 8 stations in the high-density sampling area of the St. Matthew Island Section of the Northern District (Appendix A).

In this document, *C. hybrid* crab size classes for legal males and large females are based on the size categories for snow crab (see snow crab section and Table 1). The abundance estimates reported in this report for legal-sized male *C. hybrid* crab combines both the preferred and legal size categories. The density of legal-sized male *C. hybrid* crab are listed by station in Appendix A and are separated into preferred (≥ 4.0 in. CW) and legal (≥ 3.1 in. CW) size categories.

Legal-sized male *C. hybrid* crab were caught at 48 stations, throughout all Districts combined, resulting in an abundance estimate of 10.0 ± 3.6 million crab. Fifty percent of those legal males were ≥ 4 inches in carapace width, with an abundance estimate of 5.0 ± 1.3 million crab and were primarily distributed between 50 and 100 m along the eastern Bering Sea shelf with large catches east and north of the Pribilof Islands (Figs. 31 and 32). The 2009 pre-recruit male *C. hybrid* crab abundance estimate for all Districts combined was 4.2 ± 2.5 million crab, were distributed between 50 and 100 m in the central area of the eastern Bering Sea shelf (Figs. 31 and 32).

The 2009 large female *C. hybrid* crab abundance estimate was 4.6 ± 2.4 million crab while the small female crab abundance estimate was 2.8 ± 2.2 million crab. The majority of the large females were distributed in the northwestern area of the EBS with a few large catches southeast of the Pribilof Islands, while small female hybrid crab were primarily distributed between 100 and 200 m of the northwestern area of the eastern Bering Sea (Figs. 31 and 32).

Other Crab Stocks and Species of Interest

Northern District Red King Crab

Red king crab were caught at 23 stations in the Northern District and do not occur in either of the management units where red king crab are commercially fished or managed (Fig. 2). The 2009 abundance estimates were calculated using an area of $9,223 \text{ nmi}^2$ based on the number of stations with positive catches of red king crab in the Northern District. Legal-sized males were caught at 10 of those stations. The density of legal-sized males caught at a station ranged from 75 to 154 crab/ nmi^2 (Appendix A). The 2009 population abundance estimate of legal-sized males was 0.4 ± 0.2 million crab and the abundance estimate of pre-recruit and small males was 0.3 ± 0.2 million crab and 0.7 ± 0.5 million crab, respectively. The abundance estimate of large female red king crab was 1.1 ± 0.4 million crab while the abundance estimate of small females was 0.2 ± 0.2 million crab. Both legal males and large female red king crab were caught at stations south and west of Nunivak Island (Fig. 33).

Northern District Blue King Crab

Blue king crab were caught at two stations not included in the abundance estimates for the Pribilof District blue king crab or the St. Matthew Island section Northern District blue king crab. One small, oldshell male was caught at station N03 and one large, oldshell female was caught at station T29 (Appendix A, Fig. 34).

Hair Crab

In 2009, a total of 361 hair crab were captured at 71 of the 317 stations throughout all Districts combined on the EBS bottom trawl survey (Fig. 35). Historically, hair crab have been concentrated just north of the Alaska Peninsula and near the Pribilof Islands. In recent years, however, abundance of hair crab north of 58°N latitude has been increasing (Fig.35).

In this report, legal male hair crab are defined as > 3.25 inches CW (≥ 83 mm CL) which was specified in the previous Pribilof District fishery and the female hair crab abundance estimate is presented for all sizes combined regardless of carapace size. The 2009 density of legal male hair crab caught at a station ranged from 66 to 658 crab/nmi² resulting in an abundance estimate of 3.1 ± 1.2 million crab. Legal male hair crab were primarily concentrated in Bristol Bay and distributed along the 50 m isobath (Fig. 35).

The 2009 pre-recruit male hair crab abundance estimate was 3.6 ± 1.6 million crab and the female hair crab abundance estimate was 1.7 ± 0.9 million crab. The majority of pre-recruit male and female hair crab were distributed in Bristol Bay with a high number of pre-recruit males caught west of the Pribilof Islands and north of 58°N (Fig. 35).

The Pribilof District hair crab fishery has been closed since 2000 due to a shift in the distribution of legal males to the Northern District and, after one year of experimental fishing with minimal vessel participation, the Northern District fishery was closed in 2001 (Bowers et al 2008). In the last few years, the abundance estimates of both size classes of male hair crab have increased relative to 2006 and the 2009 abundance estimate for legal-sized male hair crab is higher than the 20-year average of 2.3 million crab (Table 10).

Golden King Crab

Two golden king crab, one new hardshell male at 156 mm CL and one oldshell female at 137 mm CL, were caught at station E-19 with an average depth of 128 m (Fig. 1). This species is managed by ADF&G in the Pribilof District of the Bering Sea king crab registration Area Q (Fig. 2). There has been limited commercial effort for this stock since the fishery began in 1982 and ADF&G does not currently survey this population nor estimate population abundances (Bowers et al. 2008). The annual EBS bottom trawl survey does not routinely encounter this species due to habitat and depth preferences outside of the surveyed area.

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Table 1. -- Definition of carapace size classes for crab species in the eastern Bering Sea. Carapace length (CL) is measured for *Paralithodes* species and *Erimacrus isenbeckii*, while carapace width (CW) is measured for *Chionoecetes* species.

	Small	Pre-recruit	Legal male or Large female
<i>Paralithodes camtschaticus</i>			
Bristol Bay District			
males	<110 mm	110-134 mm	≥ 135 mm CL or ≥ 6.5 in. CW
females	<90 mm		≥ 90 mm
Pribilof District			
males	<110 mm	110-134 mm	≥ 135 mm CL or ≥ 6.5 in. CW
females	< 90 mm		≥ 90 mm
<i>P. platypus</i>			
Pribilof District			
males	<110 mm	110-134 mm	≥ 135 mm CL or ≥ 6.5 in. CW
females	< 90 mm		≥ 90 mm
St. Matthew Island			
males	< 105 mm	105-119 mm	≥ 120 mm CL or ≥ 5.5 in. CW
females	< 80 mm		≥ 80 mm
<i>Chionoecetes bairdi</i>			
males	< 110 mm	110-137 mm	≥ 138 mm or ≥ 5.5 in. CW
females	< 85 mm		≥ 85 mm
<i>C. opilio</i>			
males		< 78 mm	≥ 78 mm ¹ or ≥ 3.1 in. CW
females	<50 mm		≥ 50 mm
<i>Erimacrus isenbeckii</i>			
males		<83 mm	≥ 83 mm ² CL or > 3.25 in. CW
females			

¹ The legal minimum size limit for *C. opilio* is 3.1 in. CW (78 mm), although processors currently prefer a minimum size of 4.0 in. CW (102 mm).

² Legal-sized male crab for *E. isenbeckii* are defined as those larger than a minimum size of 3.25 inches CW (≥ 83 mm CL) Alaska Department of Fish and Game permit guidelines in past years.

Table 2. --Special projects related to crab species conducted on the National Marine Fisheries Service eastern Bering Sea bottom trawl survey in 2009.

Project title	Principle investigator	Agency
Visual monitoring for bitter crab and black mat syndrome	Bob Foy and Frank Morado	RACE ¹ -SAP ²
Pathological specimen voucher	Pam Jensen and Frank Morado	RACE ¹ -SAP ²
Bitter crab syndrome in North Pacific <i>Paralithodes</i> , <i>Hyas</i> , and <i>Pagurus</i> species	Frank Morado	RACE ¹ -SAP ²
North Pacific crab population genetics	Frank Morado and Jean-Marie Sévigny	RACE ¹ -SAP ² DFO ³
Reproductive potential of snow and Tanner crabs in the eastern Bering Sea	Laura Slater and Joel Webb	ADF&G ⁴
Developing biological reference points for crustacean fisheries: Reproductive potential of Bristol Bay red king crab	Kathy Swiney	RACE ¹ -SAP ²
Reproductive indices of male snow crab from the Bering Sea: Analysis of hormones, reproductive structures, and behavior	Sherry Tamone	UAS ⁵

¹ Alaska Fisheries Science Center, Resource Assessment and Conservation Engineering Division, Seattle, Washington.

² AFSC, Resource Assessment and Conservation Engineering Division, Shellfish Assessment Program, Kodiak, Alaska.

³ Department of Fisheries & Oceans, Canada

⁴ State of Alaska, Department of Fish and Game

⁵ University of Alaska Southeast

Table 3. --Time series of annual total abundance estimates (millions of crab) for Bristol Bay District red king crab (*Paralithodes camtschaticus*) from National Marine Fisheries Service eastern Bering Sea bottom trawl surveys. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Length (mm) Width (in)	Males			Total	Females		Total	Grand total
	Small	Pre-recruit	Legal		Small	Large		
	<110 <5.2	110-134 5.2-6.4	≥135 ≥6.5		<90 <4.3	≥90 ≥4.3		
1990*	8.2	10.2	9.2	27.6	7.2	17.5	24.7	52.2
1991*	8.1	6.4	12.0	26.5	4.7	12.6	17.4	43.9
1992*	7.0	5.5	5.8	18.3	2.2	13.4	15.6	33.9
1993*	5.7	10.2	9.8	25.7	2.5	19.2	21.7	47.4
1994*	6.2	6.7	7.5	20.4	3.4	10.1	13.5	33.9
1995*	9.7	6.0	8.9	24.6	4.9	10.4	15.3	33.9
1996*	17.2	3.5	6.0	26.7	13.7	12.9	26.6	53.3
1997*	28.1	9.8	10.6	48.5	1.8	26.5	28.3	76.8
1998	11.1	16.7	7.5	35.3	5.6	35.8	41.4	76.7
1999	8.4	7.4	11.5	27.3	6.4	15.1	21.6	48.9
2000	11.4	7.3	8.9	27.6	5.7	17.4	23.1	50.7
2001	10.2	4.4	5.3	19.9	3.9	21.8	25.7	45.5
2002	20.7	9.9	9.5	40.0	18.9	19.4	38.3	78.3
2003	17.9	9.0	12.3	39.3	10.8	34.0	44.8	84.1
2004	32.3	10.3	12.8	55.4	18.4	31.7	50.1	105.5
2005	29.2	10.4	10.0	49.6	19.6	42.6	62.2	111.8
2006	19.5	7.4	12.5	39.5	13.5	29.7	43.2	82.7
2007	15.0	10.2	13.3	38.5	3.8	35.4	39.2	77.7
2008	11.0	14.3	10.5	35.8	2.7	43.1	45.8	81.6
2009(fixed)	5.6	11.4	8.8	25.8	1.4	38.3	39.6	65.4
2009(variable)	5.3	11.0	8.5	24.8	1.3	36.1	37.4	62.2
<u>Confidence limits**</u>								
Lower	2.8	3.7	1.9	9.3	0.4	14.4	15.7	35.5
Upper	7.8	18.3	15.1	40.4	2.2	57.7	59.0	88.9
±%	47	66	78	63	69	60	58	43

* Total abundance estimates from 1990 to 1997 are Bristol Bay and Pribilof Districts combined.

** Mean ± 1.96 standard errors for most recent year; Bristol Bay, variable net width.

Table 4. --Average bottom water temperatures collected in Bristol Bay on the National Marine Fisheries Service eastern Bering Sea bottom trawl survey and the ratio of eyed to uneyed embryos in mature red king crab (*Paralithodes camtschaticus*) females with the warm years highlighted in gray. An * indicates statistical significance within the year using a two sample t-test, alpha = 0.95 and $P < 0.001$.

Sample event	Average bottom temperature (°C)	Standard deviation (n = Stations)	Two sample t-test values	Eyed to uneyed embryo ratio
May 1999	0.1	0.8 (41)	$t = -11.9$	6.54
July 1999	2.5*	0.8 (31)		0.02
May 2000	1.7	0.5 (49)	$t = -9.2$	1.45
July 2000	4.6*	1.6 (23)		0.01
June 2001	3.5	0.3 (40)		0.01
June 2002	3.4	0.6 (52)		0.06
June 2003	4.2	0.4 (51)		0.01
June 2004	3.9	0.5 (61)		0.03
June 2005	4.3	0.5 (49)		0.01
June 2006	2.2	0.7 (69)	$t = -12.5$	0.59
July 2006	4.2*	0.8 (30)		0.01
June 2007	1.8	0.9 (68)	$t = -7.4$	0.86
July 2007	3.4*	1.0 (32)		0.01
June 2008	1.4	0.7 (76)	$t = -9.5$	0.45
July 2008	3.6*	1.1 (32)		0.00
June 2009	1.5	1.6(73)	$t = -8.6$	0.42
July 2009	4.5*	1.5 (32)		0.00

Table 5. --Time series of annual total abundance estimates (millions of crab) for Pribilof District red king crab (*Paralithodes camtschaticus*) from National Marine Fisheries Service eastern Bering Sea bottom trawl surveys. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Length (mm) Width (in)	Males			Total	Females		Total	Grand total
	Small <110 <5.2	Pre-recruit 110-134 5.2-6.4	Legal ≥135 ≥6.5		Small <90 <4.3	Large ≥90 ≥4.3		
1998	0.2	0.6	0.4	1.2	0.0	1.0	1.1	2.2
1999	6.5	0.6	1.1	8.2	6.3	3.1	9.4	17.6
2000	0.0	0.4	1.2	1.5	0.0	0.6	0.6	2.2
2001	1.4	2.5	1.8	5.6	0.0	4.0	4.0	9.6
2002	0.0	0.0	1.8	1.8	0.0	0.4	0.4	2.3
2003	0.0	0.1	1.3	1.4	0.0	1.1	1.2	2.6
2004	1.4	0.0	0.8	2.2	1.1	0.6	1.6	3.8
2005	0.0	0.0	0.3	0.3	0.0	1.4	1.4	1.7
2006	0.0	0.3	1.3	1.5	0.0	0.9	0.9	2.5
2007	0.2	0.2	1.6	2.0	0.0	1.7	1.7	3.7
2008	0.4	0.3	1.2	1.8	0.1	1.8	1.9	3.7
2009(fixed)	0.0	0.3	0.7	1.0	0.0	0.3	0.3	1.4
2009(variable)	0.0	0.3	0.7	0.9	0.0	0.3	0.3	1.2
<u>Confidence limits*</u>								
Lower	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upper	0.0	0.7	1.5	2.2	0.0	0.7	0.7	2.8
±%	0	158	130	137	0	111	111	124

* Mean ± 1.96 standard errors for most recent year, variable net width.

Table 6. --Time series of annual total abundance estimates (millions of crab) for blue king crab (*Paralithodes platypus*) in the Pribilof District from National Marine Fisheries Service eastern Bering Sea bottom trawl surveys. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Length (mm) Width (in)	<u>Males</u>			Total	<u>Females</u>		Total	Grand total
	<u>Small</u>	<u>Pre-recruit</u>	<u>Legal</u>		<u>Small</u>	<u>Large</u>		
	<110 <5.2	110-134 5.2-6.4	≥135 ≥6.5		<90 <4.3	≥90 ≥4.3		
1990	1.8	1.2	0.4	3.5	1.8	2.7	4.5	8.0
1991	1.3	1.0	1.0	3.4	0.6	2.8	3.4	6.7
1992	1.6	1.2	1.0	3.8	1.3	2.1	3.4	7.1
1993	1.0	0.8	1.0	2.8	0.3	2.2	2.5	5.3
1994	0.3	0.5	0.8	1.6	0.1	4.3	4.3	5.9
1995	0.8	1.2	2.0	3.9	0.4	4.0	4.5	8.4
1996	0.3	0.7	1.2	2.3	0.1	4.6	4.7	7.0
1997	0.3	0.4	0.8	1.5	0.1	2.5	2.6	4.1
1998	0.8	0.4	0.9	2.1	0.3	2.1	2.3	4.4
1999	0.1	0.2	0.5	0.8	0.0	2.5	2.5	3.3
2000	0.1	0.2	0.5	0.9	0.0	1.4	1.4	2.3
2001	0.0	0.1	0.4	0.6	0.0	1.6	1.6	2.2
2002	0.0	0.0	0.2	0.2	0.0	1.2	1.3	1.5
2003	0.0	0.0	0.2	0.3	0.0	1.1	1.2	1.4
2004	0.1	0.1	0.0	0.2	0.1	0.1	0.2	0.3
2005	2.1	0.0	0.1	2.1	2.3	0.3	2.6	4.8
2006	0.1	0.0	0.0	0.2	0.1	0.5	0.5	0.7
2007	0.2	0.1	0.1	0.4	0.1	0.2	0.3	0.7
2008	0.2	0.1	0.02	0.28	0.06	0.8	0.86	1.14
2009(fixed)	0.2	0.3	0.08	0.58	0.08	0.7	0.72	1.30
2009(variable)	0.2	0.3	0.07	0.52	0.07	0.6	0.63	1.15
<u>Confidence limits</u> *								
Lower	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0
Upper	0.4	0.6	0.15	1.20	0.16	1.4	1.56	2.76
±%	140	136	115	132	137	155	148	141

* Mean ±1.96 standard errors for most recent year, variable net width.

Table 7. --Time series of annual total abundance estimates (millions of crab) for blue king crab (*Paralithodes platypus*) in the St. Matthew Island Section of the Northern District from National Marine Fisheries Service eastern Bering Sea bottom trawl surveys. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Length (mm) Width (in)	Males			Total	Females		Total	Grand total
	Small	Pre-recruit	Legal		Small	Large		
	<105 <4.3	105-119 4.3-5.4	\geq 120 \geq 5.5		<80 <3.8	\geq 80 \geq 3.8		
1990	1.4	0.8	1.7	3.9	0.4	0.2	0.6	4.5
1991	2.9	1.5	2.2	6.6	0.8	0.7	1.5	8.1
1992	2.3	1.5	2.3	6.0	0.9	0.4	1.3	7.4
1993	4.6	2.0	3.6	10.2	1.4	3.0	4.4	14.6
1994	1.5	1.4	2.5	5.4	0.1	0.4	0.5	5.9
1995	1.9	1.1	1.9	4.9	0.6	0.1 ¹	0.7	5.6
1996	2.6	2.0	3.4	8.0	1.1	0.9	2.0	10.0
1997	2.5	2.3	4.1	8.8	0.6	0.9	1.5	10.3
1998	2.4	1.8	3.2	7.4	0.6	0.5	1.2	8.6
1999	0.6	0.2	0.7	1.5	0.3	0.0 ¹	0.3	1.8
2000	0.6	0.3	0.8	1.7	0.1	0.1	0.2	1.9
2001	0.8	0.6	1.1	2.5	0.3	0.2	0.5	2.9
2002	0.2	0.2	0.7	1.1	0.0	0.1 ¹	0.1	1.2
2003	1.4	0.3	0.6	2.3	0.3	0.8	1.0	3.3
2004	1.0	0.2	0.7	1.9	0.5	0.2	0.7	2.6
2005	0.9	0.3	0.6	1.8	0.2	0.2	0.4	2.2
2006	2.0	0.7	1.4	4.2	0.1	0.3	0.4	4.5
2007	5.0	2.3	1.4	8.7	0.9	0.2	1.0	9.7
2008	4.2	0.9	1.7	6.8	0.6	0.2	0.8	7.6
2009(fixed)	3.8	2.4	1.6	7.8	0.7	0.4	1.1	8.9
2009(variable)	3.4	2.2	1.4	6.9	0.6	0.4	1.0	7.9
<u>Confidence limits</u> ²								
Lower	1.3	0.7	0.7	3.3	0.1	0.1	0.2	3.6
Upper	5.4	3.6	2.1	10.6	1.2	0.7	1.9	12.3
±%	60	68	47	53	88	87	83	55

¹ These estimates have low precision since few crabs were caught.

² Mean \pm 1.96 standard errors for most recent year, variable net width.

Table 8. --Time series of annual total abundance estimates (millions of crab) for Tanner crab (*Chionoecetes bairdi*) from National Marine Fisheries Service eastern Bering Sea bottom trawl surveys. Data from 1990 to 2004 for Alaska Department of Fish and Game Eastern management district only, and 2005 to present for all districts combined. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Width (mm) Width (in)	Males			Total	Females			Grand total
	Small	Pre-recruit	Legal		Small	Large	Total	
	<110	110-137	≥138		<85	≥85		
	<4.3	4.3-5.4	≥5.5		<3.4	≥3.4		
1990	286.1	87.4	45.1	418.6	266.5	97.4	363.9	782.5
1991	267.2	115.8	35.1	418.1	232.1	116.8	348.9	767.0
1992	121.0	112.7	41.8	275.5	98.9	63.9	162.8	438.3
1993	76.6	70.5	20.6	167.7	57.6	29.6	87.2	254.9
1994	47.9	43.2	15.4	106.6	57.9	27.5	85.4	192.0
1995	40.4	35.7	10.0	86.1	66.6	37.2	103.8	189.9
1996	52.6	26.7	9.2	88.5	59.3	27.7	87.1	175.6
1997	66.5	10.0	3.4	80.0	71.1	10.1	81.2	161.2
1998	75.3	12.3	2.2	89.7	62.4	6.6	69.0	158.7
1999	202.4	15.1	2.1	219.5	128.7	17.2	145.9	365.4
2000	104.1	18.2	5.0	127.3	80.6	13.7	94.3	221.6
2001	290.1	17.7	6.5	314.3	284.0	13.5	297.5	611.7
2002	204.6	15.2	7.0	226.8	200.4	10.5	210.9	437.6
2003	217.5	24.7	7.4	249.6	184.1	15.1	199.2	448.8
2004	208.0	31.7	5.4	245.0	172.1	10.9	183.0	428.0
2005	325.9	52.0	11.4	389.3	338.5	29.0	367.6	756.9
2006	427.3	73.3	14.6	515.2	307.7	43.4	351.1	866.3
2007	416.3	92.5	12.1	520.9	205.4	40.8	246.2	767.0
2008	186.8	77.7	13.1	277.6	125.6	32.1	157.7	435.3
2009(fixed)	166.2	51.5	7.9	225.6	152.0	23.8	175.8	401.4
2009(variable)	144.0	45.3	6.9	196.2	129.5	20.6	150.1	346.3
East of 166°W (%)	25	32	54	28	30	54	33	30
Confidence limits*								
Lower	104.2	32.0	4.1	149.6	88.2	10.8	106.2	259.7
Upper	183.8	58.5	9.7	242.8	170.8	30.5	194.0	432.9
±%	28	29	40	24	32	48	29	25

* Mean ± 1.96 standard errors for most recent year, variable net width.

Table 9. --Time series of annual total abundance estimates (millions of crab) for eastern Bering Sea snow crab (*Chionoecetes opilio*) from National Marine Fisheries Service bottom trawl surveys, all districts combined. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Width (mm) Width (in)	<u>Males</u>		Total	<u>Females</u>		Total	Grand total
	<u>Pre-recruit</u>	<u>Legal</u>		<u>Small</u>	<u>Large</u>		
	<78 <3.1	≥78 ≥3.1		<50 <2.0	≥50 ≥2.0		
1990	1834.5	1446.2	3280.7	1463.3	2798.1	4261.4	7542.1
1991	3277.4	1177.9	4455.3	3289.0	3575.0	6863.9	11319.2
1992	2827.0	587.8	3414.8	2433.9	1914.3	4348.2	7763.0
1993	5345.9	385.6	5731.5	3989.8	1982.6	5972.4	11703.9
1994	4027.6	326.5	4354.0	3417.6	1674.3	5091.8	9445.8
1995	3607.7	547.8	4155.5	2090.3	2409.4	4499.7	8655.2
1996	1815.2	1056.5	2871.7	1189.0	1364.2	2553.2	5424.9
1997	800.5	1031.4	1831.9	955.6	1428.3	2383.9	4215.8
1998	666.3	417.0	1283.3	813.5	1174.4	1988.0	3271.3
1999	396.8	134.0	620.8	320.7	484.3	805.0	1425.7
2000	916.5	210.3	1126.9	657.1	1511.7	2168.8	3295.7
2001	1550.2	367.0	1917.2	480.9	1564.6	2045.5	3962.7
2002	496.1	330.6	826.7	180.5	510.5	691.0	1517.7
2003	1145.2	231.7	1376.9	640.0	614.0	1253.9	2630.8
2004	1648.4	175.1	1823.5	1869.2	806.4	2675.5	4499.0
2005	1911.2	356.2	2267.4	1381.5	1630.8	3012.3	5279.7
2006	1106.9	432.3	1539.2	669.8	1045.5	1715.3	3254.5
2007	1158.6	495.2	1653.8	434.0	1244.4	1678.4	3332.0
2008	934.0	368.6	1302.6	481.7	813.6	1295.3	2597.9
2009(fixed)	1041.9	426.7	1468.6	1174.5	977.3	2151.7	3620.3
2009(variable)	879.9	371.8	1251.7	979.5	828.0	1807.5	3059.2
East of 166°W (%)	< 1	3	1	< 1	< 1	< 1	< 1
Between 166°W and 173°W (%)	52	76	59	53	75	63	62
West of 173°W (%)	48	21	40	47	25	37	38
<u>Confidence limits</u> *							
Lower	584.6	285.3	943.7	496.2	487.3	1123.6	2093.3
Upper	1175.3	458.2	1559.7	1462.8	1168.6	2491.4	4025.1
±%	34	23	25	49	41	38	32

* Mean ± 1.96 standard errors for most recent year, variable net width.

Table 10. --Time series of annual total abundance estimates (millions of crab) for hair crab (*Erimacrus isenbeckii*) from National Marine Fisheries Service bottom trawl surveys, all districts combined. From 1990 to 2008, a 50 ft net width (fixed) was used in the area swept calculation. In 2009 the mean net width (variable) was used and both are shown in this table.

Carapace Length (mm) Width (in)	<u>Males</u>			<u>Females</u>	Grand total
	<u>Pre-recruit</u>	<u>Legal</u>	Total	Total	
	<83 <3.25	≥83 ≥3.25			
1990	13.0	1.1	14.1	0.9	15.0
1991	4.5	1.3	5.7	1.2	6.9
1992	2.5	1.2	3.6	0.5	4.2
1993	9.1	2.6	11.8	1.5	13.3
1994	4.7	3.6	8.2	1.3	9.5
1995	4.6	6.5	11.1	0.7	11.8
1996	3.6	4.9	8.4	1.1	9.5
1997	1.6	4.4	6.0	0.3	6.3
1998	0.5	3.0	3.5	1.4	4.9
1999	1.5	2.4	3.9	2.0	5.8
2000	0.5	4.2	4.7	1.3	6.0
2001	0.5	1.8	2.3	2.2	4.5
2002	0.4	2.1	2.5	0.6	3.1
2003	1.3	1.0	2.3	0.5	2.8
2004	0.7	0.8	1.5	0.4	1.8
2005	1.1	0.3	1.3	0.9	2.2
2006	1.3	1.1	2.3	3.8	6.1
2007	2.3	2.0	4.4	1.3	5.7
2008	2.5	2.3	4.8	1.5	6.2
2009(fixed)	3.8	3.3	7.1	1.8	8.9
2009(variable)	3.6	3.1	6.7	1.7	8.4
<u>Confidence limits*</u>					
Lower	2.0	1.9	4.3	0.7	5.3
Upper	5.2	4.2	9.0	2.6	11.4
±%	44	38	35	58	36

* Mean ± 1.96 standard errors for most recent year, variable net width.

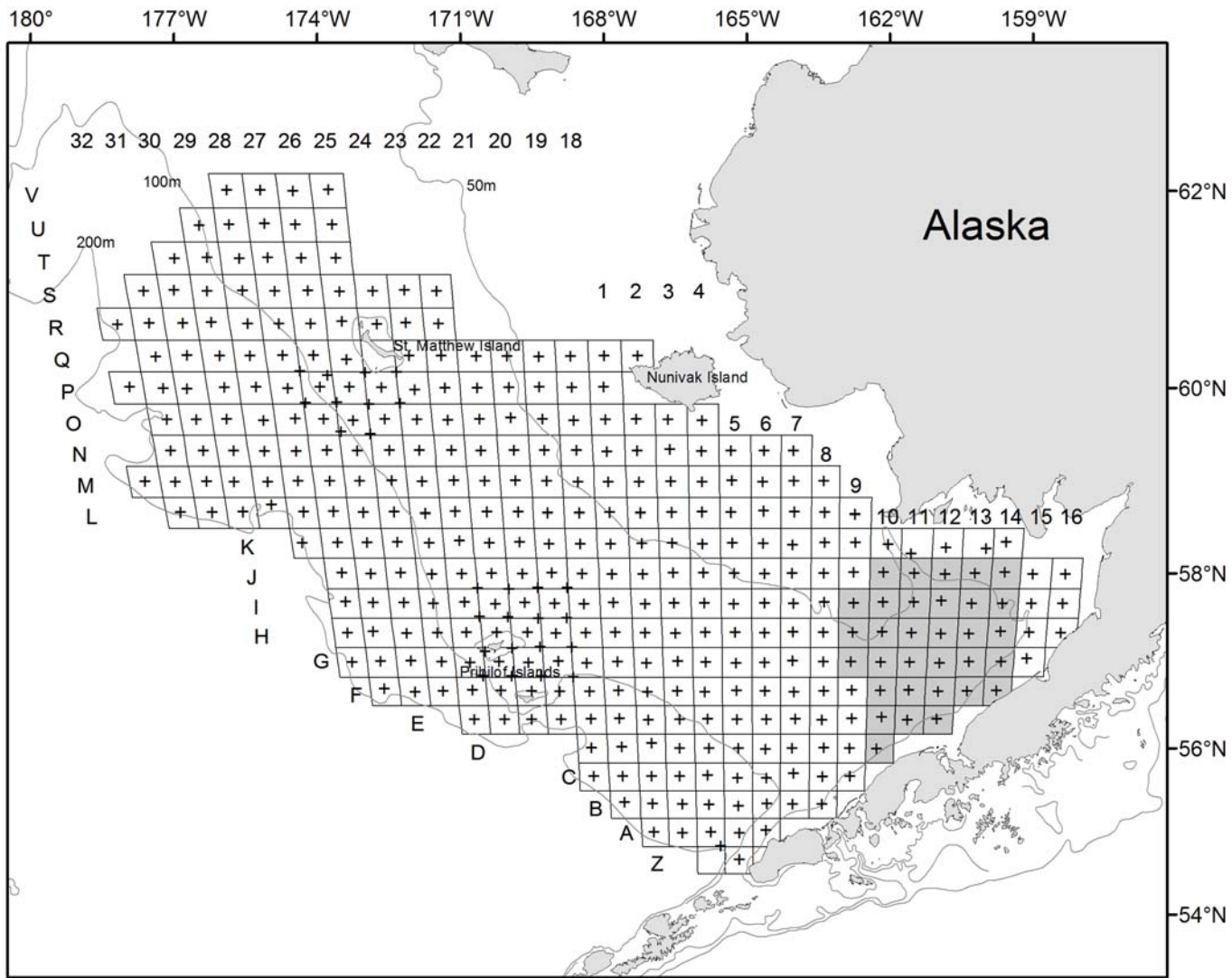


Figure 1. --National Marine Fisheries Service eastern Bering Sea bottom trawl area surveyed by FV *Arcturus* and FV *Aldebaran* from 2 June to 19 July 2009. Shaded area depicts Bristol Bay resample stations, 27 to 30 July 2009.

