



**Alaska  
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**National Marine  
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**U.S. DEPARTMENT OF COMMERCE**

## **AFSC PROCESSED REPORT 91-17**

### **Report to Industry on the 1991 Eastern Bering Sea Crab Survey**

October 1991



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Cover - An aggregation of female (*C. bairdi*) Tanner crab in Chiniak Bay near Kodiak.  
Photograph by B. G. Stevens.

Alaska Fisheries Science Center  
Processed Report 91-17

**REPORT TO INDUSTRY ON THE**  
**1991**  
**EASTERN BERING SEA**  
**CRAB SURVEY**

by

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## EXECUTIVE SUMMARY

The following is a summary of conclusions presented in this report. All numbers given are estimated total abundance of crabs, plus or minus a percentage which represents an approximate confidence interval of 95%. All estimates were compared to those of the previous year by t-test, and values of t greater than 2 were considered significant. Note that for some groups of crabs, especially blue king crabs, the variance of the data, as indicated by the confidence interval, is so great that large changes from last year may not be deemed statistically significant. Such changes are considered to be below the ability of the survey to detect. GHL = Guideline Harvest Level, as determined by the Alaska Dept. of Fish and Game.

Questions about these data, should be directed to Dr. Bradley G. Stevens or Dr. Robert Otto, NMFS, P.O. Box 1638, Kodiak, AK 99615. Phone (907) 487-4961.

### **Red king crab** (*Paralithodes camtschaticus*) All districts combined.

Legal males:	12.0 million $\pm$ 36%; Non-significant increase of 29%.
Pre-recruits:	No significant change.
Large Females:	Non-significant decrease of 28%.
Outlook:	Population remains stable at moderate levels.
GHl:	18.0 million lbs.

### **Pribilof Islands blue king crab** (*P. platypus*) Pribilof District.

Legal males:	1.0 million $\pm$ 70%; Non-significant increase of 147%.
Pre-recruits:	No significant change.
Large Females:	No significant change.
Outlook:	Population low but may be increasing; trends not detectable.
GHl:	Fishery closed for 1991.

### **St. Matthew blue king crab** (*P. platypus*) Northern District.

Legal males:	2.17 million $\pm$ 35%; Non-significant increase of 31%.
Pre-recruits:	Non-significant increase of 100%
Large Females:	Non-significant increase of 250%.
Outlook:	Population appears average and stable or increasing.
GHl:	3.2 million lbs.

**Tanner crab** (*Chionoecetes bairdi*) Eastern District.

Legal males: 35.1 million  $\pm$  35%; Non-significant decrease of 22%.  
Pre-recruits: (All districts) Non-significant increase of 37%.  
Large Females: (All districts) Non-significant increase of 27%.  
Outlook: Population moderately high and stable.  
Expect continued high recruitment in future.  
GHL: 32.8 million lbs.

**Snow crab** (*C. opilio*) All districts combined.

Large males: 484.1 million  $\pm$  29%; Non significant increase of 15%.  
Pre-recruits: Significant decrease of 32%.  
Large Females: Non-significant increase of 28%.  
Outlook: Overall population high and stable. High recruitment due to growth of pre-recruits into large sizes.  
GHL: 400.0 million lbs.

**Hair crab** (*Erimacrus isenbeckii*)

Large males: 0.65 million  $\pm$  57%; Non-significant increase of 18%.  
Large Females: No significant change.  
Outlook: Population above average and improving due to recent recruitment.  
GHL: None Projected.

## The 1991 Eastern Bering Sea Survey

An annual trawl survey is conducted in the eastern Bering Sea (EBS) to determine the distribution and abundance of crab and groundfish resources. This report summarizes survey results for commercially important crabs. It is intended to aid fishermen and processors in locating productive grounds and judging overall availability of various species. Survey-derived data are also used as part of the basis for management decisions. Results are presented for red king crab (*Paralithodes camtschaticus*), blue king crab (*P. platypus*), hair crab (*Erimacrus isenbeckii*), Tanner crab (*Chionoecetes bairdi*) and snow crab (*C. opilio*). Information on groundfish resources is available from the Alaska Fisheries Science Center, 7600 Sand Point Way NE, BIN C15700, Seattle, Washington 98115.

### Survey Area and Methods

The 1991 eastern Bering Sea (EBS) crab survey consisted of 372 successful bottom trawl tows and covered an area of approximately 146,000 square nautical miles. The 1991 survey area was similar to that of 1990 (Fig. 1). The survey was conducted aboard two chartered vessels, the F/V Ocean Hope 3 and the University of Washington's R/V Alaska between June 1 and August 7. The same two vessels were used in 1988, 1989, and 1990. Methodology was identical to that of previous surveys; most tows were made at the centers of squares defined by a 20 x 20 nautical mile grid. Near St.

Matthew Island and the Pribilofs, additional tows were made at the corners of squares. Trawl gear used was similar to that used last year.

Both vessels fished an eastern otter trawl with an 83 ft headrope and a 112 ft footrope. Wing spread on this trawl ranges from 47 - 58 feet. For consistency with previous reports an effective width of 50 feet was used. Each tow was one-half hour in duration; average length was 1.4 nautical miles (range 0.5 to 2.3). Crabs were sorted by species and sex, and then a sample of crabs was measured (to the nearest millimeter) to provide a size frequency distribution. Note that crab sizes are reported as carapace length (cl) for king and hair crabs, and carapace width (cw) for Tanner and snow crabs. Water temperatures were recorded at almost all stations.

Additional tows were made in shallow water near Togiak (2 tows) and Kuskokwim Bay (2 tows) where high catches of yellowfin sole have recently occurred. Repeat tows were made at several stations where high catches of red king crab occurred; these included F05, F07, G05, and G06. Crab data from all extra stations are incorporated into population estimates.

Procedures for estimating abundance were identical to those of previous years. Population estimates (Tables 1-6) were derived from the trawl data using the "area-swept" technique. First, the density of crabs (crabs per square nautical mile) at each trawl station was computed. Average density

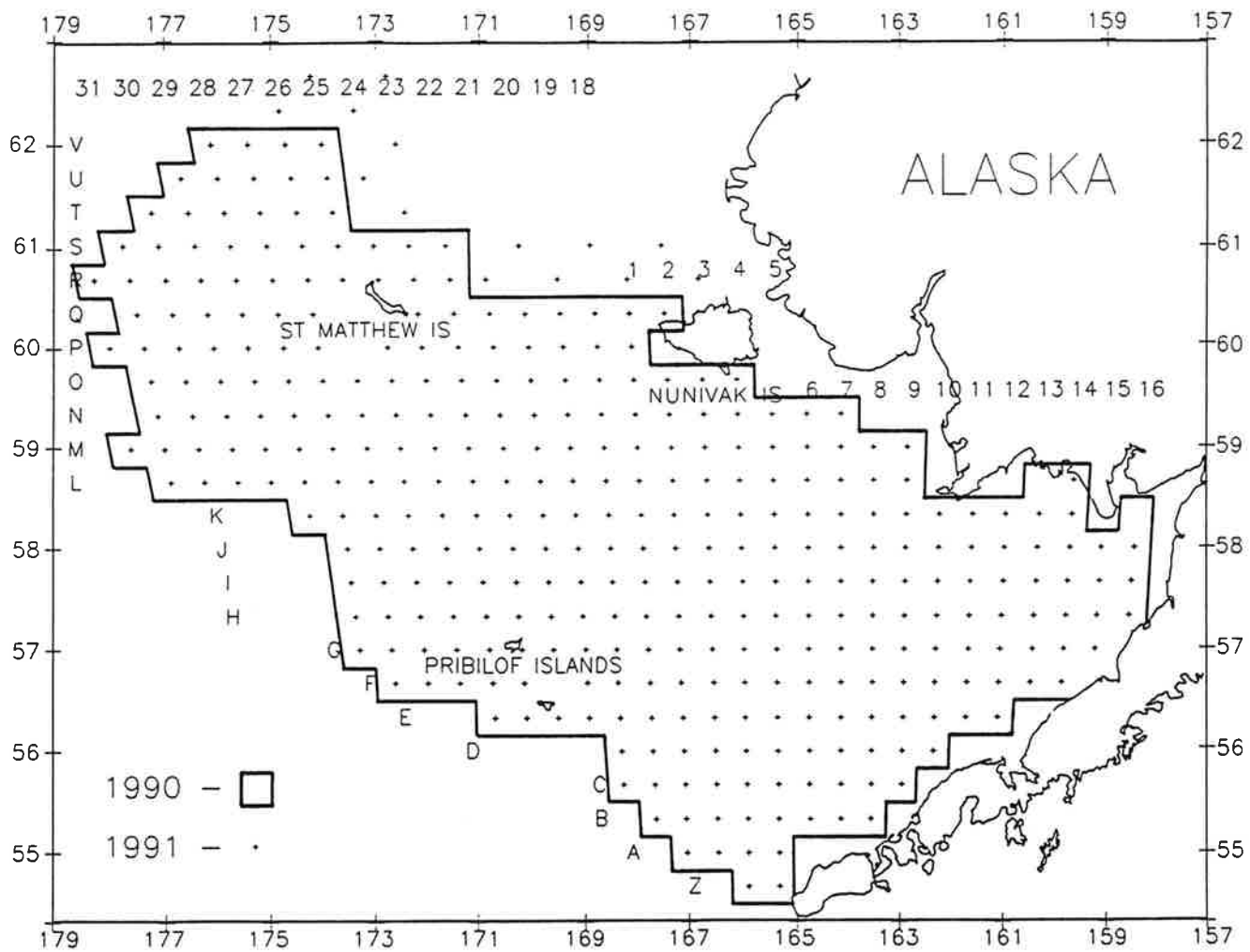


Figure 1. NMFS eastern Bering Sea Crab survey area in 1990 and 1991.



was then calculated for several sub-regions, then population estimates were calculated by extrapolating the average density of a given size group over the area of each subregion.

The following abbreviations are used in the text: (in) inches, (mm) millimeters, (fm) fathoms, (lb) pounds, (°C) degrees Celsius, (cl) carapace length, and (cw) carapace width.

### **Interpreting Tables and Charts**

Because of differences in the length of tow between vessels and stations, catches presented in accompanying charts and tables are standardized to the number of crab caught per square nautical mile. Charts are based on 20 by 20 nautical mile squares. In cases where more than one tow was made in a square (including corner tows), the average crab density is presented. It is advisable to cross-reference charts and tables to obtain more exact information.

### **Distribution and Abundance of King Crab Stocks**

#### **Red King Crab**

The majority of the legal ( $\geq 6.5$  in cw,  $\geq 135$  mm cl) male crabs occurred in Bristol Bay (Area T; Chart 1 and Table 7), and their overall distribution was similar to that of 1990. A few red king crabs were also found near the Pribilof Islands and in the Northern District (north of 58°39'N lat.), but their contribution to overall abundance in the EBS is negligible.

One of the highest catches of legal crabs in the history of the survey (423) occurred at station F06. This extremely unusual catch was excluded from the abundance estimate because it was not considered to be representative of the population. The estimated abundance of legal male red king crabs in the Bristol Bay District (south of 58°39'N lat and east of 168°W long) and the Pribilof District (south of 58°39' N lat and west of 168° W long) was 12.0 million crabs which represents a non-significant<sup>1</sup> increase of 29% from last year (Table 1). Pre-recruit crab (110-134 mm cl) and juveniles showed no significant change. The abundance of legal males has remained relatively stable for several years, but recruitment of juveniles has been poor, and numbers of small male crab are at an all-time low (Table 1; Fig. 2).

Legal male crabs were found between 15 and 50 fm (average 38.4 fm) and from 1.3 to 5.4°C (average 2.4°C). Legal crab were occasionally found as solitary individuals at the periphery of the stock's distribution. Less than 0.1% of male crabs were in molting or soft-shell condition (vs 0.1% last year). Among legal-sized crab, 16.1% were oldshell, skipmolt crabs (vs 44.2% last year). Molting of male crabs appears to have been completed prior to the survey.

The estimated abundance of large<sup>2</sup> ( $\geq 90$  mm cl) females in the Bristol Bay and Pribilof Districts showed a non-significant decrease of 28% from last year and now stands at 12.7 million crabs. The estimated abundance of small females showed a non-significant decrease of 34%. In June, 5.1% of mature females were still molting or soft-shell, (vs

1. "Significant" is a statistical term implying that the difference between two abundance estimates has a 95% chance or more of being real, rather than simply the result of chance. Generally, stocks or populations which are less abundant or occur at fewer locations, such as blue king crab or hair crab, have greater variance, so large differences may appear to be non-significant. Comparisons were made via a two-sample unpaired 't'-test, and values of  $t \geq 2.0$  were considered significant.

2. Throughout this report, the term "large females" refers to those females larger than the median size at maturity, i.e., the size at which 50% are mature. A small number of females above this size may actually be immature, but the majority are mature crabs which should contribute to reproduction of the population.

Table 1. Annual abundance estimates (millions of crabs) for red king crab (*P. camtschaticus*) in Bristol Bay and the Pribilof District from NMFS surveys.

Size <sup>1</sup> (mm) Width(in)	Males			Total	Females			Grand Total
	<110 <5.2	110-134 5.2-6.5	≥135 ≥6.5		<90 <3.5	≥90 ≥3.5	Total	
1969	41.0	20.3	9.8	71.1	18.3	28.5	46.8	117.9
1970	9.5	8.4	5.3	23.2	4.9	13.0	17.9	41.1
1972 <sup>2</sup>	14.1	8.0	5.4	27.5	7.0	12.1	19.1	46.6
1973 <sup>3</sup>	50.0	25.9	10.8	86.7	24.8	76.8	101.6	188.3
1974 <sup>3</sup>	59.0	31.2	20.9	111.1	37.7	72.0	109.7	220.8
1975	84.9	31.7	21.0	137.6	70.8	58.9	129.7	267.3
1976	70.2	49.3	32.7	152.2	35.9	71.8	107.7	259.9
1977	80.2	63.9	37.6	181.7	33.5	150.1	183.6	365.3
1978	62.9	47.9	46.6	157.4	38.2	128.4	166.6	324.0
1979	48.1	37.2	43.9	129.2	45.1	110.9	156.0	285.2
1980	56.8	23.9	36.1	116.8	44.8	67.6	112.5	229.3
1981	56.6	18.4	11.3	86.3	36.3	67.3	103.6	189.9
1982	107.2	17.4	4.7	129.3	77.2	54.8	132.0	261.3
1983	43.3	10.4	1.5	55.2	24.3	9.7	34.0	89.2
1984	81.8	12.6	3.1	97.6	57.6	17.6	75.1	172.7
1985	13.7	10.1	2.5	26.3	6.9	6.8	13.7	39.9
1986	11.8	12.3	5.9	30.1	4.5	5.4	9.8	39.9
1987	20.1	12.6	7.9	40.6	16.8	18.3	35.1	75.7
1988	8.5	6.4	6.4	21.3	2.7	15.7	18.4	39.7
1989	8.6	9.4	11.9	29.9	4.4	16.9	21.2	51.1
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
Limits <sup>4</sup>								
Lower	4.4	2.8	7.7	19.4	1.8	7.1	11.3	30.6
Upper	11.8	10.0	16.3	33.7	7.6	18.2	23.4	57.1
±%	46	56	36	27	62	44	35	30

1 Carapace length (mm).

2 Limited survey in 1971, not used for population estimate.

3 1973 and 1974 estimates considered unreliable.

4 Mean ± 2 standard errors for most recent year.

# Red King Crab Length Frequency

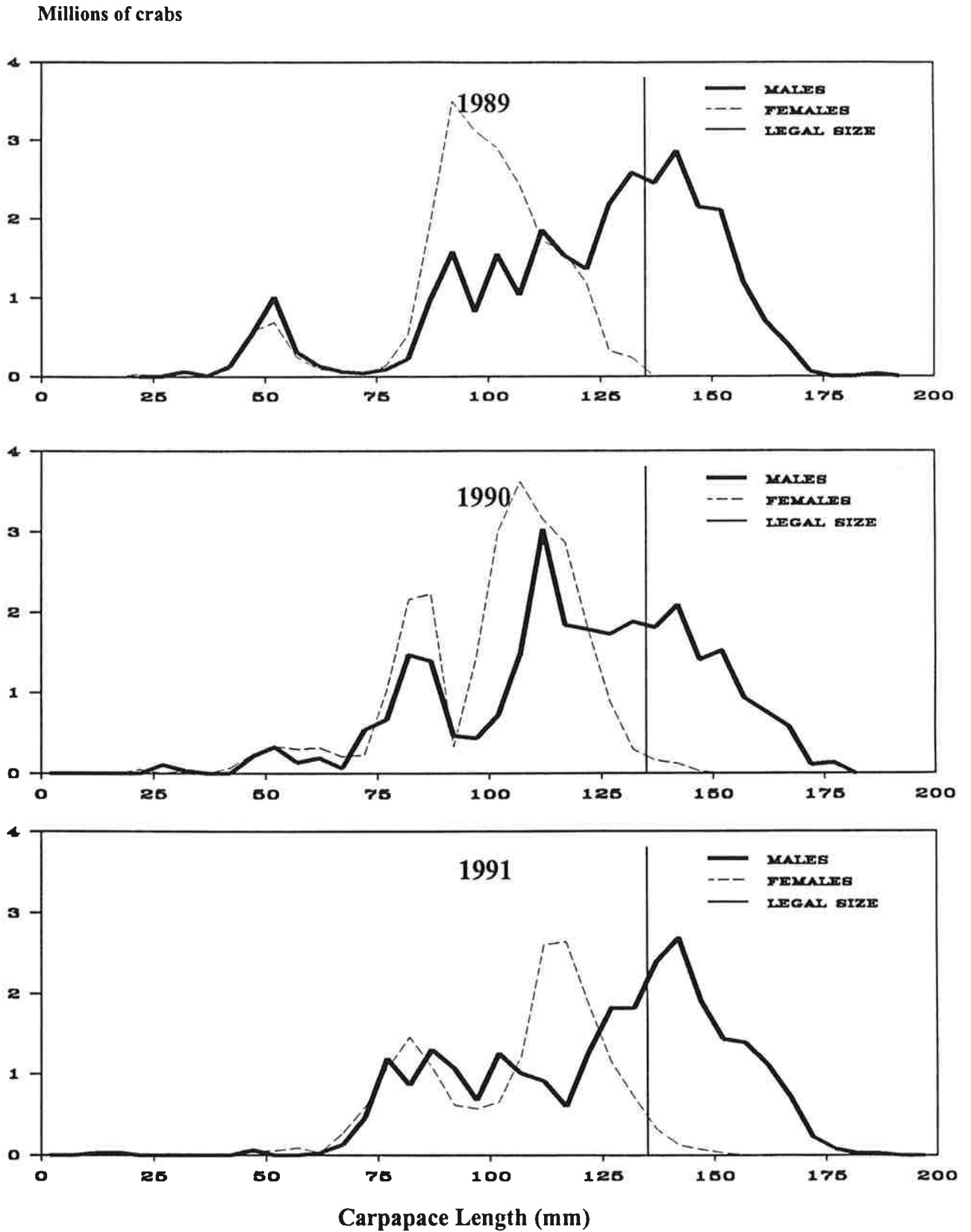


Figure 2. Estimates of abundance for red king crab (*P. camtschaticus*) by 5 mm length classes, 1989-1991. Vertical line indicates lower limit of legal size.

## Red King Crab, Bristol Bay

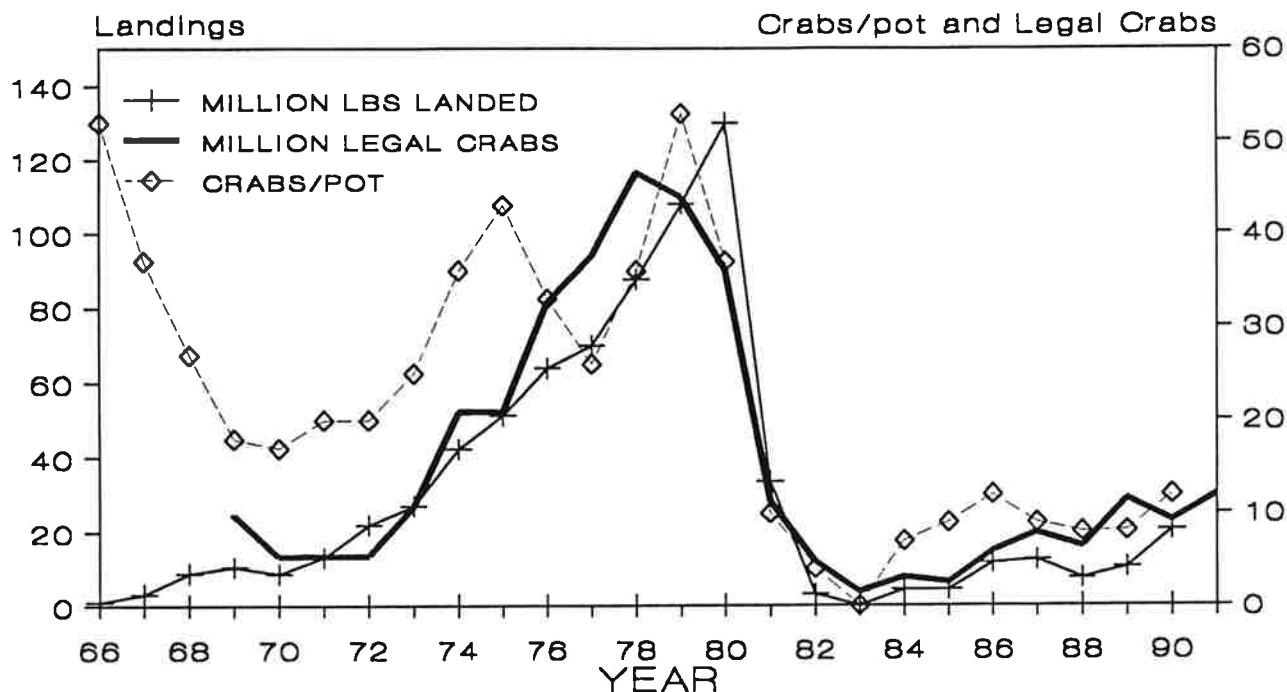


FIGURE 3. U.S. Landings in millions of lbs, catch-per-unit-of-effort as crabs/pot, and abundance of legal red king crabs (*P. camtschaticus*) in millions in Bristol Bay, estimated from NMFS trawl surveys.