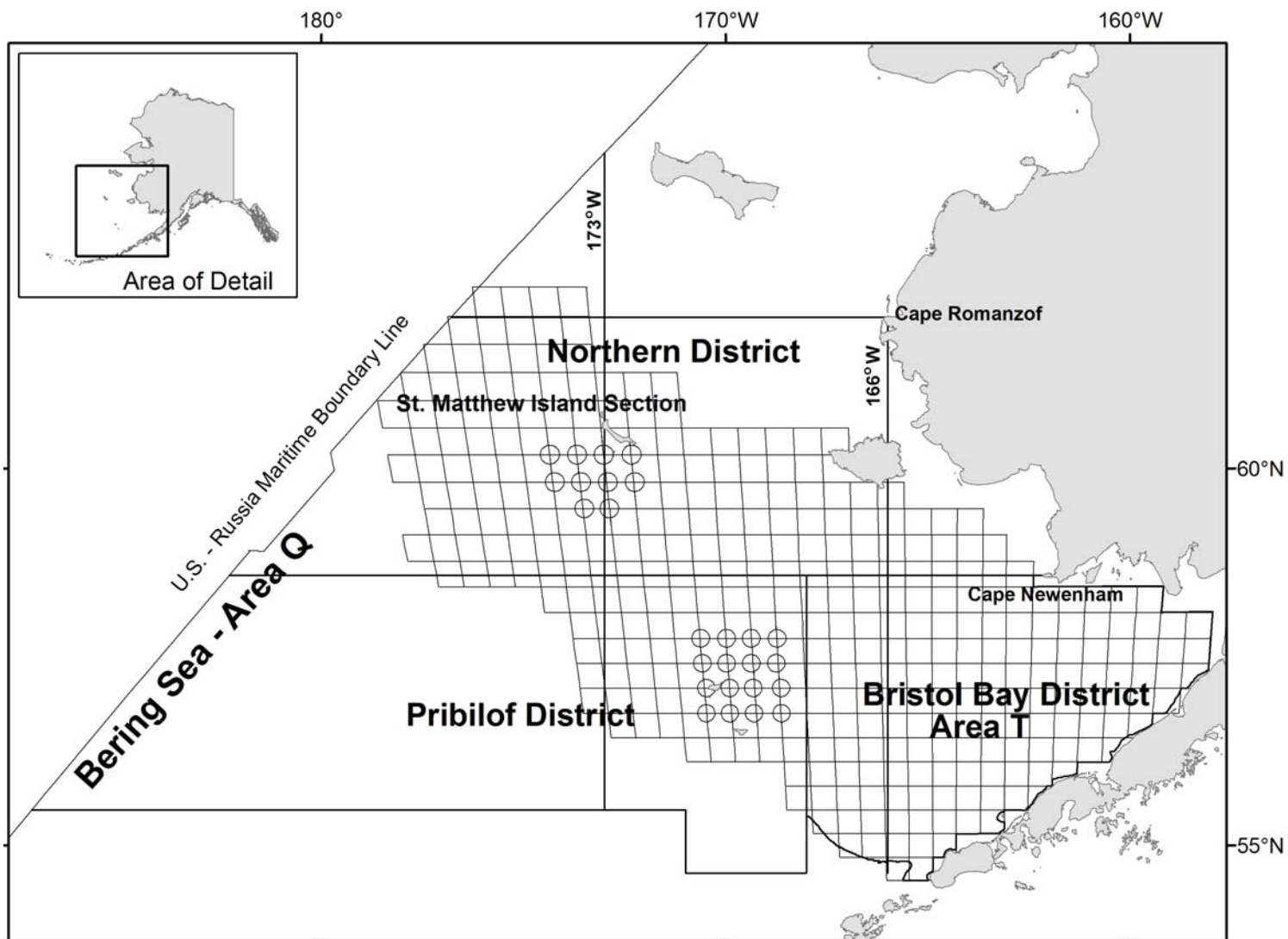


Figure 2. --Alaska Department of Fish and Game commercial crab management units within the 2009 eastern Bering Sea bottom trawl survey area. Circles represent the high-density sampling areas in the Pribilof District and St. Matthew Island Section, Northern District.

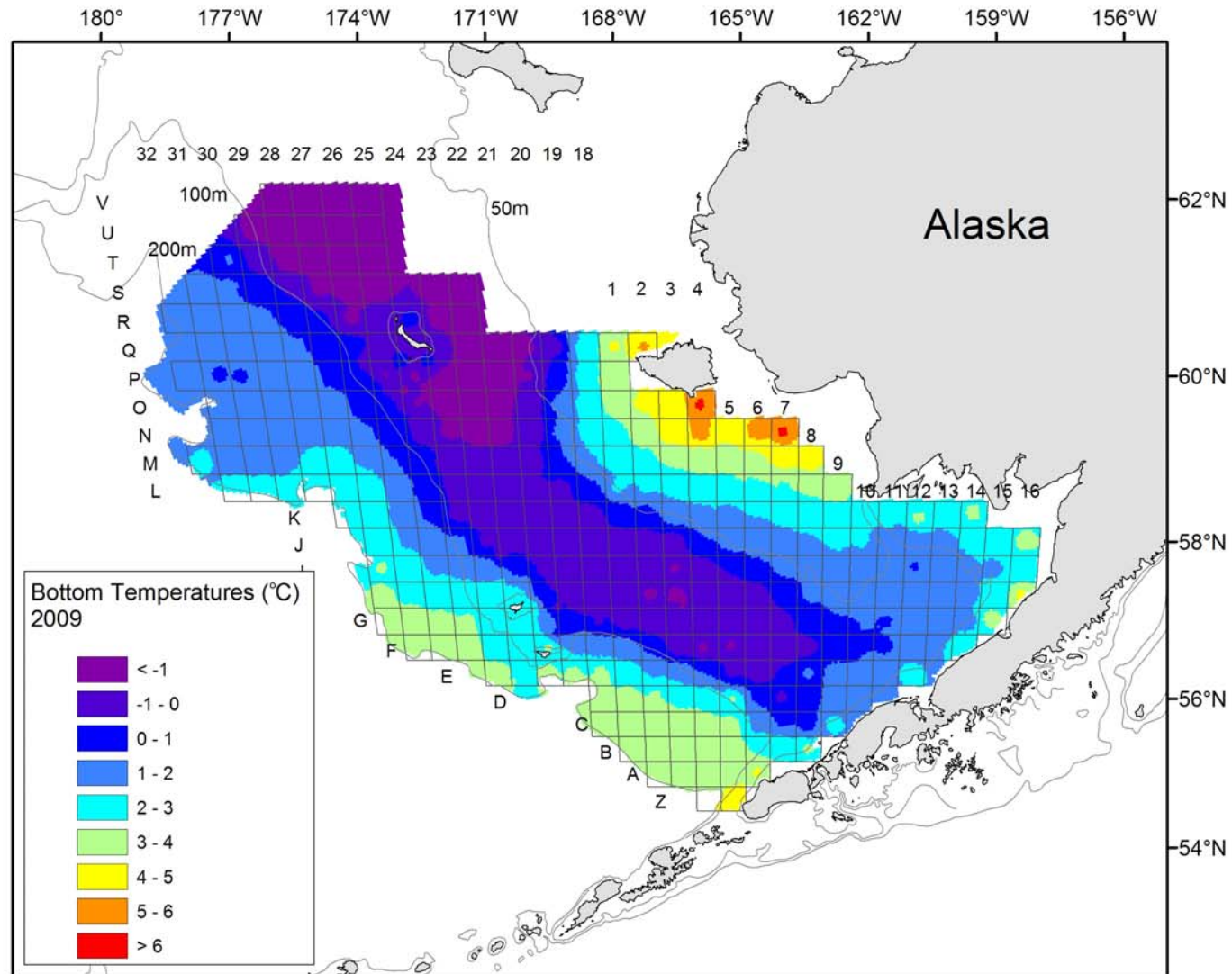


Figure 3. --Mean bottom temperatures ($^{\circ}\text{C}$) measured at stations from the National Marine Fisheries Service eastern Bering Sea bottom trawl survey, beginning 2 June 2009 in Bristol Bay and ending on 19 July 2009 at N28. This figure does not reflect the 32 resample stations in Bristol Bay, surveyed from 27 to 30 July 2009.

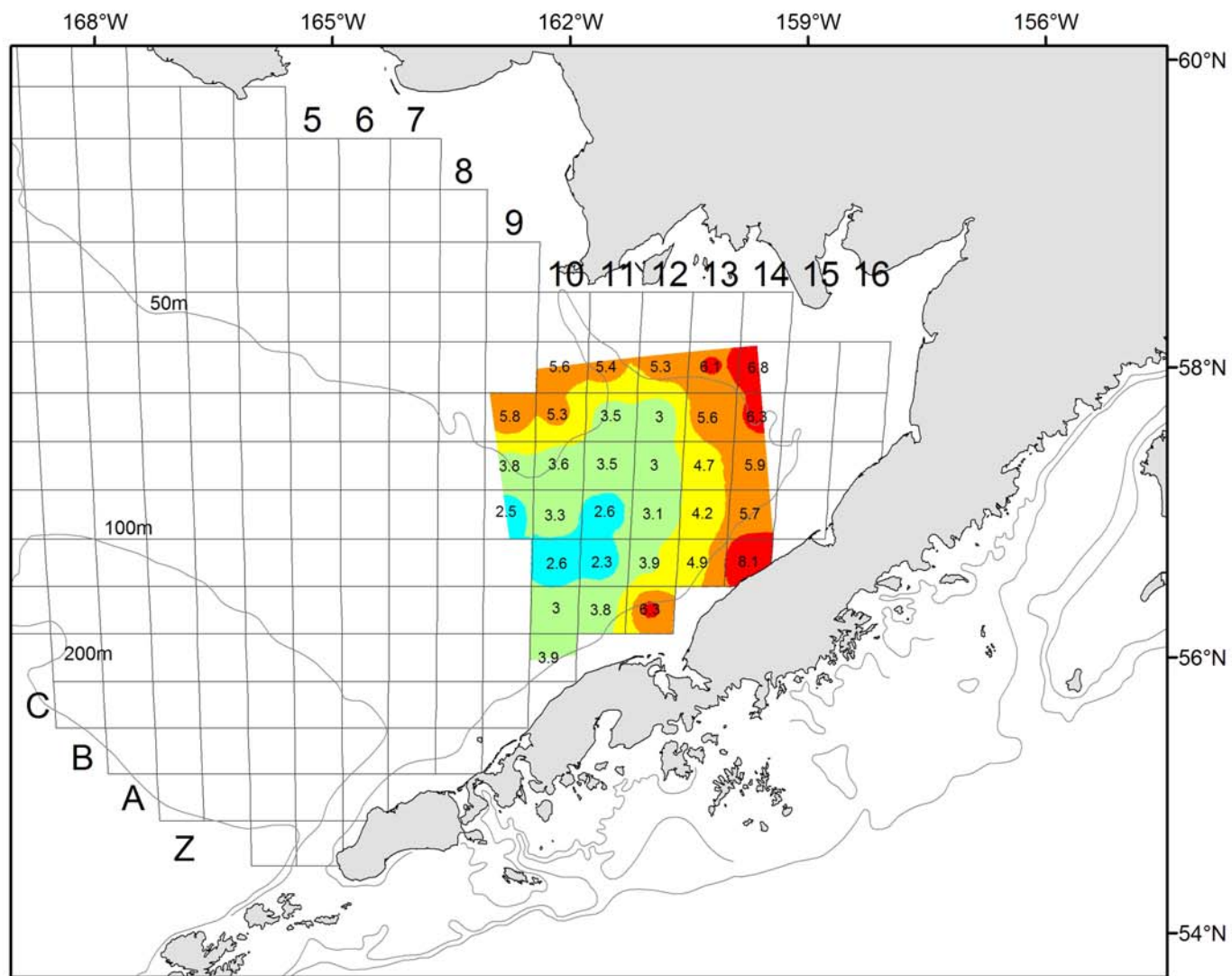


Figure 4. --Mean bottom temperatures (°C) measured at the 32 resample stations in Bristol Bay, surveyed from 27 to 30 July 2009.

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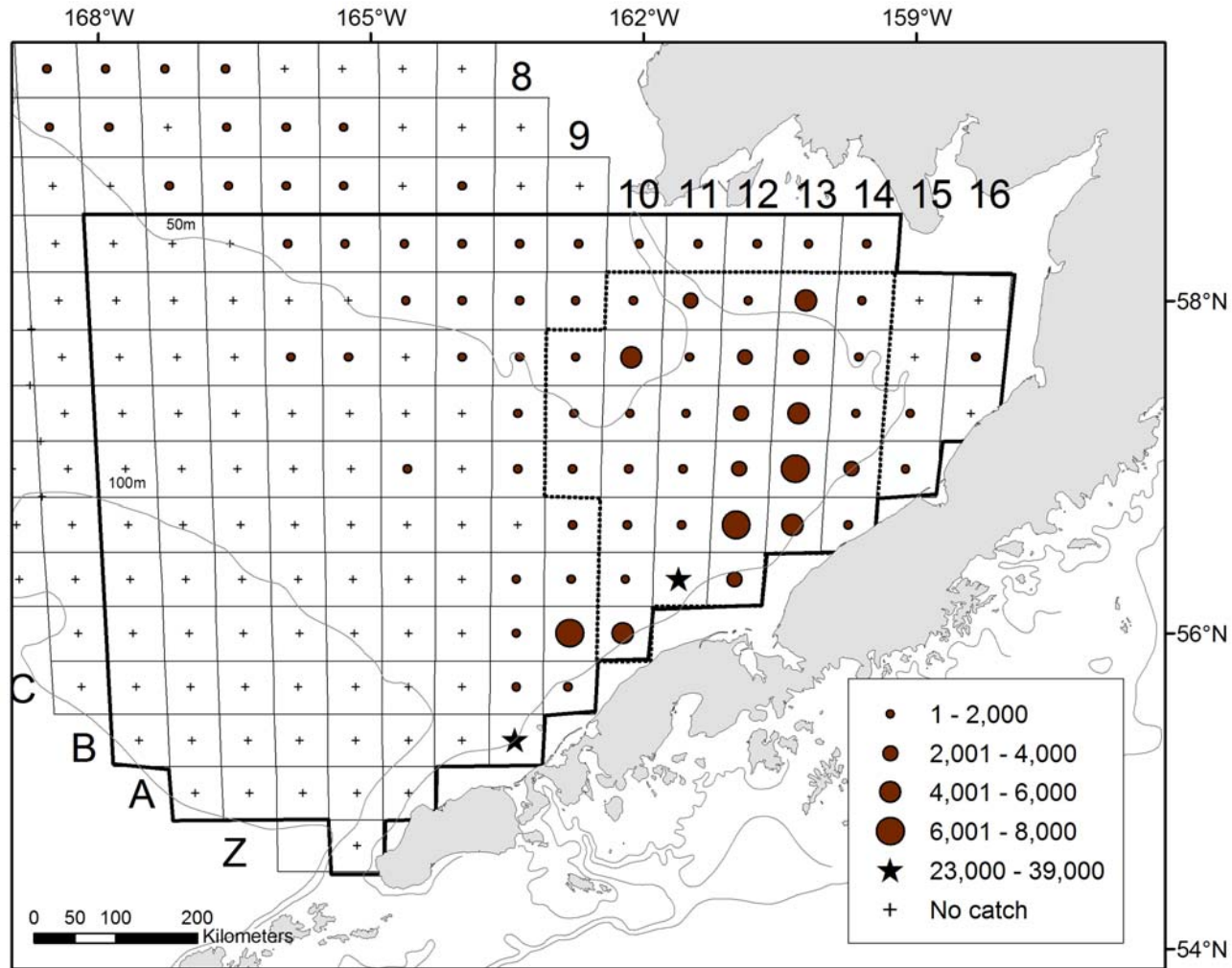


Figure 5. --Total density (number/nmi²) of red king crab (*Paralithodes camtschaticus*) at each station sampled in the Bristol Bay District in 2009. Data depicted by circles are equal interval densities, while stars are densities larger than the standard scale. Outlined area depicts the management district and dashed area depicts resurveyed stations which were included in abundance estimates by averaging male data and replacing female data collected in 3 to 7 June with data collected in 27 to 30 July at the 32 resampled stations.

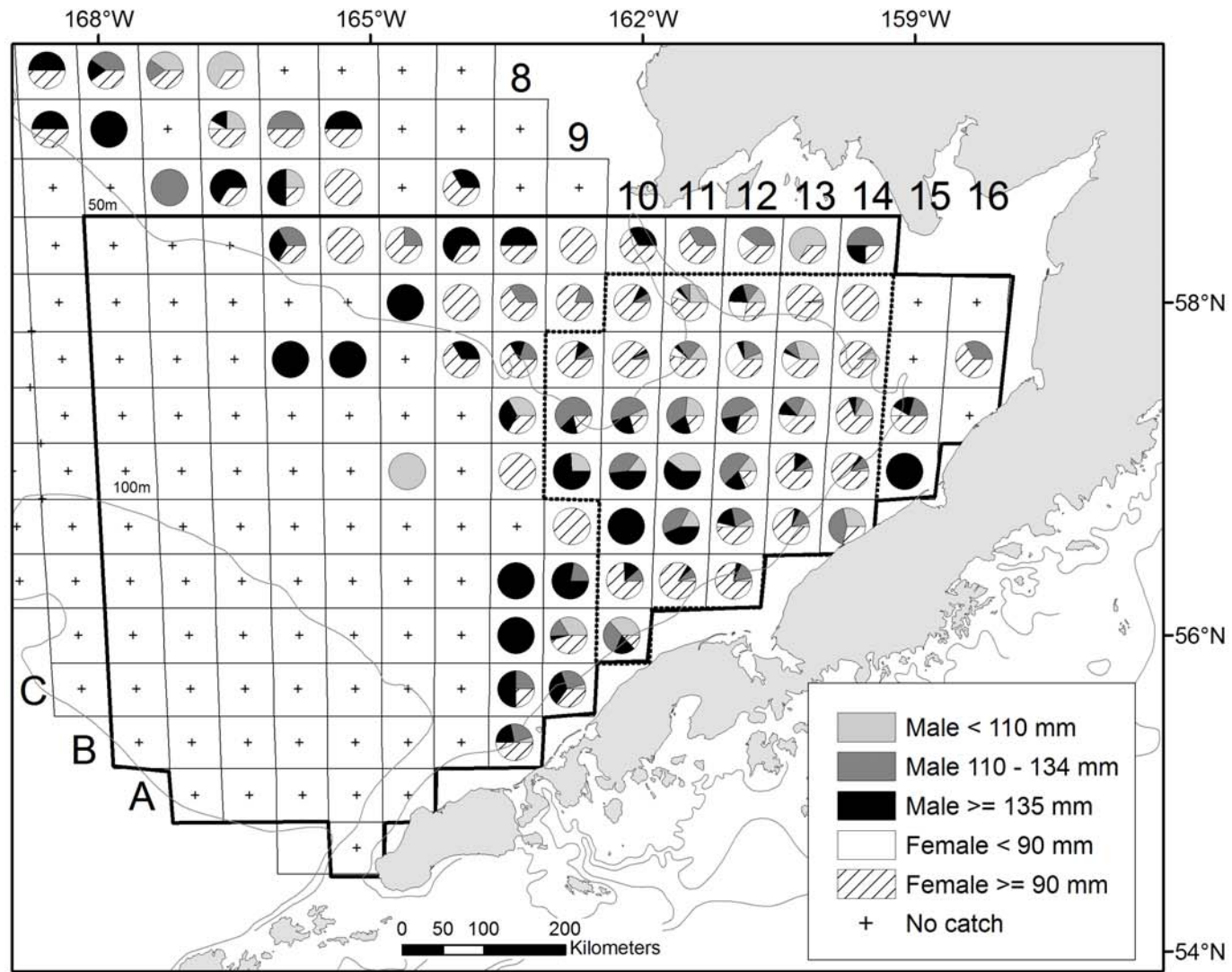


Figure 6. --Percentage of male and female red king crab (*Paralithodes camtschaticus*) size classes caught at each station in 2009. Outlined area depicts management district and dashed area depicts resurveyed stations.

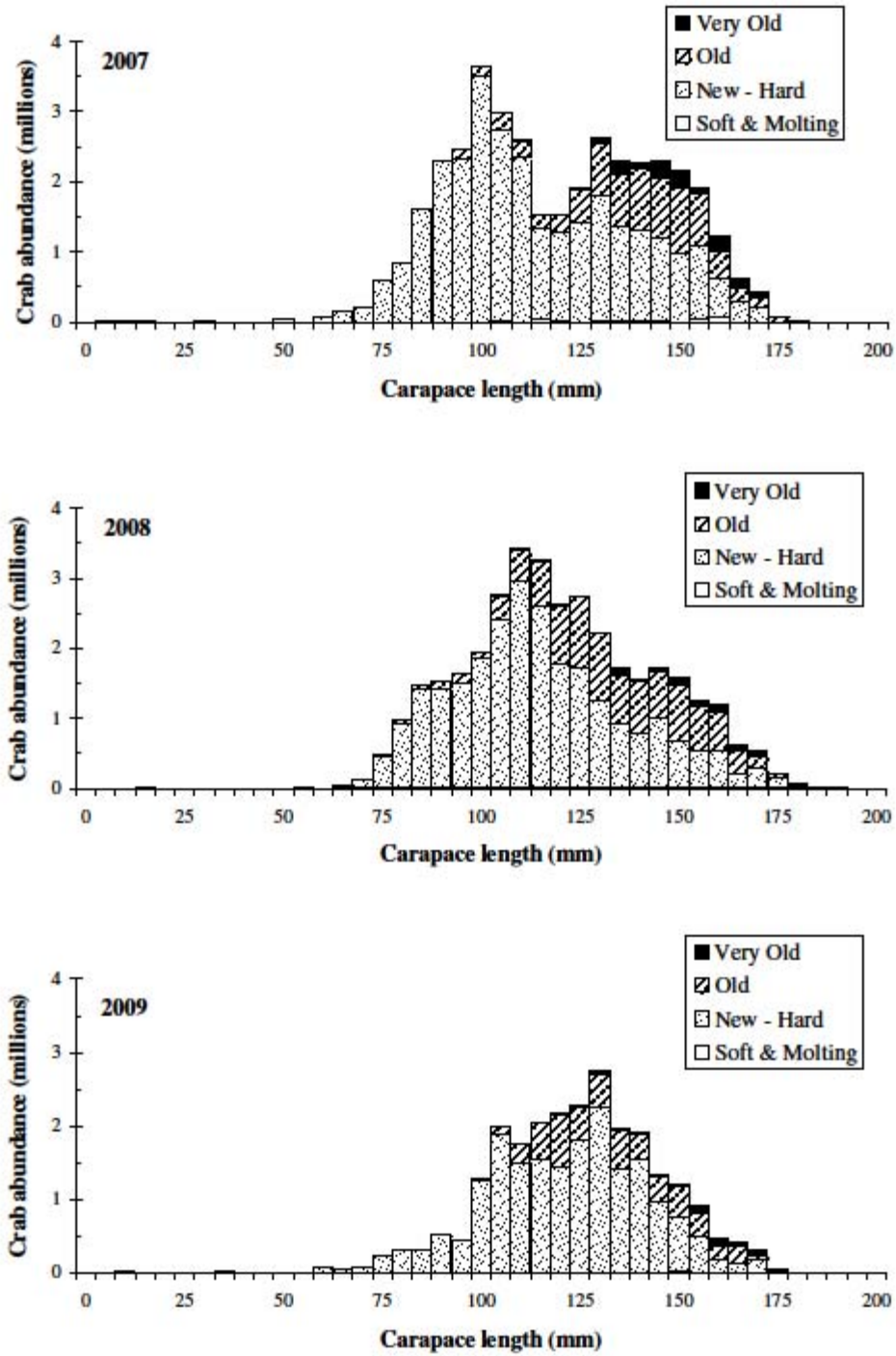


Figure 7. --Size-frequency of Bristol Bay District male red king crab (*Paralithodes camtschaticus*) by 5 mm length classes, 2007-2009.

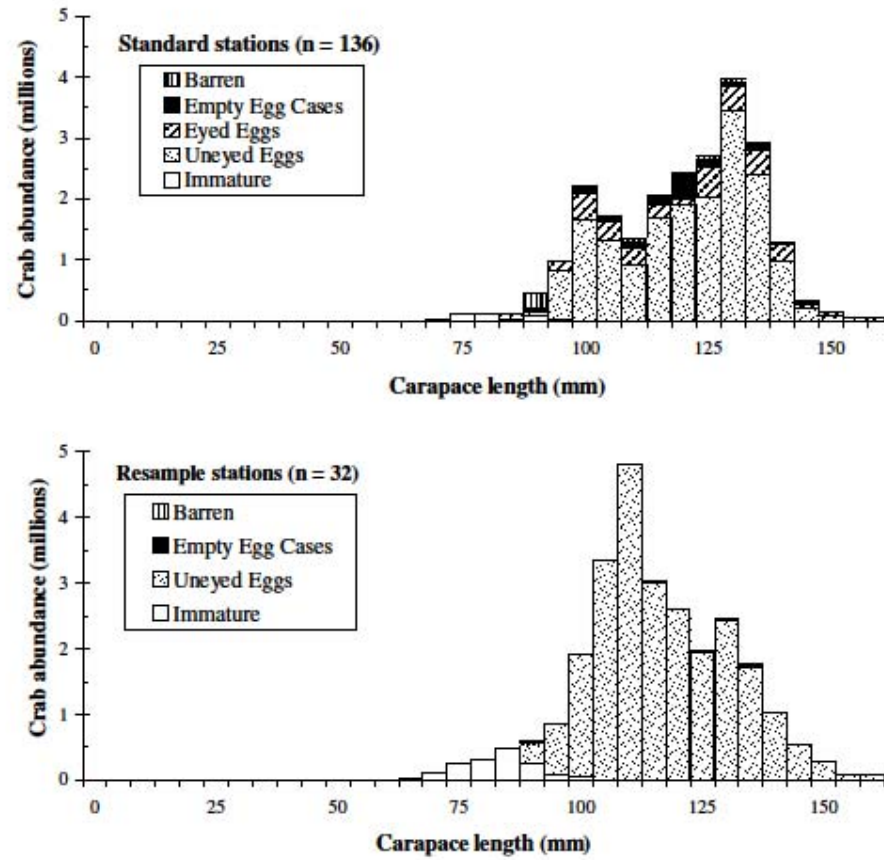


Figure 8. --Size-frequency and egg condition of Bristol Bay District female red king crab (*Paralithodes camtschaticus*) by 5 mm length classes in 2009.

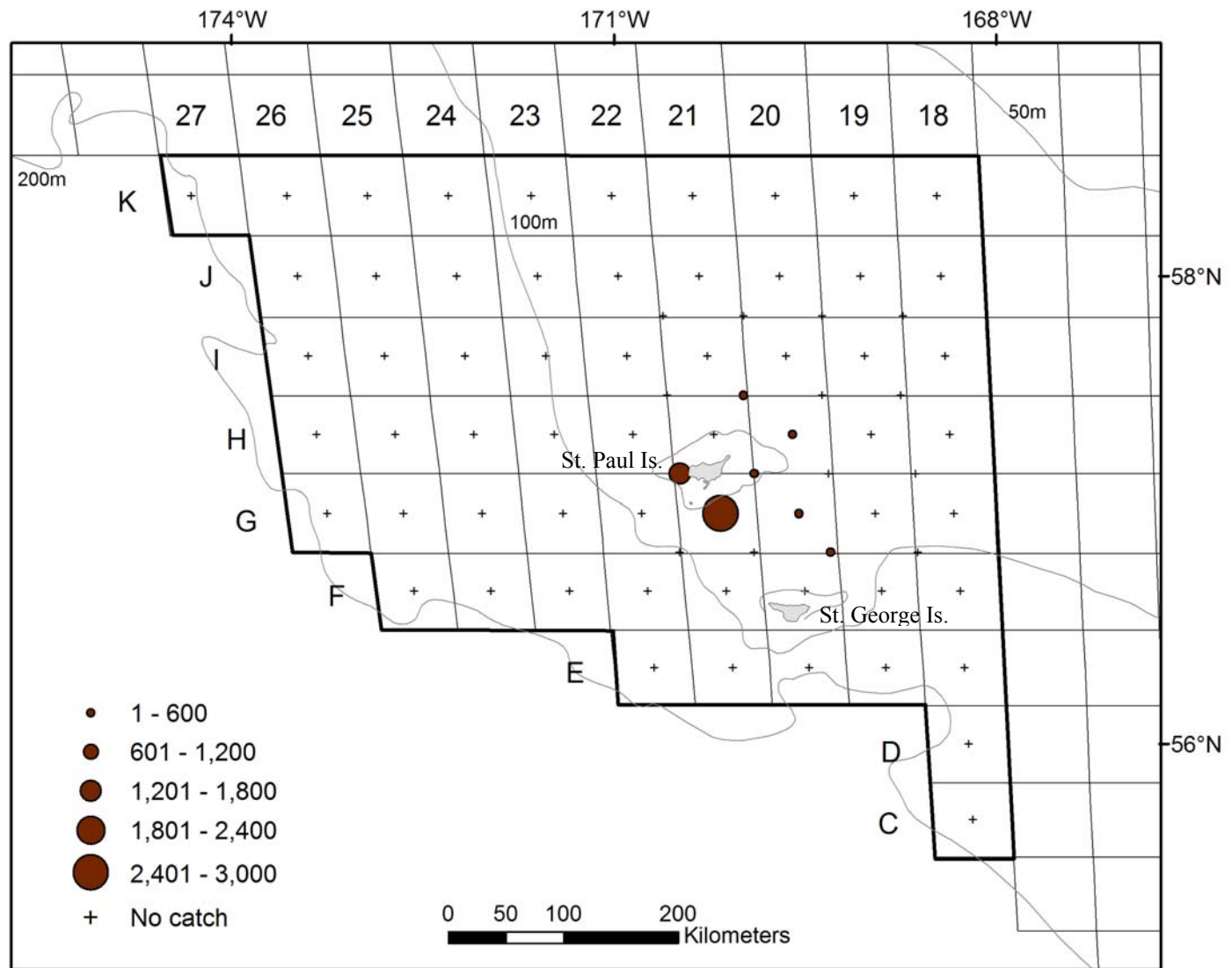


Figure 9. --Total density (number/nmi²) of red king crab (*Paralithodes camtschaticus*) at each station sampled in the Pribilof District in 2009. Data depicted by circles are equal interval densities and outlined area depicts stations within the management district.