19.7% last year). Among mature females, the proportion which had molted and extruded new, uneyed eggs was 96% compared to 97% last year. Fluctuations in the timing of molting, mating, and embryo extrusion may be related to annual variations in water temperature.

The Bristol Bay fishery will open on November 1, 1991 with a guideline harvest of 18.0 million pounds relative to an estimated stock of  $72.6 \pm 26.0$  million pounds. Catch-per-unit-of-effort (CPUE) in recent years has ranged from 8-12 crabs per pot-lift (Fig. 3). The target exploitation rate was set at 25% of the legal male biomass, as determined according to Board of Fisheries policy.

### Pribilof Islands Blue King Crab (*P. platypus*)

Legal ( $\geq 6.5$  in, or  $\geq 135$  mm cl) males were found primarily to the east of St. Paul Island (Chart 2 and Table 8). Legal crab occurred at temperatures between 2.5 and 5.3°C (average 2.8°C), and at

depths between 35 and 53 fm (average 40.1 fm). The estimated abundance of legal males was 1.0 million crabs (Table 2), a non-significant increase of 147% from last year. The number of pre-recruits showed no significant change. The abundance of juveniles ( $< 110$  mm cl), showed a non-significant decline of 28%. Size-frequency data (Fig. 4) indicate that recruitment of juveniles to larger size groups has improved, continuing a trend started in 1988. This population is still depressed (Fig. 5), but may be improving. The fishery will not be opened in 1991. Over 87% of sublegal males and 72% of legal males were in new, hardshell condition, the remainder being oldshells.

The estimated abundance of large ( $\geq 90$  mm cl) females showed a non-significant change from last year's level. Historically, estimates of female abundance have been imprecise due to the preference of females for rocky habitat which is not sampled well by trawls. Among mature females, 61% were

Table 2. Annual abundance estimates (millions of crabs) for blue king crab (*P. platypus*) in the Pribilof District from NMFS surveys.

Pribilof District								
Size <sup>1</sup> (mm)	Males			Total	Females			Grand Total
	<110	110-134	≥135		<90	≥90	Total	
Width(in)	<5.2	5.2-6.5	≥6.5		<3.5	≥3.5		
1974	4.4	3.1	1.9	9.4	0.6	10.9	11.5	20.9
1975	4.1	8.0	7.5	19.6	0.0	8.8	8.8	28.4
1976	10.3	2.1	3.9	16.3	0.4	17.7	18.1	34.4
1977	3.2	2.2	9.4	14.8	2.2	17.5	19.7	34.5
1978	1.2	5.8	4.3	11.3	0.3	35.5	35.8	47.1
1979	6.4	1.5	4.6	12.5	5.2	2.9	8.1	20.6
1980	1.9	1.4	4.2	7.5	0.8	101.9	102.7 <sup>3</sup>	110.2
1981	4.8	1.4	4.2	10.4	3.4	11.6	15.0	25.4
1982	1.2	0.7	2.2	4.1	0.7	8.6	9.3	13.4
1983	0.6	0.8	1.3	2.8	0.2	9.2	9.4	12.2
1984	0.5	0.3	0.6	1.3	0.3	3.1	3.4	4.8
1985	0.06	0.16	0.32	0.54	0.18	0.52	0.70	1.24
1986	0.02	0.02	0.43	0.47	0.04	1.86	1.90	2.37
1987	0.57	0.08	0.73	1.38	0.39	0.58	0.97	2.35
1988	1.10	0.0	0.20	1.29	0.77	0.43	1.20	2.49
1989	3.21	0.10	0.22	3.54	2.29	1.28	3.57	7.11
1990	1.84	1.24	0.41	3.48	1.82	2.66	4.48	7.96
1991	1.32	1.03	1.01	3.36	0.56	2.80	3.37	6.73
Limits <sup>2</sup>								
Lower	0.26	0.47	0.30	1.40	-0.05	0.59	1.01	2.4
Upper	2.37	1.59	1.72	5.31	1.17	5.02	5.72	11.0
±%	80	54	70	58	108	79	70	64

1 Carapace length (mm).

2 Mean ± 2 standard errors for most recent year.

3 Female estimates considered unreliable in 1980.

## Blue King Crab Length Frequency Pribilof District

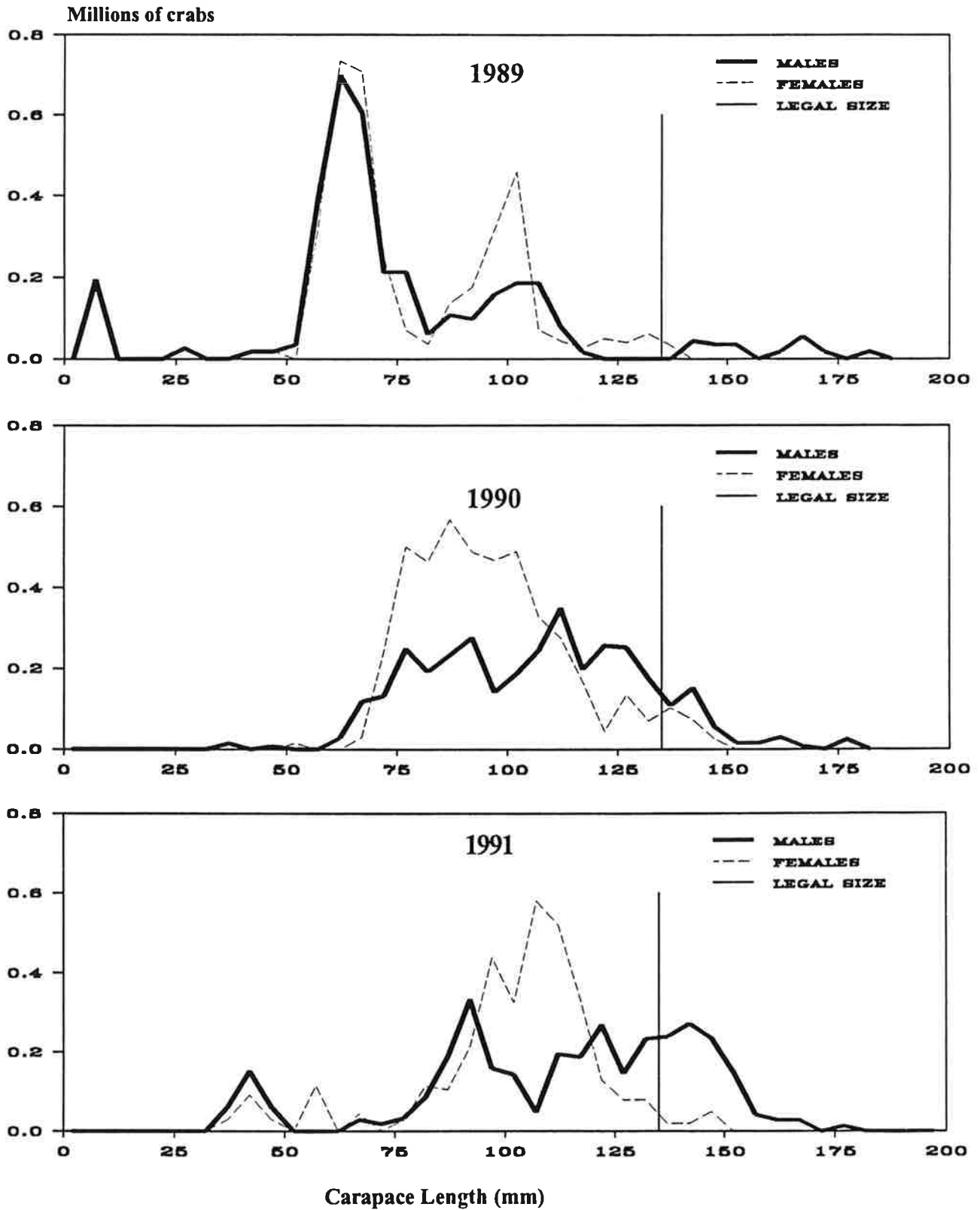


FIGURE 4. Estimates of abundance for Pribilof District blue king crab (*P. platypus*) by 5 mm length classes, 1989-1991. Vertical line indicates lower limit of legal size.

## Blue King Crab, Pribilof District

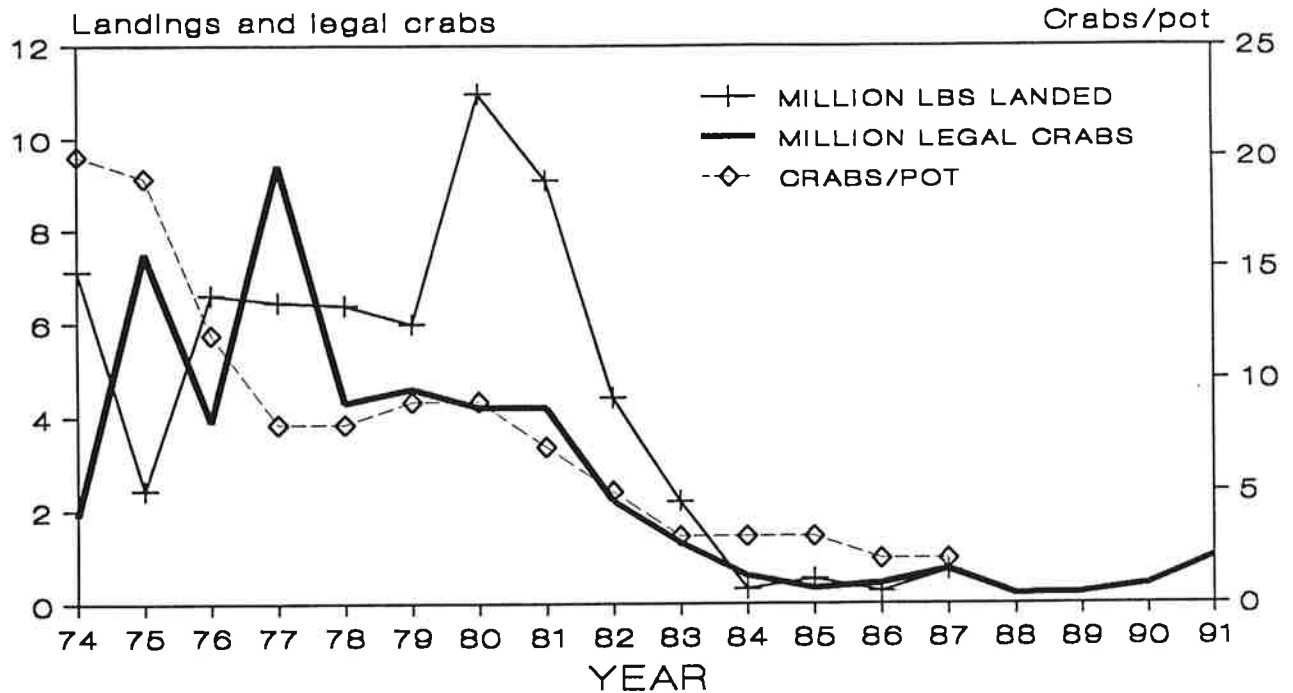


FIGURE 5. U.S. landings in millions of lbs, catch-per-unit-of-effort (CPUE) as abundance of legal blue king crabs (*P. platypus*) in millions in the Pribilof District, estimated from NMFS trawl surveys.

new hardshells, and 39% oldshells. Blue king crab are predominantly biennial spawners. Only a portion of the female population spawns in a given year, while the remainder is in the non-embryo-bearing phase. Among mature females, 43% carried new, uneyed embryos and 40% carried empty embryo cases indicating hatching had recently occurred. Less than 1% of males, and no females were in molting or soft-shell condition, indicating that molting was completed for 1991.

### St. Matthew Island Blue King Crab (*P. platypus*)

Legal ( $\geq 5.5$  in cw, or  $\geq 120$  mm cl) males occurred primarily southwest of the island (Chart 2 and Table 8) and were captured at 26 stations in 1991. (vs 12 last year). Legal males were found in depths from 25 to 71 fm (average 50.1 fm) and

temperatures from  $-1.5$  to  $2.3^{\circ}\text{C}$  (average  $0.7^{\circ}\text{C}$ ). The estimated abundance of legal crabs was 2.2 million crabs (Table 3), a non-significant increase of 31% from last year. The abundance of both pre-recruits and juveniles showed a non-significant increase of 100%. Size-frequency data (Fig. 6) show that pre-recruits have grown into the legal size range over the past year. The population appears stable and may be increasing slightly. The abundance of large females ( $\geq 80$  mm cl) showed a non-significant increase of 250% but estimates of female abundance are usually imprecise, and may be low due to habitat preference, as explained above. Among legal males, 19% were molting or softshell, 64% were new hardshells, and 16% oldshells. All 16 mature females were hardshell crabs; 11 (69%) showed signs of recent hatching, and one (6%) was carrying new uneyed embryos.

Table 3. Annual abundance estimates (millions of crabs) for blue king crab (*P. platypus*) in the Northern District from NMFS surveys.

Northern District								
Size <sup>1</sup> (mm)	Males			Total	Females			Grand Total
	<105	105-119	≥120		<80	≥80	Total	
Width(in)	<4.3	4.3-5.5	≥5.5		<3.2	≥3.2		
1978	5.6	2.4	1.8	9.8	0.8	0.4	1.2	11.0
1979	4.9	2.3	2.2	9.4	1.7	0.9	2.6	12.0
1980	3.4	2.2	2.5	8.1	0.8	2.2	3.0	11.1
1981	1.2	1.8	3.1	6.3	0.0	0.5	0.5	6.8
1982	3.2	2.6	6.8	12.5	0.4	0.7	1.1	13.7
1983	1.8	1.6	3.5	6.9	0.2	2.4	2.7	9.6
1984	1.4	0.6	1.6	3.6	0.2	0.5	0.7	4.3
1985	0.46	0.35	1.08	1.89	0.08	0.13	0.21	2.10
1986	0.56	0.40	0.38	1.34	0.25	0.06	0.31	1.65
1987	1.07	0.73	0.74	2.53	0.46	0.22	0.68	3.21
1988	1.44	0.65	0.83	2.92	0.90	0.79	1.70	4.62
1989	4.80	0.97	1.48	7.25	1.58	1.68	3.27	10.52
1990	1.44	0.75	1.66	3.85	0.45	0.20	0.65	4.50
1991	2.92	1.52	2.17	6.61	0.84	0.69	1.53	8.14
Limits <sup>2</sup>								
Lower	-0.15	0.78	1.41	2.51	-0.44	-0.33	-0.77	1.75
Upper	5.99	2.27	2.93	10.70	2.12	1.71	3.83	14.53
±%	105	49	35	62	152	148	150	79

1 Carapace length (mm), categories reflect smaller average size in the Northern District; 80 mm is the median size at maturity for females

2 Mean ± 2 standard errors for most recent year.

The 1991 fishery opened on September 1 with a guideline harvest of 3.2 million pounds out of an estimated stock of 8.1 million lbs. The target exploitation rate was 40% of the legal male biomass. In 1990, 31 vessels landed 1.7 million pounds, with an average CPUE of 8 crabs per pot-lift<sup>3</sup>. Preliminary information indicates that 1991 landings were very close to the guideline (Bill Nippes, ADF&G, 211 Mission Road, Kodiak, AK 99615, pers. commun., September 1991).

### Distribution and Abundance of Tanner Crab (*C. bairdi*)

Although the legal minimum size of 5.5 in cw is equivalent to 140 mm cw, legal crabs are defined in this report as ≥ 138 mm cw because of the difference between scientific measure (between spines) and commercial measure (spine tip to spine tip). The data included in Table 4, however, show

3. Alaska Department of Fish and Game, 1990. Westward Region shellfish report to the Alaska Board of Fisheries. ADF&G, Div. of Commercial Fisheries, Westward Regional Office, 211 Mission Road, Kodiak, AK 99615, 325 p.



## Blue King Crab Length Frequency Northern District

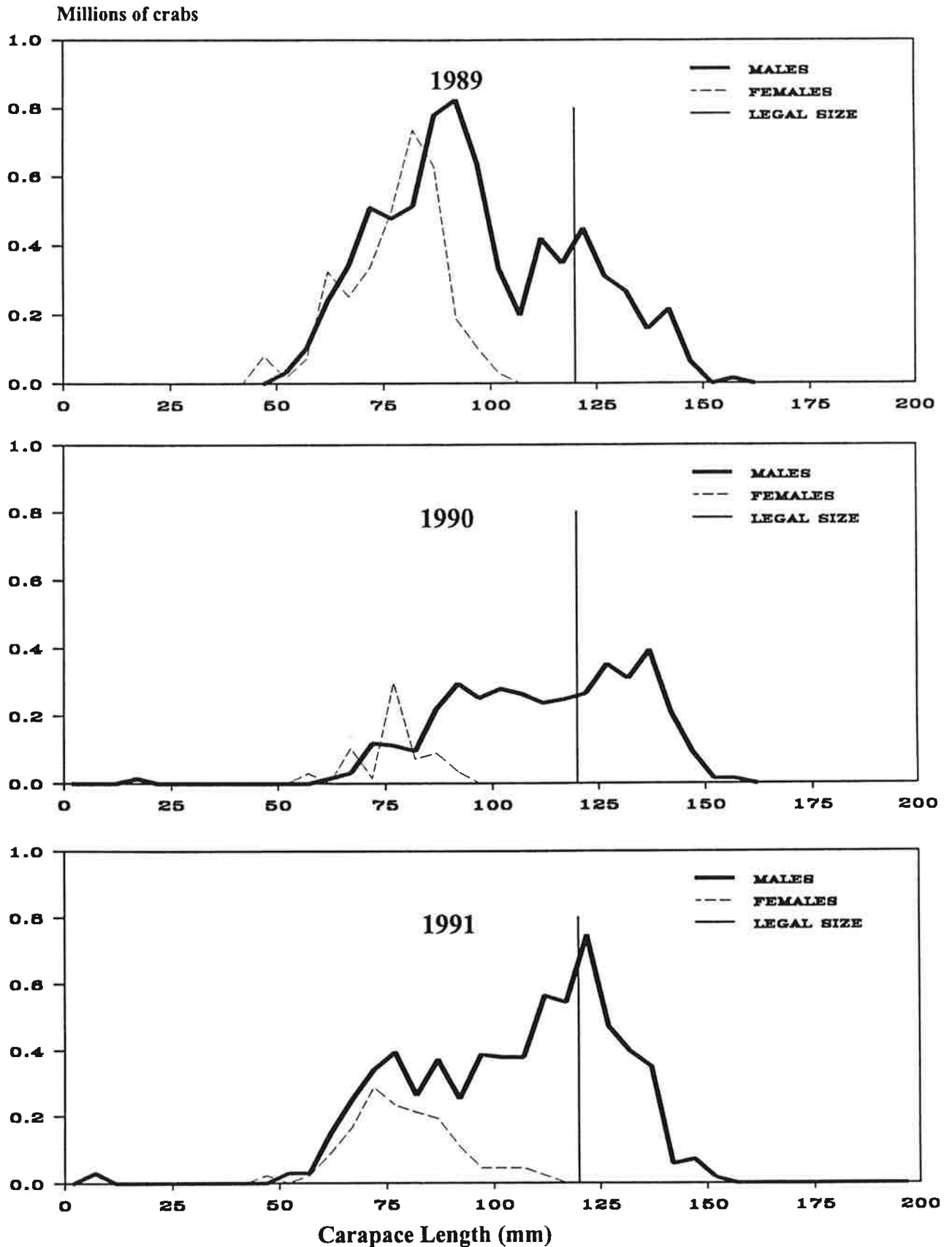


FIGURE 6. Estimates of abundance for St. Matthew Island (Northern District) blue king crab (*P. platypus*) by 5 mm length classes, 1989-1991. Vertical line indicates lower limit of legal size. 13

## Blue King Crab: Northern District

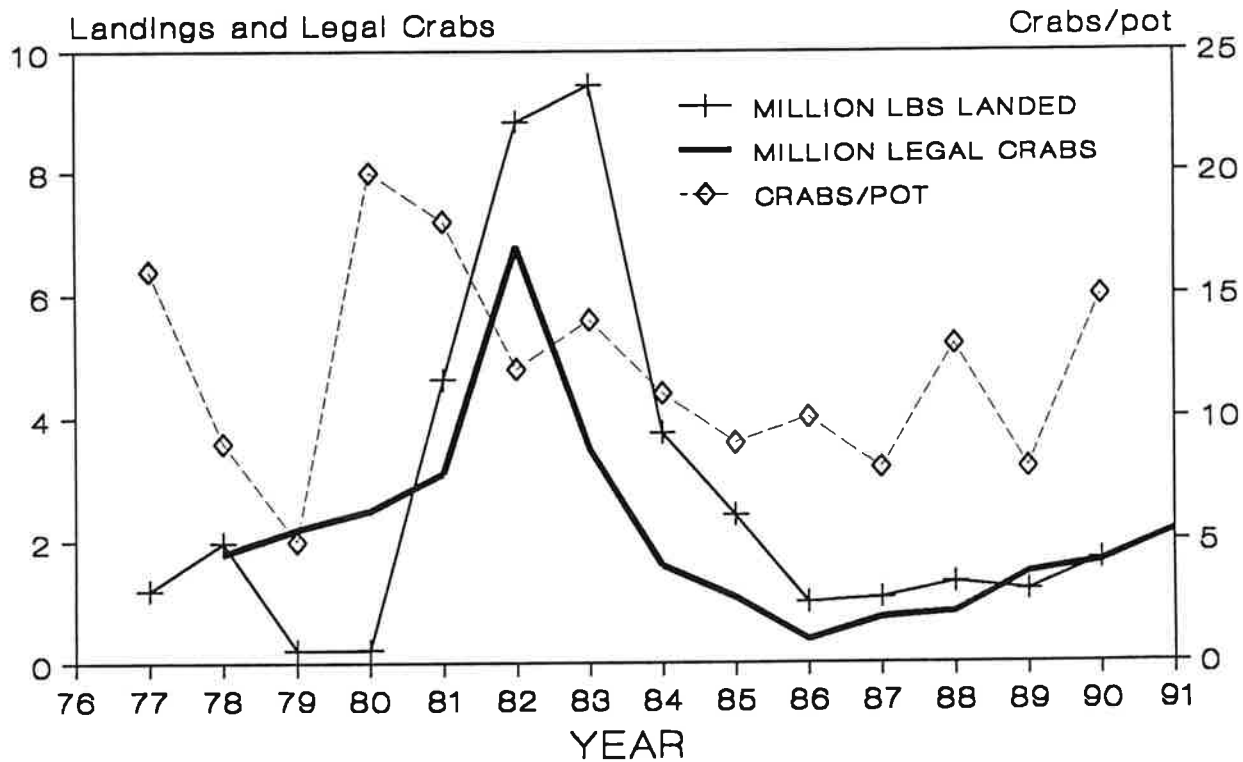


FIGURE 7. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of legal blue king crabs (*P. platypus*) in millions in the Northern District, estimated from the NMFS trawl surveys.