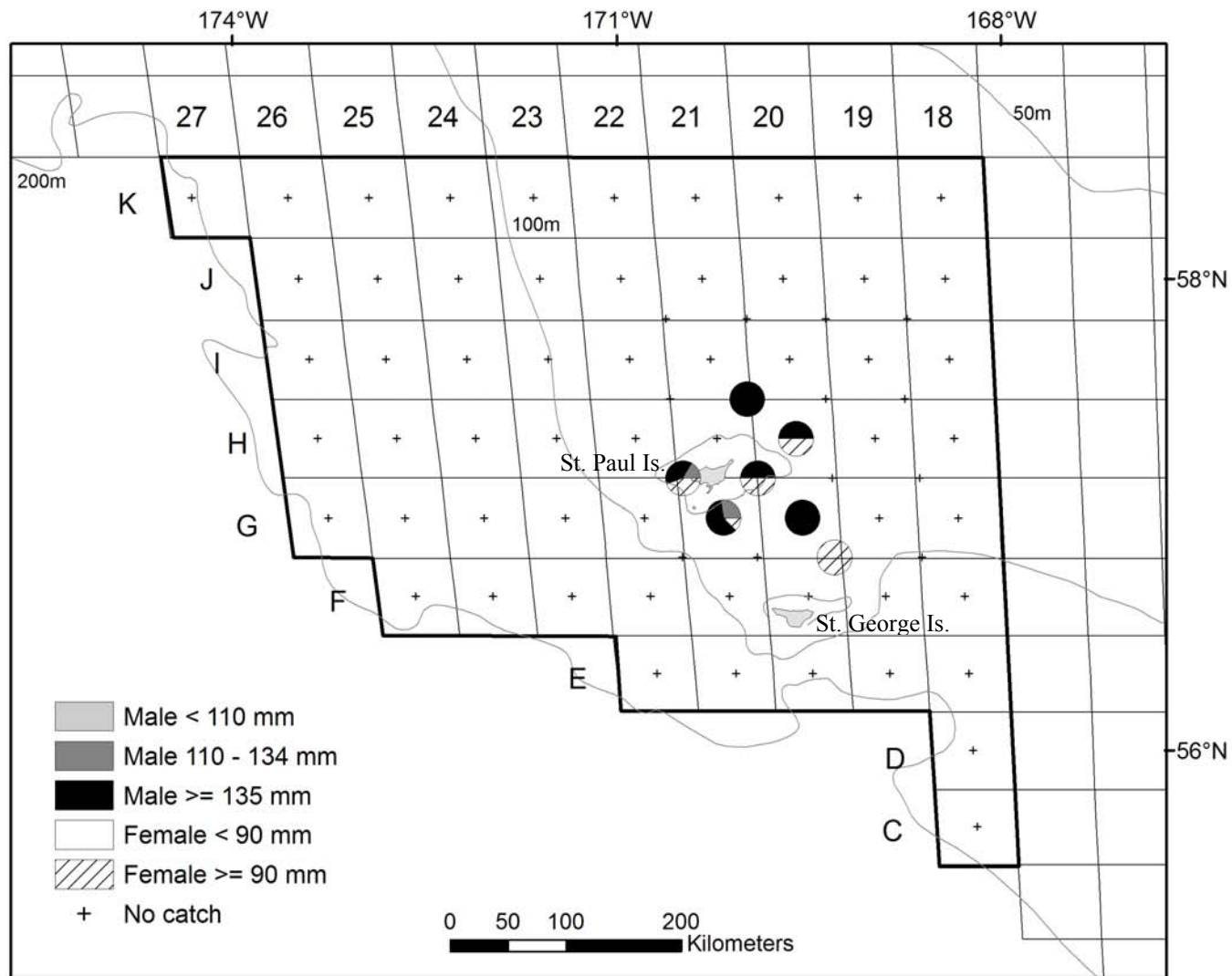


Figure 10. --Percentage of male and female red king crab (*Paralithodes camtschaticus*) size classes at each station of the Pribilof District in 2009. The outlined area depicts stations within the management district.

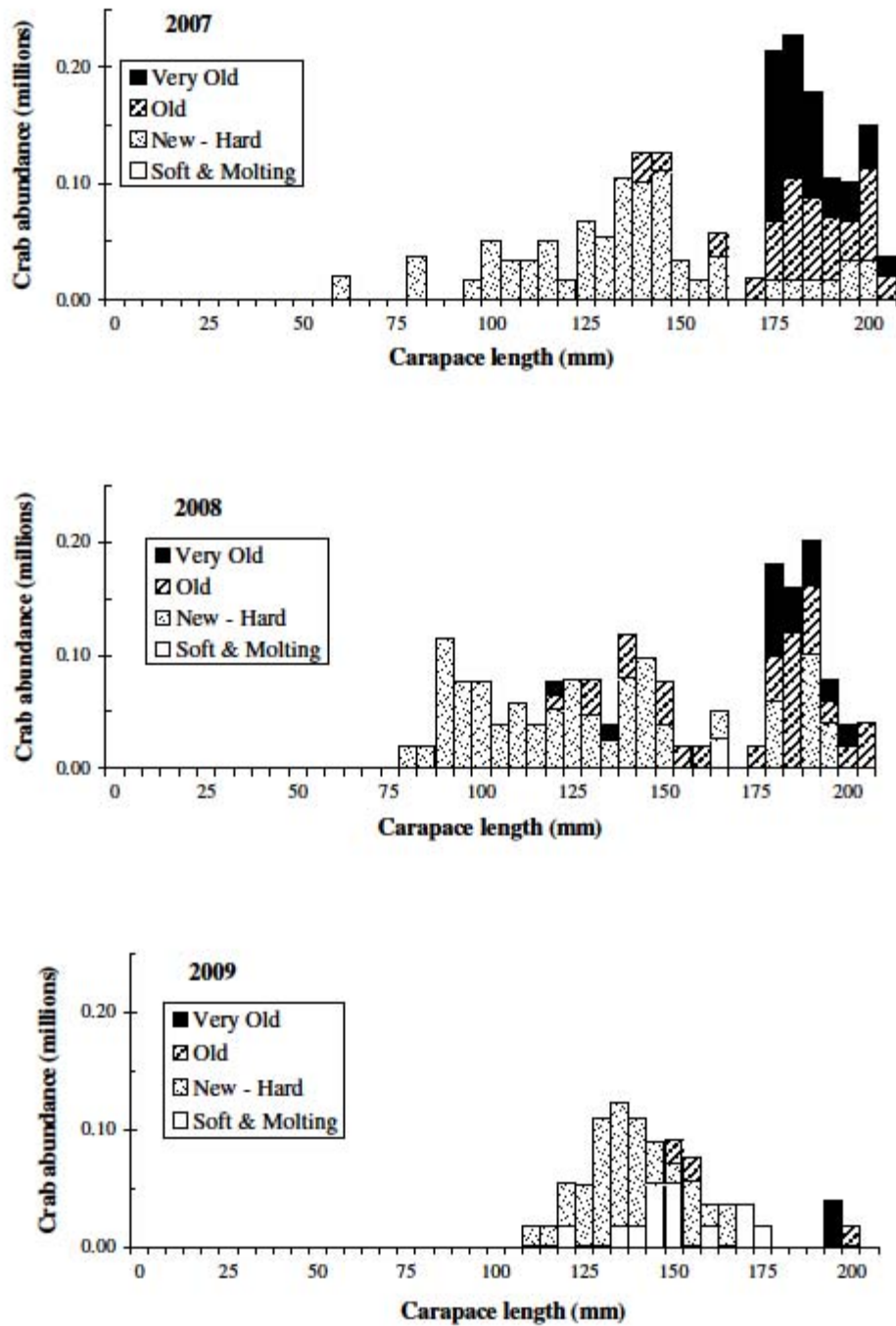


Figure 11. --Size-frequency of Pribilof District male red king crab (*Paralithodes camtschaticus*) by 5 mm length classes, 2007-2009.

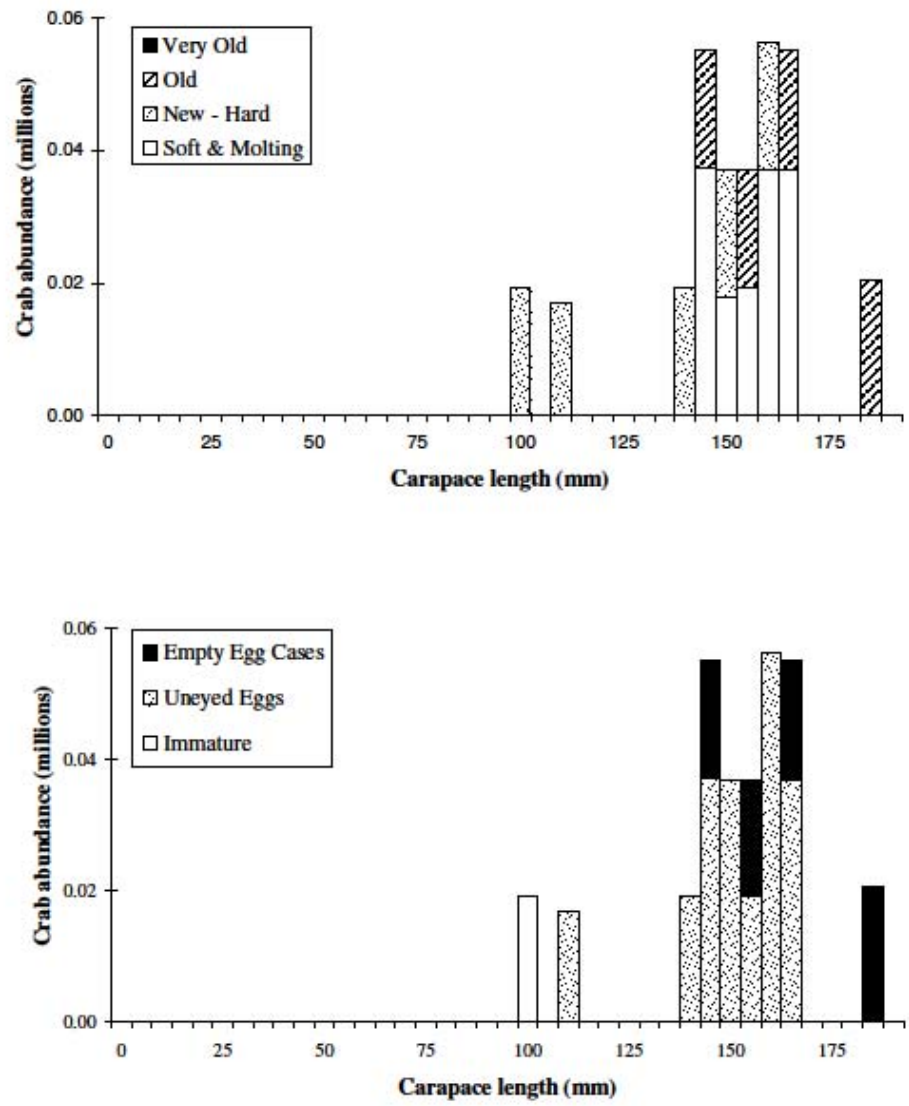


Figure 12. --Size-frequency, shell and egg condition of Pribilof District female red king crab (*Paralithodes camtschaticus*) by 5 mm length classes in 2009.

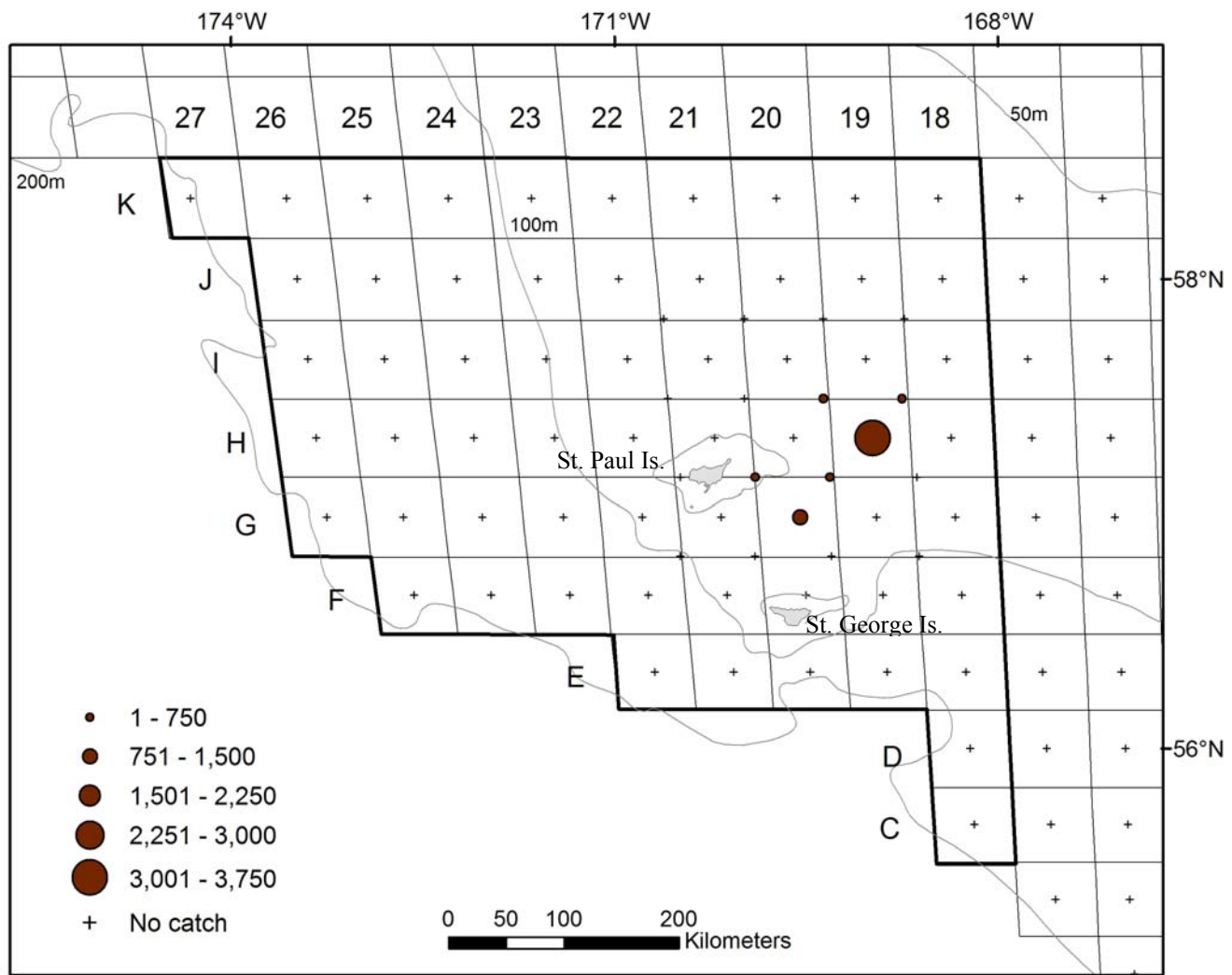


Figure 13. --Total density (number/nmi²) of blue king crab (*Paralithodes platypus*) at each station sampled in the Pribilof District in 2009. The outlined area depicts the management district.

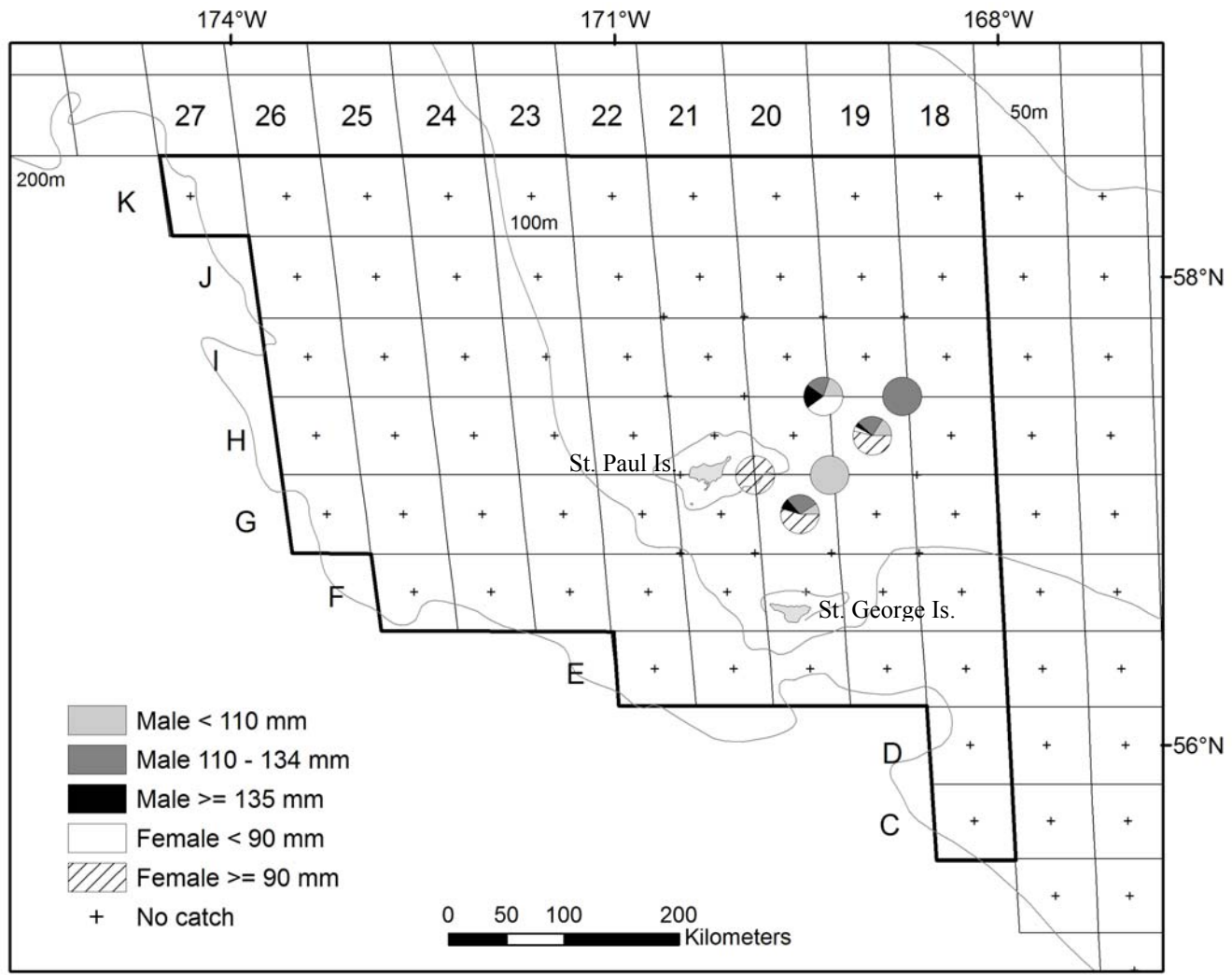


Figure 14. --Percentage of male and female blue king crab (*Paralithodes platypus*) size categories at each station of the Pribilof District in 2009. The outlined area depicts stations within the management district.

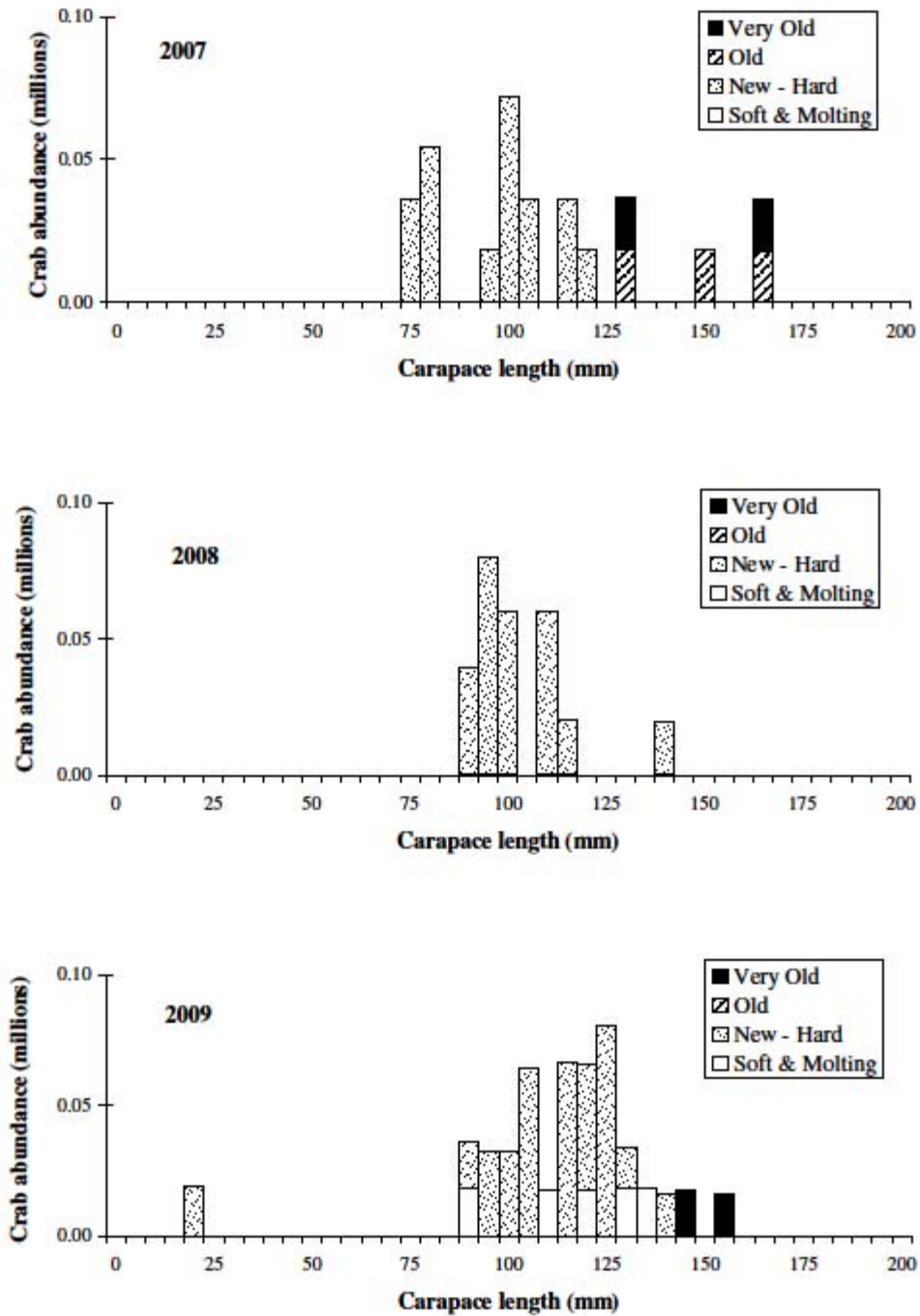


Figure 15. --Size-frequency of Pribilof District male blue king crab (*Paralithodes platypus*) by 5 mm length classes, 2007-2009.

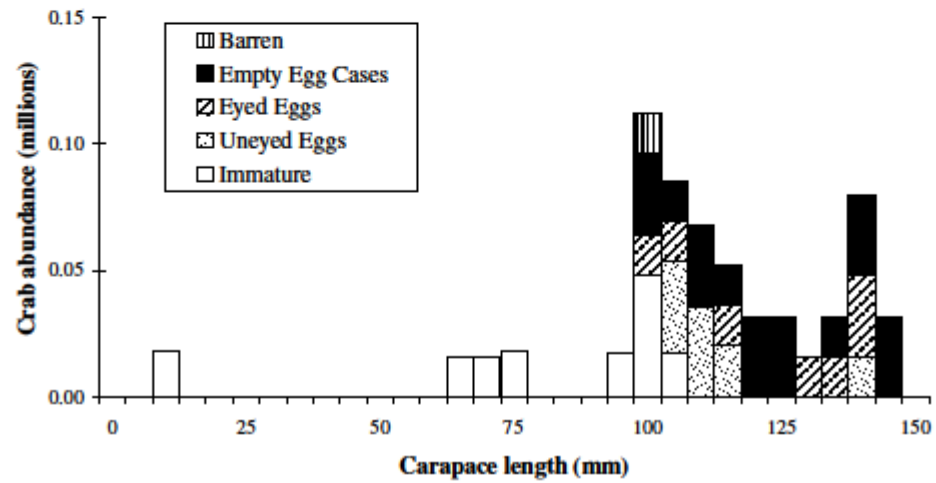
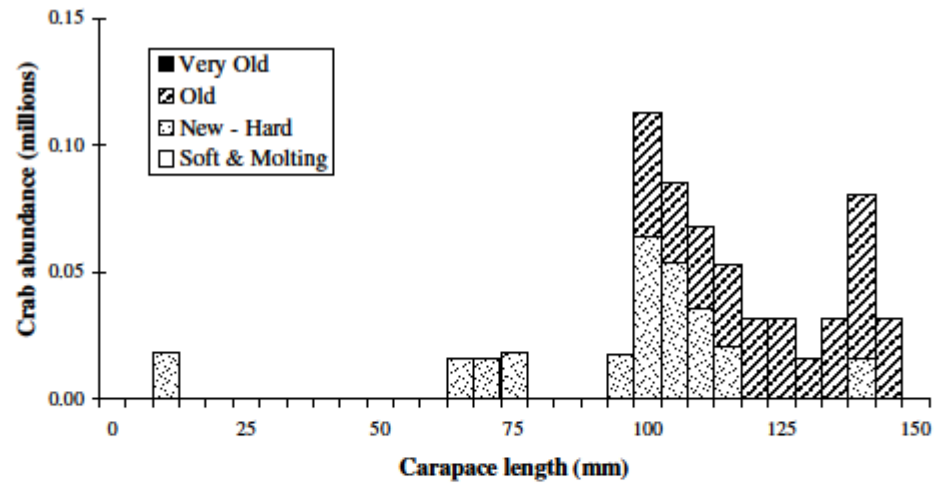


Figure 16. --Size-frequency, shell and egg condition of Pribilof District female blue king crab (*Paralithodes platypus*) by 5 mm length classes in 2009.

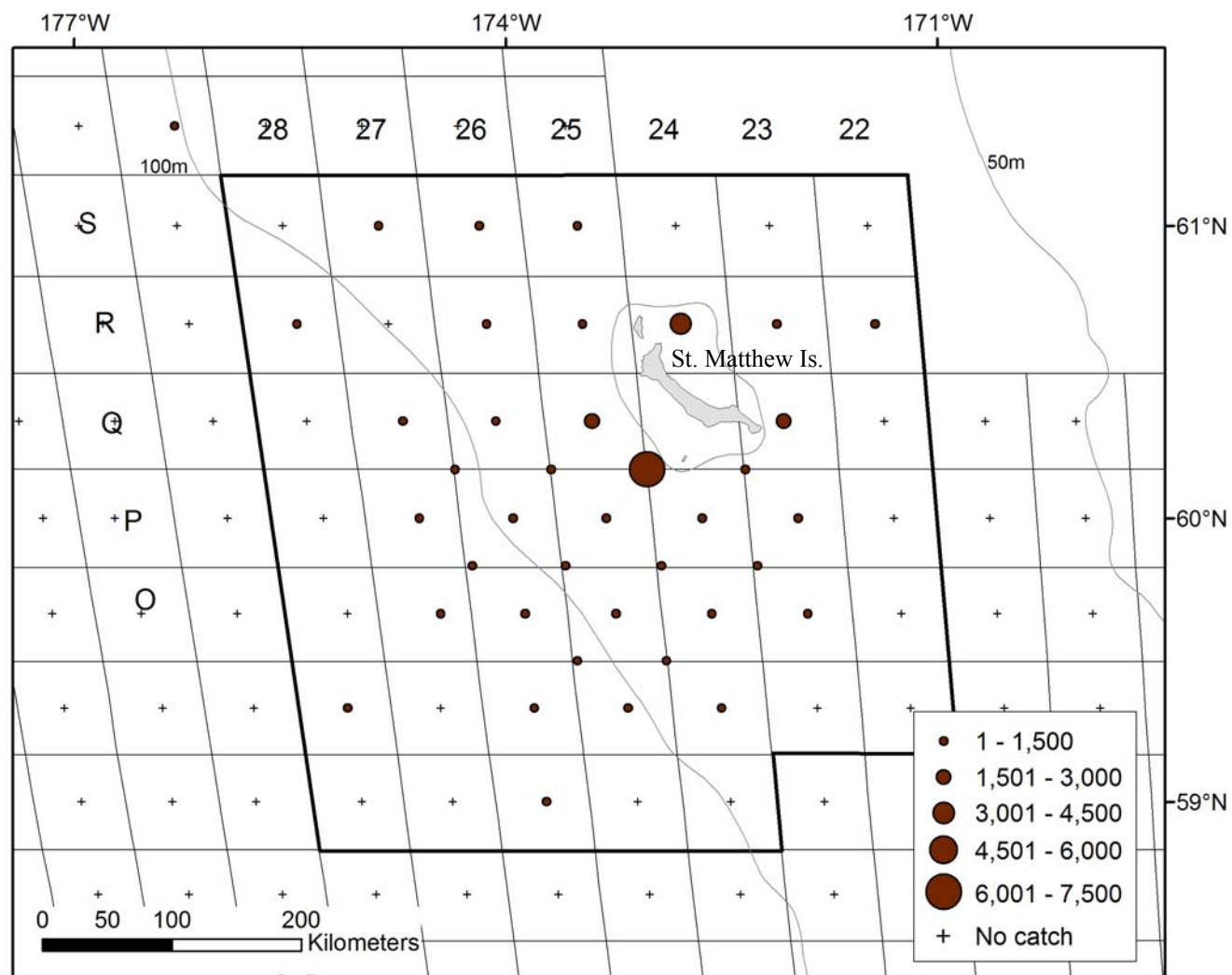


Figure 17. --Total density (number/nmi²) of blue king crab (*Paralithodes platypus*) at each station sampled in the St. Mathew Island Section of the Northern District in 2009. The outlined area depicts stations within the management district.