“large” crabs as males  $\geq 135$  mm, because this is closer to the lower limit of sizes landed, and has been used for a long-term index since 1976.

Large males were widely distributed in Bristol Bay and continental slope areas with regions of relatively high abundance in mid-Bristol Bay and the Pribilof Islands (Chart 3 and Table 9). Legal crab were found from 18 to 97 fm (average 42.2 fm) and at temperatures ranging from  $-0.8$  to  $5.5^{\circ}\text{C}$  with an average temperature of  $3.0^{\circ}\text{C}$ . The estimated abundance of large ( $\geq 135$  mm cw) male *C. bairdi* in the Eastern District is 45.5 million crabs (Table 4), of which 35.1 million are legal size ( $\geq 138$  mm cw). About 72% of the legal crab were located east of  $166^{\circ}\text{W}$  long. The Eastern District (east of  $173^{\circ}\text{W}$  long.) includes 99.8% of legal males. Note that, prior to 1989, all estimates were presented for the combined Bristol Bay and Pribilof Districts, which

included 98.4% of large males in 1988. The estimated total abundance of legal crabs showed a non-significant decrease of 22% from last year. The estimated abundance of pre-recruits (110-134 mm cw) showed a non-significant increase of 37%, and the estimate of small males ( $< 110$  mm cw) showed no significant change. This population appears fairly stable at a high level of abundance. Changes in abundance in the past few years may simply be due to imprecision in the survey. Size-frequency data (Fig. 8) show a strong cohort of pre-recruits, many of which may grow into the legal size category next year. A relatively small proportion (8%) of legal males were molting or softshell, whereas new hardshells comprised 58%, and oldshells were 33%.

The abundance of large ( $\geq 85$  mm cw) females (all districts) showed a non-significant increase of 27%, and the abundance of small ( $< 85$  mm)

Table 4. Annual abundance estimates (millions of crabs) for Tanner crab (*C. bairdi*) from NMFS surveys. Data for 1989-present for Eastern District; all prior data for Bristol Bay and the Pribilof Districts.

Size <sup>1</sup> (mm) Width(in)	Males				Females			Grand Total
	<110 <4.3	110-134 4.3-5.3	≥135 ≥5.3	Total	<85 <3.4	≥85 ≥3.4	Total	
1976	180.2	136.6	109.5	426.3	174.7	220.4	395.1	821.4
1977	255.0	116.3	92.1	463.4	328.4	215.8	544.2	1,007.6
1978	124.2	81.2	45.6	251.0	116.1	73.3	189.4	440.4
1979	133.1	47.7	31.5	212.3	122.6	42.1	164.7	377.0
1980	453.3	65.0	31.0	549.3	326.9	106.8	433.7	983.0
1981	303.8	24.0	14.0	341.8	324.2	79.1	403.3	745.1
1982	88.8	46.9	10.1	145.8	126.4	83.6	210.0	355.8
1983	146.3	32.0	6.7	185.0	180.1	45.4	225.5	410.5
1984	85.1	21.2	5.8	112.1	107.0	33.4	140.4	252.5
1985	31.1	9.4	4.4	44.9	24.2	15.6	39.8	84.7
1986	110.4	12.9	3.1	126.4	68.2	13.7	81.9	208.3
1987	230.1	19.7	8.3	258.0	193.3	35.5	228.8	486.8
1988	287.3	59.7	17.4	364.4	184.8	81.0	265.8	630.2
1989	403.0	102.1	42.3	547.5	338.6	63.8	402.4	949.9
1990	286.1	78.8	53.7	418.6	266.5	97.4	363.9	782.5
1991	267.2	105.4	45.5	418.1	232.1	116.8	348.9	767.0
Limits <sup>2</sup>								
Lower	189.7	61.1	29.6	309.4	141.6	71.3	226.8	536.2
Upper	344.7	149.7	61.4	526.8	322.6	162.4	471.0	997.8
± %	27	42	35	26	39	39	35	30

1 Carapace width (mm).

2 Mean ± 2 standard errors for most recent year.

females showed no significant change from last year. Only 21% of mature females were new hardshells, whereas 78% were oldshells, and <2% were molting or softshell. This is additional evidence that recruitment is slowing as this population nears peak abundance. About 98% of mature females were carrying new, uneyed embryos, suggesting that the period of larval hatching and embryo extrusion was essentially completed by the time of the survey.

The harvest guideline for 1991-92 has been set at 32.8 million lbs, out of an estimated 82.3 ± 29.0 millions lbs. available, for an exploitation rate of 40%. In 1990 about 40.1 million pounds were harvested<sup>3</sup> by 255 vessels, with average CPUE of 19

crabs/pot-lift(Fig.9)(Ken Griffin, ADF&G, P.O. Box 308, Dutch Harbor, AK 99692, pers. commun., September 1991).

#### Distribution and Abundance of Snow crab (*C. opilio*)

Although the legal minimum size limit for *C. opilio* is 3.1 in cw (78 mm), processors currently prefer a minimum size of 4.0 inches (102 mm). Therefore, the size ranges for male *C. opilio* used in this report are defined as follows: sublegal, <3.1 in (<78 mm) cw; small, 3.1-4.0 in cw (78-101 mm); large, ≥4.0 in cw (≥102 mm); and very large ≥4.3 in cw (≥110 mm).

### C. bairdi Width Frequency

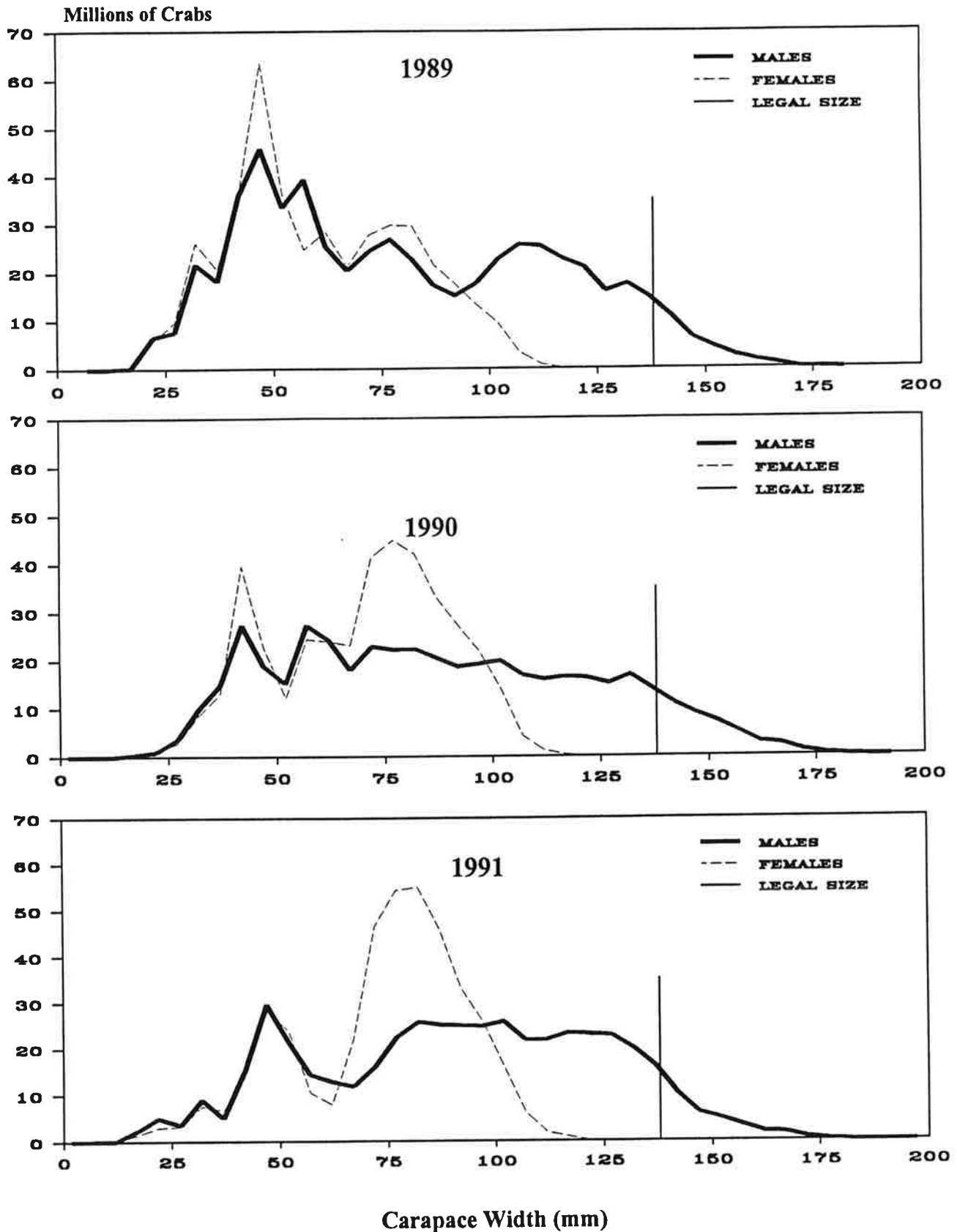


FIGURE 8. Estimates of abundance of *C. bairdi* in Bristol Bay and the Pribilof District by 5 mm width classes, 1989-1991. Vertical line indicates lower limit of legal size.

### C. bairdi, Bristol Bay and Pribilofs

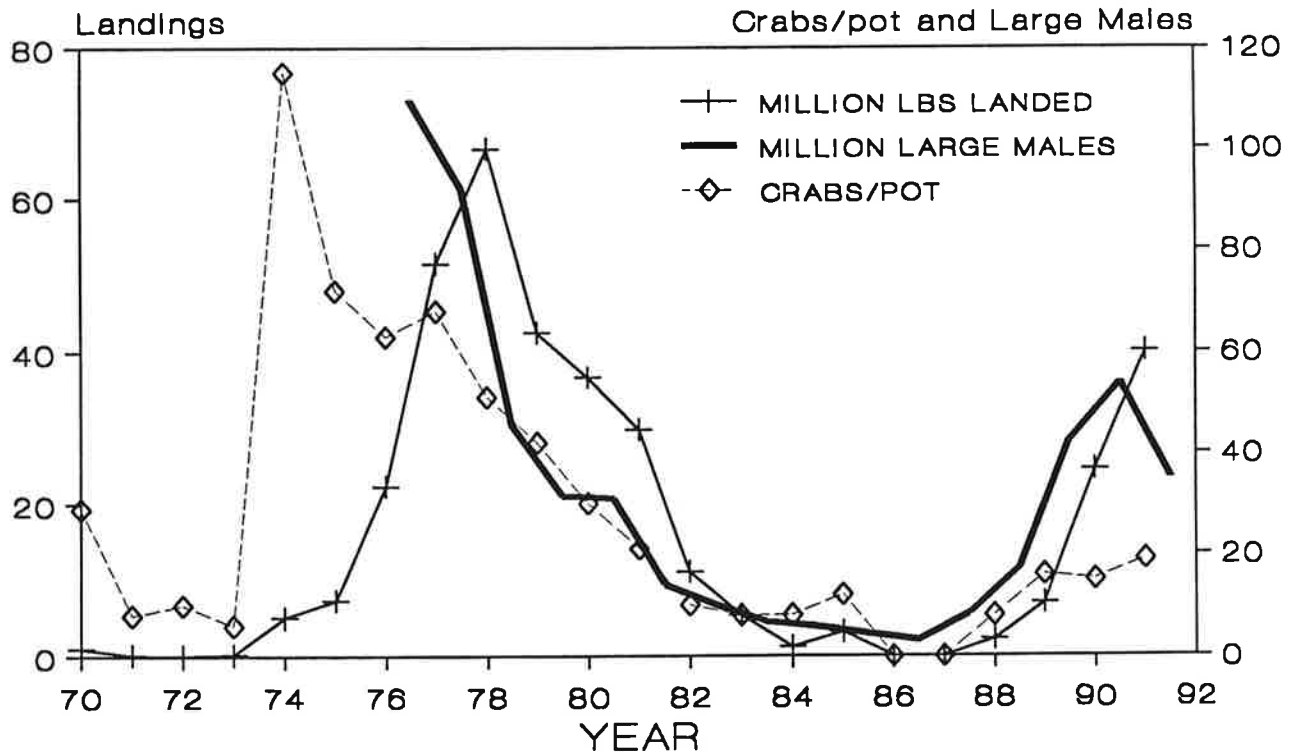


FIGURE 9. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male *C. bairdi* in millions in the Bristol Bay and Pribilof Districts (prior to 1989), or the Eastern District (After 1988), estimated from the NMFS trawl surveys.

The distribution of large males showed an area of high concentration northeast of the Pribilof Islands (Chart 4 and Table 10). There were also areas of high abundance in the extreme northwestern portion of the survey area west of St. Matthew Island. Crab larger than 4.0 inches were taken at depths from 24 to 97 fm (average 48.1 fm), and temperatures from -1.6 to 5.5°C (average 1.7°C).

This species has been surveyed since 1978, but the area surveyed prior to 1982 was smaller than the currently surveyed area, and previous estimates probably underestimated the exploitable crab population. Furthermore, the 4-inch (102 mm) size preference was not in use prior to 1984. For these reasons estimates of abundance of large males are not shown for years prior to 1984 (Table 5; Fig. 11).

The estimated number of large ( $\geq 102$  mm

cw) males (Eastern and Western Districts combined) is 484.1 million crabs, a non-significant increase of 15% from last year. Small males (78-101 mm cw) showed a significant decrease of 32%, and very large males ( $\geq 110$  mm cw) showed a significant increase of 71%. Sublegal males ( $< 3.1$  in cw) showed a significant increase of 79%. Increases in larger size groups are primarily due to growth of pre-recruit crab, and the population also appears to have had strong recruitment of juvenile crab. The estimated abundance of large female ( $\geq 50$  mm cw) crabs showed a non-significant increase of 28%, and small females showed a significant increase of 125%. Size-frequency data (Fig. 10) indicate that major recruitment of postlarval crab occurred in the mid-1980's, and recruitment to the fishery has improved as juveniles matured. From 1989 to 1990 a large

Table 5. Annual abundance estimates (all districts combined) for eastern Bering Sea snow crab (*C. opilio*) from NMFS surveys (millions of crab).

Size <sup>1</sup> (mm) Width(in)	Males				Females			Grand Total
	<102 <3.7	≥102 ≥4.0	≥110 ≥4.3	Total	<50 <2.0	≥50 ≥2.0	Total	
1982	*	*	21.7	2073.2	402.6	2255.8	2658.4	4731.7
1983	*	*	22.1	1858.1	673.1	1228.4	1912.6	3759.7
1984	1237.4	153.2	73.9	1390.7	610.5	581.7	1192.2	2582.9
1985	547.8	74.9	40.7	622.6	258.2	123.5	381.7	1004.3
1986	1179.0	83.1	45.9	1262.0	790.6	422.0	1212.5	2474.5
1987	4438.9	150.8	70.0	4589.8	2919.3	2929.3	5848.6	10438.4
1988	3467.2	171.0	90.1	3638.2	1235.3	2322.7	3556.0	7194.2
1989	3646.1	187.1	81.2	3833.1	1922.8	3790.7	5713.4	9546.5
1990	2860.4	420.3	188.7	3280.7	1463.3	2798.1	4261.4	7542.1
1991	3971.2	484.1	323.0	4455.0	3289.0	3575.0	6863.9	11319.2
East (%) <sup>2</sup>	67.1	78.3	78.5	68.5	59.8	60.4	60.2	63.8
Limits <sup>3</sup>								
Lower	2700.4	343.7	216.4	3163.3	2006.3	2037.7	4255.6	7418.9
Upper	5245.0	624.5	429.5	5747.4	4571.7	5112.2	9472.2	15219.6
±	32	29	33	29	39	43	38	34

1 Carapace width in mm.

2 Proportion of size group in Eastern District.

3 Mean ± 2 standard errors for most recent year.

\* Estimates not available at present time.

number of males grew about 20 mm, a larger than expected increment. It also appears that a large number of legal sized but small clawed crab grew into the large size category in 1991. In addition, strong recruitment of postlarval crab has occurred in the last few years. Recruitment patterns in this stock are not entirely clear since recruitment evidently occurs both through localized production and by immigration from unsurveyed areas, perhaps including Soviet waters. Among large male crabs in the Eastern District, 36% were in molting or softshell condition, 51% were newshells indicating a recent molt, and 13% were oldshells (these may have some scratch marks and be slightly duller than newshells, but still fairly clean). Less

than 0.1% were very oldshells (dark colored, often with wound marks and/or overgrown with barnacles and other organisms). In the Western District, 15% of large males were molting or softshells, 66% were newshells, 16% were oldshells, and 3% were very oldshells.

Almost no females were molting or softshell, indicating that the female molting period was completed. Oldshells comprised 54% of mature females in the Eastern District, and 85% in the Western District: these proportions are very similar to last year. Considering only mature female crabs, about 87% carried new uneyed embryos (vs 77% last year) indicating that hatching and extrusion were close to completion by the time of the survey.

## C. opilio Width Frequency

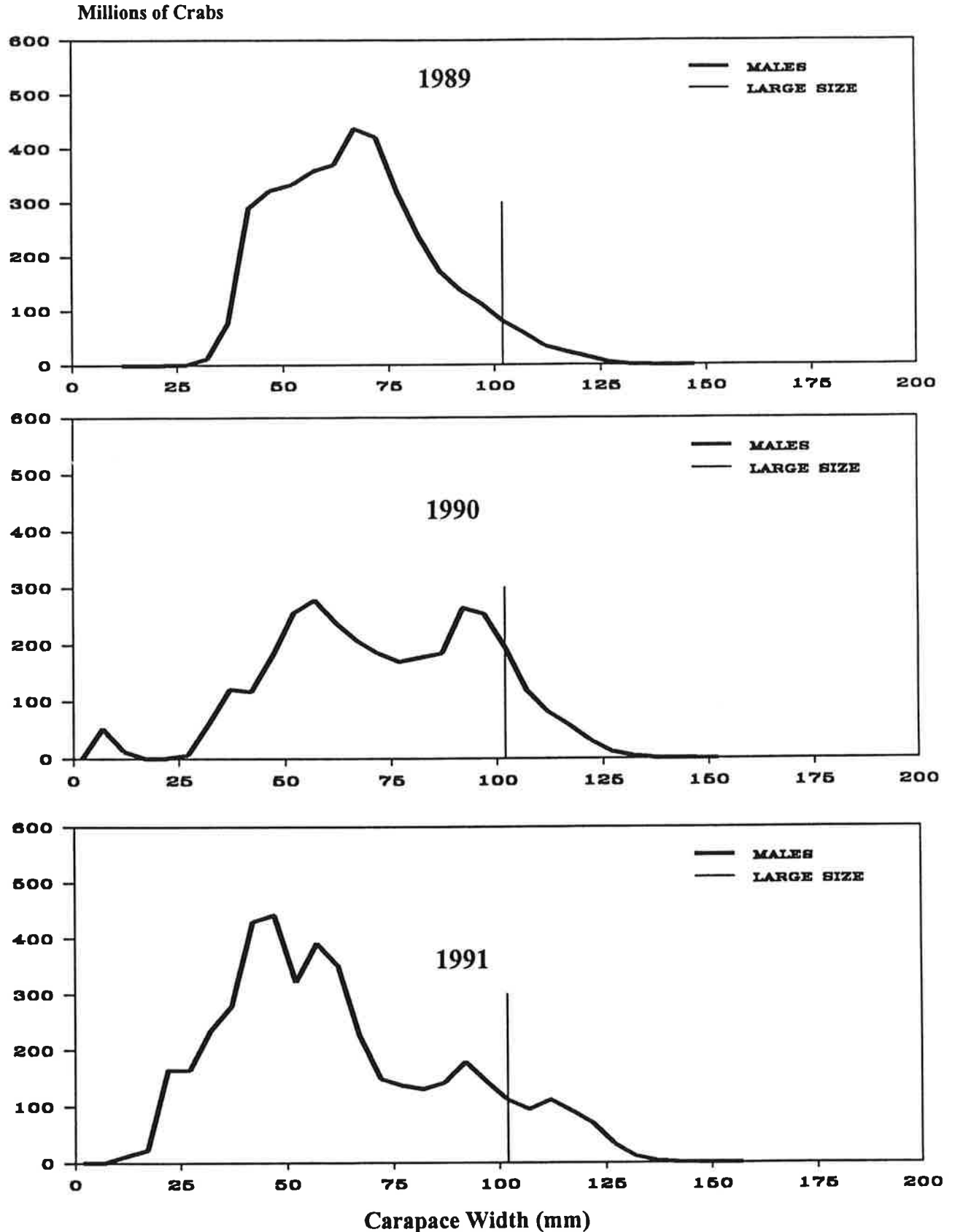


FIGURE 10. Estimates of abundance for male *C. opilio*, all districts combined by 5 mm width classes, 1989-1991. Vertical line indicates minimum size preferred by industry.

## C. opilio, All Districts

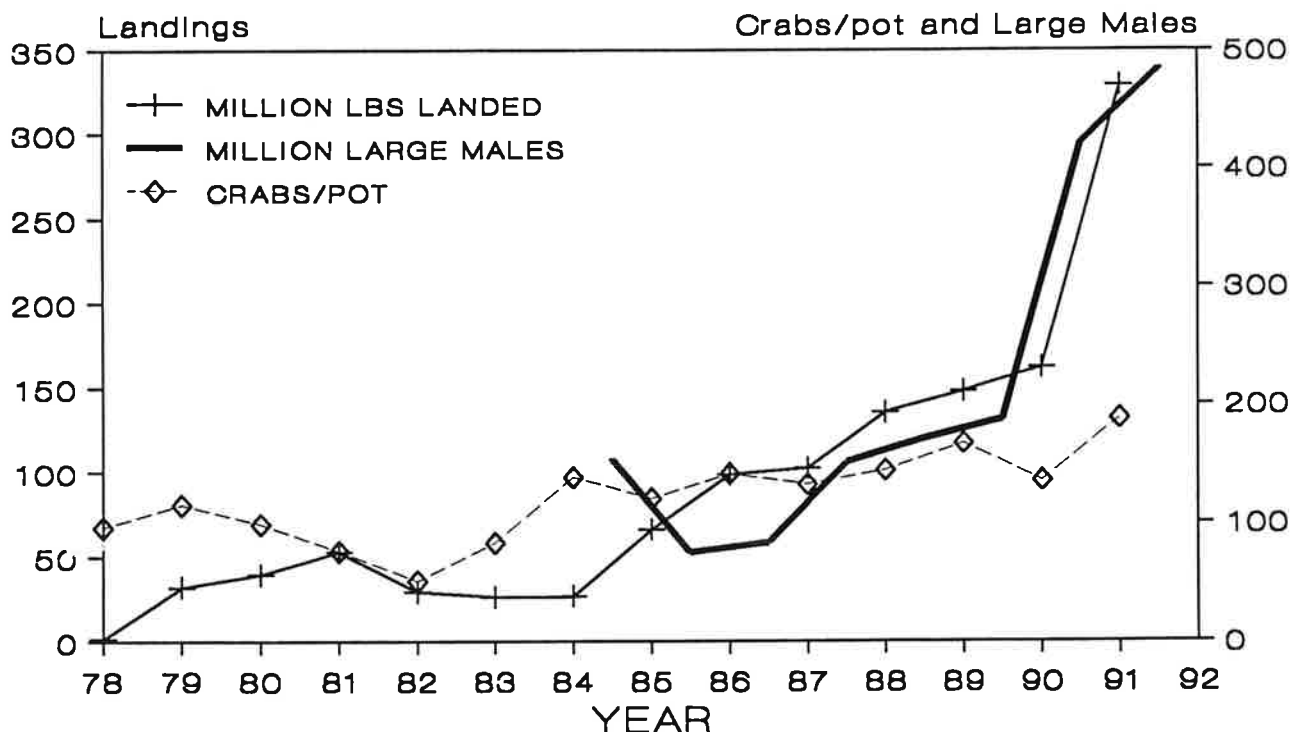


FIGURE 11. U.S. landings in million of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male ( $\geq 102$  mm cw) *C. opilio* in millions (all districts combined), estimated from the NMFS trawl surveys.

The harvest guideline for 1991 has been set at 400 million lbs for large crab. Currently there are an estimated 690 ( $\pm 200$ ) million pounds of large males ( $\geq 4.0$  in cw) within the survey area of which 88% by weight exist east of 173° W long. Preliminary 1991 ADF&G statistics<sup>3</sup> indicate that about 328.6 million lbs were landed (Fig. 11) by 228 vessels, with average catches of 188 crabs/pot (Ken Griffin, ADF&G, pers. commun., September 1991).

### Distribution and Abundance of Hair Crab

Hair crab are widely scattered across the EBS (Chart 5 and Table 11). Areas of concentration exist immediately north of the Alaska Peninsula and near the Pribilof Islands. Large hair crab ( $\geq 3.5$  in or  $\geq 90$  mm cl) were taken in 24 to 46 fm (average 32.0

fm) and at temperatures of 2.1 to 5.4°C (average 3.9°C). Large males were 100% of the catch in many areas. We have never found many female or small male crab during the survey and hence have little understanding of their distribution.

Because of their patchy distribution and low densities, estimates of abundance of hair crab are imprecise. The estimated abundance of large male hair crabs has been declining since 1981 and has been very low since 1988 (Table 6). The current estimate of 650,000 shows a non-significant increase of 18% over the past year. The estimated abundance of small ( $< 3.5$  in cl) males shows a non-significant decrease of 62% from last year, but is still relatively high and indicative of recent strong juvenile production. The estimated abundance of total females shows a non-significant increase of 53% from last year, but this estimate is unreliable as



indicated above. Size-frequency data (Fig. 12) show improved recruitment of small male crabs in the past 3 years, and may indicate future improvement in the fishable stocks. Shell conditions for hair crab are difficult to determine, and may not be very precise. The majority of males (80%) and females (94%) were new hardshell crabs.

Landings have been largely incidental to Tanner and snow crabbing although there is occasionally some directed effort. No hair crab were landed in the last year. Currently there are an estimated 1.1 million pounds ( $\pm 57\%$ ) of large male crabs. The fishery and markets have both been intermittent and probably will remain so in the near

future. There are no guideline harvest levels, closed seasons or size limits for hair crab. CPUE has not been predictable due to low effort in recent years (Fig. 13).

### Bottom Temperatures

The average bottom water temperature in 1991 was 2.3°C as compared to 2.2°C in 1990 and 3.0°C in 1989. The coldest waters were encountered around St. Matthew Island (Chart 6). The warmest waters were found in Kuskokwim Bay and inner Bristol Bay. Most year-to-year variation in temperature is associated with relatively shallow areas of the

Table 6. Annual abundance estimates (millions of crabs) for hair crabs (*Erimacrus isenbeckii*) from NMFS surveys. The size at entry to the U.S. fishery is approximately 90 mm (3.5 in) carapace length.

Size <sup>1</sup> (mm) Length(in)	Males		Total	Females		Grand Total
	<90 <3.5	≥90 ≥3.5		Total	Total	
1979	6.4	16.1	22.5	1.6	24.1	
1980	6.0	13.7	19.7	3.1	22.8	
1981	6.1	15.9	22.0	0.8	22.8	
1982	1.4	7.7	9.1	0.4	9.5	
1983	0.9	4.8	5.7	0.9	6.6	
1984	1.1	2.9	4.0	0.4	4.4	
1985	0.53	2.22	2.75	0.22	2.97	
1986	0.71	1.46	2.17	0.37	2.54	
1987	1.95	1.19	3.14	0.91	4.05	
1988	3.98	0.55	4.52	0.85	5.37	
1989	12.30	0.40	12.72	0.30	13.02	
1990	15.58	0.55	16.14	0.87	17.00	
1991	5.88	0.65	6.53	1.33	7.86	
Limits <sup>2</sup>						
Lower	2.18	0.28	2.61	0.46	3.08	
Upper	9.59	1.02	10.45	2.19	12.64	
±%	63	57	60	65	61	

1 Carapace length (mm).

2 Mean  $\pm$  2 standard errors for most recent year.

# Hair Crab, *Erimacrus isenbeckii*

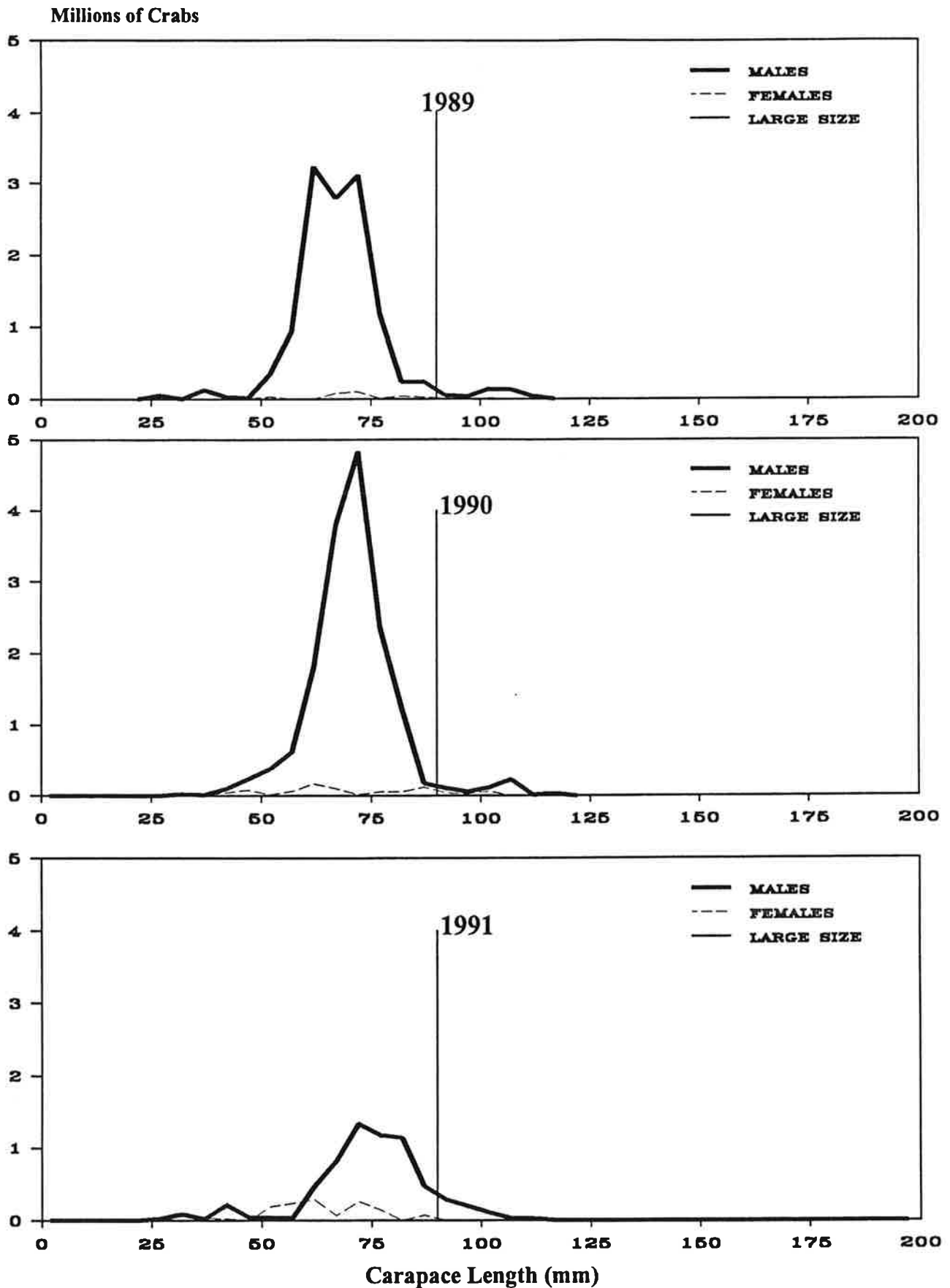


FIGURE 12. Estimates of abundance for hair crab (*E. isenbeckii*) by 5 mm length classes, 1989-1991. Vertical line indicates lower limit of large size group.

## Hair Crab, *Erimacrus isenbeckii*

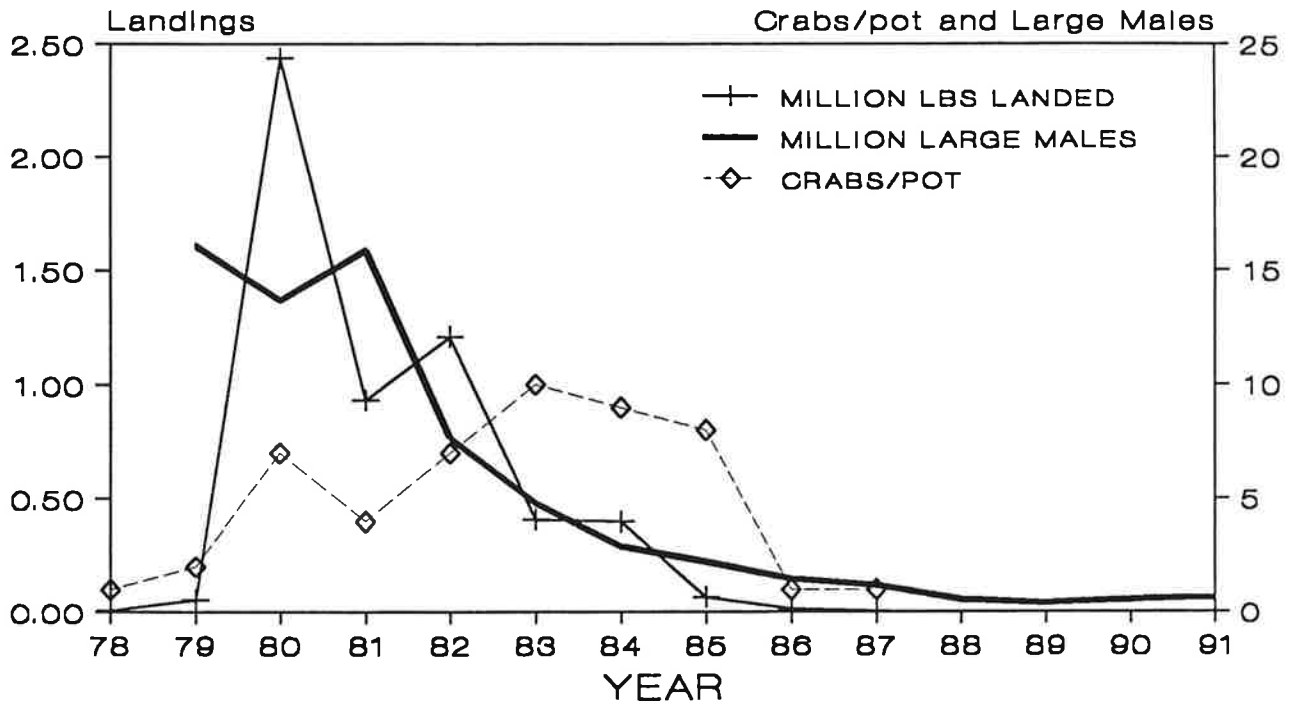


FIGURE 13. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male ( $\geq 90$  mm cl) hair crab (*E. isenbeckii*) in millions (all districts combined), estimated from the NMFS trawl survey.

continental shelf and near shore. There is little year-to-year change in the Pribilof Islands and other shelf edge areas where temperatures are moderated by incursions of deep ocean water. The effect of water temperature on changes in the distribution and abundance of crabs in the eastern Bering Sea is poorly known.

As an index of mean temperature in the area most important to larval and juvenile red king crab growth, the average temperature has been determined from the June survey data for 37 stations along the Alaska Peninsula since 1971. This coastal temperature index for 1991 was  $3.61^{\circ}\text{C}$  (Fig. 14), which is slightly above the 1971-1991 average.

### Summary

In the early or mid-1980's, a major recruitment event occurred for both Tanner and snow crab. In 1990 and 1991, *C. opilio* have continued to grow, increasing the abundance of large crab. Additionally, another major cohort of juvenile *C. opilio* appears to have been produced in the late 1980's. Pribilof Island blue king crabs, as well as hair crab, have also shown improved signs of recruitment of small crab; however, lack of knowledge concerning growth rates of those two species leads to uncertainty about the timing of the event. In contrast, Bristol Bay red king crab and St. Matthew Island blue kings show little sign of recruitment, but the

## Coastal Bottom Temperature Index

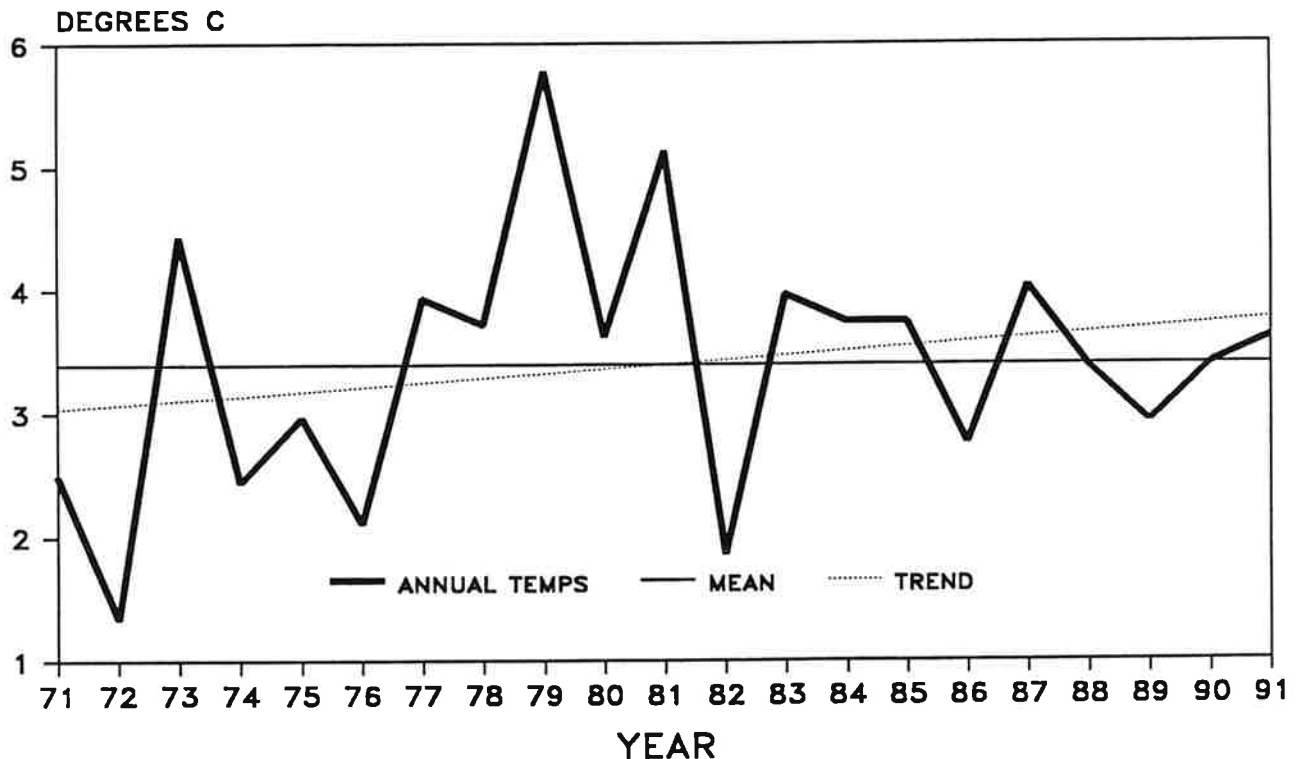


FIGURE 14. Coastal bottom temperature index (mean of 37 survey stations along the Alaska Peninsula in degrees C for 1971-present). Horizontal line is average value over the entire period.

survey has generally been unsuccessful in detecting such crab until they are typically 50-75 mm cl, or 5-8 years of age. Whatever conditions are responsible for such recruitment events may have been limited to the outer shelf area, where it would have affected all but the latter two stocks. Shelf and coastal water temperatures remained in the average range, as they have since 1983.

### A Note on Tagging and Tag Returns

Since 1982, NMFS has tagged a number of crabs each year. These include red, blue and golden (brown) king crabs. In Bristol Bay, we tagged about 10,000 red king crabs in 1985, and several hundred each year through 1990. The purpose of our tagging program is to gather information on growth, migrations, and the frequency of molting. For this reason,

we need fairly complete information with returned tags. Tag returns are not used to monitor or close fisheries. All tagged crabs, regardless of size or sex, may be retained for the purpose of tag data recovery. The following information is requested:

1. Name and mailing address of person to receive reward
2. Tag number (one or both tags if present)
3. Length-width measurements (length - from rear of eye socket to center of rear margin of carapace; width - maximum width including spines)
4. Recovery date
5. Recovery location (Latitude and Longitude)
6. Depth
7. Vessel ADF&G number

This information will be recorded on stamped data cards and if possible validated by ADF&G biologists before being mailed to the NMFS in Kodiak. The reward will be mailed to the address on the card. Any legal male crab will remain the property of the catcher vessel.