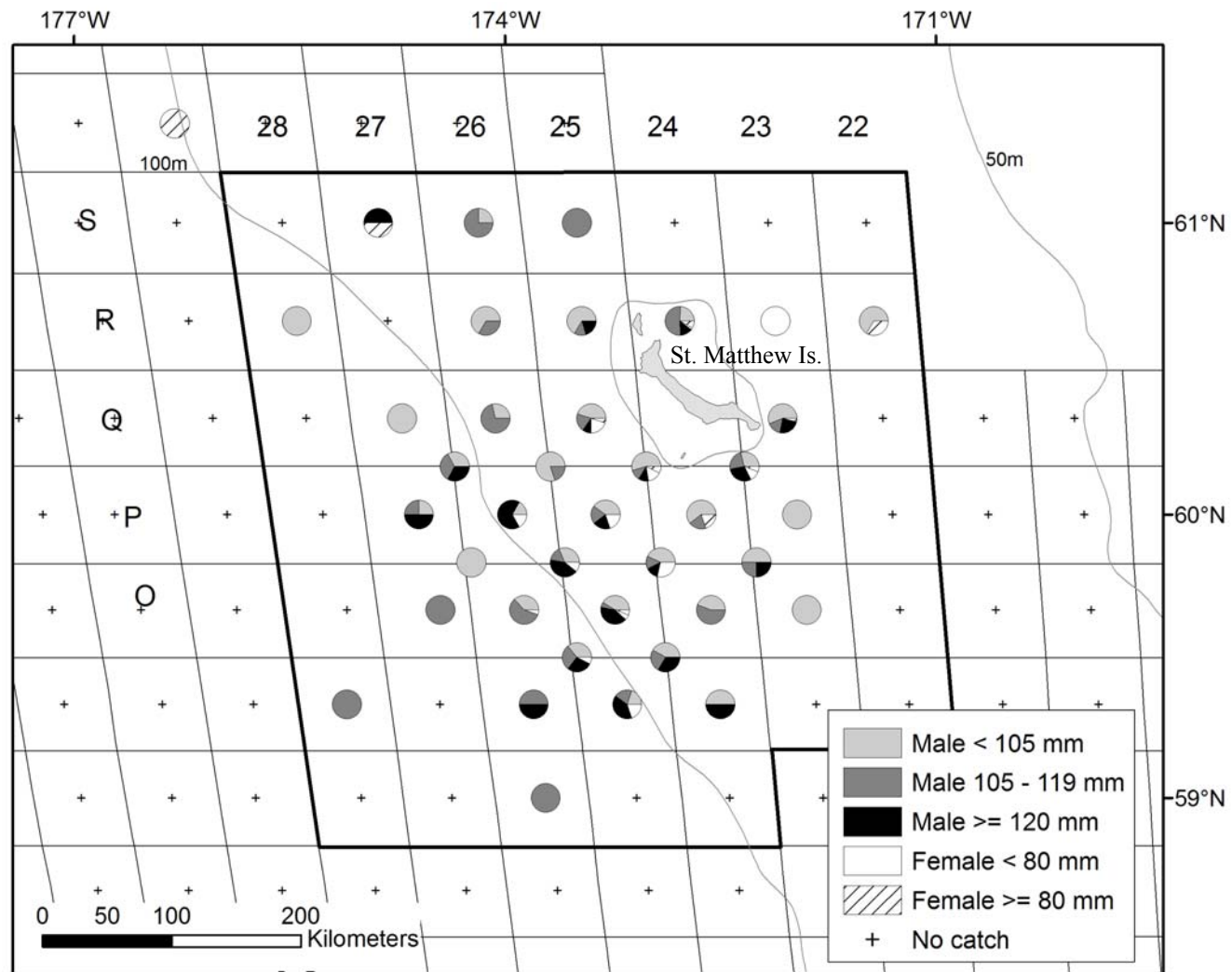


Figure 18. --Percentage of male and female blue king crab (*Paralithodes platypus*) size categories at each station of the St. Matthew Island Section of the Northern District in 2009. The outlined area depicts stations within the management district.

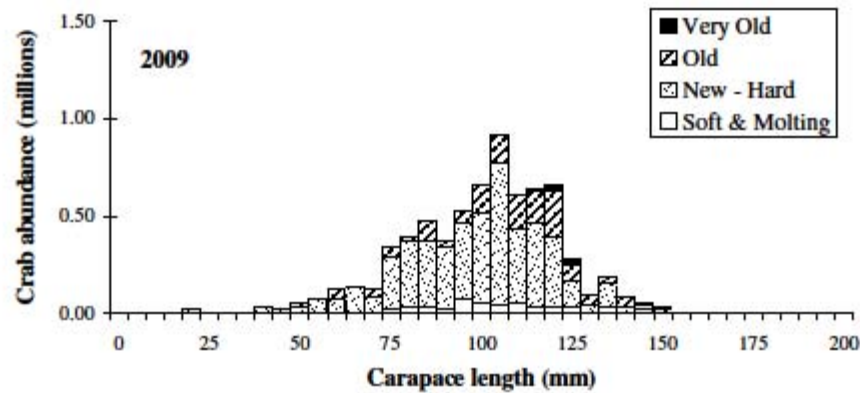
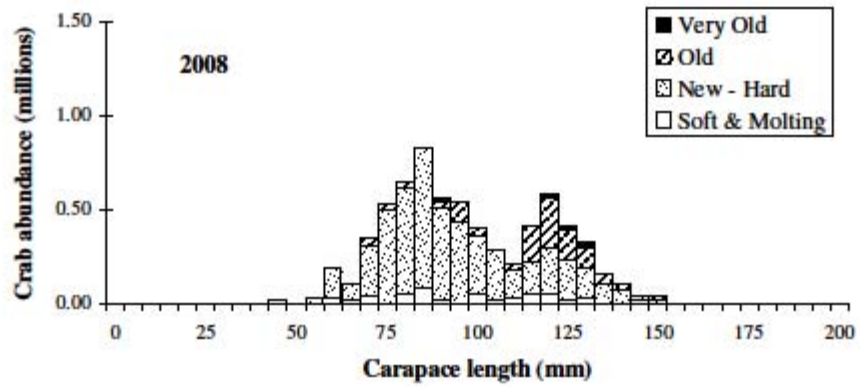
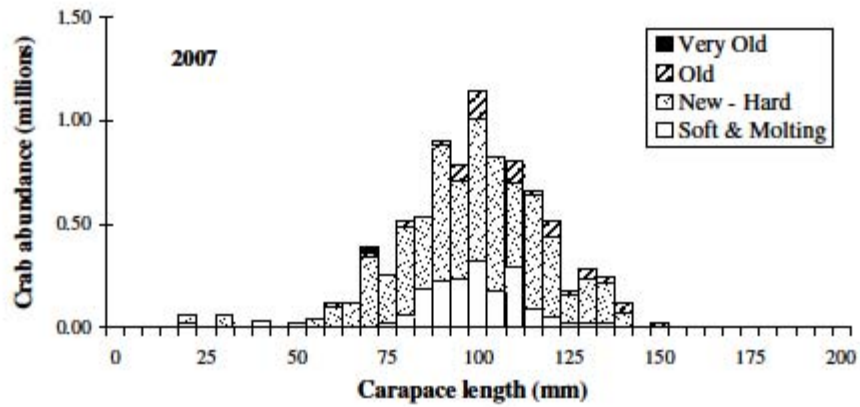


Figure 19. --Size-frequency of St. Matthew Island Section male blue king crab (*Paralithodes platypus*) by 5 mm length classes, 2007-2009.

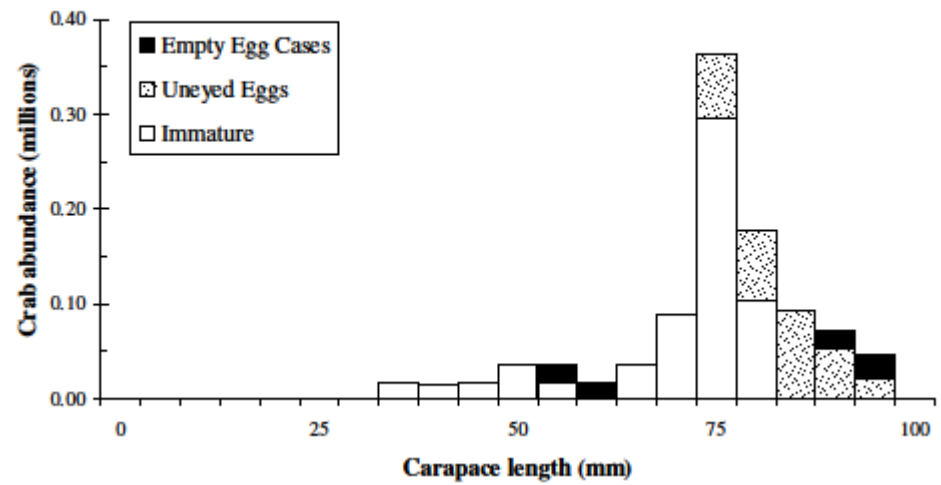
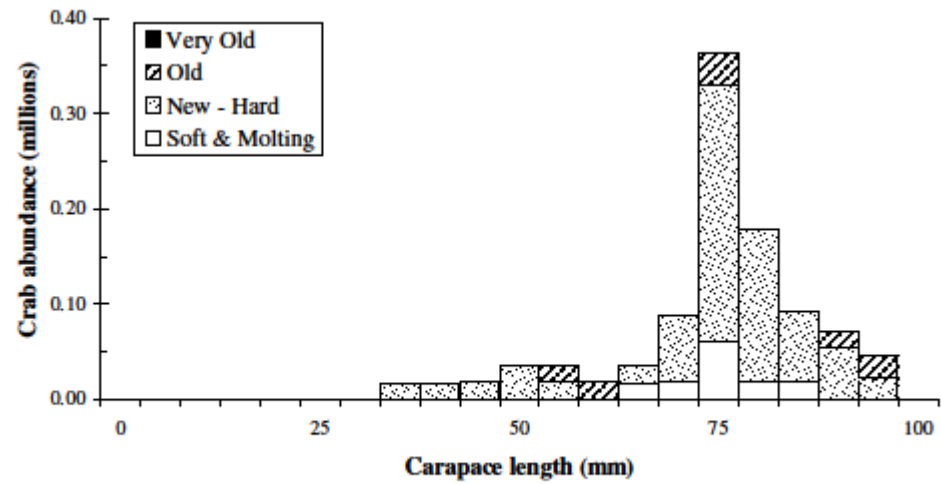


Figure 20. -- Size-frequency, shell and egg condition of St. Matthew Island Section female blue king crab (*Paralithodes platypus*) by 5 mm length classes, 2007-2009.

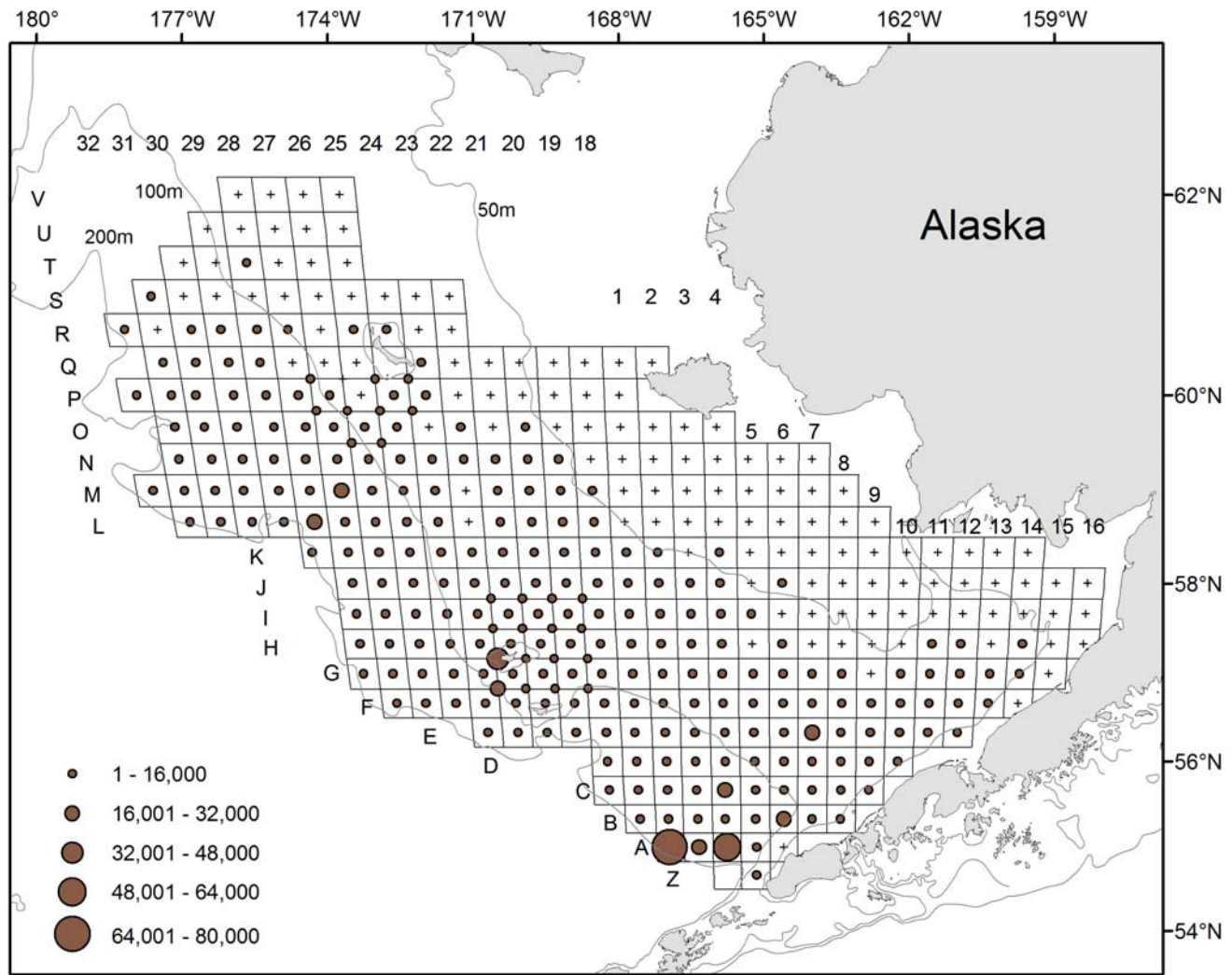


Figure 21. --Total density (number/nmi²) of Tanner crab (*Chionoecetes bairdi*) at each station sampled in 2009. Data depicted by circles are crab densities at equal intervals.

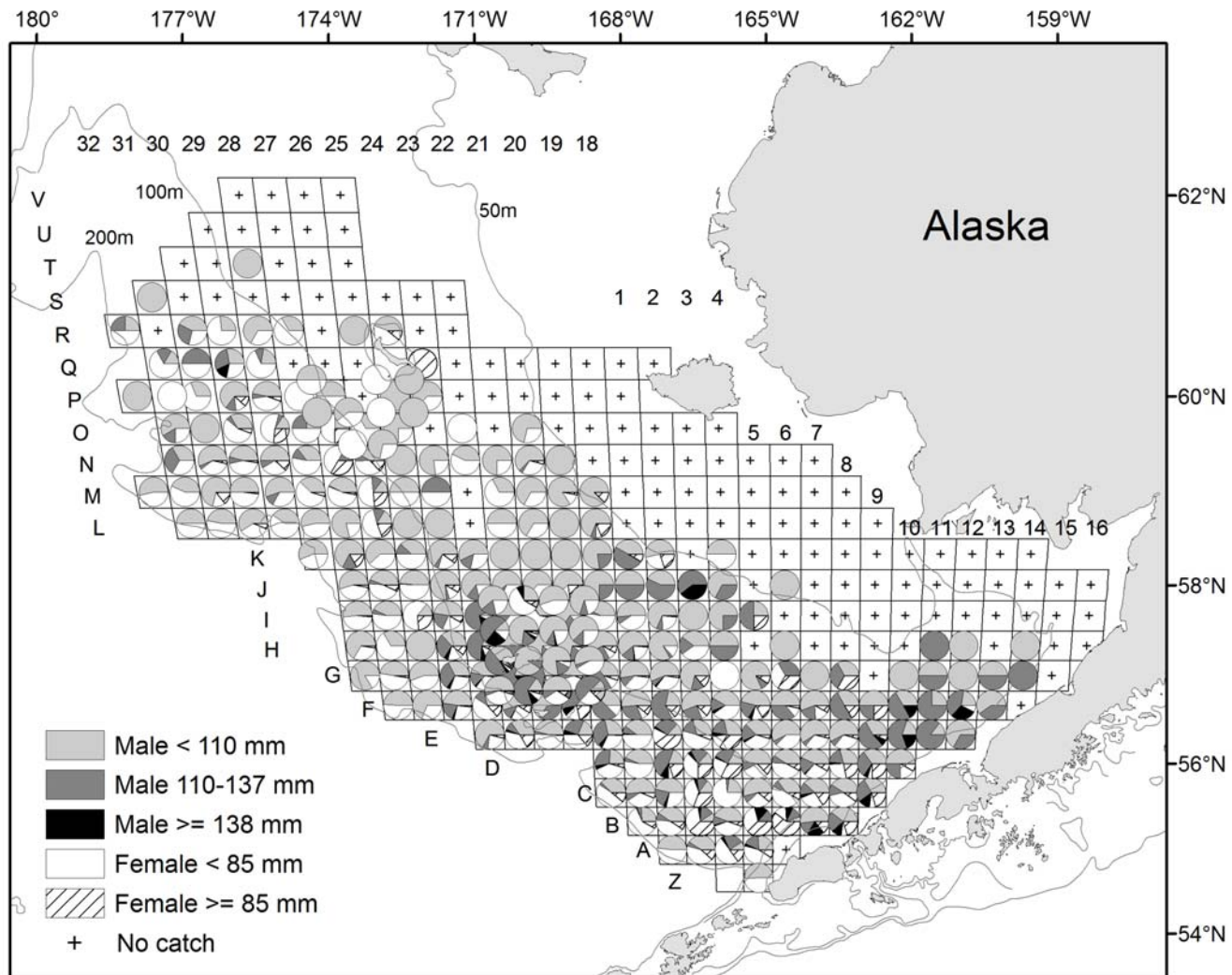


Figure 22. --Percentage of male and female Tanner crab (*Chionoecetes bairdi*) size categories at each station sampled in 2009.

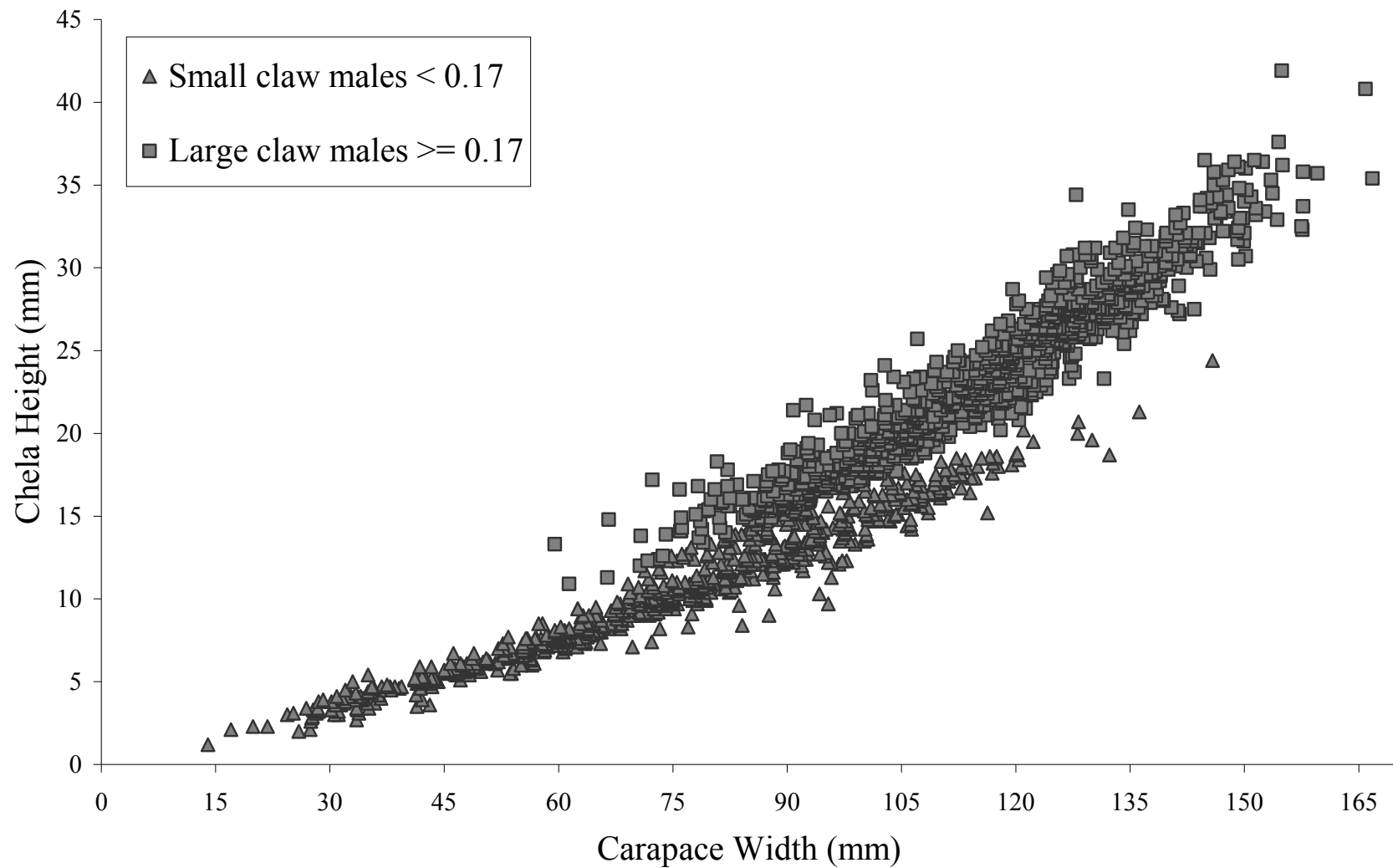


Figure 23. --Male Tanner crab (*Chionoecetes bairdi*) chela height versus carapace width measurements collected on the 2008 National Marine Fisheries Service eastern Bering Sea bottom trawl survey.

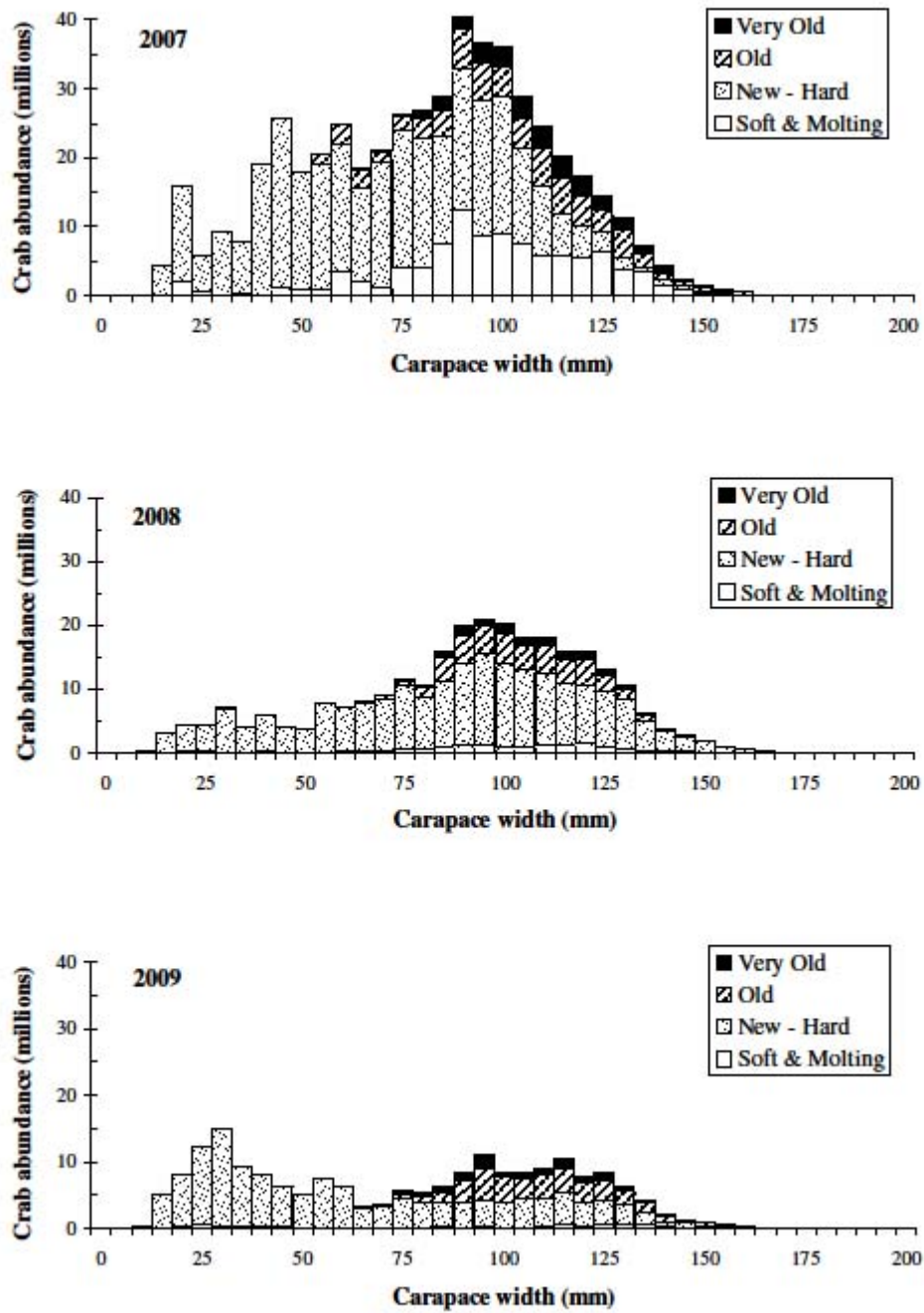


Figure 24. --Size-frequency of male Tanner crab (*Chionoecetes bairdi*) by 5 mm width classes of all districts combined, 2007-2009.

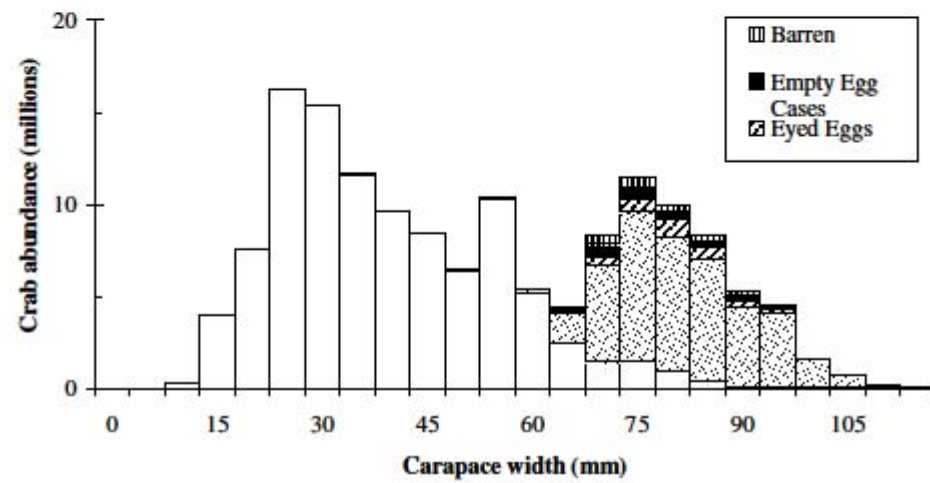
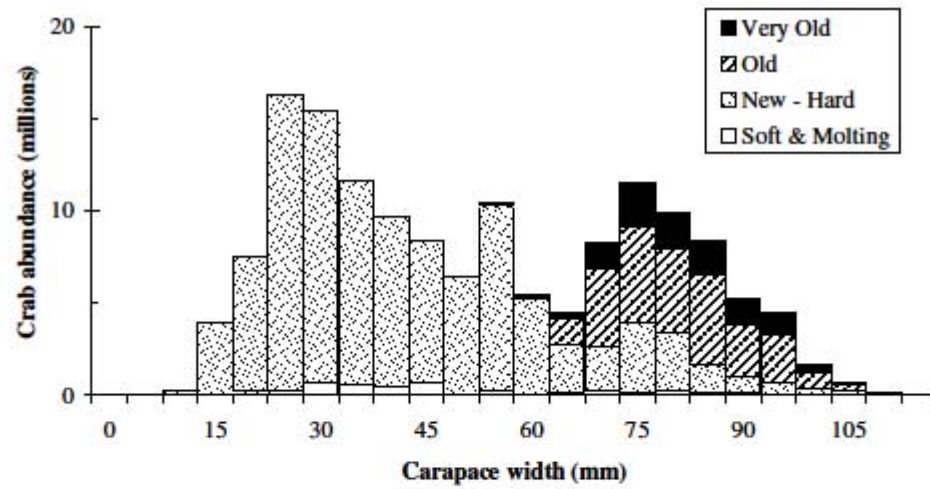


Figure 25. --Size-frequency, shell and egg condition of female Tanner crab (*Chionoecetes bairdi*) by 5 mm width classes of all districts combined in 2009.