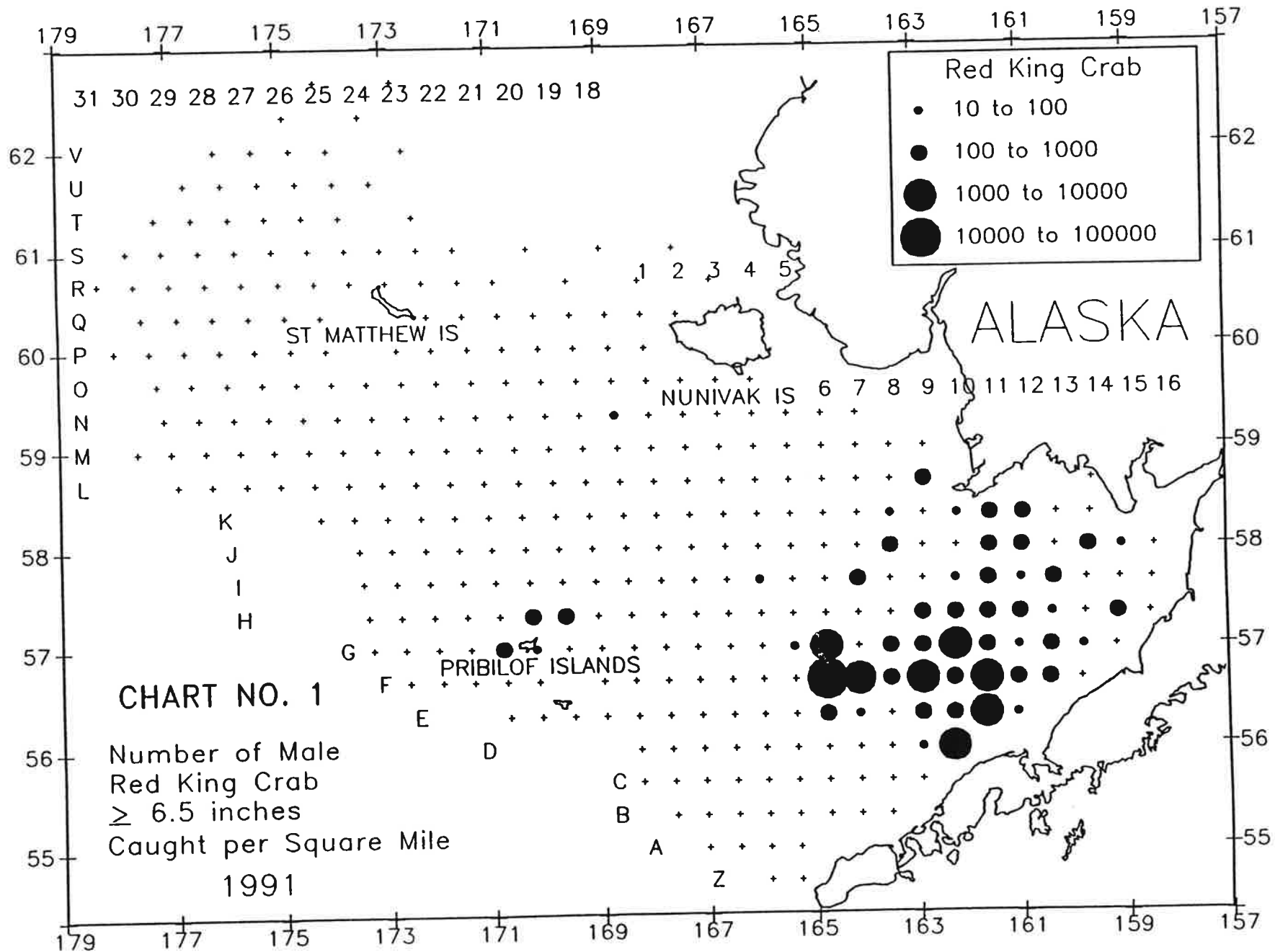
A reward of \$10.00 will be paid for all tags returned with complete information with the exception of 70 predetermined numbers. Of these 70 tags, 40 will have a reward value of \$25.00, 20 a reward value of \$50.00 and 10 a reward value of \$100.00. Tags returned without the above information will have a reward value of \$1.00.

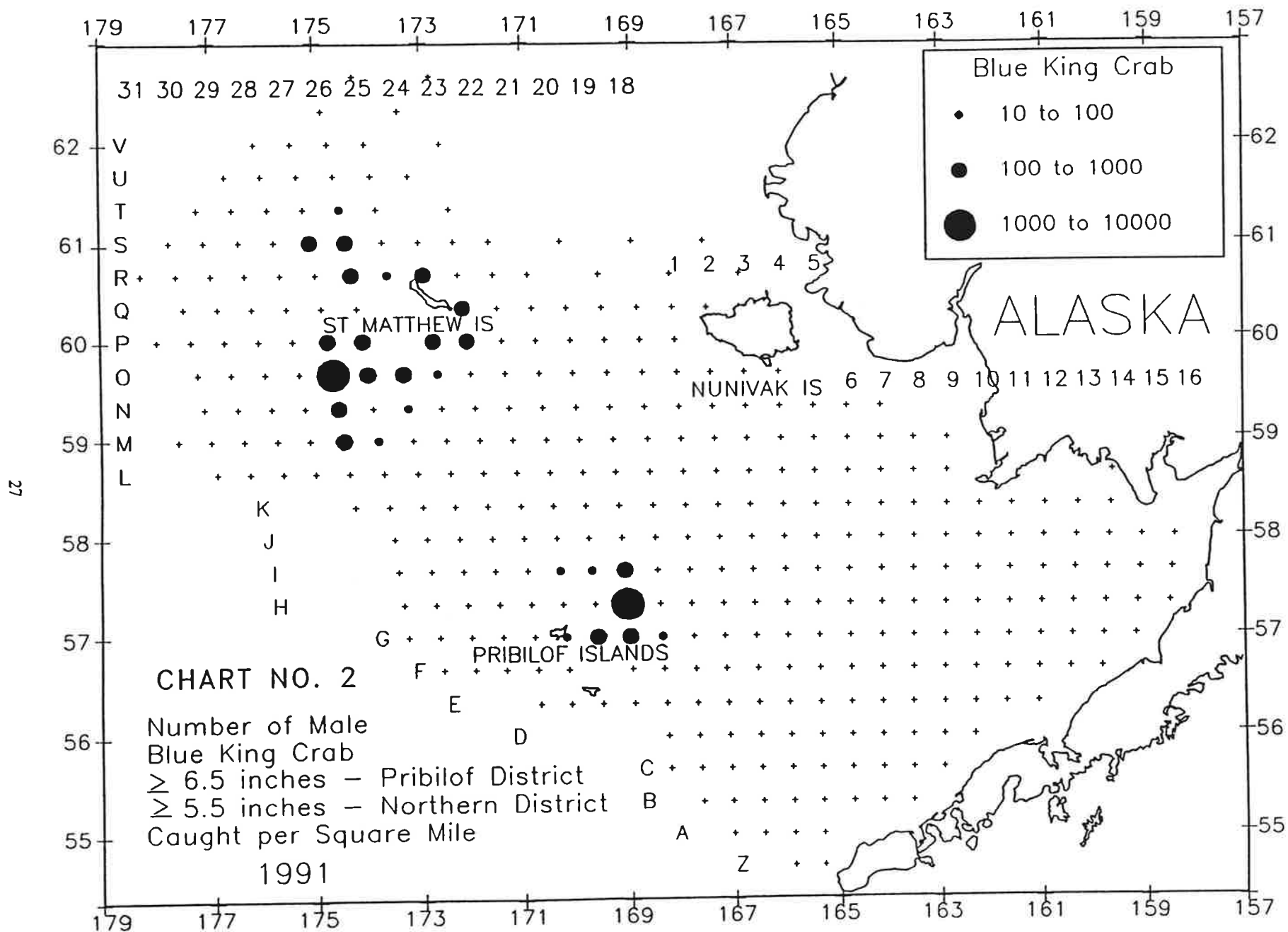
After the fishery is closed and all returns have been checked for completeness and accuracy, six of the returned numbers will be randomly

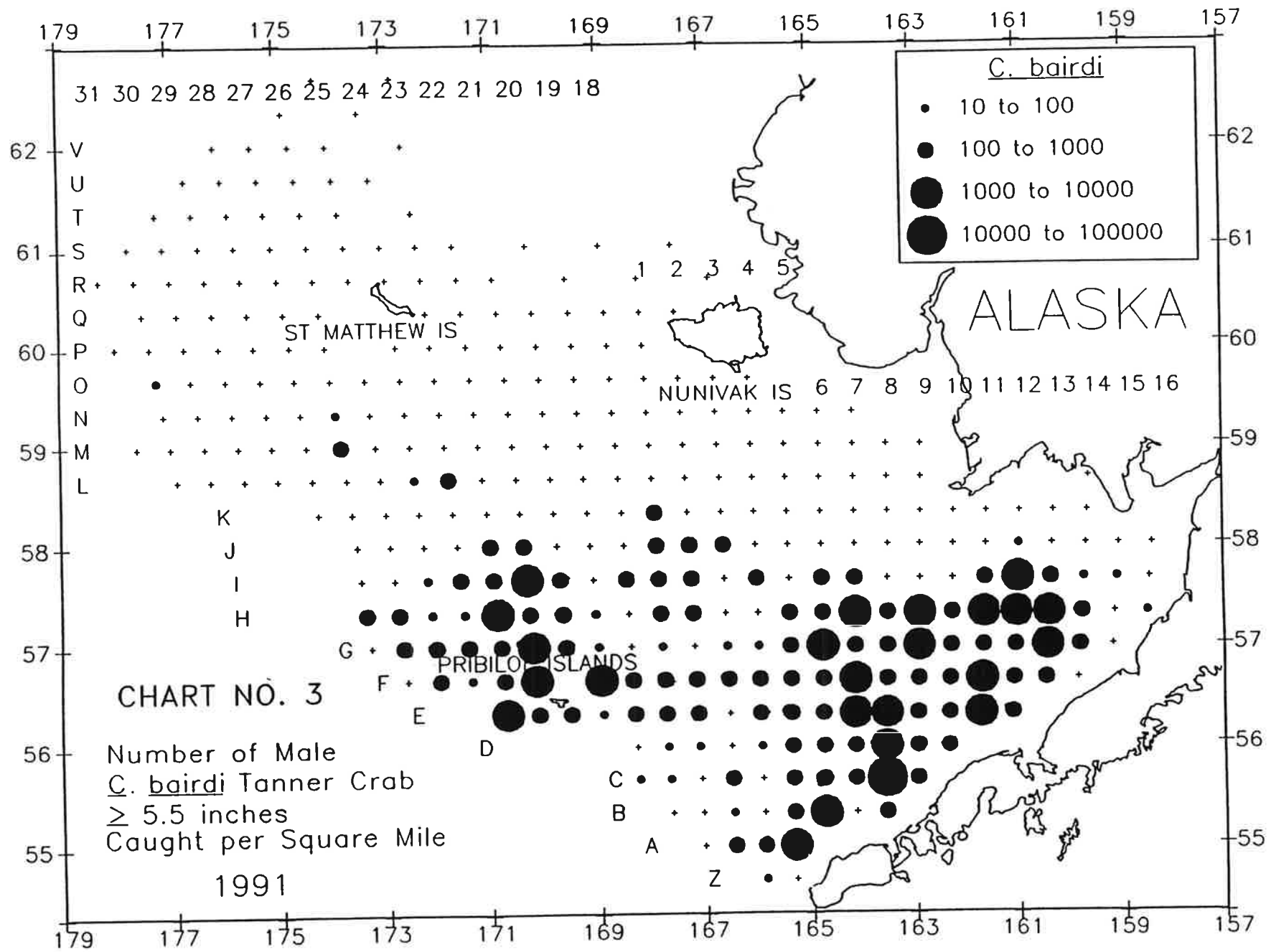
selected by computer. Of these randomly selected numbers, three will have an additional reward value of \$200.00 and three will have an additional reward value of \$300.00. In each case, the returned tag must be accompanied by all of the above listed information to be eligible. Cooperation is essential to the success of this program.

### **Acknowledgements**

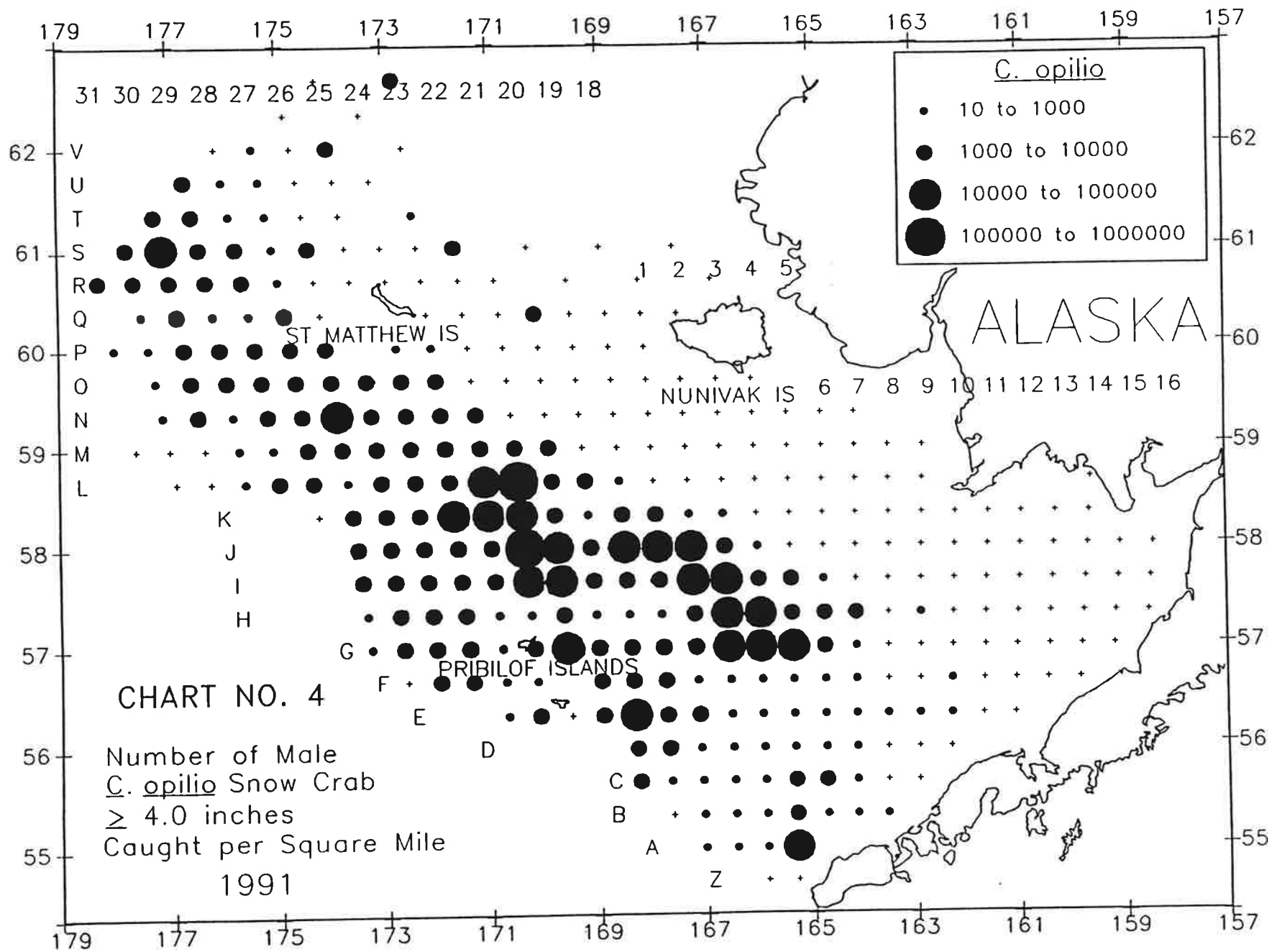
Successful completion of the annual eastern Bering Sea crab-groundfish survey is crucially dependent on the skipper and crews of the participating vessels. We extend special thanks to Mitch Hull and Joe Spicciani (FV Ocean Hope 3), Tom Oswald (RV Alaska), and their crews.

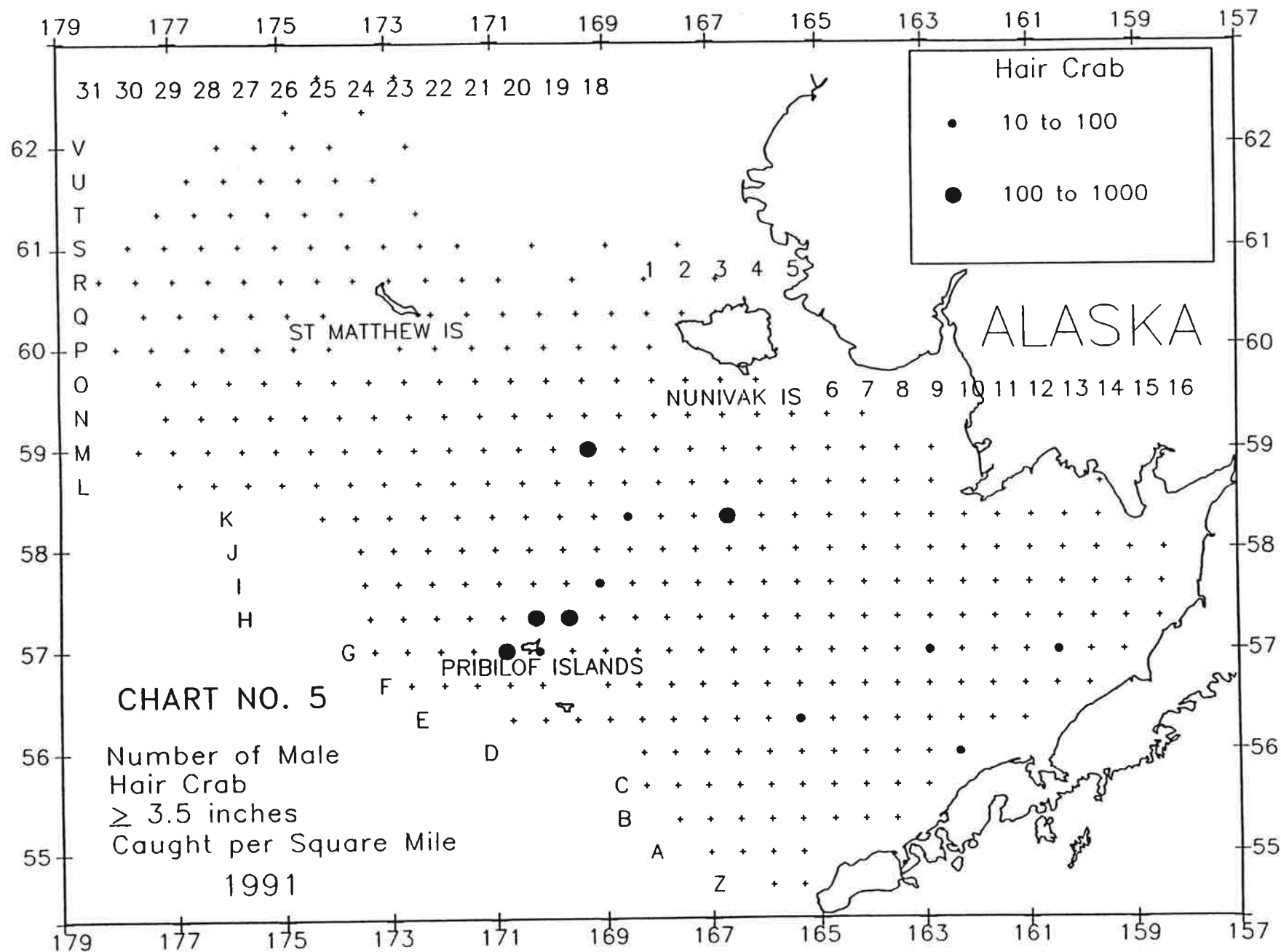












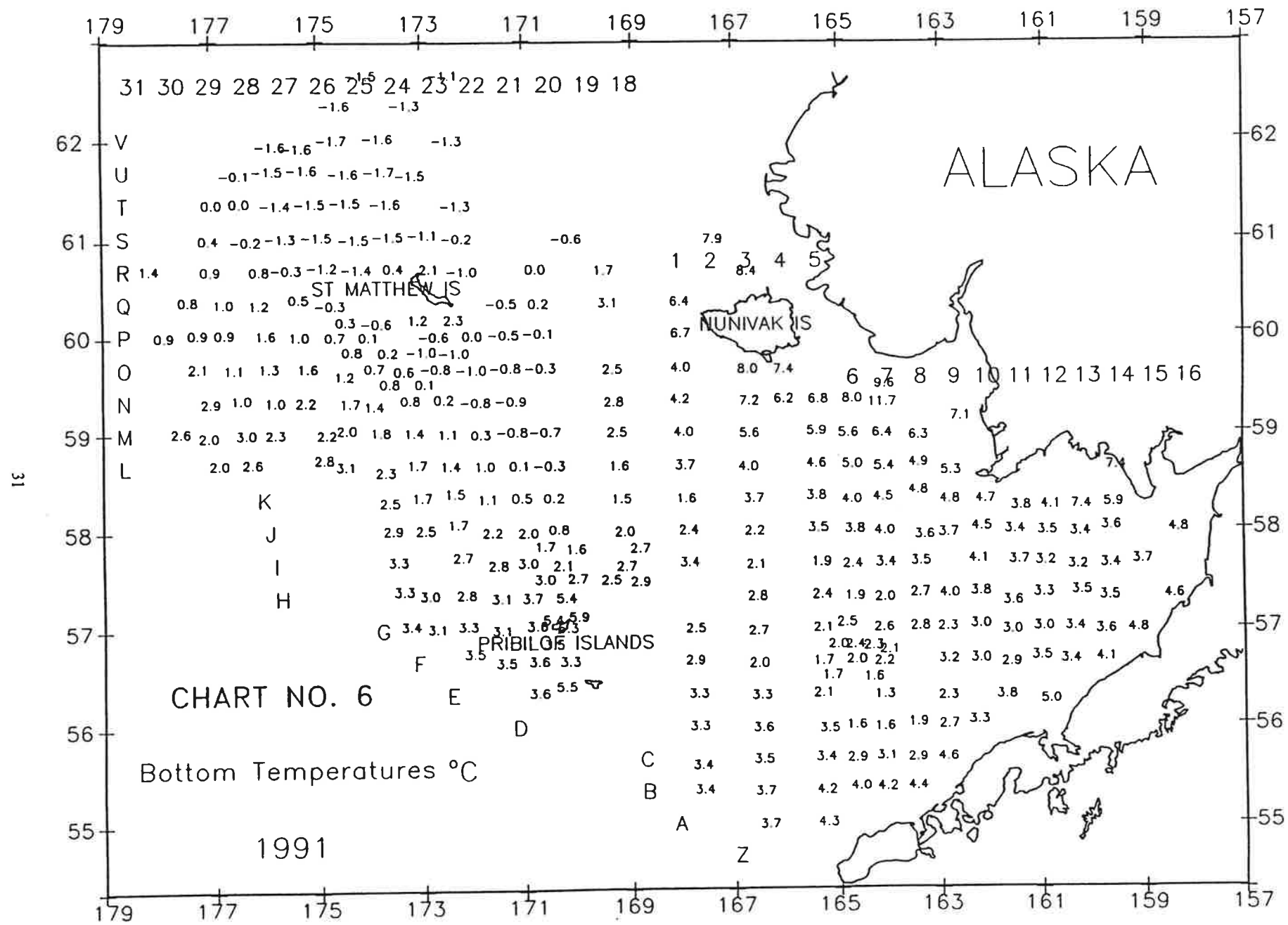


TABLE 7 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE RED KING CRAB WERE TAKEN