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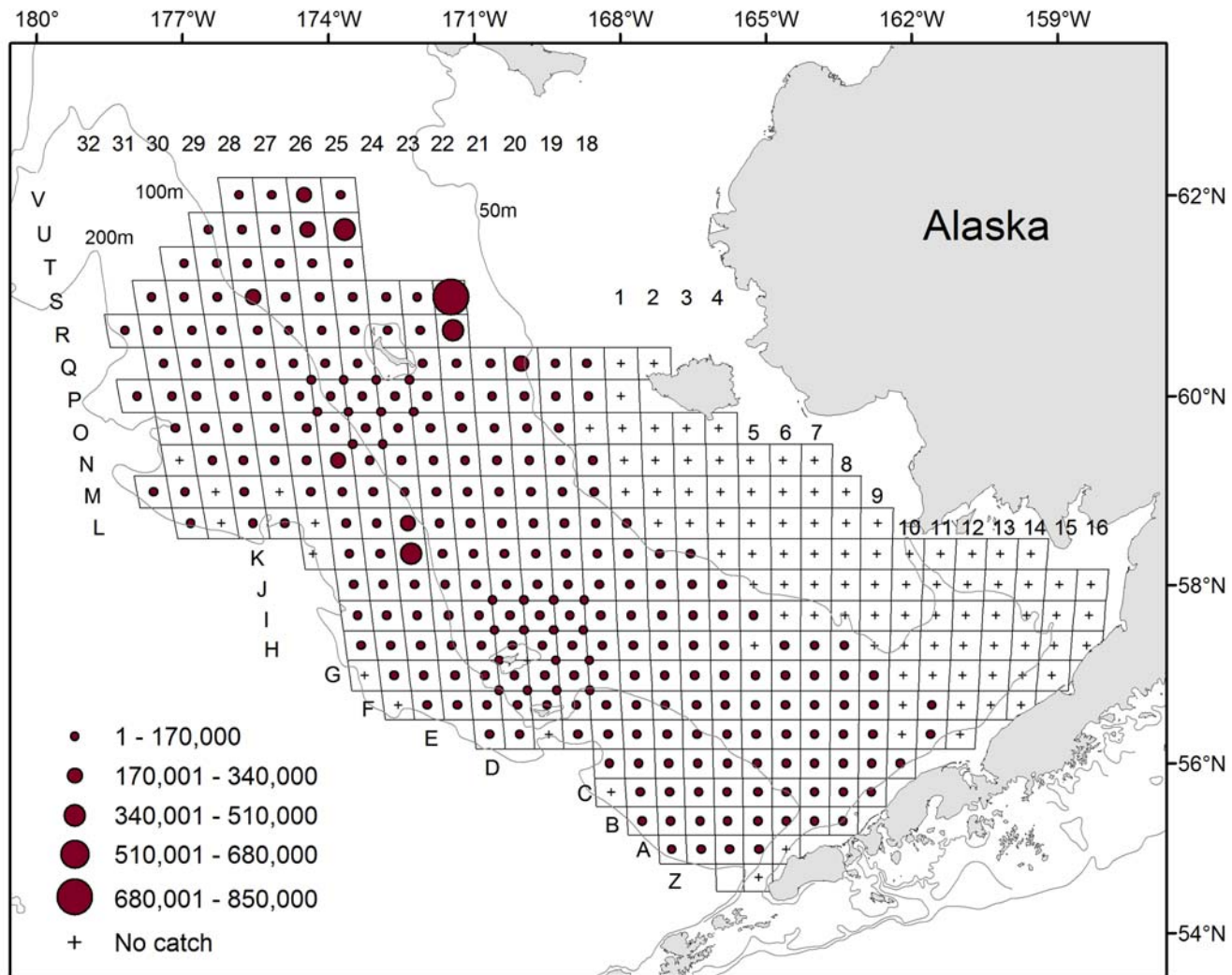


Figure 26. --Total density (number/nmi²) of snow crab (*Chionoecetes opilio*) at each station sampled in 2009. Data depicted by circles are crab densities at equal intervals.

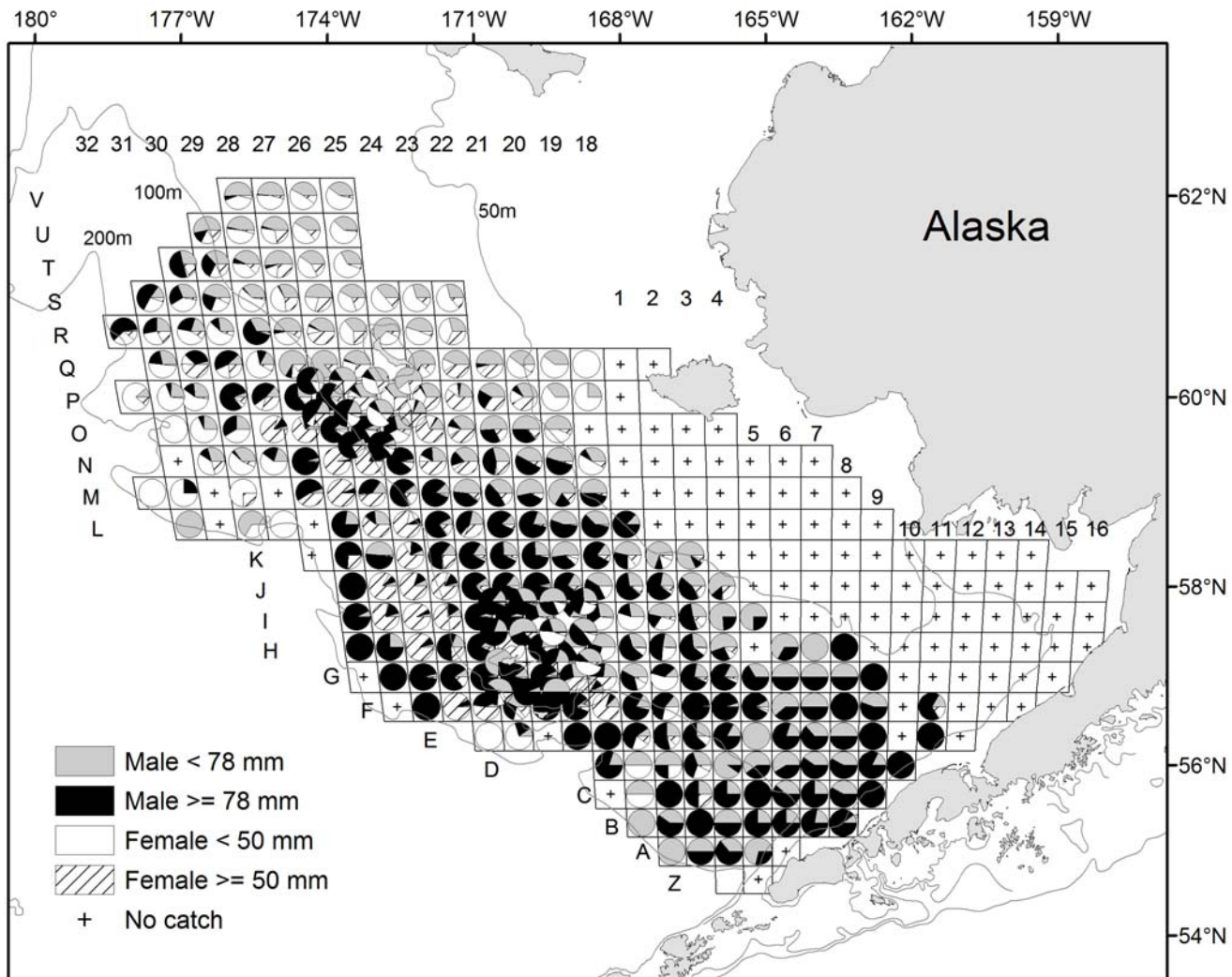


Figure 27. --Percentage of male and female snow crab (*Chionoecetes opilio*) size categories at each station sampled in 2009.

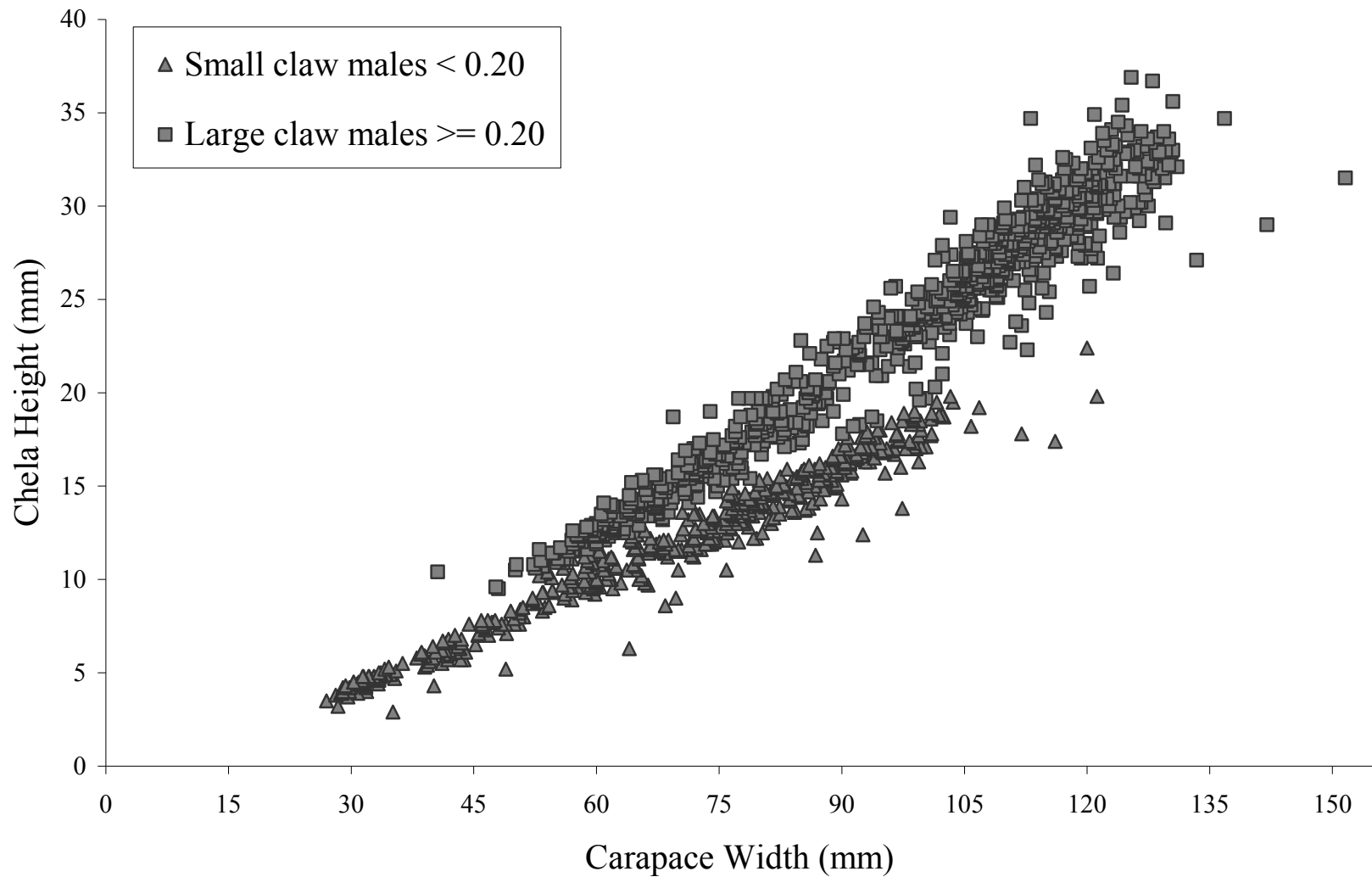


Figure 28. -- Male snow crab (*Chionoecetes opilio*) chela height versus carapace width measurements collected on the 2009 National Marine Fisheries Service eastern Bering Sea bottom trawl survey.

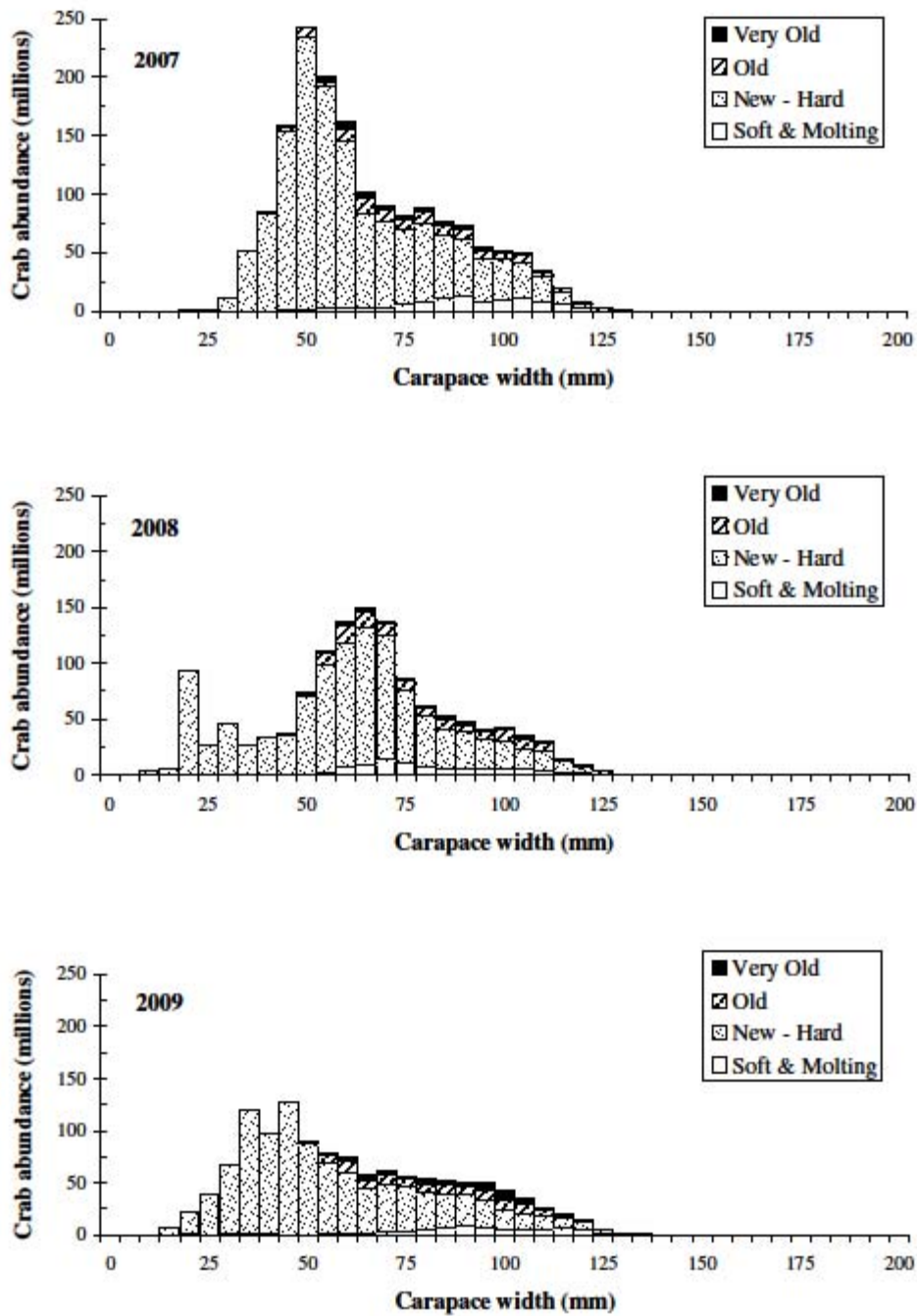


Figure 29. --Size-frequency of male snow crab (*Chionoecetes opilio*) by 5 mm width classes of all districts combined, 2007-2009.

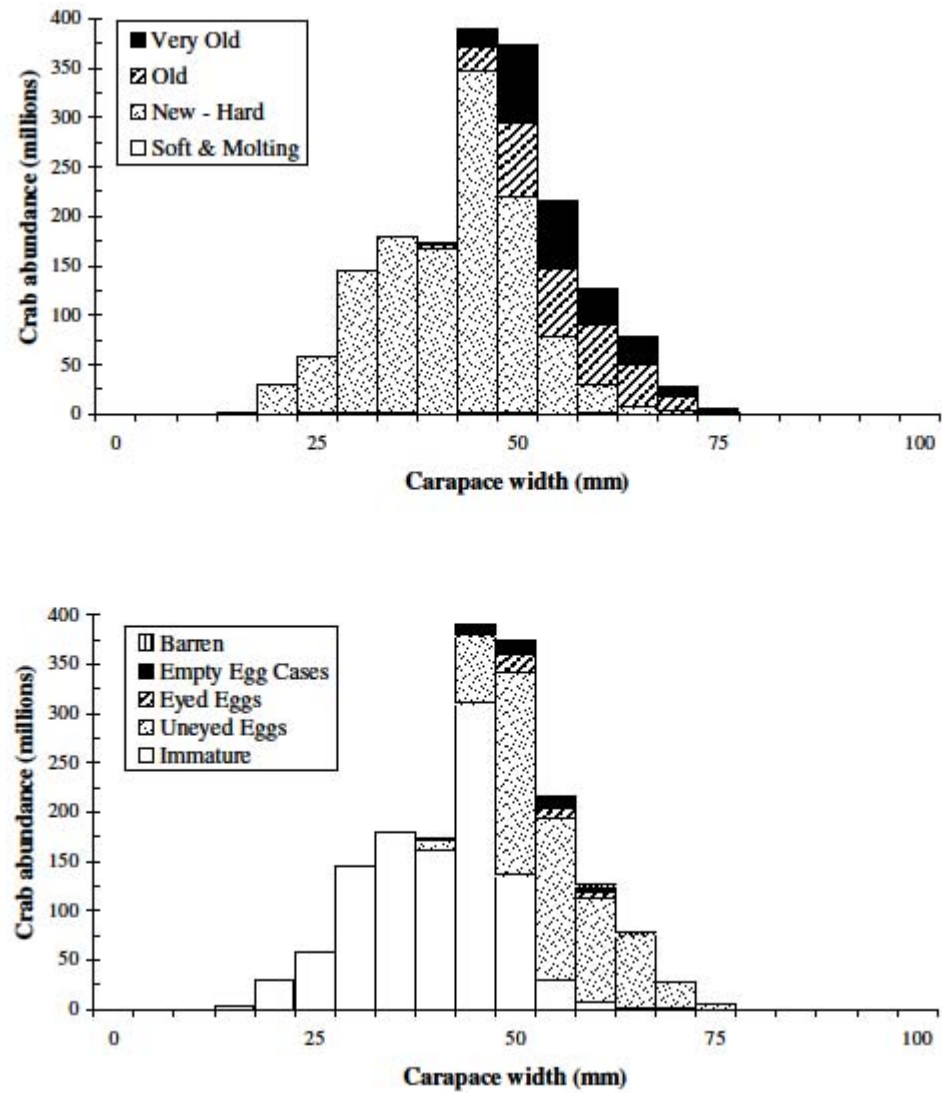


Figure 30. --Size-frequency, shell and egg condition of female snow crab (*Chionoecetes opilio*) by 5 mm width classes of all districts combined in 2009.

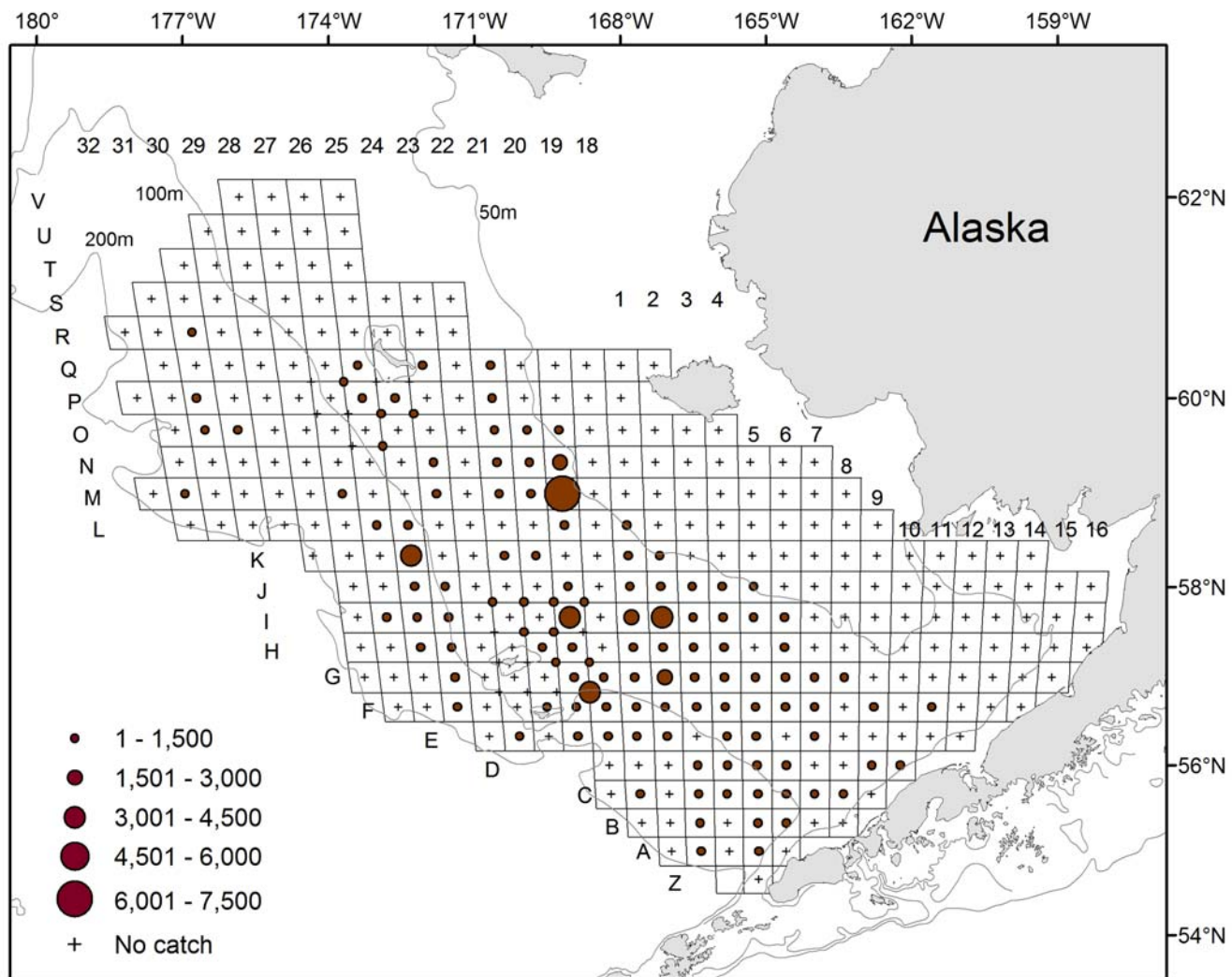


Figure 31. --Total density (number/nmi²) of *Chionoecetes bairdi/opilio* hybrid crab at each station sampled in 2009. Data depicted by circles are crab densities at equal intervals.

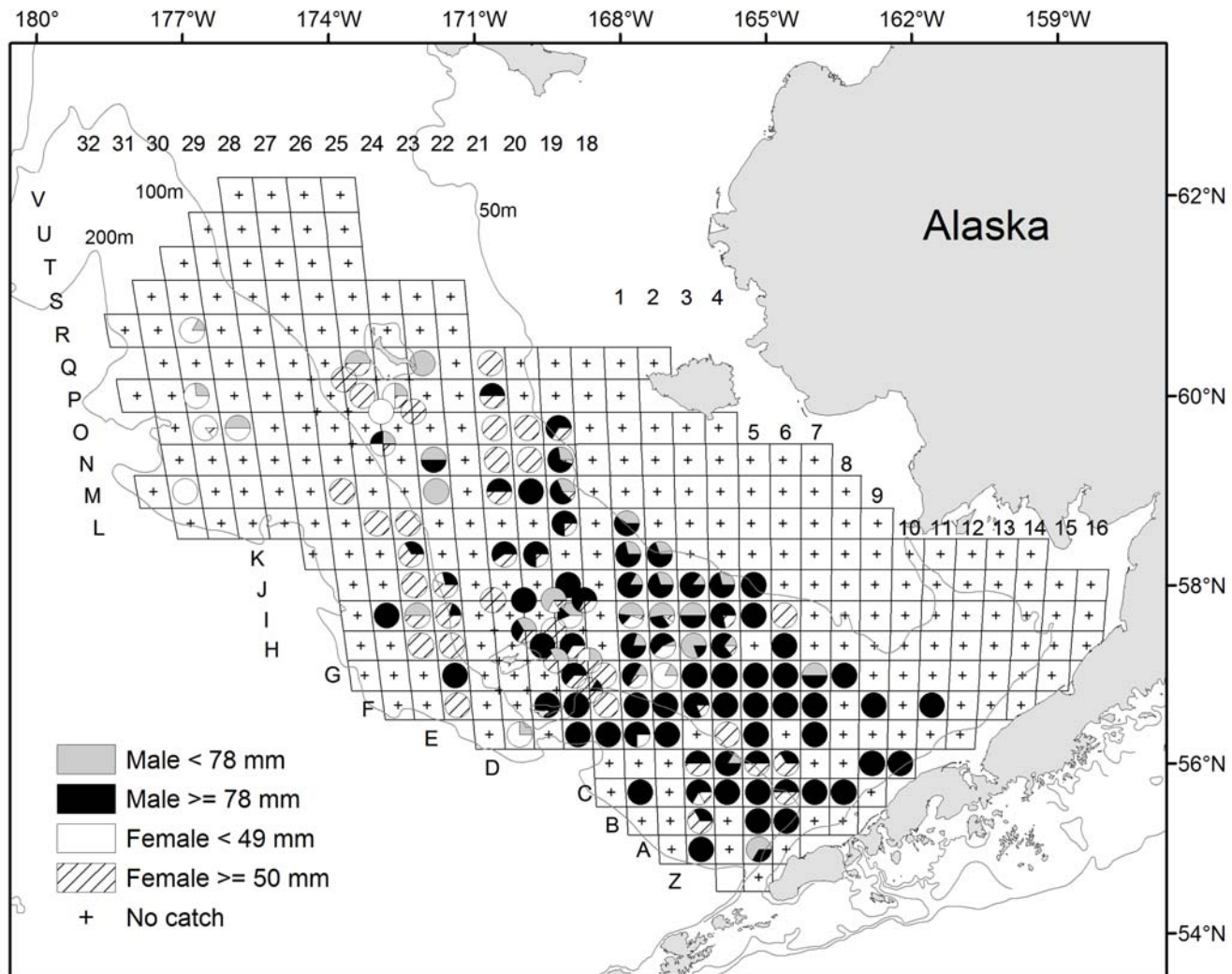


Figure 32. --Percentage of male and female *Chionoectes bairdi/opilio* hybrid crab size categories at each station sampled in 2009.

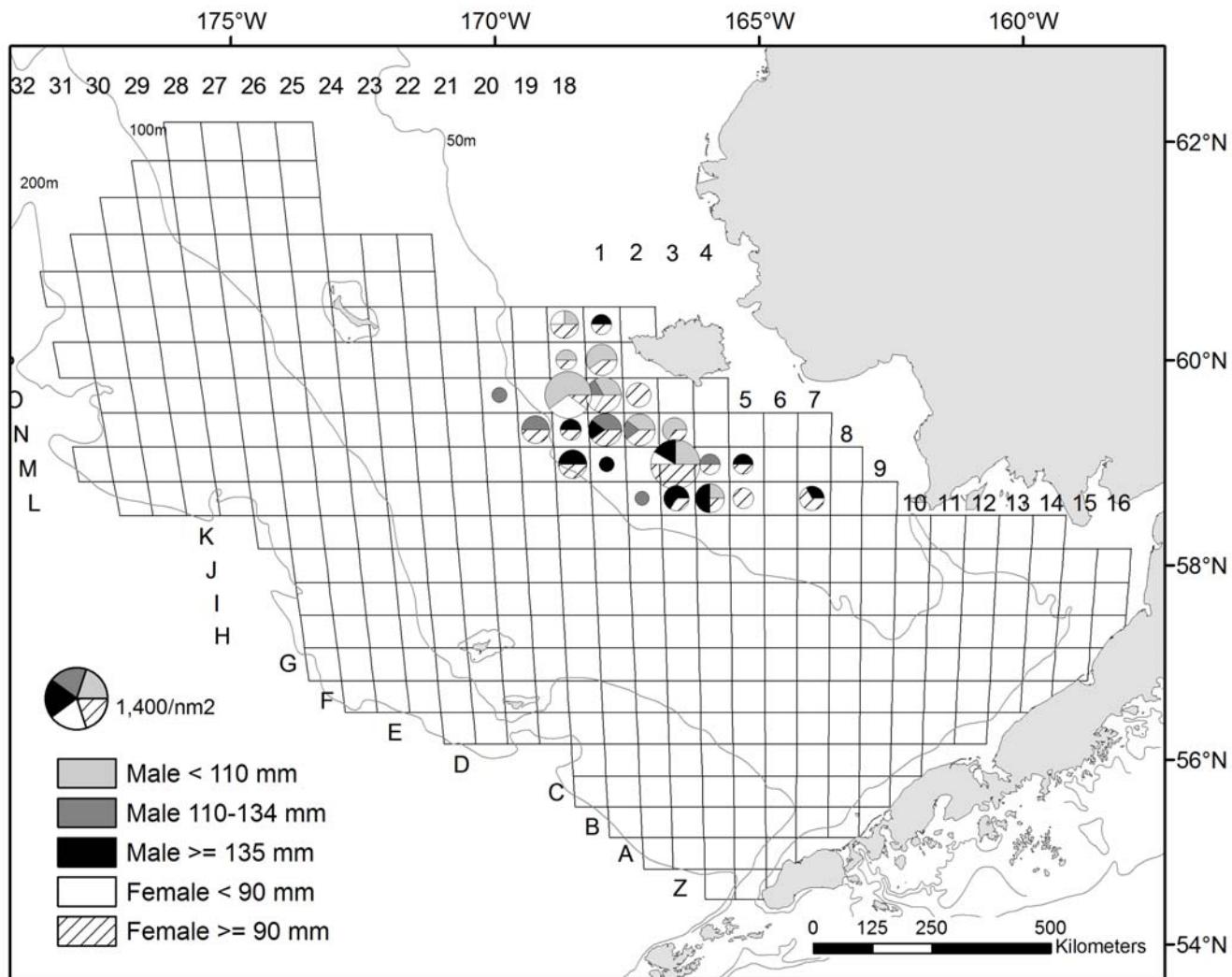


Figure 33. --Total density (number/nm²) and percentage of male and female red king crab (*Paralithodes camtschaticus*) size categories at each station sampled in the Northern District in 2009.