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
D09	6/21	56-01	162-47	Y33994 Z47198	42	2.7	0.0	0.0	0.0	73.0	73.0	100.0	
D10	6/15	56-03	162-12	Y33891 Z46967	42	3.3	1301.0	163.0	650.0	1789.0	3903.0	45.8	
E06	6/22	56-20	164-34	Y34209 Z47905	48		0.0	0.0	0.0	313.0	313.0	100.0	
E07	6/22	56-19	164-02	Y34121 Z47695	46	1.3	0.0	0.0	0.0	76.0	76.0	100.0	
E09	6/21	56-18	162-48	Y33920 Z47201	43	2.3	0.0	0.0	77.0	154.0	231.0	66.7	
E10	6/15	56-22	162-11	Y33806 Z46957	48		20367.0	2239.0	373.0	746.0	23725.0	3.1	
E11	6/14	56-19	161-40	Y33739 Z46749	34	3.8	4969.0	186.0	497.0	1056.0	6708.0	15.7	
E12	6/12	56-16	160-49	Y33626 Z46409	18	5.0	0.0	0.0	0.0	66.0	66.0	100.0	
F06	6/23	56-40	164-34	Y34115 Z47910	40	2.0	0.0	615.0	7308.0	32538.0	40462.0	80.4	
F07	6/23	56-49	164-15	Y34014 Z47778	39	2.3	0.0	0.0	157.0	2520.0	2677.0	94.1	
F07	6/22	56-47	163-56	Y33973 Z47655	39	2.1	81.0	0.0	2419.0	4194.0	6694.0	62.7	
F07	6/22	56-40	164-03	Y34027 Z47699	40	2.2	0.0	0.0	556.0	4286.0	4841.0	88.5	
F07	6/23	56-30	164-15	Y34108 Z47779	44	1.6	0.0	0.0	81.0	813.0	894.0	90.9	
F08	6/20	56-43	163-21	Y33893 Z47420	41		87.0	87.0	261.0	609.0	1044.0	58.3	
F09	6/20	56-41	162-47	Y33811 Z47192	38	3.2	315.0	384.0	709.0	1339.0	2756.0	48.6	
F10	6/15	56-41	162-10	Y33710 Z46943	39	3.0	1983.0	413.0	248.0	413.0	3057.0	13.5	
F11	6/14	56-39	161-34	Y33632 Z46706	50	2.9	598.0	342.0	1111.0	1197.0	3248.0	36.9	
F12	6/12	56-43	160-59	Y33525 Z46468	38	3.5	1130.0	261.0	87.0	435.0	1913.0	22.7	
F13	6/11	56-40	160-25	Y33454 Z46241	34	3.4	423.0	634.0	141.0	141.0	1338.0	10.5	
F14	6/08	56-42	159-44	Y33354 Z45967	19	4.1	0.0	0.0	72.0	0.0	72.0	0.0	
G05	6/23	56-50	164-55	Y34129 Z48050	39	2.0	0.0	0.0	0.0	78.0	78.0	100.0	
G06	6/24	57-04	164-45	Y34023 Z47977	37	2.5	0.0	0.0	0.0	79.0	79.0	100.0	
G06	6/23	56-50	164-36	Y34072 Z47919	39	2.4	0.0	0.0	254.0	5424.0	5678.0	95.5	
G08	6/20	57-01	163-21	Y33794 Z47410	36	2.8	152.0	0.0	379.0	455.0	985.0	46.2	
G09	6/20	57-01	162-48	Y33708 Z47193	32	2.3	227.0	76.0	227.0	758.0	1288.0	58.9	
G10	6/15	57-02	162-10	Y33597 Z46934	32	3.0	763.0	1069.0	305.0	1145.0	3282.0	34.9	
G11	6/14	56-59	161-33	Y33524 Z46691	38	3.0	331.0	83.0	0.0	165.0	579.0	28.5	
G12	6/12	57-01	160-56	Y33425 Z46443	33	3.0	840.0	84.0	336.0	84.0	1344.0	6.3	
G13	6/11	57-01	160-20	Y33338 Z46198	36	3.4	2044.0	949.0	0.0	292.0	3285.0	8.9	
G14	6/09	56-59	159-44	Y33268 Z45960	32	3.6	1699.0	1634.0	65.0	65.0	3464.0	1.9	
H08	6/20	57-21	163-20	Y33672 Z47393	29	2.7	0.0	0.0	85.0	0.0	85.0	0.0	
H09	6/20	57-21	162-45	Y33584 Z47165	25	4.0	159.0	0.0	0.0	317.0	476.0	66.6	
H10	6/15	57-22	162-09	Y33483 Z46922	28	3.8	81.0	81.0	81.0	569.0	813.0	70.0	
H11	6/14	57-16	161-32	Y33424 Z46675	31	3.6	1667.0	2803.0	682.0	909.0	6061.0	15.0	

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH FOR AREA S. OF 58:39N  
 PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH FOR AREA N. OF 58:39N

TABLE 7 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE RED KING CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)					
								SMALL	PRERECRUIT	LEGAL			
H12	6/12	57-21	160-56	Y33310 Z46433	32	3.3	1441.0	593.0	85.0	339.0	2458.0	13.8	
H13	6/11	57-22	160-12	Y33201 Z46136	32	3.5	776.0	259.0	259.0	86.0	1379.0	6.2	
H14	6/09	57-19	159-39	Y33148 Z45920	31	3.5	391.0	703.0	0.0	0.0	1094.0	0.0	
H15	6/07	57-20	159-02	X18724 Z45673	27		303.0	76.0	0.0	152.0	530.0	28.7	
H20	7/12	57-19	169-35	Y34903 Z49890	35		0.0	0.0	0.0	234.0	234.0	100.0	
I04	6/30	57-39	165-53	Y34005 Z48394	36		0.0	0.0	0.0	72.0	72.0	100.0	
I07	6/25	57-40	164-00	Y33664 Z47645	27	3.4	0.0	0.0	0.0	265.0	265.0	100.0	
I10	6/19	57-42	162-11	Y33365 Z46925	25	4.1	69.0	139.0	69.0	69.0	347.0	19.9	
I11	6/14	57-41	161-24	Y33257 Z46613	28	3.7	625.0	1094.0	0.0	625.0	2344.0	26.7	
I12	6/13	57-40	160-53	Y33190 Z46410	31	3.2	1870.0	1057.0	81.0	81.0	3090.0	2.6	
I13	6/10	57-38	160-16	Y33120 Z46159	29	3.2	1361.0	1088.0	544.0	204.0	3198.0	6.4	
I14	6/09	57-39	159-38	Y33033 Z45908	27	3.4	0.0	323.0	0.0	0.0	323.0	0.0	
I16	6/07	57-37	158-22	X18735 Z45404	18		167.0	167.0	0.0	0.0	334.0	0.0	
J08	6/19	57-56	163-13	Y33426 Z47326	23	3.6	0.0	0.0	0.0	144.0	144.0	100.0	
J09	6/19	57-58	162-46	Y33346 Z47143	23	3.7	0.0	0.0	172.0	0.0	172.0	0.0	
J10	6/19	58-01	162-07	Y33227 Z46889	22	4.5	0.0	0.0	159.0	0.0	159.0	0.0	
J11	6/13	58-00	161-29	Y33148 Z46638	30	3.4	1371.0	565.0	0.0	161.0	2097.0	7.7	
J12	6/13	57-59	160-51	Y33070 Z46392	25	3.5	3462.0	2769.0	77.0	154.0	6462.0	2.4	
J14	6/09	58-02	159-36	Y32894 Z45901	22	3.6	156.0	0.0	156.0	469.0	781.0	60.1	
J15	6/08	58-00	158-56	Y32826 Z45637	23		78.0	0.0	0.0	78.0	156.0	50.0	
J16	6/07	58-00	158-18	Y32751 Z45388	17	4.8	74.0	74.0	0.0	0.0	148.0	0.0	
K03	7/04	58-19	166-32	Y33787 Z48552	24	3.7	83.0	0.0	0.0	0.0	83.0	0.0	
K06	6/26	58-18	164-38	Y33482 Z47843	23	4.0	0.0	0.0	82.0	0.0	82.0	0.0	
K08	6/18	58-24	163-21	Y33243 Z47346	19	4.8	0.0	0.0	71.0	71.0	142.0	50.0	
K09	6/18	58-18	162-44	Y33197 Z47116	17	4.8	0.0	76.0	153.0	0.0	229.0	0.0	
K10	6/19	58-18	162-03	Y33098 Z46849	26	4.7	165.0	0.0	83.0	83.0	330.0	25.2	
K11	6/13	58-14	161-22	Y33037 Z46586	24	3.8	79.0	79.0	157.0	157.0	473.0	33.2	
K12	6/13	58-14	160-47	Y32958 Z46361	18	4.1	459.0	183.0	183.0	183.0	1009.0	18.1	
L02	7/04	58-40	167-13	Y33689 Z48724	24		78.0	0.0	0.0	0.0	78.0	0.0	
L04	6/29	58-39	165-56	Y33504 Z48278	20		0.0	0.0	147.0	0.0	147.0	0.0	
L05	6/29	58-40	165-19	Y33397 Z48051	20	4.6	85.0	0.0	169.0	0.0	254.0	0.0	
L06	6/26	58-40	164-37	Y33297 Z47798	19	5.0	81.0	0.0	0.0	0.0	81.0	0.0	
L09	6/18	58-36	162-43	Y33060 Z47090	15	5.3	80.0	0.0	80.0	160.0	320.0	50.0	
M03	7/04	58-59	166-36	Y33402 Z48446	17	5.6	0.0	0.0	81.0	0.0	81.0	0.0	
M04	6/29	59-00	165-56	Y33305 Z48217	16		0.0	0.0	83.0	0.0	83.0	0.0	
N18	7/07	59-19	168-34	Y33418 Z48951	22		0.0	85.0	0.0	85.0	171.0	49.7	

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH FOR AREA S. OF 58:39N  
 PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH FOR AREA N. OF 58:39N

TABLE 8 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BLUE KING CRAB WERE TAKEN

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE				TOTAL	PERCENT LEGAL
							MALES (SEE NOTE)			FEMALES		
							SMALL	PRERECRUIT	LEGAL			
G01	7/08	57-00	167-41	Y34615 Z49159	41	2.5	0.0	0.0	91.0	0.0	91.0	0.0
G05	6/30	57-00	165-13	Y34125 Z48162	38	2.1	0.0	0.0	79.0	0.0	79.0	0.0
G18	7/08	56-58	168-20	Y34761 Z49416	46		0.0	0.0	167.0	83.0	250.0	33.2
G19	7/12	57-10	168-38	Y34762 Z49535	43		508.0	424.0	1186.0	424.0	2542.0	16.7
G19	7/11	56-51	168-38	Y34861 Z49532	53		0.0	0.0	0.0	252.0	252.0	100.0
G19	7/11	57-00	168-56	Y34887 Z49658	44		336.0	84.0	504.0	252.0	1176.0	21.4
G20	7/11	57-08	169-21	Y34931 Z49819	40		3276.0	345.0	172.0	172.0	3966.0	4.3
G20	7/10	56-50	169-17	Y34997 Z49779	44		1024.0	79.0	157.0	157.0	1418.0	11.1
G20	7/11	57-00	169-32	Y35015 Z49894	35		2966.0	85.0	169.0	169.0	3390.0	5.0
G21	7/11	56-51	169-53	Y35103 Z49993	40		1220.0	0.0	325.0	0.0	1545.0	0.0
G21	7/21	57-01	170-10	Y35132 Z50121	36	5.3	108.0	0.0	108.0	108.0	323.0	33.4
G21	7/21	57-08	169-57	Y35077 Z50065	25	5.9	120.0	0.0	0.0	0.0	120.0	0.0
G22	7/22	57-06	170-27	X18660 Y35118	25	5.4	1184.0	1184.0	0.0	0.0	2368.0	0.0
H18	7/08	57-19	168-22	Y34640 Z49410	41		0.0	0.0	263.0	0.0	263.0	0.0
H19	7/12	57-29	168-45	Y34650 Z49542	38	2.9	244.0	0.0	244.0	244.0	732.0	33.3
H19	7/12	57-20	169-00	Y34770 Z49659	40		3361.0	1885.0	1311.0	2131.0	8689.0	24.5
H20	7/12	57-19	169-35	Y34903 Z49890	35		78.0	156.0	156.0	0.0	391.0	0.0
H21	7/21	57-19	170-11	X18715 Y35008	27	5.4	0.0	132.0	0.0	0.0	132.0	0.0
I18	7/08	57-39	168-24	Y34486 Z49374	39		0.0	263.0	0.0	0.0	263.0	0.0
I19	7/13	57-38	169-01	Y34616 Z49608	37	2.7	0.0	81.0	163.0	1220.0	1463.0	83.4
I20	7/12	57-30	169-19	Y34753 Z49751	37	2.5	894.0	1463.0	244.0	81.0	2683.0	3.0
I20	7/13	57-41	169-38	Y34685 Z49796	39		0.0	0.0	0.0	76.0	76.0	100.0
I21	7/20	57-31	169-58	X18698 Y34847	37	2.7	0.0	159.0	79.0	159.0	397.0	40.1
I21	7/20	57-39	170-14	X18625 Y34771	39	2.1	125.0	0.0	0.0	0.0	125.0	0.0
I22	7/20	57-30	170-35	X18576 Y34869	40	3.0	260.0	0.0	0.0	0.0	260.0	0.0
J20	7/13	57-50	169-20	Y34539 Z49654	37		0.0	0.0	85.0	0.0	85.0	0.0
Z23	7/28	63-19	172-36	X17320 Y30903	34	-1.6	81.0	0.0	0.0	0.0	81.0	0.0
L04	6/29	58-39	165-56	Y33504 Z48278	20		0.0	74.0	0.0	0.0	74.0	0.0
M26	7/31	59-01	173-43	X17462 Y33697	66	1.8	0.0	0.0	82.0	82.0	164.0	50.0
M27	8/05	59-02	174-22	X17266 Y33642	71	2.0	0.0	0.0	246.0	164.0	410.0	40.0
N25	7/31	59-20	173-08	X17602 Y33521	55	0.8	0.0	0.0	0.0	83.0	83.0	100.0
N26	7/31	59-17	173-50	X17413 Y33527	63	1.4	0.0	163.0	0.0	0.0	163.0	0.0
N27	7/30	59-19	174-18	X17280 Y33486	66	1.7	0.0	87.0	174.0	348.0	609.0	57.1
O24	7/25	59-39	172-36	X17708 Y33323	47	-0.8	0.0	0.0	0.0	68.0	68.0	100.0
O25	7/25	59-30	172-51	X17660 Y33420	53	0.1	0.0	163.0	81.0	163.0	407.0	40.0
O25	7/30	59-38	173-16	X17543 Y33325	53	0.6	0.0	0.0	0.0	165.0	165.0	100.0
O25	7/30	59-49	173-34	X17449 Y33197	53	0.2	0.0	252.0	504.0	672.0	1429.0	47.0
O26	7/30	59-30	173-32	X17483 Y33400	56	0.8	0.0	0.0	0.0	254.0	254.0	100.0

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH FOR AREA S. OF 58:39N  
 PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH FOR AREA N. OF 58:39N

TABLE 8 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BLUE KING CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)					
								SMALL	PRERECRUIT	LEGAL			
O26	7/30	59-40	173-50	X17392 Y33288	57	0.7	0.0	0.0	81.0	163.0	244.0	66.8	
O27	7/30	59-35	174-25	X17239 Y33318	65	1.2	0.0	313.0	1094.0	1016.0	2422.0	41.9	
P18	7/07	59-58	168-40	Y32953 Z48776	22		0.0	88.0	0.0	0.0	88.0	0.0	
P23	7/26	60-09	172-18	X17713 Y32985	30	2.3	1600.0	5600.0	1067.0	800.0	9067.0	8.8	
P24	7/26	60-09	173-00	X17557 Y32986	33	1.2	4949.0	4242.0	909.0	1212.0	11313.0	10.7	
P24	7/26	59-59	172-38	X17662 Y33104	37	-0.6	0.0	95.0	0.0	190.0	286.0	66.4	
P24	7/26	59-50	172-52	X17622 Y33203	45	-1.0	0.0	0.0	0.0	115.0	115.0	100.0	
P26	7/30	59-59	173-57	X17343 Y33089	53	0.1	0.0	76.0	458.0	840.0	1374.0	61.1	
P26	7/30	60-07	173-44	X17386 Y33007	48	-0.6	0.0	0.0	130.0	130.0	260.0	50.0	
P27	7/30	59-50	174-16	X17269 Y33173	61	0.8	85.0	171.0	85.0	598.0	940.0	63.6	
P27	7/30	59-59	174-36	X17176 Y33075	61	0.7	0.0	0.0	83.0	0.0	83.0	0.0	
P27	7/30	60-08	174-23	X17223 Y32986	57	0.3	0.0	0.0	74.0	221.0	294.0	75.2	
Q23	7/26	60-19	172-04	X17742 Y32874	31		0.0	256.0	0.0	128.0	385.0	33.2	
Q26	7/29	60-22	174-16	X17240 Y32839	52		0.0	0.0	79.0	0.0	79.0	0.0	
Q27	7/30	60-18	174-37	X17156 Y32878	58	-0.3	0.0	0.0	84.0	0.0	84.0	0.0	
R24	7/27	60-40	172-46	X17552 Y32637	25	2.1	0.0	82.0	410.0	328.0	820.0	40.0	
R25	7/29	60-41	173-28	X17404 Y32644	35	0.4	0.0	163.0	81.0	81.0	325.0	24.9	
R26	7/29	60-40	174-07	X17259 Y32654	49	-1.4	0.0	0.0	0.0	152.0	152.0	100.0	
R27	8/06	60-41	174-46	X17105 Y32642	55	-1.2	0.0	90.0	90.0	0.0	180.0	0.0	
S26	7/29	60-59	174-10	X17228 Y32461	47	-1.5	0.0	0.0	0.0	254.0	254.0	100.0	
S27	8/06	61-00	174-53	X17068 Y32453	52	-1.5	0.0	81.0	81.0	163.0	325.0	50.2	
T23	7/27	61-19	172-11	X17591 Y32181	34	-1.3	81.0	0.0	0.0	0.0	81.0	0.0	
T26	7/29	61-21	174-19	X17170 Y32230	44	-1.5	0.0	0.0	0.0	78.0	78.0	100.0	

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH FOR AREA S. OF 58:39N  
 PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH FOR AREA N. OF 58:39N