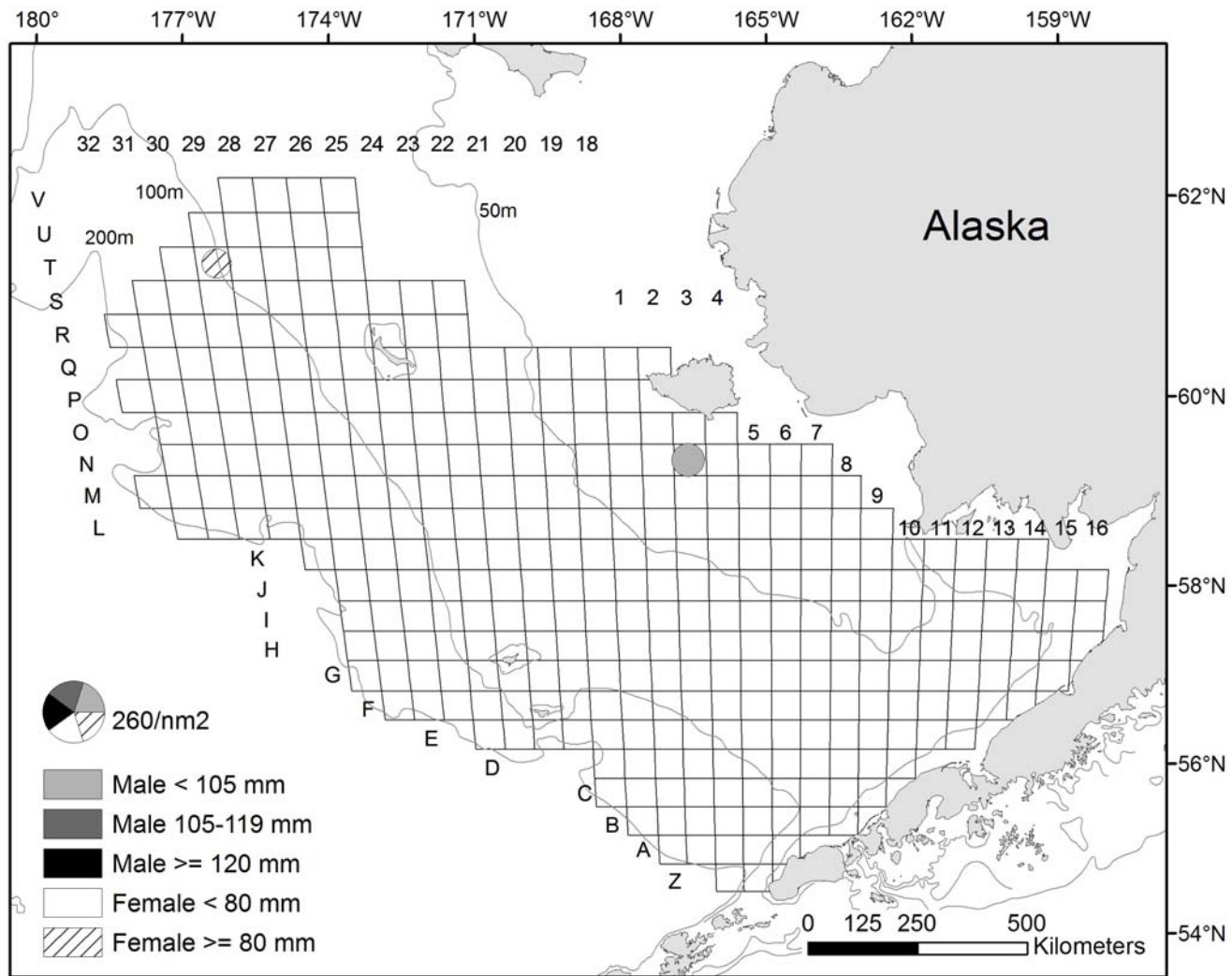


Figure 34. --Total density (number/nm²) and percentage of male and female blue king crab (*Paralithodes platypus*) size categories at each station sampled in the Northern District in 2009.

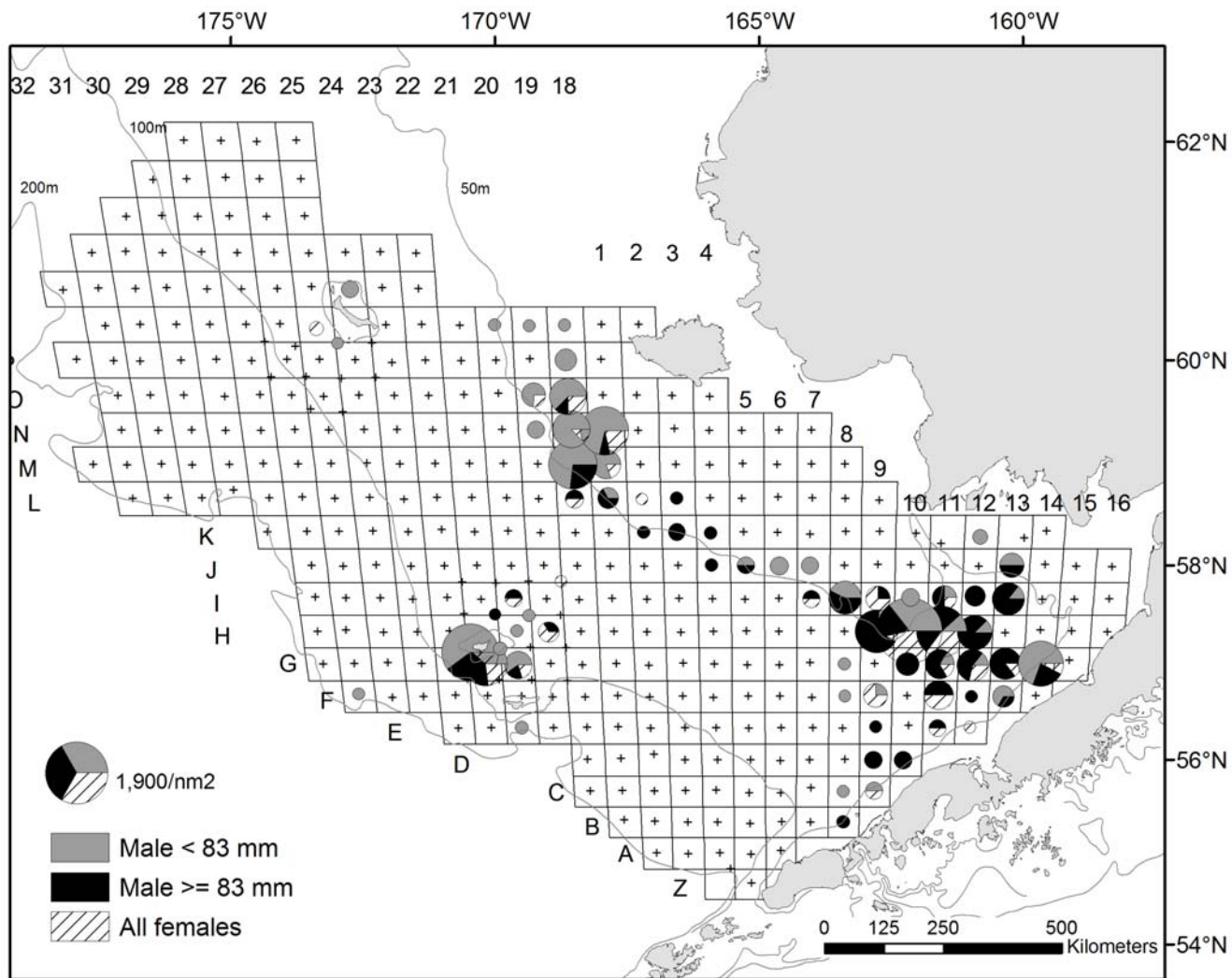


Figure 35. --Total density (number/nm²) and percentage of male and female hair crab (*Erimacrus isenbeckii*) size categories at each station sampled in 2009

Appendix A. --Tow details, crab density (number/nmi²), and catch weight at successful stations on the 2009 eastern Bering Sea bottom trawl survey.

Station	G-15	H-16	H-15	I-15	I-16	J-15	J-16	K-13	K-14	J-13	J-14
Start Date	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/3/09	6/3/09	6/3/09	6/3/09
Duration (hour)	0.52	0.53	0.53	0.54	0.51	0.52	0.52	0.51	0.54	0.53	0.50
Distance Fished (km)	3.00	2.86	2.90	2.97	2.77	2.83	2.70	2.79	2.95	2.94	2.73
Mid-Latitude (°N)	57.04	57.33	57.34	57.66	57.66	57.99	57.99	58.28	58.34	58.00	58.01
Mid-Longitude (°W)	-159.13	-158.41	-159.08	-159.03	-158.37	-159.00	-158.32	-159.98	-159.55	-160.22	-159.59
Bottom Depth (m)	35	32	50	47	36	39	35	41	25	51	43
Bottom Temperature (°C)	3.60	4.40	2	1.70	2.10	2.20	3.40	2.40	3.30	1.50	2.20
Red King Crab											
Small males	0	0	0	0	0	0	0	151	0	0	0
Pre-recruit	0	0	352	0	75	0	0	0	166	0	0
Legal	73	0	352	0	0	0	0	0	83	0	0
Small females	0	0	141	0	0	0	0	0	0	0	0
Large females	0	0	844	0	151	0	0	76	83	281	229
Total weight (kg)	2.40	0	42.31	0	6.10	0	0	2.08	7.41	4.92	3.58
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	I-13	I-14	H-13	H-14	G-13	G-14	F-14	E-12	F-13	E-11	F-12
Start Date	6/3/09	6/3/09	6/3/09	6/3/09	6/3/09	6/3/09	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009
Duration (hour)	0.53	0.51	0.54	0.50	0.55	0.51	0.51	0.53	0.51	0.54	0.51
Distance Fished (km)	2.93	2.90	3.03	2.67	2.99	2.72	2.74	2.91	2.86	3.04	2.87
Mid-Latitude (°N)	57.66	57.66	57.32	57.35	57.00	57.00	56.67	56.34	56.66	56.33	56.66
Mid-Longitude (°W)	-160.28	-159.64	-160.34	-159.67	-160.34	-159.67	-159.76	-161.01	-160.38	-161.62	-160.98
Bottom Depth (m)	55	50	62	55	63	54	38	55	60	64	69
Bottom Temperature (°C)	1.50	2	1.30	1.70	1	1.50	2.90	2.60	2	1.90	1.30
Red King Crab											
Small males	1,078	226	440	332	275	231	151	142	222	394	216
Pre-recruit	288	75	660	83	961	385	226	711	1,038	1,446	1,150
Legal	144	0	367	166	1,030	77	0	355	371	920	1,438
Small females	1,366	151	220	166	69	77	0	142	0	0	72
Large females	1,438	753	1,027	2,241	1,785	1,618	302	1,209	4,375	2,103	647
Total weight (kg)	44.01	17.82	40.08	46.30	93.12	45.18	11.17	48.25	117.13	111.03	87.56
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	83	137	0	0	142	222	66	431
Pre-recruit	0	0	0	0	137	231	0	71	148	394	791
Legal	0	0	0	0	0	0	0	0	0	0	575
Small females	0	0	0	0	0	0	0	0	0	0	144
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0.51	1.52	1.49	0	1.07	1.78	3.66	12.52
Opilio Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	197	0
Preferred	0	0	0	0	0	0	0	0	0	197	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	2.40	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	F-11	G-12	G-11	H-12	H-11	I-12	I-11	J-12	J-11	K-12	J-10
Start Date	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/5/2009	6/5/2009	6/5/2009	6/5/2009	6/5/2009	6/5/2009	6/5/2009
Duration (hour)	0.53	0.52	0.53	0.52	0.52	0.54	0.53	0.52	0.52	0.35	0.52
Distance Fished (km)	2.93	2.88	2.94	2.80	2.83	3.07	2.91	2.95	2.89	2.02	2.87
Mid-Latitude (°N)	56.68	56.99	57.00	57.32	57.33	57.69	57.68	57.99	58.00	58.29	58.01
Mid-Longitude (°W)	-161.60	-160.96	-161.58	-160.92	-161.54	-160.91	-161.49	-160.84	-161.48	-160.81	-162.13
Bottom Depth (m)	87	65	68	64	57	56	54	46	55	31	37
Bottom Temperature (°C)	0.70	1.50	0.90	1.30	1.80	0.90	1.50	1.50	1.10	3.30	2.10
Red King Crab											
Small males	0	617	68	290	512	67	284	144	802	0	76
Pre-recruit	0	1,303	0	1,452	804	470	568	144	365	211	76
Legal	138	549	68	218	366	67	71	144	73	0	228
Small females	0	0	0	73	146	0	355	359	219	105	76
Large females	0	343	0	1,742	146	939	1,065	431	802	211	607
Total weight (kg)	3.70	58.98	3.52	74.02	33.19	28.03	32.20	18.93	27.21	6.33	19.31
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	69	69	68	73	0	0	0	0	0	0	0
Pre-recruit	207	0	68	0	73	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	1.88	0.92	0.81	0.29	0.55	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	69	0	0	0	0	0	0	0	0	0	0
Legal	275	0	0	0	0	0	0	0	0	0	0
Preferred	69	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	69	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	1.70	0	0	0	0	0	0	0	0	0	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	207	0	0	0	0	0	0	0	0	0	0
Preferred	207	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	1.66	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	K-11	K-10	K-09	I-10	J-09	H-10	I-09	G-10	H-09	F-10	G-09
Start Date	6/5/2009	6/5/2009	6/5/2009	6/6/2009	6/6/2009	6/6/2009	6/6/2009	6/6/2009	6/6/2009	6/6/2009	6/6/2009
Duration (hour)	0.51	0.52	0.54	0.52	0.52	0.51	0.51	0.53	0.55	0.51	0.56
Distance Fished (km)	2.78	2.88	3	2.82	2.82	2.76	2.84	2.98	3.02	2.90	3.06
Mid-Latitude (°N)	58.22	58.32	58.34	57.68	58.01	57.34	57.67	57.00	57.33	56.67	57.00
Mid-Longitude (°W)	-161.55	-162.03	-162.72	-162.13	-162.75	-162.16	-162.75	-162.19	-162.77	-162.20	-162.81
Bottom Depth (m)	39	46	32	48	42	52	44	59	49	69	60
Bottom Temperature (°C)	2.10	2.10	2.60	1.90	2.20	1.30	1.60	1	1.50	0.90	1
Red King Crab											
Small males	0	0	0	146	0	0	74	0	0	0	0
Pre-recruit	77	0	0	146	76	0	221	0	479	0	0
Legal	0	71	0	146	0	0	221	189	0	0	65
Small females	0	0	0	146	0	0	0	0	0	0	0
Large females	153	142	141	729	302	75	441	0	137	0	0
Total weight (kg)	2.82	7.30	2.32	16.40	5.62	0.52	24.32	7.44	12.35	0	2.26
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	126	0	136	0
Pre-recruit	0	0	0	0	0	0	0	0	0	204	0
Legal	0	0	0	0	0	0	0	0	0	68	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0.58	0	2.81	0
Opilio Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	65
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0.45
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	F-09	E-10	D-10	C-09	C-08	D-09	B-08	D-08	B-07	E-09	A-06
Start Date	6/6/2009	6/6/2009	6/7/2009	6/7/2009	6/7/2009	6/7/2009	6/7/2009	6/7/2009	6/7/2009	6/7/2009	6/8/2009
Duration (hour)	0.53	0.53	0.50	0.52	0.54	0.50	0.52	0.50	0.55	0.50	0.54
Distance Fished (km)	2.91	2.92	2.73	2.83	2.98	2.72	2.90	2.78	3.00	2.82	2.97
Mid-Latitude (°N)	56.68	56.36	56.00	55.67	55.66	56.00	55.34	56.01	55.34	56.35	55.03
Mid-Longitude (°W)	-162.80	-162.17	-162.27	-162.83	-163.41	-162.84	-163.41	-163.38	-164.03	-162.79	-164.59
Bottom Depth (m)	71	82	73	51	82	79	53	87	78	77	63
Bottom Temperature (°C)	0.30	1	2	2.40	0.40	1.60	3.20	0.10	3	1.30	4.10
Red King Crab											
Small males	0	0	3,293	73	0	2,119	1,806	0	0	0	0
Pre-recruit	0	69	2,681	439	69	1,060	8,948	0	0	143	0
Legal	0	69	1,302	586	138	227	8,291	71	0	500	0
Small females	0	69	460	0	0	0	0	0	0	0	0
Large females	68	69	8,272	586	69	2,876	19,045	0	0	0	0
Total weight (kg)	1.64	5.41	244.76	38.77	6.15	81.60	756.91	1.81	0	24.27	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	407	138	460	366	3,389	530	4,351	1,713	779	357	0
Pre-recruit	203	413	230	293	1,038	454	2,381	1,071	212	572	0
Legal	0	138	0	146	0	76	1,231	143	283	71	0
Small females	0	0	153	73	3,043	76	739	1,570	0	0	0
Large females	203	0	77	220	623	378	2,052	785	212	71	0
Total weight (kg)	3.54	5.90	3.23	6.95	17.53	6.50	52.17	19.99	6.82	6.51	0
Opilio Tanner Crab											
Small males	271	0	0	0	346	227	164	571	142	0	0
Legal	339	0	383	146	484	1,060	1,396	785	496	286	0
Preferred	136	0	153	0	208	681	985	357	425	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	2.68	0	2.86	0.52	3.86	7.57	8.98	5.26	4.47	1.17	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	68	0	230	0	69	76	0	0	0	0	0
Preferred	68	0	230	0	69	76	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0.43	0	1.27	0	0.66	0.67	0	0	0	0	0

Appendix A. --Continued.

Station	E-08	B-06	E-07	C-06	F-07	C-07	F-08	D-07	G-08	H-08	G-07
Start Date	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/9/2009	6/9/2009
Duration (hour)	0.50	0.53	0.51	0.54	0.43	0.55	0.51	0.52	0.51	0.50	0.53
Distance Fished (km)	2.78	2.94	2.81	2.95	2.40	2.98	2.85	2.88	2.78	2.75	2.90
Mid-Latitude (°N)	56.33	55.34	56.34	55.65	56.65	55.71	56.67	56.00	57.00	57.34	57.01
Mid-Longitude (°W)	-163.42	-164.57	-163.98	-164.58	-164.00	-164.02	-163.38	-164.04	-163.39	-163.39	-164.03
Bottom Depth (m)	86	100	87	96	76	93	74	90	65	54	69
Bottom Temperature (°C)	1.20	2.80	0.10	1.60	-0.80	0.70	-0.50	-0.20	0.40	1.20	-0.20
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	76	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	305	0	0	0	0	0	0	0	0	76	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	75	76	0
Total weight (kg)	11.84	0	0	0	0	0	0	0	2.17	4.22	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	4,649	917	15,021	1,252	1,155	2,519	139	2,170	75	0	74
Pre-recruit	533	2,358	1,099	278	413	969	208	950	75	0	0
Legal	76	1,572	147	0	0	258	0	68	0	0	0
Small females	2,515	2,696	8,110	1,739	330	1,873	0	1,424	0	0	0
Large females	381	10,246	513	209	165	581	69	271	75	0	0
Total weight (kg)	12.97	93.62	22.84	5.92	6.21	21.36	2.39	13.36	1.19	0	0.00
Opilio Tanner Crab											
Small males	305	196	586	348	165	129	0	407	75	0	147
Legal	305	589	1,026	557	165	388	139	610	75	76	147
Preferred	152	393	513	417	83	388	69	271	0	0	74
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	2.04	5	7.41	4.71	1.54	4.32	0.93	4.32	0.49	0.19	0.92
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	74
Legal	0	196	147	70	83	129	0	0	150	0	74
Preferred	0	131	0	0	83	129	0	0	75	0	74
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	70	0	0	0	0	0	0	0
Total weight (kg)	0	1.28	0.49	0.44	0.18	1.22	0	0	0.60	0	0.70

Appendix A. --Continued.

Station	I-08	H-07	J-08	I-07	K-08	J-07	K-07	L-09	L-07	L-08	L-06
Start Date	6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/10/2009	6/10/2009	6/10/2009
Duration (hour)	0.52	0.55	0.52	0.52	0.52	0.53	0.35	0.53	0.52	0.52	0.52
Distance Fished (km)	2.86	3.10	2.87	2.87	2.84	2.88	1.94	3.01	2.90	3.02	2.91
Mid-Latitude (°N)	57.68	57.34	58.00	57.66	58.34	58.00	58.31	58.65	58.67	58.67	58.68
Mid-Longitude (°W)	-163.37	-164.02	-163.38	-164.01	-163.35	-164.04	-164.03	-162.72	-163.99	-163.36	-164.64
Bottom Depth (m)	47	63	44	53	37	47	42	25	34	31	38
Bottom Temperature (°C)	1.30	0.10	1.90	1.30	2.60	1.50	2.20	3.90	2.90	3.10	2.80
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	225	0	75	0	0	0	0	0	0	0	0
Legal	150	0	0	72	78	0	454	0	76	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	749	0	151	144	78	215	227	0	152	0	0
Total weight (kg)	20.48	0	4.38	5.41	4.49	4.77	15.54	0	6.29	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	0	65	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0.10	0	0	0	0	0	0	0	0	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	M-08	M-06	M-07	M-05	N-07	N-05	N-06	K-06	L-05	J-06	K-05
Start Date	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/11/2009	6/11/2009	6/11/2009	6/11/2009
Duration (hour)	0.54	0.54	0.53	0.54	0.54	0.55	0.29	0.50	0.52	0.53	0.54
Distance Fished (km)	3.23	3.00	3.00	2.98	3.09	3.12	1.79	2.74	2.84	2.89	2.96
Mid-Latitude (°N)	59.00	59.00	59.01	59.01	59.33	59.33	59.33	58.33	58.67	57.99	58.33
Mid-Longitude (°W)	-163.37	-164.66	-164.01	-165.30	-164.01	-165.33	-164.63	-164.65	-165.33	-164.61	-165.29
Bottom Depth (m)	22	29	29	29	23	22	22	44	39	45	46
Bottom Temperature (°C)	4.50	3.70	4.40	3.30	6.30	4	5.40	2	2.70	1.50	1.70
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	80	0	0	0
Legal	0	0	0	75	0	0	0	0	0	80	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	75	0	0	0	240	155	0	70
Total weight (kg)	0	0	0	4.13	0	0	0	7.50	4.37	2.60	1.84
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	80	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0.21	0
Opilio Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	J-05	I-06	H-06	I-05	H-05	G-06	G-05	D-06	F-05	D-05	F-06
Start Date	6/11/2009	6/11/2009	6/11/2009	6/11/2009	6/11/2009	6/11/2009	6/12/2009	6/12/2009	6/12/2009	6/12/2009	6/12/2009
Duration (hour)	0.53	0.50	0.51	0.54	0.53	0.50	0.52	0.54	0.51	0.55	0.53
Distance Fished (km)	2.90	2.74	2.86	3.06	2.96	2.77	2.88	2.93	2.85	2.94	2.96
Mid-Latitude (°N)	58.00	57.67	57.33	57.66	57.34	56.99	56.99	55.99	56.67	56.00	56.67
Mid-Longitude (°W)	-165.25	-164.62	-164.62	-165.26	-165.24	-164.61	-165.22	-164.59	-165.20	-165.16	-164.61
Bottom Depth (m)	51	54	66	62	66	69	71	93	76	96	76
Bottom Temperature (°C)	1.40	0.90	-0.70	0	-0.90	-0.40	-0.80	0.90	-1.10	3.10	-0.90
Red King Crab											
Small males	0	0	0	0	0	73	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	66	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	2.08	0	3.46	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	285	66	0	0	630	2,880	741	3,516	934
Pre-recruit	0	0	0	133	0	73	70	603	337	730	667
Legal	0	0	0	0	0	0	0	67	67	0	0
Small females	0	0	0	0	0	73	0	3,081	202	2,189	200
Large females	0	0	0	66	0	0	70	201	135	663	0
Total weight (kg)	0	0	0.82	1.15	0	0.84	1.92	10.72	5.18	18.57	6.93
Opilio Tanner Crab											
Small males	0	0	143	199	0	73	70	469	135	398	534
Legal	0	0	71	66	0	73	140	335	1,481	265	333
Preferred	0	0	71	0	0	73	70	268	1,347	133	267
Small females	0	0	0	0	0	0	0	0	67	0	0
Large females	0	0	0	0	0	0	0	0	67	0	0
Total weight (kg)	0	0	0.76	0.62	0	0.73	0.55	3.60	11.96	2.46	2.87
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	71	0	71	332	0	439	140	67	135	66	67
Preferred	71	0	0	133	0	439	70	67	135	66	67
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	79	0	0	0	0	0	134	0	66	0
Total weight (kg)	0.18	0.25	0.22	1.30	0	1.76	0.44	0.82	1.88	0.63	0.18

Appendix A. --Continued.

Station	C-05	E-06	B-05	E-05	A-05	C-04	F-04	D-04	G-04	E-04	G-03
Start Date	6/12/2009	6/12/2009	6/12/2009	6/12/2009	6/12/2009	6/13/2009	6/13/2009	6/13/2009	6/13/2009	6/13/2009	6/13/2009
Duration (hour)	0.56	0.50	0.56	0.50	0.57	0.55	0.47	0.57	0.50	0.57	0.48
Distance Fished (km)	3.14	2.78	3.16	2.77	3.07	2.99	2.49	3.18	2.74	3.18	2.55
Mid-Latitude (°N)	55.65	56.34	55.32	56.34	54.99	55.68	56.65	56.00	57.00	56.34	57.01
Mid-Longitude (°W)	-165.19	-164.58	-165.17	-165.19	-165.15	-165.81	-165.87	-165.79	-165.85	-165.81	-166.44
Bottom Depth (m)	109	87	111	86	110	118	79	108	72	92	74
Bottom Temperature (°C)	3.50	-0.90	3.50	-0.30	3.90	3.40	-1.20	2.80	-1	1	-1
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	1,213	2,171	122	1,121	1,227	6,266	1,934	2,346	0	356	383
Pre-recruit	182	210	1,946	561	839	1,014	696	3,210	0	237	77
Legal	0	0	2,250	70	129	0	155	309	0	59	0
Small females	607	1,400	4,865	1,051	2,131	20,437	1,857	3,148	72	178	0
Large females	61	0	3,527	140	323	0	0	3,210	0	297	77
Total weight (kg)	4.04	4.20	86.23	5.69	13.47	16.47	9.05	58.86	1.35	6.09	2.88
Opilio Tanner Crab											
Small males	0	70	61	280	323	62	232	556	505	59	995
Legal	182	280	182	0	129	186	4,642	62	2,237	297	3,215
Preferred	61	140	182	0	65	186	3,868	62	1,876	237	2,832
Small females	0	0	0	0	0	0	0	0	144	0	153
Large females	0	0	0	0	0	0	0	0	72	0	153
Total weight (kg)	1.07	2.11	1.93	0.55	1.78	1.93	31.69	1.96	15.69	2.56	21.81
Hybrid Tanner Crab											
Small males	0	0	0	0	129	0	0	62	0	0	0
Legal	121	0	122	70	65	124	696	309	433	0	612
Preferred	61	0	122	70	65	62	619	247	361	0	536
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	59	0
Total weight (kg)	1.01	0	1.03	0.88	0.61	1.06	5.12	2.64	2.63	0.82	3.33

Appendix A. --Continued.

Station	E-03	H-03	F-03	H-04	I-04	I-03	J-03	J-04	K-03	K-04	L-03
Start Date	6/13/2009	6/13/2009	6/13/2009	6/13/2009	6/14/2009	6/14/2009	6/14/2009	6/14/2009	6/14/2009	6/14/2009	6/14/2009
Duration (hour)	0.54	0.51	0.54	0.59	0.53	0.54	0.54	0.50	0.53	0.52	0.51
Distance Fished (km)	2.95	2.77	2.93	3.22	2.88	3.01	3.03	2.74	2.98	2.89	2.85
Mid-Latitude (°N)	56.34	57.32	56.67	57.34	57.67	57.67	58.00	58.01	58.33	58.32	58.67
Mid-Longitude (°W)	-166.40	-166.48	-166.45	-165.86	-165.88	-166.52	-166.53	-165.90	-166.56	-165.92	-166.56
Bottom Depth (m)	103	70	84	68	64	67	61	56	49	45	43
Bottom Temperature (°C)	1.80	-1.10	-1	-1	-0.40	-1.10	-0.60	1	1.80	1.80	2.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	75	0
Legal	0	0	0	0	71	0	0	0	0	75	154
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	75	77
Total weight (kg)	0	0	0	0	2.76	0	0	0	0	5.70	4.87
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	969	147	601	126	212	266	0	155	0	75	0
Pre-recruit	517	73	267	126	71	0	200	77	0	0	0
Legal	0	0	0	0	0	0	133	0	0	0	0
Small females	1,551	147	67	0	0	0	0	0	0	75	0
Large females	194	0	134	0	0	0	0	0	0	0	0
Total weight (kg)	7.39	0.26	3.16	1.14	0.87	0.61	2.00	0.79	0	0.13	0
Opilio Tanner Crab											
Small males	129	1,833	134	1,194	1,341	665	3,659	3,169	645	0	0
Legal	323	4,252	10,091	566	424	1,263	4,258	696	72	0	0
Preferred	194	2,126	9,356	189	0	332	599	0	0	0	0
Small females	65	660	0	189	0	133	133	77	0	0	0
Large females	0	73	0	189	0	332	1,464	1,237	72	0	0
Total weight (kg)	3	14.83	76.88	4.40	3.06	5.28	20.42	5.57	1.26	0	0
Hybrid Tanner Crab											
Small males	0	293	0	63	0	66	67	155	0	0	0
Legal	0	73	869	314	494	66	399	387	0	0	0
Preferred	0	0	869	251	353	66	266	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	200	63	141	0	0	0	0	0	0
Total weight (kg)	0	0.72	7.54	1.70	2.16	0.32	1.71	1.16	0	0	0

Appendix A. --Continued.