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOF R M TEMP	NUMBER PER SQUARE MILE				TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)				
								SMALL	PRERECRUIT	LEGAL		
A02	7/02	55-01	166-56	Y34822 Z48680	85		63311.0	43394.0	424.0	0.0	107129.0	0.0
A03	7/02	54-59	166-16	Y34731 Z48453	78	3.7	17825.0	10476.0	1667.0	952.0	30920.0	3.1
A04	7/01	54-59	165-44	Y34654 Z48268	72		19028.0	2569.0	833.0	139.0	22570.0	0.6
A05	7/01	55-00	165-08	Y34563 Z48056	60	4.3	26212.0	8842.0	6079.0	2210.0	43343.0	5.1
B01	7/09	55-21	167-32	Y34876 Z48931	80	3.4	4297.0	3672.0	625.0	0.0	8594.0	0.0
B02	7/02	55-20	166-57	Y34795 Z48735	78		44769.0	56807.0	1345.0	0.0	102920.0	0.0
B03	7/02	55-20	166-21	Y34705 Z48522	72	3.7	36417.0	34167.0	2000.0	83.0	72667.0	0.1
B04	7/01	55-19	165-48	Y34621 Z48320	67		5211.0	2676.0	282.0	0.0	8169.0	0.0
B05	7/01	55-20	165-10	Y34517 Z48090	60	4.2	541.0	811.0	991.0	180.0	2523.0	7.1
B06	6/22	55-22	164-30	Y34407 Z47847	56	4.0	138824.0	3679.0	6833.0	6482.0	155818.0	4.2
B07	6/21	55-22	164-00	Y34327 Z47654	40	4.2	2195.0	5122.0	122.0	0.0	7439.0	0.0
B08	6/21	55-22	163-24	Y34233 Z47429	30	4.4	3750.0	16875.0	4063.0	469.0	25156.0	1.9
C01	7/09	55-36	167-34	Y34858 Z48982	74	3.4	2326.0	543.0	388.0	78.0	3334.0	2.3
C02	7/02	55-40	166-59	Y34761 Z48789	75		2149.0	3884.0	248.0	0.0	6281.0	0.0
C03	7/02	55-39	166-22	Y34663 Z48565	69	3.5	3704.0	2037.0	1111.0	370.0	7223.0	5.1
C04	7/01	55-39	165-48	Y34569 Z48350	65		5966.0	756.0	336.0	0.0	7058.0	0.0
C05	7/01	55-41	165-10	Y34460 Z48117	59	3.4	1525.0	678.0	678.0	339.0	3220.0	10.5
C06	6/22	55-40	164-35	Y34363 Z47888	53	2.9	27868.0	24265.0	368.0	147.0	52647.0	0.3
C07	6/22	55-41	164-01	Y34266 Z47670	51	3.1	3008.0	5285.0	5041.0	813.0	14146.0	5.7
C08	6/21	55-40	163-24	Y34172 Z47435	45	2.9	13658.0	16690.0	63550.0	23109.0	117008.0	19.7
C09	6/21	55-40	162-49	Y34077 Z47206	27	4.6	7867.0	24773.0	4843.0	559.0	38041.0	1.5
C18	7/09	55-41	168-10	Y34939 Z49199	75		488.0	163.0	81.0	81.0	813.0	10.0
D01	7/09	56-00	167-37	Y34820 Z49060	72	3.3	3629.0	1774.0	726.0	81.0	6210.0	1.3
D02	7/02	56-01	167-00	Y34712 Z48835	74		397.0	1270.0	159.0	79.0	1905.0	4.1
D03	7/02	55-59	166-23	Y34609 Z48598	67	3.6	1081.0	1081.0	450.0	0.0	2613.0	0.0
D04	7/01	55-59	165-48	Y34506 Z48377	61		0.0	0.0	204.0	68.0	272.0	25.0
D05	7/01	55-59	165-06	Y34388 Z48106	52	3.5	2764.0	488.0	407.0	407.0	4065.0	10.0
D06	6/22	56-01	164-35	Y34291 Z47903	51	1.6	7667.0	5014.0	1087.0	145.0	13913.0	1.0
D07	6/22	55-59	164-02	Y34203 Z47690	49	1.6	14160.0	2880.0	1440.0	640.0	19120.0	3.3
D08	6/21	56-02	163-23	Y34085 Z47434	49	1.9	35109.0	3782.0	2437.0	1765.0	43092.0	4.1
D09	6/21	56-01	162-47	Y33994 Z47198	42	2.7	1387.0	876.0	803.0	876.0	3942.0	22.2
D10	6/15	56-03	162-12	Y33891 Z46967	42	3.3	1463.0	813.0	650.0	163.0	3089.0	5.3
D18	7/09	56-00	168-12	Y34917 Z49267	83		88.0	88.0	0.0	0.0	176.0	0.0
E01	7/09	56-20	167-38	Y34770 Z49105	71	3.3	1271.0	2712.0	763.0	254.0	5000.0	5.1
E02	7/02	56-19	167-01	Y34660 Z48868	63		948.0	431.0	603.0	172.0	2155.0	8.0
E03	7/02	56-19	166-24	Y34546 Z48631	56	3.3	769.0	0.0	598.0	0.0	1367.0	0.0

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH



TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
E04	6/30	56-19	165-48	Y34432 Z48391	51		400.0	67.0	667.0	200.0	1333.0	15.0	
E05	6/30	56-20	165-13	Y34321 Z48161	46	2.1	4298.0	1322.0	579.0	165.0	6364.0	2.6	
E06	6/22	56-20	164-34	Y34209 Z47905	48		5781.0	3438.0	2734.0	859.0	12812.0	6.7	
E07	6/22	56-19	164-02	Y34121 Z47695	46	1.3	31851.0	985.0	3030.0	3485.0	39351.0	8.9	
E08	6/21	56-22	163-23	Y33999 Z47435	47		32894.0	1441.0	2373.0	1186.0	37894.0	3.1	
E09	6/21	56-18	162-48	Y33920 Z47201	43	2.3	1538.0	769.0	615.0	462.0	3384.0	13.7	
E10	6/15	56-22	162-11	Y33806 Z46957	48		1322.0	1240.0	1157.0	661.0	4380.0	15.1	
E11	6/14	56-19	161-40	Y33739 Z46749	34	3.8	807.0	1677.0	2422.0	1118.0	6024.0	18.6	
E12	6/12	56-16	160-49	Y33626 Z46409	18	5.0	0.0	397.0	265.0	132.0	795.0	16.6	
E18	7/09	56-20	168-15	Y34885 Z49338	86		2033.0	2846.0	3089.0	407.0	8374.0	4.9	
E19	7/10	56-21	168-52	Y34987 Z49556	70		14088.0	8772.0	1404.0	88.0	24351.0	0.4	
E20	7/10	56-23	169-32	Y35078 Z49773	71		0.0	1404.0	0.0	175.0	1579.0	11.1	
E21	7/22	56-25	170-12	Y35132 Z49952	62	5.5	7374.0	11212.0	1010.0	101.0	19697.0	0.5	
E22	7/23	56-21	170-42	X18269 Z50020	66	3.6	11484.0	7344.0	2500.0	1016.0	22343.0	4.5	
F01	7/08	56-41	167-42	Y34711 Z49157	55	2.9	96.0	192.0	192.0	192.0	673.0	28.5	
F02	7/03	56-41	167-03	Y34580 Z48901	53		410.0	1803.0	902.0	164.0	3279.0	5.0	
F03	7/03	56-39	166-27	Y34473 Z48663	45	2.0	12427.0	656.0	1557.0	164.0	14804.0	1.1	
F04	6/30	56-39	165-51	Y34355 Z48420	44		9375.0	694.0	1042.0	139.0	11250.0	1.2	
F05	6/30	56-40	165-13	Y34233 Z48167	40	1.7	1322.0	2397.0	1322.0	0.0	5041.0	0.0	
F05	6/23	56-31	165-02	Y34243 Z48096	43	1.7	9606.0	7244.0	1654.0	394.0	18897.0	2.1	
F06	6/23	56-40	164-34	Y34115 Z47910	40	2.0	308.0	538.0	1462.0	231.0	2539.0	9.1	
F07	6/22	56-40	164-03	Y34027 Z47699	40	2.2	3254.0	397.0	2143.0	1746.0	7540.0	23.2	
F07	6/23	56-49	164-15	Y34014 Z47778	39	2.3	945.0	1024.0	1496.0	1339.0	4803.0	27.9	
F07	6/22	56-47	163-56	Y33973 Z47655	39	2.1	323.0	484.0	242.0	645.0	1694.0	38.1	
F07	6/23	56-30	164-15	Y34108 Z47779	44	1.6	20325.0	1220.0	5122.0	3496.0	30162.0	11.6	
F08	6/20	56-43	163-21	Y33893 Z47420	41		609.0	1565.0	1913.0	696.0	4783.0	14.6	
F09	6/20	56-41	162-47	Y33811 Z47192	38	3.2	157.0	1024.0	1417.0	551.0	3149.0	17.5	
F10	6/15	56-41	162-10	Y33710 Z46943	39	3.0	2149.0	3223.0	579.0	496.0	6447.0	7.7	
F11	6/14	56-39	161-34	Y33632 Z46706	50	2.9	22876.0	513.0	940.0	1795.0	26124.0	6.9	
F12	6/12	56-43	160-59	Y33525 Z46468	38	3.5	5391.0	3217.0	870.0	957.0	10434.0	9.2	
F13	6/11	56-40	160-25	Y33454 Z46241	34	3.4	1972.0	4366.0	1197.0	282.0	7817.0	3.6	
F14	6/08	56-42	159-44	Y33354 Z45967	19	4.1	72.0	144.0	72.0	0.0	288.0	0.0	
F18	7/09	56-39	168-18	Y34835 Z49388	59		165.0	83.0	661.0	165.0	1074.0	15.4	
F19	7/10	56-39	168-53	Y34952 Z49614	56		4262.0	1148.0	2459.0	1803.0	9672.0	18.6	
F21	7/23	56-40	170-08	X18544 Z50011	52	3.3	32787.0	6048.0	4032.0	1855.0	44722.0	4.1	

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
F22	7/23	56-40	170-42	X18407 Z50104	62	3.6	6029.0	1618.0	1029.0	441.0	9117.0	4.8	
F23	7/23	56-39	171-19	X18200 Z50144	65	3.5	1707.0	976.0	244.0	81.0	3008.0	2.7	
F24	7/23	56-45	171-56	X18007 Z50171	67	3.5	3259.0	2301.0	383.0	288.0	6231.0	4.6	
F25	8/01	56-39	172-34	X17739 Y34914	74		172.0	517.0	0.0	0.0	689.0	0.0	
G01	7/08	57-00	167-41	Y34615 Z49159	41	2.5	1273.0	1455.0	273.0	91.0	3091.0	2.9	
G02	7/03	57-01	167-04	Y34486 Z48911	41		2520.0	2439.0	813.0	0.0	5772.0	0.0	
G03	7/03	56-59	166-28	Y34375 Z48669	39	2.7	1120.0	1680.0	1040.0	80.0	3920.0	2.0	
G04	6/30	56-59	165-51	Y34251 Z48417	40		2500.0	2361.0	69.0	69.0	5000.0	1.4	
G05	6/30	57-00	165-13	Y34125 Z48162	38	2.1	2126.0	1417.0	630.0	315.0	4488.0	7.0	
G05	6/23	56-50	164-55	Y34129 Z48050	39	2.0	310.0	1318.0	1783.0	310.0	3721.0	8.3	
G06	6/23	56-50	164-36	Y34072 Z47919	39	2.4	763.0	1017.0	1949.0	85.0	3814.0	2.2	
G06	6/24	57-04	164-45	Y34023 Z47977	37	2.5	6457.0	7437.0	11832.0	6592.0	32318.0	20.4	
G07	6/24	57-00	164-03	Y33917 Z47693	36	2.6	323.0	161.0	726.0	161.0	1371.0	11.7	
G08	6/20	57-01	163-21	Y33794 Z47410	36	2.8	379.0	530.0	303.0	682.0	1894.0	36.0	
G09	6/20	57-01	162-48	Y33708 Z47193	32	2.3	3030.0	1288.0	1591.0	2197.0	8106.0	27.1	
G10	6/15	57-02	162-10	Y33597 Z46934	32	3.0	13969.0	5267.0	1145.0	687.0	21068.0	3.3	
G11	6/14	56-59	161-33	Y33524 Z46691	38	3.0	0.0	413.0	248.0	579.0	1240.0	46.7	
G12	6/12	57-01	160-56	Y33425 Z46443	33	3.0	1176.0	252.0	840.0	420.0	2689.0	15.6	
G13	6/11	57-01	160-20	Y33338 Z46198	36	3.4	511.0	438.0	1387.0	3869.0	6204.0	62.4	
G14	6/09	56-59	159-44	Y33268 Z45960	32	3.6	196.0	327.0	719.0	131.0	1372.0	9.5	
G18	7/08	56-58	168-20	Y34761 Z49416	46		583.0	667.0	417.0	0.0	1666.0	0.0	
G19	7/12	57-10	168-38	Y34762 Z49535	43		1610.0	1949.0	339.0	85.0	3983.0	2.1	
G19	7/11	56-51	168-38	Y34861 Z49532	53		0.0	1681.0	1345.0	0.0	3025.0	0.0	
G19	7/11	57-00	168-56	Y34887 Z49658	44		252.0	252.0	84.0	0.0	588.0	0.0	
G20	7/11	57-08	169-21	Y34931 Z49819	40		4828.0	1207.0	1552.0	517.0	8104.0	6.4	
G20	7/11	57-00	169-32	Y35015 Z49894	35		2004.0	1503.0	3506.0	0.0	7013.0	0.0	
G20	7/10	56-50	169-17	Y34997 Z49779	44		1654.0	472.0	1417.0	551.0	4095.0	13.5	
G21	7/11	56-51	169-53	Y35103 Z49993	40		34526.0	4602.0	10226.0	6903.0	56256.0	12.3	
G21	7/21	57-01	170-10	Y35132 Z50121	36	5.3	8172.0	18833.0	27578.0	5045.0	59628.0	8.5	
G21	7/21	57-08	169-57	Y35077 Z50065	25	5.9	361.0	2048.0	361.0	0.0	2771.0	0.0	
G22	7/21	57-02	170-45	X18531 Y35087	48	3.6	4000.0	3600.0	800.0	667.0	9067.0	7.4	
G22	7/22	57-06	170-27	X18660 Y35118	25	5.4	789.0	1579.0	1711.0	1184.0	5263.0	22.5	
G22	7/23	56-50	170-26	X18563 Z50118	55	3.5	5932.0	8644.0	85.0	763.0	15424.0	4.9	
G23	7/24	56-59	171-24	X18268 Y35000	60	3.1	873.0	317.0	397.0	159.0	1746.0	9.1	
G24	7/24	57-02	172-03	X18022 Y34888	65	3.3	2222.0	1197.0	342.0	171.0	3931.0	4.4	
G25	8/01	57-00	172-39	X17785 Y34809	67	3.1	7025.0	10331.0	331.0	496.0	18182.0	2.7	
G26	8/01	57-02	173-10	X17587 Y34726	75	3.4	5100.0	3200.0	0.0	0.0	8300.0	0.0	

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE				TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)				
								SMALL	PRERECRUIT	LEGAL		
H01	7/08	57-20	167-45	Y34502 Z49162	39		1322.0	1488.0	248.0	165.0	3223.0	5.1
H02	7/03	57-19	167-07	Y34381 Z48911	39		2500.0	4091.0	1136.0	833.0	8561.0	9.7
H03	7/03	57-20	166-29	Y34250 Z48658	37	2.8	3534.0	6638.0	517.0	0.0	10689.0	0.0
H04	6/30	57-20	165-52	Y34131 Z48410	38		1578.0	19942.0	1578.0	0.0	23098.0	0.0
H05	6/30	57-21	165-13	Y34006 Z48153	35	2.4	2033.0	29894.0	2457.0	410.0	34794.0	1.2
H06	6/25	57-20	164-35	Y33898 Z47900	35	1.9	3008.0	13659.0	2195.0	894.0	19756.0	4.5
H07	6/24	57-19	164-01	Y33805 Z47673	34	2.0	1290.0	8952.0	3952.0	1935.0	16129.0	12.0
H08	6/20	57-21	163-20	Y33672 Z47393	29	2.7	254.0	1695.0	1780.0	593.0	4322.0	13.7
H09	6/20	57-21	162-45	Y33584 Z47165	25	4.0	10000.0	15873.0	3254.0	1746.0	30873.0	5.7
H10	6/15	57-22	162-09	Y33483 Z46922	28	3.8	2602.0	5772.0	1545.0	488.0	10407.0	4.7
H11	6/14	57-16	161-32	Y33424 Z46675	31	3.6	1439.0	1515.0	3182.0	4848.0	10984.0	44.1
H12	6/12	57-21	160-56	Y33310 Z46433	32	3.3	424.0	85.0	847.0	1780.0	3136.0	56.8
H13	6/11	57-22	160-12	Y33201 Z46136	32	3.5	259.0	0.0	603.0	1121.0	1983.0	56.5
H14	6/09	57-19	159-39	Y33148 Z45920	31	3.5	234.0	391.0	234.0	781.0	1640.0	47.6
H15	6/07	57-20	159-02	X18724 Z45673	27		152.0	379.0	303.0	0.0	834.0	0.0
H16	6/07	57-20	158-24	Y32988 Z45420	18	4.6	0.0	0.0	89.0	89.0	179.0	49.7
H18	7/08	57-19	168-22	Y34640 Z49410	41		4474.0	4737.0	0.0	0.0	9211.0	0.0
H19	7/12	57-20	169-00	Y34770 Z49659	40		820.0	1066.0	984.0	82.0	2951.0	2.8
H19	7/12	57-29	168-45	Y34650 Z49542	38	2.9	1463.0	976.0	81.0	0.0	2520.0	0.0
H20	7/12	57-19	169-35	Y34903 Z49890	35		21906.0	2734.0	2031.0	391.0	27062.0	1.4
H21	7/21	57-19	170-11	X18715 Y35008	27	5.4	0.0	0.0	526.0	132.0	658.0	20.1
H22	7/21	57-19	170-50	X18523 Y34964	44	3.7	8594.0	1016.0	3047.0	3984.0	16641.0	23.9
H23	7/24	57-19	171-24	X18306 Y35882	54	3.1	394.0	315.0	315.0	79.0	1103.0	7.2
H24	7/24	57-21	172-05	X18049 Y34766	61	2.8	0.0	2016.0	403.0	81.0	2500.0	3.2
H25	8/01	57-21	172-48	X17773 Y34667	63	3.0	1563.0	3125.0	0.0	234.0	4922.0	4.8
H26	8/01	57-23	173-18	X17589 Y34580	67	3.3	48136.0	15763.0	339.0	339.0	64577.0	0.5
I01	7/08	57-40	167-47	Y34356 Z49137	36	3.4	3263.0	5199.0	560.0	240.0	9262.0	2.6
I02	7/03	57-41	167-07	Y34220 Z48875	38		1200.0	6175.0	2000.0	400.0	9775.0	4.1
I03	7/03	57-39	166-30	Y34117 Z48636	35	2.1	800.0	5520.0	640.0	0.0	6960.0	0.0
I04	6/30	57-39	165-53	Y34005 Z48394	36		290.0	2464.0	1739.0	217.0	4710.0	4.6
I05	6/30	57-40	165-14	Y33874 Z48133	32	1.9	11016.0	6016.0	234.0	0.0	17266.0	0.0
I06	6/25	57-39	164-38	Y33777 Z47897	29	2.4	5859.0	10000.0	1797.0	469.0	18125.0	2.6
I07	6/25	57-40	164-00	Y33664 Z47645	27	3.4	4690.0	10442.0	973.0	354.0	16460.0	2.2
I08	6/20	57-40	163-19	Y33548 Z47373	26	3.5	147.0	515.0	0.0	0.0	662.0	0.0
I09	6/20	57-40	162-41	Y33455 Z47125	23		328.0	656.0	246.0	0.0	1230.0	0.0
I10	6/19	57-42	162-11	Y33365 Z46925	25	4.1	1528.0	2153.0	139.0	0.0	3820.0	0.0
I11	6/14	57-41	161-24	Y33257 Z46613	28	3.7	2031.0	2344.0	313.0	156.0	4844.0	3.2
I12	6/13	57-40	160-53	Y33190 Z46410	31	3.2	4797.0	4634.0	1789.0	1870.0	13090.0	14.3

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
I13	6/10	57-38	160-16	Y33120 Z46159	29	3.2	408.0	340.0	204.0	136.0	1088.0	12.5	
I14	6/09	57-39	159-38	Y33033 Z45908	27	3.4	403.0	726.0	161.0	81.0	1371.0	5.9	
I15	6/08	57-41	159-01	Y32944 Z45662	26	3.7	275.0	734.0	183.0	92.0	1284.0	7.2	
I18	7/08	57-39	168-24	Y34486 Z49374	39		0.0	263.0	526.0	263.0	1053.0	25.0	
I19	7/13	57-49	168-45	Y34460 Z49466	38	2.7	1905.0	2858.0	0.0	0.0	4763.0	0.0	
I19	7/13	57-38	169-01	Y34616 Z49608	37	2.7	1301.0	1951.0	81.0	0.0	3334.0	0.0	
I20	7/12	57-30	169-19	Y34753 Z49751	37	2.5	488.0	813.0	488.0	569.0	2358.0	24.1	
I20	7/13	57-41	169-38	Y34685 Z49796	39		353.0	1766.0	3533.0	707.0	6358.0	11.1	
I21	7/20	57-31	169-58	X18698 Y34847	37	2.7	827.0	1378.0	12953.0	6339.0	21497.0	29.5	
I21	7/20	57-49	170-00	X18625 Y34634	39	1.6	357.0	1905.0	2024.0	1548.0	5833.0	26.5	
I21	7/20	57-39	170-14	X18625 Y34771	39	2.1	1000.0	4014.0	16246.0	6880.0	28140.0	24.4	
I22	7/20	57-30	170-35	X18576 Y34869	40	3.0	0.0	519.0	519.0	519.0	1558.0	33.3	
I22	7/20	57-40	170-54	X18453 Y34736	46	3.0	494.0	1358.0	1111.0	123.0	3087.0	4.0	
I23	7/24	57-39	171-28	X18274 Y34697	53	2.8	488.0	1138.0	488.0	325.0	2439.0	13.3	
I24	7/24	57-44	172-09	X18033 Y34573	60	2.7	0.0	1301.0	163.0	81.0	1545.0	5.2	
I25	8/01	57-39	172-47	X17800 Y34532	65		1681.0	21009.0	0.0	0.0	22690.0	0.0	
I26	8/01	57-41	173-24	X17575 Y34439	82	3.3	12332.0	25559.0	0.0	0.0	37891.0	0.0	
J01	7/08	58-00	167-48	Y34184 Z49081	36	2.4	649.0	2596.0	433.0	216.0	3894.0	5.5	
J02	7/03	58-00	167-10	Y34074 Z48848	36		638.0	1276.0	1276.0	638.0	3827.0	16.7	
J03	7/03	57-59	166-31	Y33959 Z48601	32	2.2	259.0	1466.0	603.0	259.0	2587.0	10.0	
J04	6/29	57-59	165-54	Y33848 Z48365	31		267.0	933.0	267.0	0.0	1467.0	0.0	
J05	6/29	58-01	165-17	Y33728 Z48123	26	3.5	167.0	333.0	0.0	0.0	500.0	0.0	
J06	6/25	58-00	164-35	Y33614 Z47851	23	3.8	0.0	83.0	83.0	0.0	167.0	0.0	
J07	6/25	57-59	164-01	Y33531 Z47632	24	4.0	0.0	231.0	77.0	0.0	308.0	0.0	
J08	6/19	57-56	163-13	Y33426 Z47326	23	3.6	0.0	72.0	0.0	0.0	72.0	0.0	
J09	6/19	57-58	162-46	Y33346 Z47143	23	3.7	0.0	86.0	0.0	0.0	86.0	0.0	
J11	6/13	58-00	161-29	Y33148 Z46638	30	3.4	0.0	81.0	0.0	0.0	81.0	0.0	
J12	6/13	57-59	160-51	Y33070 Z46392	25	3.5	77.0	231.0	0.0	77.0	385.0	20.0	
J13	6/10	57-58	160-13	Y32991 Z46138	27	3.4	0.0	0.0	77.0	0.0	77.0	0.0	
J18	7/08	57-58	168-26	Y34314 Z49315	38		1745.0	2908.0	0.0	0.0	4653.0	0.0	
J19	7/13	57-59	169-03	Y34400 Z49516	37	2.0	2716.0	3457.0	123.0	0.0	6296.0	0.0	
J20	7/13	58-00	169-42	Y34472 Z49702	39		3322.0	3691.0	1107.0	0.0	8120.0	0.0	
J20	7/13	57-50	169-20	Y34539 Z49654	37		4732.0	5069.0	676.0	0.0	10477.0	0.0	
J21	7/19	58-01	170-19	X18523 Y34503	40	0.8	0.0	0.0	694.0	694.0	1388.0	50.0	
J22	7/20	57-58	170-54	X18399 Y34526	46	2.0	0.0	123.0	123.0	123.0	370.0	33.2	