Station	L-04	M-03	M-04	K-02	K-01	J-02	J-01	I-02	I-01	H-02	H-01
Start Date	6/14/2009	6/14/2009	6/14/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009	6/15/2009
Duration (hour)	0.51	0.53	0.52	0.51	0.54	0.53	0.53	0.52	0.53	0.50	0.53
Distance Fished (km)	2.81	2.90	2.85	2.86	3.05	2.89	2.95	2.80	2.87	2.75	2.93
Mid-Latitude (°N)	58.67	59.00	59.00	58.33	58.32	57.99	57.99	57.66	57.67	57.33	57.33
Mid-Longitude (°W)	-165.92	-166.58	-165.93	-167.19	-167.84	-167.17	-167.81	-167.12	-167.78	-167.12	-167.75
Bottom Depth (m)	38	35	31	52	60	64	67	68	69	71	73
Bottom Temperature (°C)	2.70	3.10	3.20	0.60	0.70	-1	-0.70	-0.60	-0.50	-1.10	-0.90
Red King Crab											
Small males	76	227	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	79	0	0	0	0	0	0	0	0
Legal	153	151	0	0	0	0	0	0	0	0	0
Small females	0	76	0	0	0	0	0	0	0	0	0
Large females	76	454	79	0	0	0	0	0	0	0	0
Total weight (kg)	5.61	12.09	1.64	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	590	325	428	196	2,772	5,089	1,385	2,615
Pre-recruit	0	0	0	0	391	570	196	285	767	73	619
Legal	0	0	0	0	0	0	0	0	70	0	69
Small females	0	0	0	295	0	0	0	927	3,974	219	895
Large females	0	0	0	147	65	0	0	71	0	0	0
Total weight (kg)	0	0	0	1.18	3.13	4.00	1.50	4.65	11.74	4.41	11.90
Opilio Tanner Crab											
Small males	0	0	0	2,654	846	784	849	21,289	16,871	3,062	3,991
Legal	0	0	0	369	521	2,424	1,958	8,411	10,946	6,925	7,914
Preferred	0	0	0	0	0	143	261	1,996	4,532	3,426	3,854
Small females	0	0	0	590	195	143	65	13,809	33,757	3,426	1,308
Large females	0	0	0	221	260	214	261	1,954	587	146	138
Total weight (kg)	0	0	0	3.46	4.31	8.38	7.65	39.84	63.05	25.36	44.66
Hybrid Tanner Crab											
Small males	0	0	0	295	260	214	65	1,711	1,185	73	69
Legal	0	0	0	663	651	499	326	1,069	349	656	275
Preferred	0	0	0	295	391	143	196	713	349	510	69
Small females	0	0	0	0	0	0	0	214	767	437	0
Large females	0	0	0	0	0	0	0	285	139	0	0
Total weight (kg)	0	0	0	2.80	2.28	2.19	1.13	7.12	2.33	2.36	1.28

Appendix A. --Continued.

Station	G-02	F-02	D-03	C-03	E-02	D-02	B-04	C-02	A-03	Z-05	A-04
Start Date	6/15/2009	6/16/2009	6/16/2009	6/16/2009	6/16/2009	6/16/2009	6/16/2009	6/16/2009	6/19/2009	6/19/2009	6/19/2009
Duration (hour)	0.54	0.50	0.55	0.57	0.50	0.50	0.54	0.50	0.55	0.53	0.51
Distance Fished (km)	3.03	2.79	2.99	3.06	2.77	2.72	2.96	2.74	2.91	2.89	2.86
Mid-Latitude (°N)	56.98	56.66	56.00	55.67	56.33	56.06	55.34	55.67	54.99	54.67	54.83
Mid-Longitude (°W)	-167.09	-167.07	-166.40	-166.39	-167.05	-166.99	-165.78	-166.98	-166.34	-165.14	-165.53
Bottom Depth (m)	74	95	124	127	113	132	120	135	143	81	154
Bottom Temperature (°C)	-0.80	0.90	3	3.20	1.90	3.10	3.60	3.60	3.50	5	3.60
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	4,318	420	967	2,614	850	263	3,853	825	9,812	2,353	31,041
Pre-recruit	487	1,190	1,483	2,033	1,771	592	870	381	1,219	0	9,319
Legal	182	0	322	639	142	131	124	63	64	0	1,322
Small females	2,493	70	2,773	6,656	1,134	66	3,356	507	10,133	2,281	34,287
Large females	61	210	709	2,069	1,913	263	373	0	2,245	0	132
Total weight (kg)	10.26	10.87	29.74	54	25.22	9.48	15.85	5.95	37.10	1.41	130.64
Opilio Tanner Crab											
Small males	6,854	70	258	116	425	131	62	0	128	0	330
Legal	21,557	280	322	232	921	66	62	127	128	0	727
Preferred	15,767	70	193	116	567	66	62	63	0	0	595
Small females	33,906	140	193	0	142	66	0	0	0	0	0
Large females	0	0	64	116	213	0	0	0	0	0	0
Total weight (kg)	136.99	1.44	3.41	2.29	7.27	1.06	1.14	0.78	0.78	0	6.84
Hybrid Tanner Crab											
Small males	487	0	0	0	0	0	0	0	0	0	0
Legal	0	280	129	232	213	0	0	0	128	0	0
Preferred	0	280	129	174	71	0	0	0	128	0	0
Small females	2,250	0	0	58	0	0	0	0	0	0	0
Large females	0	0	129	58	0	0	0	0	0	0	0
Total weight (kg)	0.45	1.47	2.02	3.16	1	0	0	0	0.78	0	0

Appendix A. --Continued.

Station	A-02	B-02	A-04	B-01	B-03	C-01	C-18	D-01	D-18	E-01	E-18
Start Date	6/19/2009	6/19/2009	6/19/2009	6/19/2009	6/19/2009	6/20/2009	6/20/2009	6/20/2009	6/20/2009	6/20/2009	6/20/2009
Duration (hour)	0.57	0.54	0.52	0.57	0.42	0.55	0.52	0.55	0.50	0.58	0.52
Distance Fished (km)	3.11	2.99	2.91	3.15	2.30	3.02	2.81	3.07	2.73	3.24	2.71
Mid-Latitude (°N)	55.00	55.35	55.00	55.36	55.34	55.67	55.67	56.02	56.01	56.35	56.34
Mid-Longitude (°W)	-166.94	-166.97	-165.74	-167.55	-166.34	-167.59	-168.19	-167.61	-168.24	-167.66	-168.26
Bottom Depth (m)	155	139	130	146	133	136	136	132	151	128	152
Bottom Temperature (°C)	3.50	3.40	3.60	3.40	3.40	3.40	3.40	3.50	3.30	2.60	3.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	36,836	2,349	2,552	3,010	817	3,147	676	2,735	1,603	1,992	1,860
Pre-recruit	606	482	6,739	542	1,308	441	68	243	1,821	410	2,289
Legal	0	0	1,047	120	327	0	0	0	291	59	358
Small females	39,733	2,470	14,301	6,924	3,024	2,140	878	3,343	2,550	2,461	2,003
Large females	121	482	2,471	241	1,635	189	68	0	0	0	72
Total weight (kg)	82.91	22.71	113.21	26.01	25.40	12.46	2.78	4.56	24.18	7.17	26.77
Opilio Tanner Crab											
Small males	61	120	262	60	0	63	0	61	73	59	0
Legal	0	181	327	0	245	0	0	0	291	352	1,502
Preferred	0	60	196	0	245	0	0	0	219	293	1,430
Small females	0	0	0	0	0	63	0	61	0	117	0
Large females	0	0	0	0	0	0	0	0	0	59	0
Total weight (kg)	0.12	1.51	3.32	0.13	2.03	0.13	0	0.17	2	2.99	13.34
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	82	63	0	0	0	176	143
Preferred	0	0	0	0	82	63	0	0	0	176	143
Small females	0	0	0	0	0	0	0	0	0	59	0
Large females	0	0	0	0	163	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0.88	0.54	0	0	0	1.75	1.15

Appendix A. --Continued.

Station	F-01	F-18	G-01	G-18	L-01	H-18	L-02	I-18	M-02	J-18	N-02
Start Date	6/20/2009	6/20/2009	6/20/2009	6/20/2009	6/21/2009	6/21/2009	6/21/2009	6/21/2009	6/21/2009	6/21/2009	6/21/2009
Duration (hour)	0.55	0.50	0.55	0.54	0.53	0.52	0.55	0.49	0.51	0.50	0.53
Distance Fished (km)	3.07	2.79	3.00	2.90	2.93	2.81	2.99	2.64	2.88	2.71	3.03
Mid-Latitude (°N)	56.67	56.66	57.00	56.99	58.67	57.33	58.66	57.66	59.00	58.00	59.33
Mid-Longitude (°W)	-167.68	-168.29	-167.70	-168.34	-167.86	-168.37	-167.22	-168.40	-167.25	-168.44	-167.29
Bottom Depth (m)	101	108	77	83	45	75	45	71	41	70	33
Bottom Temperature (°C)	1.40	1.80	-0.50	-0.10	2.20	-0.70	2.10	-0.70	2.70	-0.80	3.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	149
Pre-recruit	0	0	0	0	0	0	69	0	0	0	74
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	149
Total weight (kg)	0	0	0	0	0	0	1.43	0	0	0	6.05
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	900	216	5,852	4,914	0	506	0	735	0	230	0
Pre-recruit	514	288	1,225	6,208	0	217	0	82	0	77	0
Legal	0	0	68	129	0	0	0	0	0	0	0
Small females	129	72	3,879	1,514	0	72	0	898	0	0	0
Large females	129	0	0	288	0	72	0	0	0	0	0
Total weight (kg)	8.89	3.56	23.30	73.51	0	3.19	0	2	0	0.73	0
Opilio Tanner Crab											
Small males	322	6,051	2,586	5,000	71	1,445	0	5,881	0	921	0
Legal	1,608	3,458	2,246	5,476	495	795	0	6,943	0	921	0
Preferred	1,093	1,873	1,429	2,619	71	217	0	1,225	0	77	0
Small females	64	0	817	0	0	939	0	8,005	0	384	0
Large females	0	38,272	476	10,735	0	0	0	327	0	0	0
Total weight (kg)	11.84	84.92	19.22	53.76	1.32	5.45	0	26.60	0	3.31	0
Hybrid Tanner Crab											
Small males	0	0	68	0	141	0	0	0	0	0	0
Legal	193	0	204	0	212	0	0	0	0	0	0
Preferred	193	0	204	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	288	136	360	0	0	0	0	0	0	0
Total weight (kg)	1.75	0.59	1.81	0.55	0.72	0	0	0	0	0	0

Appendix A. --Continued.

Station	K-18	L-18	N-03	N-04	M-18	O-04	M-01	O-03	N-01	O-02	N-18
Start Date	6/21/2009	6/21/2009	6/21/2009	6/22/2009	6/22/2009	6/22/2009	6/22/2009	6/22/2009	6/22/2009	6/22/2009	6/22/2009
Duration (hour)	0.50	0.50	0.54	0.39	0.52	0.54	0.49	0.52	0.51	0.53	0.50
Distance Fished (km)	2.75	2.73	3.02	2.13	2.84	3.02	2.70	2.97	2.77	3.09	2.78
Mid-Latitude (°N)	58.32	58.66	59.35	59.33	59.00	59.65	59.00	59.66	59.32	59.67	59.34
Mid-Longitude (°W)	-168.48	-168.50	-166.60	-165.94	-168.53	-165.93	-167.89	-166.64	-167.92	-167.31	-168.55
Bottom Depth (m)	66	55	29	25	47	25	42	29	41	32	42
Bottom Temperature (°C)	-0.80	0.80	4.90	5.80	2	6.20	2.60	4.60	2.70	4.20	2.50
Red King Crab											
Small males	0	0	146	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	161	0	0
Legal	0	0	0	0	154	0	82	0	81	0	83
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	73	0	154	0	0	0	161	222	83
Total weight (kg)	0	0	1.84	0	10.25	0	2.24	0	6.12	2.80	3.78
Blue King Crab											
Small males	0	0	73	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0.33	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	745	881	0	0	537	0	0	0	0	0	0
Pre-recruit	224	80	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	80	0	0	0	0	0	0	0	0	0
Large females	0	160	0	0	77	0	0	0	0	0	0
Total weight (kg)	2.51	2.69	0	0	1.39	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	1,118	2,564	0	0	921	0	0	0	0	0	331
Legal	5,812	4,007	0	0	844	0	0	0	0	0	83
Preferred	1,043	321	0	0	154	0	0	0	0	0	0
Small females	0	80	0	0	0	0	0	0	0	0	497
Large females	596	160	0	0	77	0	0	0	0	0	83
Total weight (kg)	20.40	14.14	0	0	3.72	0	0	0	0	0	0.40
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	O-01	O-18	P-01	P-19	P-18	Q-19	Q-18	Q-20	Q-01	P-20	Q-02
Start Date	6/22/2009	6/22/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009	6/23/2009
Duration (hour)	0.53	0.50	0.55	0.52	0.52	0.52	0.53	0.50	0.54	0.50	0.39
Distance Fished (km)	2.98	2.83	3.05	2.79	2.87	2.86	2.89	2.76	2.92	2.73	2.22
Mid-Latitude (°N)	59.67	59.65	60.01	60.01	60.00	60.32	60.33	60.33	60.33	60.00	60.33
Mid-Longitude (°W)	-167.95	-168.62	-167.99	-169.33	-168.66	-169.35	-168.69	-170.01	-167.98	-169.98	-167.28
Bottom Depth (m)	36	40	26	47	39	45	37	53	32	55	31
Bottom Temperature (°C)	3.50	2.40	3.80	0.10	2.60	-0.40	2.30	-1.30	4.10	-1.10	5.10
Red King Crab											
Small males	156	491	217	0	77	0	73	0	0	0	0
Pre-recruit	78	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	75	0	0
Small females	78	245	0	0	0	0	73	0	0	0	0
Large females	156	82	144	0	77	0	145	0	75	0	0
Total weight (kg)	4.41	6.24	6.20	0	1.48	0	2.60	0	3.70	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	0	0	0	379	77	3,332	0	86,126	0	16,158	0
Legal	0	0	0	0	0	0	0	381	0	3,556	0
Preferred	0	0	0	0	0	0	0	76	0	464	0
Small females	0	0	0	683	230	5,036	73	105,993	0	7,813	0
Large females	0	0	0	0	0	74	0	23,037	0	19,887	0
Total weight (kg)	0	0	0	0.19	0.02	1.17	0.25	104.31	0	41.73	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	O-20	O-19	N-20	N-19	M-20	M-19	L-20	L-19	K-20	K-19	J-19
Start Date	6/23/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/24/2009	6/25/2009
Duration (hour)	0.49	0.54	0.35	0.53	0.50	0.53	0.50	0.55	0.49	0.60	0.54
Distance Fished (km)	2.69	2.97	1.72	2.94	2.72	2.96	2.69	3.04	2.72	3.23	2.95
Mid-Latitude (°N)	59.68	59.67	59.34	59.34	59.01	59.00	58.67	58.66	58.34	58.33	58.00
Mid-Longitude (°W)	-169.94	-169.27	-169.86	-169.23	-169.84	-169.18	-169.78	-169.16	-169.75	-169.13	-169.07
Bottom Depth (m)	57	48	61	50	64	54	67	63	70	67	70
Bottom Temperature (°C)	-0.80	1.30	-0.80	1.30	-0.30	1	0	-0.30	-0.30	-0.60	-0.80
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	85	0	0	144	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	144	0	0	0	0	0	0	0
Total weight (kg)	1.25	0	0	4.35	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	424	0	1,721	1,365	157	8,606	302	921	393	120	518
Pre-recruit	0	0	115	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	170	0	803	0	79	1,363	151	0	0	0	129
Large females	0	0	0	0	0	0	0	0	0	0	65
Total weight (kg)	0.61	0	2.66	3.25	0.21	19.07	0.63	1.97	0.46	0.47	1.35
Opilio Tanner Crab											
Small males	17,577	2,582	8,835	1,437	9,902	24,401	8,471	1,973	2,597	783	1,942
Legal	13,089	0	10,211	1,581	7,230	7,093	34,879	2,368	7,397	542	8,288
Preferred	374	0	115	0	314	0	0	132	157	120	518
Small females	679	2,233	115	0	0	0	0	0	79	120	194
Large females	3,904	349	1,721	144	1,415	5,248	1,281	66	236	60	777
Total weight (kg)	53.47	1.52	27.98	6.08	29.56	59.38	108.69	10.22	23.15	3.81	30.26
Hybrid Tanner Crab											
Small males	0	0	0	790	0	2,133	0	0	0	0	0
Legal	0	140	0	1,940	79	3,705	0	197	236	0	194
Preferred	0	70	0	72	0	112	0	0	79	0	129
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	170	70	115	144	0	818	0	66	79	0	0
Total weight (kg)	0.18	0.24	0.13	5.79	0.23	11.81	0	0.68	0.75	0	0.61

Appendix A. --Continued.

Station	J-20	JI1918	JI2019	I-19	I-20	IH1918	IH2019	H-20	H-19	HG2019	HG1918
Start Date	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/25/2009	6/26/2009
Duration (hour)	0.50	0.53	0.51	0.53	0.50	0.53	0.50	0.51	0.53	0.52	0.56
Distance Fished (km)	2.72	2.93	2.77	2.95	2.78	2.96	2.73	2.83	2.91	2.75	3.10
Mid-Latitude (°N)	58.00	57.84	57.84	57.66	57.67	57.50	57.49	57.34	57.33	57.17	57.17
Mid-Longitude (°W)	-169.69	-168.75	-169.36	-169.02	-169.65	-168.76	-169.36	-169.59	-168.98	-169.32	-168.65
Bottom Depth (m)	70	71	68	69	71	71	71	64	69	73	77
Bottom Temperature (°C)	-0.50	-0.80	-0.40	-0.60	-0.40	-0.40	-0.30	0	-0.20	-0.20	-0.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	148	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	148	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	14.54	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	74	0	525	78	0
Pre-recruit	0	0	0	0	0	67	74	0	722	0	0
Legal	0	0	0	0	0	0	74	0	131	0	0
Small females	0	0	0	0	0	0	149	0	131	0	0
Large females	0	0	0	0	0	0	0	0	1,773	0	0
Total weight (kg)	0	0	0	0	0	1.11	3.57	0	58.85	0.01	0
Bairdi Tanner Crab											
Small males	533	1,997	1,233	1,416	876	337	2,530	1,034	3,546	4,987	3,615
Pre-recruit	0	266	0	467	73	67	372	222	854	1,013	245
Legal	0	0	0	0	0	0	74	0	0	0	0
Small females	304	599	1,016	280	1,532	135	819	148	394	390	2,757
Large females	0	0	0	0	0	0	0	0	131	0	0
Total weight (kg)	1.18	4.64	1.91	6.58	2.40	1.59	9.20	5.14	19.47	24.83	7.10
Opilio Tanner Crab											
Small males	1,175	3,795	5,368	5,514	5,618	674	11,385	960	1,445	4,441	2,573
Legal	29,579	6,258	3,265	8,214	5,108	809	7,069	2,733	1,773	8,493	735
Preferred	2,351	1,265	653	1,402	1,022	539	2,977	1,551	525	3,662	551
Small females	609	3,795	1,669	23,332	7,296	202	17,487	74	0	0	3,002
Large females	152	666	290	401	584	67	2,084	517	591	9,264	429
Total weight (kg)	82.41	26.46	18.24	63.09	25.97	6.08	43.94	16.81	13.17	59.84	9.51
Hybrid Tanner Crab											
Small males	0	0	290	1,474	0	0	0	0	0	78	61
Legal	0	266	0	668	0	0	0	74	131	0	0
Preferred	0	200	0	601	0	0	0	0	66	0	0
Small females	0	0	73	1,687	0	0	0	0	0	0	61
Large females	0	133	73	0	0	0	74	0	66	156	123
Total weight (kg)	0	2.36	0.20	4.45	0	0	0.09	0.35	0.67	0.24	0.21

Appendix A. --Continued.

Station	G-21	G-19	GF2120	GF1918	F-20	F-19	GF2019	G-20	E-19	E-20	HG2221
Start Date	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/27/2009	6/27/2009
Duration (hour)	0.52	0.55	0.50	0.56	0.52	0.55	0.52	0.51	0.55	0.41	0.51
Distance Fished (km)	2.79	3.03	2.73	3.07	2.88	3.08	2.82	2.84	3.19	2.24	2.69
Mid-Latitude (°N)	57.00	57.01	56.84	56.83	56.67	56.66	56.84	56.99	56.34	56.34	57.12
Mid-Longitude (°W)	-170.18	-168.94	-169.92	-168.63	-169.50	-168.91	-169.30	-169.56	-168.88	-169.49	-170.47
Bottom Depth (m)	70	80	73	97	80	100	80	60	128	145	52
Bottom Temperature (°C)	2.30	0.10	3	1.10	3.30	2	0.70	1.60	3.30	3.30	2.80
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	801	0	0	0	0	0	0	0	0	0	235
Legal	1,747	0	0	0	0	0	0	146	0	0	549
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	364	0	0	0	0	0	69	0	0	0	628
Total weight (kg)	97.13	0	0	0	0	0	1.07	5.66	0	0	40.66
Blue King Crab											
Small males	0	0	0	0	0	0	0	73	0	0	0
Pre-recruit	0	0	0	0	0	0	0	219	0	0	0
Legal	0	0	0	0	0	0	0	73	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	437	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	13.18	0	0	0
Bairdi Tanner Crab											
Small males	1,164	964	1,339	1,320	586	507	760	1,311	1,371	3,190	17,593
Pre-recruit	3,566	128	5,578	5,518	293	1,395	138	1,894	1,908	245	22,904
Legal	873	0	744	0	0	317	0	73	358	0	1,992
Small females	0	771	669	2,674	0	571	484	219	2,623	3,436	1,413
Large females	0	64	149	1,014	0	507	69	947	477	82	3,846
Total weight (kg)	40.08	3.44	64.97	65.94	4.93	22.47	3.06	21.41	37.57	4.49	224.10
Opilio Tanner Crab											
Small males	291	2,056	74	4,548	0	317	622	146	0	0	235
Legal	2,329	2,184	1,190	5,458	367	2,854	622	1,821	537	0	78
Preferred	1,383	1,221	818	3,411	220	2,156	415	1,311	537	0	78
Small females	0	321	0	0	0	0	0	0	0	0	0
Large females	73	2,891	0	50,939	0	190	0	0	0	0	0
Total weight (kg)	14.54	23.07	8.31	140.50	2.67	24.28	5.69	11.12	5.42	0	0.76
Hybrid Tanner Crab											
Small males	0	0	0	60	0	0	0	0	0	0	0
Legal	0	450	0	423	73	127	0	0	417	0	0
Preferred	0	193	0	302	0	127	0	0	417	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	257	0	2,599	0	0	0	0	0	0	0
Total weight (kg)	0	2.86	0	8.28	0.63	1.27	0	0	4.26	0	0

Appendix A. --Continued.

Station	G-22	E-21	GF2221	E-22	HG2120	F-22	H-21	F-21	IH2120	H-22	IH2221
Start Date	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/27/2009	6/28/2009	6/28/2009	6/28/2009
Duration (hour)	0.51	0.53	0.52	0.56	0.51	0.56	0.50	0.56	0.54	0.51	0.52
Distance Fished (km)	2.77	2.96	2.81	3.05	2.71	3.06	2.77	3.02	3.02	2.78	2.82
Mid-Latitude (°N)	56.99	56.34	56.84	56.34	57.16	56.68	57.34	56.67	57.51	57.34	57.51
Mid-Longitude (°W)	-170.78	-170.07	-170.51	-170.69	-169.90	-170.74	-170.23	-170.14	-170.00	-170.86	-170.58
Bottom Depth (m)	96	110	102	122	50	113	56	97	69	84	74
Bottom Temperature (°C)	2.80	3	2.80	3.20	2.90	2.80	3	2.60	1.10	2.70	2.10
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	84	0	0	0	66	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	84	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	8.84	0	0	0	1.64	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	84	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	1.27	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	3,942	3,232	15,835	1,894	839	3,211	75	4,317	1,256	1,180	144
Pre-recruit	1,362	870	1,244	178	84	1,427	75	925	264	3,687	650
Legal	143	249	69	0	0	0	0	123	66	442	289
Small females	2,795	3,481	12,107	651	0	5,054	0	1,788	66	811	144
Large females	215	1,057	1,175	118	0	1,249	0	555	66	369	0
Total weight (kg)	20.47	21.71	32.43	9.44	2.51	24.74	0.67	24.55	7.93	34.35	7.21
Opilio Tanner Crab											
Small males	1,328	62	743	0	0	832	0	185	1,851	590	3,106
Legal	51,115	124	622	0	0	4,341	0	123	1,057	3,908	12,786
Preferred	48,791	0	207	0	0	2,200	0	0	397	2,950	7,585
Small females	287	435	168	59	0	110	0	62	0	0	0
Large females	143	0	336	0	0	5,624	75	62	397	295	0
Total weight (kg)	377.89	0.87	4.91	0.01	0	46.88	0.11	0.97	9.24	25.08	65.60
Hybrid Tanner Crab											
Small males	0	62	0	0	0	0	0	0	66	0	0
Legal	0	0	0	0	0	0	0	0	66	0	0
Preferred	0	0	0	0	0	0	0	0	66	0	0
Small females	0	186	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	66	0	0
Total weight (kg)	0	0.08	0	0	0	0	0	0.08	0.69	0	0

Appendix A. --Continued.

Station	I-21	I-22	J12221	J12120	J-22	J-21	K-21	L-21	K-22	M-21	L-22
Start Date	6/28/2009	6/28/2009	6/28/2009	6/28/2009	6/28/2009	6/28/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
Duration (hour)	0.53	0.49	0.52	0.53	0.50	0.52	0.53	0.52	0.51	0.53	0.50
Distance Fished (km)	2.94	2.70	2.81	2.91	2.69	2.87	2.86	2.90	2.83	2.98	2.69
Mid-Latitude (°N)	57.66	57.68	57.84	57.82	58.00	58.00	58.33	58.67	58.36	59.01	58.68
Mid-Longitude (°W)	-170.26	-170.90	-170.62	-169.98	-170.96	-170.34	-170.39	-170.44	-171.01	-170.48	-171.09
Bottom Depth (m)	73	86	78	72	86	74	74	73	83	71	83
Bottom Temperature (°C)	0.70	1.70	-0.50	-0.10	-0.20	-0.50	-0.40	-0.50	-0.90	-0.80	-0.90
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	466	367	1,209	206	2,370	1,046	490	68	276	67	0
Pre-recruit	133	4,328	356	0	503	139	0	0	69	0	0
Legal	0	880	0	69	0	0	0	0	0	0	0
Small females	333	440	427	481	790	558	0	68	138	133	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	1.55	30.24	2.43	1.24	4.08	2.12	0.36	0.33	0.96	0.24	0
Opilio Tanner Crab											
Small males	1,265	3,692	2,773	2,820	2,011	1,813	5,391	1,018	2,068	3,863	2,831
Legal	19,515	55,378	14,791	5,502	14,723	10,039	14,212	7,123	10,134	4,662	5,521
Preferred	6,727	40,610	7,395	1,238	8,475	1,673	1,260	204	3,378	133	1,770
Small females	200	0	356	206	1,005	70	770	68	345	67	637
Large females	200	734	640	275	1,436	488	630	543	552	1,798	4,105
Total weight (kg)	95.09	302.82	69.62	26.40	81.67	42.63	63.30	24.51	50.84	21.14	35.12
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	69	0	0	210	0	0	133	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	142	0	0	0	140	0	0	133	0
Total weight (kg)	0	0	0.19	0.29	0	0	0.58	0	0	0.31	0

Appendix A. --Continued.

Station	M-22	L-23	M-23	K-23	K-24	J-25	K-25	L-24	L-25	M-24	N-24
Start Date	6/29/2009	6/29/2009	6/29/2009	6/29/2009	7/1/2009	7/1/2009	7/1/2009	7/1/2009	7/1/2009	7/1/2009	7/1/2009
Duration (hour)	0.55	0.52	0.55	0.52	0.53	0.29	0.54	0.55	0.54	0.55	0.54
Distance Fished (km)	3.06	2.84	3.00	2.82	2.93	1.57	3.00	3.15	2.96	3.17	2.97
Mid-Latitude (°N)	59.01	58.66	59.00	58.34	58.34	57.99	58.34	58.67	58.67	59.01	59.34
Mid-Longitude (°W)	-171.13	-171.72	-171.79	-171.64	-172.31	-172.87	-172.95	-172.37	-173.03	-172.43	-172.48
Bottom Depth (m)	78	93	87	96	102	109	109	102	112	98	88
Bottom Temperature (°C)	-0.80	-0.30	-0.60	-0.30	0.80	1.90	1.60	0.70	1.40	0.40	-0.20
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	64
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	64
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	1.92
Bairdi Tanner Crab											
Small males	0	137	0	899	3,522	2,273	529	413	1,125	55	64
Pre-recruit	0	0	63	69	1,174	239	0	0	860	0	0
Legal	0	0	0	0	0	0	0	0	66	0	0
Small females	0	0	63	277	4,697	2,273	331	0	3,508	55	0
Large females	0	0	0	0	0	239	0	0	927	0	0
Total weight (kg)	0	0.27	0.45	2.16	39.76	2.78	0.48	1.94	20.15	0.23	0.01
Opilio Tanner Crab											
Small males	5,999	1,029	1,940	2,767	28,179	1,794	12,387	2,889	13,972	716	450
Legal	5,124	9,811	13,577	11,275	77,492	2,512	12,938	14,033	6,537	5,124	12,660
Preferred	687	2,470	5,104	2,421	29,353	1,436	413	3,302	1,666	1,763	8,740
Small females	250	274	316	346	40,462	1,324	199	28,420	610	110	1,285
Large females	1,000	1,647	506	4,150	296,720	27,134	331	162,402	30,523	1,157	257
Total weight (kg)	31.14	50.51	79.68	59.56	807.52	33.31	72.48	272.15	97.50	36	82.84
Hybrid Tanner Crab											
Small males	0	0	63	0	0	0	0	0	0	0	0
Legal	0	0	0	0	1,174	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	2,348	0	0	413	132	0	0
Total weight (kg)	0	0	0.15	0	6.80	0	0	0.74	0.27	0	0

Appendix A. --Continued.

Station	M-25	N-25	N-23	N-22	O-22	N-21	P-22	O-21	Q-22	P-21	R-22
Start Date	7/1/2009	7/1/2009	7/1/2009	7/2/2009	7/2/2009	7/2/2009	7/2/2009	7/2/2009	7/2/2009	7/2/2009	7/2/2009
Duration (hour)	0.57	0.52	0.56	0.56	0.54	0.53	0.51	0.53	0.52	0.54	0.52
Distance Fished (km)	3.02	2.88	3.05	3.10	2.92	2.90	2.84	2.96	2.89	2.92	2.87
Mid-Latitude (°N)	59.01	59.33	59.34	59.33	59.66	59.33	60.00	59.67	60.34	60.00	60.67
Mid-Longitude (°W)	-173.10	-173.15	-171.85	-171.18	-171.26	-170.56	-171.31	-170.59	-171.39	-170.64	-171.45
Bottom Depth (m)	107	100	81	75	73	68	69	66	66	64	63
Bottom Temperature (°C)	1	0.50	-1.20	-1.30	-1.50	-1.40	-1.50	-1.30	-1.50	-1.40	-1.50
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	66	0	0	0	0	0	0	0	0	120
Pre-recruit	0	66	0	0	0	0	0	0	0	0	0
Legal	0	132	0	0	0	0	0	0	0	0	0
Small females	0	66	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	60
Total weight (kg)	0	6.99	0	0	0	0	0	0	0	0	1.76
Bairdi Tanner Crab											
Small males	317	2,965	630	181	0	205	0	0	0	0	0
Pre-recruit	254	659	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	1,078	2,570	189	242	66	68	0	0	0	0	0
Large females	190	395	0	0	0	0	0	0	0	0	0
Total weight (kg)	5.59	16.55	0.28	0.16	0.09	0.31	0	0	0	0	0
Opilio Tanner Crab											
Small males	2,092	329	15,147	12,150	19,100	4,644	11,347	3,971	46,358	9,316	123,147
Legal	5,135	3,294	9,220	5,906	4,838	7,034	2,038	2,449	748	5,564	0
Preferred	3,233	1,384	878	338	147	0	0	66	0	129	0
Small females	302	0	4,740	1,701	6,209	341	6,864	66	16,142	66	166,003
Large females	6,490	16,321	28,754	12,836	21,811	3,893	29,566	1,324	44,122	7,503	135,119
Total weight (kg)	50.42	36.71	93.30	57.33	65.34	29.71	45.88	15.83	97.68	41.66	316.28
Hybrid Tanner Crab											
Small males	0	0	63	0	0	0	0	0	0	0	0
Legal	0	0	63	0	0	0	0	0	0	66	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	137	0	66	0	66	0
Total weight (kg)	0	0	0.31	0	0	0.10	0	0.10	0	0.19	0

Appendix A. --Continued.

Station	Q-21	S-22	Q-23	S-23	S-24	R-23	S-25	R-24	S-26	R-25	R-26
Start Date	7/2/2009	7/2/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009	7/4/2009
Duration (hour)	0.54	0.36	0.54	0.52	0.52	0.54	0.53	0.54	0.52	0.54	0.51
Distance Fished (km)	2.99	1.99	2.99	2.86	2.85	2.97	3.03	3.05	2.78	2.96	2.78
Mid-Latitude (°N)	60.33	61.00	60.33	61.01	61.00	60.68	61.00	60.66	61.00	60.69	60.67
Mid-Longitude (°W)	-170.66	-171.49	-172.07	-172.17	-172.83	-172.13	-173.52	-172.74	-174.18	-173.47	-174.12
Bottom Depth (m)	62	61	60	64	67	61	75	44	83	67	87
Bottom Temperature (°C)	-1.40	-1.60	-0.70	-1.50	-1	-1.50	-1.50	0.50	-1.60	-0.60	-1.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	969	0	0	0	0	837	67	694	136
Pre-recruit	0	0	277	0	0	0	61	1,744	202	139	68
Legal	0	0	415	0	0	0	0	488	0	208	0
Small females	0	0	0	0	0	59	0	70	0	0	0
Large females	0	0	69	0	0	0	0	279	0	0	0
Total weight (kg)	0	0	19.62	0	0	0.41	1.48	51.91	4.63	12.24	2.32
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	0	279	0	705	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	279	0	0	0
Large females	0	0	69	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0.14	0	0	0	0	0.34	0	0.61	0
Opilio Tanner Crab											
Small males	15,661	243,975	6,576	17,523	31,448	74,330	15,451	3,557	47,767	45,110	29,748
Legal	1,615	0	346	0	120	177	0	0	810	0	2,107
Preferred	0	0	0	0	0	0	0	0	135	0	68
Small females	2,628	483,680	1,869	35,042	44,722	79,580	13,999	1,744	21,541	50,749	6,653
Large females	11,904	112,158	1,385	6,240	12,068	10,450	7,280	419	28,489	30,309	33,872
Total weight (kg)	37.04	355.83	7.56	30.80	55.05	88.41	24.79	2.89	81.83	79.07	71.71
Hybrid Tanner Crab											
Small males	0	0	69	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	64	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0.13	0	0.05	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	Q-25	QP2524	P-24	QP2423	PO2524	P-23	O-24	PO2423	ON2524	O-23	O-25
Start Date	7/4/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009	7/5/2009
Duration (hour)	0.39	0.55	0.44	0.55	0.52	0.54	0.52	0.56	0.52	0.55	0.51
Distance Fished (km)	2.17	3.06	2.44	3.04	2.84	2.99	2.91	3.13	2.87	2.98	2.81
Mid-Latitude (°N)	60.30	60.16	60.00	60.16	59.83	59.98	59.67	59.84	59.51	59.66	59.65
Mid-Longitude (°W)	-173.38	-172.98	-172.64	-172.33	-172.90	-171.95	-172.57	-172.26	-172.88	-171.90	-173.24
Bottom Depth (m)	64	61	66	58	80	67	84	74	93	77	96
Bottom Temperature (°C)	-0.80	0.70	-1.20	0.50	-1.20	-1.40	-1.10	-1.40	0.10	-1.30	0.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	854	3,559	245	326	203	66	264	126	342	131	477
Pre-recruit	380	739	82	261	68	0	330	63	205	0	68
Legal	190	739	0	326	68	0	0	63	274	0	477
Small females	380	1,007	0	131	135	0	0	0	0	0	68
Large females	95	470	82	65	0	0	0	0	0	0	68
Total weight (kg)	11.55	65.08	3.53	18.54	5.28	0.18	7.62	3.42	12.82	1.08	19.00
Bairdi Tanner Crab											
Small males	0	0	82	131	0	465	198	63	342	0	68
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	67	0	0	68	266	66	0	137	0	136
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0.02	0.09	0.09	0.01	0.36	0.34	0.01	0.16	0	0.22
Opilio Tanner Crab											
Small males	5,695	470	45,137	718	12,965	4,118	5,668	6,856	1,990	9,646	817
Legal	285	134	2,122	0	3,758	332	5,931	1,510	23,732	1,509	9,196
Preferred	0	0	0	0	338	0	725	126	13,168	66	3,747
Small females	3,322	470	48,286	196	18,855	4,318	6,780	4,012	2,393	8,327	1,703
Large females	3,796	269	31,545	261	5,347	4,052	1,516	26,881	1,436	45,421	272
Total weight (kg)	5.13	0.97	52.92	0.68	32.39	9.79	32.44	41.28	136.05	60.04	44.77
Hybrid Tanner Crab											
Small males	190	0	82	0	0	0	0	0	68	0	0
Legal	0	0	0	0	0	0	0	0	68	0	0
Preferred	0	0	0	0	0	0	0	0	68	0	0
Small females	0	0	163	0	68	0	0	0	68	0	0
Large females	190	0	82	0	0	0	0	63	68	0	0
Total weight (kg)	0.11	0	0.16	0	0.01	0	0	0.05	0.61	0	0

Appendix A. --Continued.

Station	J-24	I-24	J-23	I-25	I-23	H-25	H-23	H-24	F-24	F-25	F-23
Start Date	7/6/2009	7/6/2009	7/6/2009	7/6/2009	7/6/2009	7/6/2009	7/6/2009	7/6/2009	7/11/2009	7/11/2009	7/11/2009
Duration (hour)	0.55	0.53	0.56	0.52	0.56	0.53	0.55	0.54	0.54	0.51	0.55
Distance Fished (km)	2.93	2.97	3.01	2.85	3.10	2.87	2.92	3.00	2.94	2.82	3.05
Mid-Latitude (°N)	58.00	57.67	57.99	57.67	57.66	57.35	57.33	57.33	56.66	56.69	56.66
Mid-Longitude (°W)	-172.24	-172.17	-171.59	-172.82	-171.55	-172.82	-171.47	-172.11	-171.94	-172.58	-171.35
Bottom Depth (m)	105	108	97	119	99	117	100	109	126	134	119
Bottom Temperature (°C)	1.70	1.80	1.20	2.40	1.70	2.90	2.70	2.70	3.30	3.30	3.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	2,429	199	1,230	672	1,166	403	944	129	761	2,650	1,320
Pre-recruit	67	0	65	67	518	0	741	0	0	0	594
Legal	0	0	0	0	0	0	135	0	0	0	66
Small females	2,564	863	194	807	583	807	472	0	346	2,720	726
Large females	0	266	65	0	130	0	270	0	0	0	0
Total weight (kg)	5.14	1.55	5.49	0.78	10.32	0.35	12	0.40	0.75	2.47	10.05
Opilio Tanner Crab											
Small males	6,659	4,649	1,747	807	2,266	67	472	1,157	0	0	1,188
Legal	10,618	6,973	5,436	3,160	3,885	202	1,483	3,472	69	0	5,213
Preferred	5,219	3,918	1,294	807	1,166	134	607	1,350	0	0	2,111
Small females	827	0	1,765	285	439	0	0	0	0	0	0
Large females	69,430	111,577	32,837	14,245	18,865	0	607	33,221	0	0	66,912
Total weight (kg)	155.96	184.33	68.72	40.35	52.62	1.48	10.99	75.84	0.20	0	143.20
Hybrid Tanner Crab											
Small males	0	66	0	0	0	0	0	0	0	0	0
Legal	0	0	129	67	130	0	0	0	0	0	0
Preferred	0	0	0	67	65	0	0	0	0	0	0
Small females	0	0	65	0	0	0	0	0	0	0	0
Large females	337	66	259	0	518	0	67	129	0	0	264
Total weight (kg)	0.37	0.28	0.89	0.33	1.14	0	0.08	0.27	0	0	0.58

Appendix A. --Continued.

Station	G-25	G-23	G-26	H-26	G-24	I-26	K-27	J-26	L-27	K-26	M-27
Start Date	7/11/2009	7/11/2009	7/11/2009	7/11/2009	7/11/2009	7/12/2009	7/12/2009	7/12/2009	7/12/2009	7/12/2009	7/12/2009
Duration (hour)	0.51	0.53	0.50	0.51	0.54	0.60	0.52	0.40	0.53	0.57	0.53
Distance Fished (km)	2.79	2.92	2.78	2.86	2.97	3.38	2.95	2.21	2.95	3.15	2.98
Mid-Latitude (°N)	57.01	57.00	57.00	57.33	57.01	57.68	58.34	58.00	58.67	58.34	59.01
Mid-Longitude (°W)	-172.66	-171.39	-173.25	-173.35	-172.03	-173.40	-174.30	-173.47	-174.27	-173.56	-174.39
Bottom Depth (m)	122	108	141	122	116	146	162	117	157	115	126
Bottom Temperature (°C)	3.30	3.10	3.30	3.20	3.20	3.10	3	2.70	2.80	2.70	2.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	1,202	1,010	355	1,855	962	1,853	3,673	1,652	11,264	247	3,502
Pre-recruit	0	1,010	0	0	0	0	0	0	0	62	0
Legal	0	135	0	0	0	0	0	0	0	0	0
Small females	1,273	875	71	856	756	1,694	2,899	1,304	9,745	0	5,317
Large females	71	0	0	0	0	53	0	87	0	62	195
Total weight (kg)	0.96	11.26	1.05	5.33	1.65	3.42	2.79	5.77	4.11	1.62	5.22
Opilio Tanner Crab											
Small males	0	606	0	0	275	53	0	0	0	0	130
Legal	707	5,182	0	71	6,321	688	0	348	0	866	1,297
Preferred	495	3,500	0	71	1,031	424	0	87	0	556	584
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	875	0	0	137	0	0	0	0	309	973
Total weight (kg)	5.79	40.10	0	0.54	30.42	6.51	0	1.74	0	6.85	9.72
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	135	0	0	0	0	0	0	0	0	0
Preferred	0	135	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0.97	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	N-27	L-26	O-27	M-26	PO2726	N-26	P-27	ON2625	QP2726	O-26	O-28
Start Date	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/13/2009	7/14/2009
Duration (hour)	0.52	0.54	0.53	0.55	0.55	0.45	0.55	0.55	0.52	0.55	0.53
Distance Fished (km)	2.81	3.00	3.00	3.02	3.04	2.43	3.01	3.01	2.93	3.04	2.94
Mid-Latitude (°N)	59.33	58.68	59.67	59.00	59.84	59.34	59.99	59.54	60.17	59.67	59.66
Mid-Longitude (°W)	-174.43	-173.64	-174.45	-173.72	-174.24	-173.79	-174.61	-173.49	-174.36	-173.85	-175.11
Bottom Depth (m)	120	126	115	117	107	110	108	101	100	104	126
Bottom Temperature (°C)	1.90	2.60	1.30	1.90	1	1.10	1	0.50	0.50	0.90	1.70
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	63	0	64	324	131	454	0
Pre-recruit	0	0	65	63	0	81	64	259	131	713	0
Legal	0	0	0	0	0	81	128	259	131	0	0
Small females	0	0	0	0	0	0	0	65	0	65	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	1.03	1.50	0.56	2.47	5.50	13.66	7.60	16.72	0
Bairdi Tanner Crab											
Small males	413	673	65	7,021	63	0	0	0	131	65	192
Pre-recruit	138	0	65	190	0	81	0	0	0	0	64
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	620	184	130	8,602	0	243	64	194	131	130	639
Large females	0	0	0	316	0	0	0	0	0	0	192
Total weight (kg)	1.18	0.78	0.60	10.52	0.01	1.18	0.01	0.21	0.06	0.21	2.73
Opilio Tanner Crab											
Small males	413	735	3,049	253	2,344	1,780	1,282	647	654	778	703
Legal	8,751	2,449	5,645	1,518	6,652	5,663	3,012	5,633	2,943	5,059	1,982
Preferred	2,067	245	3,244	759	1,774	2,023	385	1,424	719	2,724	1,023
Small females	69	0	1,340	0	1,267	16,464	64	0	589	454	831
Large females	138	0	20,097	23,725	3,991	209,326	577	1,360	131	259	14,000
Total weight (kg)	46.50	13.03	66.04	40.58	44.75	198.90	15.29	28.00	14.59	29.26	29.56
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	63	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0.13	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	PO2625	P-25	P-28	P-26	QP2625	Q-28	Q-26	R-28	S-28	Q-27	R-27
Start Date	7/14/2009	7/14/2009	7/14/2009	7/14/2009	7/14/2009	7/14/2009	7/15/2009	7/15/2009	7/15/2009	7/15/2009	7/15/2009
Duration (hour)	0.57	0.56	0.52	0.56	0.54	0.53	0.56	0.54	0.52	0.55	0.54
Distance Fished (km)	3.14	3.11	2.94	3.08	2.97	2.88	3.03	2.97	2.87	3.03	2.99
Mid-Latitude (°N)	59.84	60.01	60.01	60.01	60.13	60.33	60.34	60.66	61.01	60.34	60.67
Mid-Longitude (°W)	-173.58	-173.32	-175.27	-173.94	-173.78	-175.40	-174.07	-175.45	-175.56	-174.71	-174.79
Bottom Depth (m)	94	74	117	96	88	112	90	107	102	102	97
Bottom Temperature (°C)	0.40	-1.10	1.30	0.40	-0.70	1.10	0.50	1	-0.10	0.80	0.10
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	363	120	0	61	260	0	124	63	0	63	0
Pre-recruit	182	60	0	0	65	0	311	0	0	0	0
Legal	485	60	0	246	0	0	0	0	0	0	0
Small females	121	60	0	61	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	22.11	4.63	0	8.37	3.92	0	6.48	0.78	0	0.92	0
Bairdi Tanner Crab											
Small males	545	0	516	123	0	470	0	127	0	0	63
Pre-recruit	0	0	64	0	0	202	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	363	0	451	123	0	1,411	0	63	0	0	126
Large females	0	0	64	0	0	0	0	0	0	0	0
Total weight (kg)	0.62	0	1.54	0.25	0	2.52	0	0.10	0	0	0.08
Opilio Tanner Crab											
Small males	1,151	2,153	1,160	1,351	9,037	7,595	83,266	6,214	96,653	3,035	15,067
Legal	3,574	478	4,126	5,341	3,754	4,772	622	11,731	3,132	316	1,418
Preferred	1,878	120	1,031	2,394	454	1,613	249	2,473	267	0	252
Small females	1,272	538	967	552	379	27,566	1,706	507	160,303	569	12,048
Large females	363	3,230	2,579	614	12,890	3,857	12,283	317	5,198	632	2,619
Total weight (kg)	24.33	8.69	24.79	30.75	40.70	39.55	133.79	67.89	63.71	6.40	32.53
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	60	0	0	65	0	0	0	0	0	0
Total weight (kg)	0	0.04	0	0	0.08	0	0	0	0	0	0

Appendix A. --Continued.

Station	T-28	S-27	T-29	T-27	U-29	T-26	U-26	U-27	T-25	V-27	U-25
Start Date	7/15/2009	7/15/2009	7/15/2009	7/15/2009	7/15/2009	7/16/2009	7/16/2009	7/16/2009	7/16/2009	7/16/2009	7/16/2009
Duration (hour)	0.53	0.57	0.54	0.53	0.52	0.55	0.52	0.52	0.54	0.52	0.55
Distance Fished (km)	2.88	3.05	3.03	2.89	2.85	3.04	2.88	2.94	2.95	2.94	3.12
Mid-Latitude (°N)	61.33	61.00	61.34	61.34	61.66	61.33	61.67	61.68	61.33	62.01	61.67
Mid-Longitude (°W)	-175.62	-174.88	-176.30	-175.02	-176.47	-174.33	-174.45	-175.10	-173.60	-175.18	-173.68
Bottom Depth (m)	97	92	106	88	105	78	77	85	73	81	70
Bottom Temperature (°C)	-1.70	-1.20	-0.90	-1.60	-1.30	-1.60	-1.70	-1.70	-1.60	-1.60	-1.70
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	63	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	63	57	0	0	0	0	0	0	0	0
Total weight (kg)	0	1.91	0.60	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	65	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0.01	0	0.03	0	0	0	0	0	0	0	0
Opilio Tanner Crab											
Small males	7,184	25,747	4,225	18,620	8,143	44,012	87,696	18,141	38,289	67,259	130,606
Legal	1,036	1,006	3,654	1,472	2,204	125	463	1,067	128	1,904	0
Preferred	0	189	514	266	367	0	66	63	0	131	0
Small females	6,537	35,202	1,599	5,986	2,571	46,837	98,698	12,178	70,501	65,944	211,303
Large females	2,136	18,955	2,113	9,977	2,449	18,428	28,482	8,851	6,327	5,122	5,217
Total weight (kg)	15.48	58.95	29.40	38.34	26.95	59.57	109.40	27.71	41.99	43.88	115.34
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0

Appendix A. --Continued.

Station	V-28	V-25	V-26	U-28	S-29	T-30	R-29	S-30	R-30	S-31	Q-30
Start Date	7/16/2009	7/16/2009	7/16/2009	7/16/2009	7/17/2009	7/17/2009	7/17/2009	7/17/2009	7/17/2009	7/17/2009	7/17/2009
Duration (hour)	0.54	0.54	0.56	0.54	0.56	0.53	0.56	0.53	0.56	0.53	0.56
Distance Fished (km)	2.94	3.05	3.13	2.92	3.10	2.88	3.08	2.92	3.14	2.84	3.06
Mid-Latitude (°N)	62.01	62.01	62.00	61.67	61.00	61.33	60.68	61.01	60.67	61.00	60.34
Mid-Longitude (°W)	-175.89	-173.76	-174.50	-175.83	-176.30	-176.98	-176.21	-176.99	-176.80	-177.63	-176.72
Bottom Depth (m)	92	62	73	96	111	116	118	121	128	135	136
Bottom Temperature (°C)	-1.60	-1.70	-1.70	-1.60	0.90	1.10	1.20	1.20	1.20	1.20	1.20
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	0	0	0	0	0	251	0	183	67	0
Pre-recruit	0	0	0	0	0	0	0	0	122	0	61
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	690	0	122	0	61
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0.37	0	1.38	0.23	0.86
Opilio Tanner Crab											
Small males	11,864	46,670	96,642	29,227	18,979	11,222	9,233	13,108	6,618	2,219	798
Legal	1,259	0	0	1,540	10,131	20,403	3,701	11,660	8,884	7,330	7,119
Preferred	0	0	0	257	1,427	4,081	1,192	3,865	2,712	3,160	4,787
Small females	9,677	67,337	111,142	30,225	10,044	1,333	19,206	16,748	14,250	4,102	2,380
Large females	795	3,544	22,682	2,594	3,038	6,664	1,989	957	3,058	672	10,541
Total weight (kg)	16.40	35.79	98.51	31.51	69.24	121.95	29.60	78.15	60.11	49.46	79.08
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	61	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	305	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0.11	0	0

Appendix A. --Continued.

Station	R-31	R-32	Q-31	M-32	P-32	M-31	P-31	L-31	O-31	L-30	N-31
Start Date	7/17/2009	7/17/2009	7/17/2009	7/18/2009	7/18/2009	7/18/2009	7/18/2009	7/18/2009	7/18/2009	7/18/2009	7/18/2009
Duration (hour)	0.50	0.51	0.51	0.55	0.52	0.55	0.52	0.55	0.52	0.56	0.53
Distance Fished (km)	2.74	2.89	2.81	3.06	2.84	3.07	2.88	3.04	2.87	3.14	2.97
Mid-Latitude (°N)	60.67	60.65	60.32	59.00	60.01	59.00	59.99	58.67	59.66	58.67	59.33
Mid-Longitude (°W)	-177.51	-178.17	-177.37	-177.60	-177.92	-176.96	-177.22	-176.85	-177.14	-176.19	-177.06
Bottom Depth (m)	146	160	146	134	141	135	136	135	173	139	150
Bottom Temperature (°C)	1.10	1.20	1	2.20	1.20	1.70	0.90	2.40	1.70	2.50	1.50
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	0	65	69	3,345	201	1,158	0	383	471	482	64
Pre-recruit	0	65	69	0	0	0	0	0	135	0	64
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	129	275	2,858	0	1,524	133	383	202	542	64
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0.95	0.69	6.66	0.36	2.54	0.07	0.83	3.64	0.90	0.73
Opilio Tanner Crab											
Small males	2,891	65	3,674	0	134	0	3,183	64	0	0	0
Legal	3,166	1,748	2,610	0	0	61	862	0	0	0	0
Preferred	1,101	1,036	1,030	0	0	0	398	0	0	0	0
Small females	3,373	777	6,497	61	872	183	8,752	0	67	0	0
Large females	1,996	324	206	0	134	0	265	0	0	0	0
Total weight (kg)	24.46	14.79	21.00	0.01	0.40	0.32	10.11	0.18	0.01	0	0
Hybrid Tanner Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	122	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0.08	0	0	0	0	0

Appendix A. --Continued.

Station	M-30	N-30	O-29	N-29	O-30	M-29	P-30	L-29	L-28	P-29	M-28
Start Date	7/18/2009	7/18/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009	7/19/2009
Duration (hour)	0.56	0.53	0.58	0.54	0.55	0.53	0.54	0.51	0.50	0.56	0.56
Distance Fished (km)	3.06	2.97	3.14	2.96	3.08	2.94	3.00	2.81	2.79	3.10	3.05
Mid-Latitude (°N)	59.00	59.33	59.67	59.33	59.67	58.99	59.99	58.67	58.75	60.00	59.00
Mid-Longitude (°W)	-176.31	-176.37	-175.88	-175.74	-176.52	-175.73	-176.72	-175.54	-174.95	-175.94	-175.03
Bottom Depth (m)	135	136	136	136	135	132	140	134	142	129	130
Bottom Temperature (°C)	1.50	1	1.50	1.20	1	1.30	0.90	2.50	2.70	1.80	2.30
Red King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Blue King Crab											
Small males	0	0	0	0	0	0	0	0	0	0	0
Pre-recruit	0	0	0	0	0	0	0	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	0	0	0	0	0	0	0	0	0
Large females	0	0	0	0	0	0	0	0	0	0	0
Total weight (kg)	0	0	0	0	0	0	0	0	0	0	0
Bairdi Tanner Crab											
Small males	319	1,896	371	1,186	64	1,508	879	5,088	3,304	696	325
Pre-recruit	0	126	62	198	0	0	0	0	0	126	65
Legal	0	0	0	0	0	0	0	0	0	0	0
Small females	64	1,201	618	1,120	0	1,443	1,946	2,985	4,921	126	195
Large females	64	126	62	66	0	66	0	339	0	126	0
Total weight (kg)	1.11	5.76	2.08	5.60	0.02	1.20	0.91	15.42	1.43	1.98	1.46
Opilio Tanner Crab											
Small males	0	822	185	1,317	448	0	2,009	136	0	190	0
Legal	0	316	247	132	128	0	1,004	0	0	2,782	0
Preferred	0	190	0	132	64	0	942	0	0	1,771	0
Small females	0	1,074	309	2,042	1,215	393	4,268	68	141	190	0
Large females	0	569	0	263	0	131	188	0	0	316	0
Total weight (kg)	0	3.60	1.32	2.56	1.22	0.21	12.38	0.10	0.03	21.84	0
Hybrid Tanner Crab											
Small males	0	0	62	0	0	0	251	0	0	0	0
Legal	0	0	0	0	0	0	0	0	0	0	0
Preferred	0	0	0	0	0	0	0	0	0	0	0
Small females	0	0	62	0	384	0	690	0	0	0	0
Large females	0	0	0	0	64	0	0	0	0	0	0
Total weight (kg)	0	0	0.04	0	0.21	0	0.23	0	0	0	0

Appendix A. --Continued.

Station	Q-29	N-28	H-09	G-09	I-09	G-10	I-10	H-10	J-10	H-11	J-11
Start Date	7/19/2009	7/19/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009	7/27/2009
Duration (hour)	0.39	0.54	0.58	0.52	0.52	0.53	0.54	0.51	0.53	0.52	0.52
Distance Fished (km)	2.15	2.94	3.13	2.85	2.96	2.89	2.99	2.82	2.95	2.91	2.87
Mid-Latitude (°N)	60.33	59.33	57.33	57.02	57.67	56.99	57.68	57.34	58.00	57.34	58.00
Mid-Longitude (°W)	-176.03	-175.10	-162.76	-162.80	-162.76	-162.19	-162.16	-162.14	-162.13	-161.53	-161.54
Bottom Depth (m)	121	133	49	60	43	61	47	52	38	57	56
Bottom Temperature (°C)	1.40	1.70	3.80	2.50	5.80	3.30	5.30	3.60	5.60	3.50	5.40
Red King Crab											
Small males	0	0	0	74	0	144	0	155	0	0	741
Pre-recruit	0	0	251	0	0	361	208	1,084	147	0	222
Legal	0	0	188	148	70	289	138	542	74	74	148
Small females	0	0	0	0	0	0	0	0	0	0	222
Large females	0	0	125	0	1,049	0	3,668	232	1,397	223	1,705
Total weight (kg)	0	0	16.70	7.70	19.23	22.05	65.55	47.14	23.61	7.35	39.88
Blue King Crab											
Small males	0	0									
Pre-recruit	0	134									
Legal	0	0									
Small females	0	0									
Large females	0	0									
Total weight (kg)	0	2.17									
Bairdi Tanner Crab											
Small males	185	1,140									
Pre-recruit	185	201									
Legal	92	0									
Small females	185	670									
Large females	0	0									
Total weight (kg)	1.77	6.45									
Opilio Tanner Crab											
Small males	832	67									
Legal	3,050	67									
Preferred	1,202	0									
Small females	1,386	201									
Large females	1,571	0									
Total weight (kg)	13.99	0.43									
Hybrid Tanner Crab											
Small males	0	0									
Legal	0	0									
Preferred	0	0									
Small females	0	0									
Large females	0	0									
Total weight (kg)	0	0									

Appendix A. --Continued.

Station	I-11	J-12	J-13	H-12	J-14	I-12	I-14	I-13	H-14	H-13	G-14
Start Date	7/27/2009	7/27/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009
Duration (hour)	0.51	0.54	0.53	0.51	0.52	0.50	0.55	0.51	0.52	0.52	0.55
Distance Fished (km)	2.84	2.92	2.86	2.80	2.88	2.75	3.07	2.80	2.81	2.85	2.97
Mid-Latitude (°N)	57.67	58.00	58.00	57.34	58.00	57.66	57.67	57.66	57.34	57.33	57.00
Mid-Longitude (°W)	-161.48	-160.86	-160.23	-160.93	-159.62	-160.88	-159.64	-160.26	-159.66	-160.30	-159.73
Bottom Depth (m)	53	45	51	63	42	56	49	54	54	62	58
Bottom Temperature (°C)	3.50	5.30	6.10	3	6.80	3	6.30	5.60	5.90	4.70	5.70
Red King Crab											
Small males	233	207	220	290	0	269	72	663	76	1,283	0
Pre-recruit	233	207	73	1,452	0	538	0	332	76	1,069	284
Legal	78	346	0	1,016	0	269	0	83	0	784	142
Small females	155	277	73	0	0	807	0	497	0	641	0
Large females	1,010	346	5,713	944	440	986	1,439	1,160	837	1,781	2,836
Total weight (kg)	23.32	29.06	103.08	83.37	9.54	35.96	26.26	33.30	17.16	91.94	64.90
Station	G-13	G-12	F-14	G-11	F-13	F-11	F-12	E-12	F-10	E-11	E-10
Start Date	7/28/2009	7/28/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009	7/29/2009
Duration (hour)	0.50	0.51	0.53	0.51	0.56	0.54	0.54	0.52	0.52	0.54	0.52
Distance Fished (km)	2.78	2.82	2.84	2.80	3.26	2.93	2.82	2.83	2.80	2.97	2.86
Mid-Latitude (° N)	57.00	57.00	56.67	57.02	56.66	56.67	56.66	56.34	56.66	56.33	56.35
Mid-Longitude ((° W)	-160.33	-160.95	-159.75	-161.56	-160.39	-161.59	-161.00	-160.99	-162.17	-161.61	-162.18
Bottom Depth (m)	64	65	38	69	58	89	67	54	75	65	79
Bottom Temperature ((° C)	4.20	3.10	8.10	2.60	4.90	2.30	3.90	6.30	2.60	3.80	3
Red King Crab											
Small males	165	236	0	73	126	453	779	72	0	1,230	0
Pre-recruit	329	1,576	0	0	443	982	1,770	432	0	2,331	283
Legal	658	631	0	145	190	982	1,133	0	291	971	354
Small females	0	79	0	0	0	0	283	0	0	0	0
Large females	5,348	473	76	0	4,299	0	3,469	2,881	0	19,103	1,134
Total weight (kg)	111.17	60.36	2.16	5.86	98.25	65.23	151.59	60.90	11.85	455.26	42.54
Station	D-10										
Start Date	7/30/2009										
Duration (hour)	0.51										
Distance Fished (km)	2.78										
Mid-Latitude (°N)	56.00										
Mid-Longitude (°W)	-162.27										
Bottom Depth (m)	71										
Bottom Temperature (°C)	3.90										
Red King Crab											
Small males	318										
Pre-recruit	477										
Legal	556										
Small females	0										
Large females	635										
Total weight (kg)	36.27										

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