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
J22	7/19	57-50	170-35	X18507 Y34633	42	1.7	161.0	161.0	161.0	161.0	645.0	25.0	
J23	7/24	57-59	171-34	X18205 Y34484	53	2.2	2149.0	1405.0	248.0	0.0	3802.0	0.0	
J24	7/24	58-04	172-14	X17985 Y34373	58	1.7	0.0	1328.0	391.0	0.0	1719.0	0.0	
J25	7/31	58-00	172-52	X17773 Y34343	59	2.5	248.0	1405.0	165.0	0.0	1818.0	0.0	
J26	7/31	58-00	173-29	X17555 Y34277	66	2.9	2018.0	263.0	0.0	0.0	2281.0	0.0	
K01	7/07	58-19	167-51	Y34000 Z49021	32	1.6	0.0	894.0	488.0	163.0	1545.0	10.6	
K02	7/04	58-21	167-11	Y33880 Z48785	28		0.0	0.0	238.0	0.0	238.0	0.0	
K03	7/04	58-19	166-32	Y33787 Z48552	24	3.7	0.0	165.0	0.0	0.0	165.0	0.0	
K04	6/29	58-19	165-55	Y33684 Z48323	24		0.0	0.0	78.0	0.0	78.0	0.0	
K10	6/19	58-18	162-03	Y33098 Z46849	26	4.7	0.0	83.0	0.0	0.0	83.0	0.0	
K12	6/13	58-14	160-47	Y32958 Z46361	18	4.1	92.0	0.0	0.0	0.0	92.0	0.0	
K19	7/13	58-19	169-06	Y34182 Z49423	36	1.5	241.0	120.0	0.0	0.0	361.0	0.0	
K20	7/13	58-21	169-44	Y34221 Z49578	39		1334.0	1867.0	267.0	0.0	3468.0	0.0	
K23	7/24	58-19	171-39	X18133 Y34255	52	1.1	2063.0	635.0	79.0	0.0	2777.0	0.0	
K24	7/24	58-23	172-17	X17940 Y34178	57	1.5	0.0	806.0	403.0	0.0	1210.0	0.0	
K25	7/31	58-20	172-56	X17741 Y34150	59	1.7	2034.0	1949.0	254.0	0.0	4237.0	0.0	
K26	7/31	58-17	173-33	X17536 Y34122	64	2.5	8352.0	1978.0	330.0	0.0	10660.0	0.0	
K27	8/05	58-23	174-19	X17280 Y34000	110		2750.0	4333.0	0.0	0.0	7083.0	0.0	
L03	7/04	58-39	166-38	Y33615 Z48526	21	4.0	0.0	76.0	0.0	0.0	76.0	0.0	
L20	7/13	58-41	169-48	Y33984 Z49470	38		0.0	706.0	353.0	0.0	1059.0	0.0	
L23	7/25	58-39	171-42	X18068 Y34024	50	1.0	164.0	0.0	0.0	164.0	328.0	50.0	
L24	7/25	58-40	172-22	X17886 Y33992	57	1.4	0.0	1391.0	348.0	87.0	1826.0	4.8	
L25	7/31	58-40	173-01	X17691 Y33942	61	1.7	1948.0	1169.0	519.0	0.0	3636.0	0.0	
L26	7/31	58-36	173-38	X17506 Y33942	70	2.3	8793.0	20647.0	431.0	0.0	29871.0	0.0	
L27	8/05	58-40	174-23	X17262 Y33847	93	3.1	4148.0	5037.0	0.0	0.0	9185.0	0.0	
L28	8/05	58-44	174-49	X17126 Y33776	95	2.8	763.0	508.0	0.0	0.0	1271.0	0.0	
L29	8/06	58-40	175-34	X16875 Y33746	73		118.0	471.0	0.0	0.0	589.0	0.0	
L30	8/12	58-41	176-11	X16679 Y33686	75	2.6	952.0	397.0	0.0	0.0	1349.0	0.0	
L31	8/12	58-41	176-49	X16470 Y33638	73	2.0	3333.0	2262.0	0.0	0.0	5595.0	0.0	
M20	7/14	59-00	169-49	Y33744 Z49357	35		736.0	1473.0	0.0	0.0	2209.0	0.0	
M21	7/18	59-00	170-30	X18272 Y33778	39	-0.7	0.0	477.0	0.0	0.0	477.0	0.0	
M23	7/25	58-59	171-47	X18000 Y33800	47	0.3	0.0	81.0	0.0	0.0	81.0	0.0	
M24	7/25	58-59	172-25	X17834 Y33774	55	1.1	0.0	0.0	85.0	0.0	85.0	0.0	
M25	7/31	59-00	173-05	X17649 Y33737	58	1.4	84.0	1933.0	672.0	0.0	2689.0	0.0	
M26	7/31	59-01	173-43	X17462 Y33697	66	1.8	26508.0	11123.0	7663.0	247.0	45541.0	0.5	

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 9 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LEGAL
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LEGAL			
M27	8/05	59-02	174-22	X17266 Y33642	71	2.0	7869.0	10179.0	574.0	0.0	18622.0	0.0	
M28	8/05	58-59	174-45	X17148 Y33643	72	2.2	1597.0	588.0	0.0	0.0	2185.0	0.0	
M29	8/06	58-59	175-44	X16842 Y33572	74	2.3	2540.0	4762.0	238.0	0.0	7540.0	0.0	
M30	8/12	58-59	176-18	X16668 Y33534	75	3.0	3866.0	7143.0	252.0	0.0	11261.0	0.0	
M31	8/11	58-58	177-01	X16439 Y33493	73	2.0	1102.0	472.0	0.0	0.0	1574.0	0.0	
M32	8/11	59-01	177-33	X16277 Y33434	74	2.6	413.0	744.0	83.0	0.0	1239.0	0.0	
N01	7/07	59-20	167-58	Y33339 Z48778	20	4.2	0.0	79.0	0.0	0.0	79.0	0.0	
N22	7/18	59-19	171-08	X18086 Y33559	41	-0.9	0.0	340.0	0.0	0.0	340.0	0.0	
N25	7/31	59-20	173-08	X17602 Y33521	55	0.8	0.0	413.0	83.0	0.0	496.0	0.0	
N26	7/31	59-17	173-50	X17413 Y33527	63	1.4	976.0	2764.0	407.0	81.0	4228.0	1.9	
N27	7/30	59-19	174-18	X17280 Y33486	66	1.7	3739.0	1478.0	435.0	0.0	5652.0	0.0	
N28	8/12	59-19	175-09	X17030 Y33433	74	2.2	3553.0	1974.0	132.0	0.0	5658.0	0.0	
N29	8/06	59-19	175-44	X16856 Y33400	75	1.0	1870.0	2683.0	488.0	0.0	5041.0	0.0	
N30	8/11	59-21	176-23	X16665 Y33348	75	1.0	3415.0	2195.0	244.0	0.0	5854.0	0.0	
N31	8/11	59-19	176-58	X16487 Y33330	80	2.9	1074.0	1322.0	83.0	0.0	2479.0	0.0	
O25	7/25	59-30	172-51	X17660 Y33420	53	0.1	0.0	163.0	81.0	0.0	244.0	0.0	
O26	7/30	59-30	173-32	X17483 Y33400	56	0.8	0.0	424.0	85.0	0.0	508.0	0.0	
O27	7/30	59-35	174-25	X17239 Y33318	65	1.2	1484.0	2344.0	156.0	0.0	3984.0	0.0	
O28	8/13	59-40	175-07	X17042 Y33241	69	1.6	122.0	0.0	0.0	0.0	122.0	0.0	
O29	8/07	59-40	175-52	X16832 Y33208	75	1.3	0.0	579.0	0.0	0.0	579.0	0.0	
O30	8/11	59-39	176-31	X16643 Y33183	75	1.1	1240.0	1074.0	248.0	0.0	2562.0	0.0	
O31	8/10	59-40	177-12	X16447 Y33140	97	2.1	20115.0	1652.0	2261.0	87.0	24115.0	0.4	
P23	7/26	60-09	172-18	X17713 Y32985	30	2.3	0.0	133.0	0.0	0.0	133.0	0.0	
P23	7/26	59-59	171-56	X17812 Y33096	36	0.0	345.0	1724.0	0.0	0.0	2069.0	0.0	
P24	7/26	59-59	172-38	X17662 Y33104	37	-0.1	286.0	667.0	0.0	0.0	953.0	0.0	
P24	7/26	59-50	172-52	X17622 Y33203	45	-1.0	1149.0	575.0	0.0	0.0	1724.0	0.0	
P26	7/30	59-59	173-57	X17343 Y33089	53	0.1	0.0	0.0	76.0	0.0	76.0	0.0	
P27	7/30	59-59	174-36	X17176 Y33075	61	0.7	0.0	83.0	0.0	0.0	83.0	0.0	
P31	8/10	60-01	177-13	X16471 Y32971	75	0.9	887.0	726.0	0.0	0.0	1613.0	0.0	
P32	8/10	59-59	177-52	X16290 Y32957	77	0.9	588.0	824.0	118.0	0.0	1529.0	0.0	
R27	8/06	60-41	174-46	X17105 Y32642	55	-1.2	631.0	0.0	0.0	0.0	631.0	0.0	
R31	8/09	60-39	177-28	X16444 Y32635	81		118.0	0.0	0.0	0.0	118.0	0.0	
R32	8/09	60-40	178-08	X16277 Y32615	89	1.4	83.0	0.0	0.0	0.0	83.0	0.0	
S31	8/08	61-01	177-34	X16442 Y32442	74		0.0	84.0	0.0	0.0	84.0	0.0	
Z04	7/01	54-49	165-31	Y34642 Z48174	91		9156.0	10584.0	130.0	65.0	19935.0	0.3	
Z05	7/01	54-44	165-09	Y34599 Z48036	49	5.1	1053.0	1579.0	3816.0	1711.0	8158.0	21.0	

NOTE: PRE-RECRUIT = 4.3-5.5 IN. WIDTH; LEGAL = 5.5 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
Z23	7/28	63-19	172-36	X17320 Y30903	34	-1.6	105911.0	166695.0	0.0	921.0	273527.0	0.3	
A02	7/02	55-01	166-56	Y34822 Z48680	85		0.0	0.0	0.0	85.0	85.0	100.0	
A03	7/02	54-59	166-16	Y34731 Z48453	78	3.7	0.0	0.0	79.0	238.0	317.0	75.1	
A04	7/01	54-59	165-44	Y34654 Z48268	72		0.0	69.0	69.0	278.0	417.0	66.7	
A05	7/01	55-00	165-08	Y34563 Z48056	60	4.3	0.0	854.0	1538.0	13327.0	15719.0	84.8	
B01	7/09	55-21	167-32	Y34876 Z48931	80	3.4	391.0	78.0	156.0	0.0	625.0	0.0	
B02	7/02	55-20	166-57	Y34795 Z48735	78		1092.0	0.0	252.0	336.0	1680.0	20.0	
B03	7/02	55-20	166-21	Y34705 Z48522	72	3.7	500.0	417.0	417.0	417.0	1750.0	23.8	
B04	7/01	55-19	165-48	Y34621 Z48320	67		0.0	0.0	141.0	211.0	352.0	59.9	
B05	7/01	55-20	165-10	Y34517 Z48090	60	4.2	90.0	90.0	541.0	1622.0	2342.0	69.3	
B06	6/22	55-22	164-30	Y34407 Z47847	56	4.0	0.0	469.0	156.0	234.0	859.0	27.2	
B07	6/21	55-22	164-00	Y34327 Z47654	40	4.2	0.0	122.0	244.0	244.0	610.0	40.0	
B08	6/21	55-22	163-24	Y34233 Z47429	30	4.4	0.0	78.0	0.0	78.0	156.0	50.0	
C01	7/09	55-36	167-34	Y34858 Z48982	74	3.4	7752.0	78.0	388.0	853.0	9070.0	9.4	
C02	7/02	55-40	166-59	Y34761 Z48789	75		14876.0	165.0	248.0	248.0	15537.0	1.6	
C03	7/02	55-39	166-22	Y34663 Z48565	69	3.5	0.0	0.0	93.0	185.0	278.0	66.5	
C04	7/01	55-39	165-48	Y34569 Z48350	65		168.0	168.0	168.0	84.0	588.0	14.3	
C05	7/01	55-41	165-10	Y34460 Z48117	59	3.4	254.0	593.0	593.0	1610.0	3051.0	52.8	
C06	6/22	55-40	164-35	Y34363 Z47888	53	2.9	441.0	1029.0	1176.0	1397.0	4044.0	34.5	
C07	6/22	55-41	164-01	Y34266 Z47670	51	3.1	0.0	325.0	732.0	325.0	1382.0	23.5	
C08	6/21	55-40	163-24	Y34172 Z47435	45	2.9	0.0	85.0	171.0	0.0	256.0	0.0	
C09	6/21	55-40	162-49	Y34077 Z47206	27	4.6	0.0	76.0	0.0	0.0	76.0	0.0	
C18	7/09	55-41	168-10	Y34939 Z49199	75		0.0	0.0	81.0	1545.0	1626.0	95.0	
D01	7/09	56-00	167-37	Y34820 Z49060	72	3.3	403.0	323.0	1371.0	1613.0	3709.0	43.5	
D02	7/02	56-01	167-00	Y34712 Z48835	74		556.0	0.0	159.0	635.0	1350.0	47.0	
D03	7/02	55-59	166-23	Y34609 Z48598	67	3.6	270.0	90.0	0.0	450.0	811.0	55.5	
D04	7/01	55-59	165-48	Y34506 Z48377	61		136.0	136.0	272.0	680.0	1224.0	55.6	
D05	7/01	55-59	165-06	Y34388 Z48106	52	3.5	650.0	163.0	488.0	407.0	1707.0	23.8	
D06	6/22	56-01	164-35	Y34291 Z47903	51	1.6	0.0	725.0	942.0	652.0	2319.0	28.1	
D07	6/22	55-59	164-02	Y34203 Z47690	49	1.6	0.0	320.0	800.0	640.0	1760.0	36.4	
D08	6/21	56-02	163-23	Y34085 Z47434	49	1.9	0.0	504.0	168.0	0.0	672.0	0.0	
D09	6/21	56-01	162-47	Y33994 Z47198	42	2.7	0.0	73.0	0.0	0.0	73.0	0.0	
D18	7/09	56-00	168-12	Y34917 Z49267	83		0.0	88.0	526.0	2719.0	3333.0	81.6	
E01	7/09	56-20	167-38	Y34770 Z49105	71	3.3	339.0	593.0	4492.0	6356.0	11780.0	54.0	
E02	7/02	56-19	167-01	Y34660 Z48868	63		0.0	431.0	172.0	1466.0	2069.0	70.9	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
E03	7/02	56-19	166-24	Y34546 Z48631	56	3.3	513.0	85.0	256.0	769.0	1624.0	47.4	
E04	6/30	56-19	165-48	Y34432 Z48391	51		200.0	0.0	133.0	267.0	600.0	44.5	
E05	6/30	56-20	165-13	Y34321 Z48161	46	2.1	0.0	661.0	248.0	413.0	1322.0	31.2	
E06	6/22	56-20	164-34	Y34209 Z47905	48		0.0	313.0	156.0	469.0	938.0	50.0	
E07	6/22	56-19	164-02	Y34121 Z47695	46	1.3	0.0	606.0	227.0	76.0	909.0	8.4	
E08	6/21	56-22	163-23	Y33999 Z47435	47		0.0	593.0	339.0	169.0	1102.0	15.3	
E09	6/21	56-18	162-48	Y33920 Z47201	43	2.3	0.0	77.0	154.0	77.0	308.0	25.0	
E10	6/15	56-22	162-11	Y33806 Z46957	48		0.0	0.0	0.0	83.0	83.0	100.0	
E18	7/09	56-20	168-15	Y34885 Z49338	86		0.0	560.0	6158.0	14742.0	21460.0	68.7	
E19	7/10	56-21	168-52	Y34987 Z49556	70		33526.0	789.0	3421.0	1754.0	39491.0	4.4	
E20	7/10	56-23	169-32	Y35078 Z49773	71		1228.0	0.0	0.0	0.0	1228.0	0.0	
E21	7/22	56-25	170-12	Y35132 Z49952	62	5.5	106776.0	1717.0	2929.0	1313.0	112736.0	1.2	
E22	7/23	56-21	170-42	X18269 Z50020	66	3.6	15292.0	234.0	781.0	234.0	16542.0	1.4	
F01	7/08	56-41	167-42	Y34711 Z49157	55	2.9	96.0	481.0	5096.0	5865.0	11538.0	50.8	
F02	7/03	56-41	167-03	Y34580 Z48901	53		9672.0	1639.0	1311.0	902.0	13524.0	6.7	
F03	7/03	56-39	166-27	Y34473 Z48663	45	2.0	574.0	656.0	410.0	328.0	1967.0	16.7	
F04	6/30	56-39	165-51	Y34355 Z48420	44		0.0	417.0	278.0	625.0	1319.0	47.4	
F05	6/30	56-40	165-13	Y34233 Z48167	40	1.7	83.0	248.0	0.0	909.0	1240.0	73.3	
F05	6/23	56-31	165-02	Y34243 Z48096	43	1.7	0.0	472.0	236.0	787.0	1496.0	52.6	
F06	6/23	56-40	164-34	Y34115 Z47910	40	2.0	0.0	231.0	154.0	538.0	923.0	58.3	
F07	6/23	56-49	164-15	Y34014 Z47778	39	2.3	0.0	709.0	787.0	945.0	2441.0	38.7	
F07	6/22	56-47	163-56	Y33973 Z47655	39	2.1	0.0	242.0	323.0	161.0	726.0	22.2	
F07	6/22	56-40	164-03	Y34027 Z47699	40	2.2	0.0	317.0	238.0	79.0	635.0	12.4	
F07	6/23	56-30	164-15	Y34108 Z47779	44	1.6	0.0	1707.0	894.0	813.0	3415.0	23.8	
F08	6/20	56-43	163-21	Y33893 Z47420	41		87.0	522.0	87.0	0.0	696.0	0.0	
F09	6/20	56-41	162-47	Y33811 Z47192	38	3.2	0.0	157.0	79.0	0.0	236.0	0.0	
F10	6/15	56-41	162-10	Y33710 Z46943	39	3.0	0.0	83.0	0.0	83.0	165.0	50.3	
F11	6/14	56-39	161-34	Y33632 Z46706	50	2.9	0.0	256.0	256.0	0.0	513.0	0.0	
F18	7/09	56-39	168-18	Y34835 Z49388	59		496.0	998.0	12143.0	7652.0	21288.0	35.9	
F19	7/10	56-39	168-53	Y34952 Z49614	56		46044.0	1311.0	4098.0	1148.0	52601.0	2.2	
F21	7/23	56-40	170-08	X18544 Z50011	52	3.3	0.0	645.0	726.0	403.0	1774.0	22.7	
F22	7/23	56-40	170-42	X18407 Z50104	62	3.6	147.0	221.0	1324.0	809.0	2500.0	32.4	
F23	7/23	56-39	171-19	X18200 Z50144	65	3.5	175177.0	2114.0	6504.0	2195.0	185990.0	1.2	
F24	7/23	56-45	171-56	X18007 Z50171	67	3.5	65473.0	913.0	25554.0	3042.0	94982.0	3.2	
G01	7/08	57-00	167-41	Y34615 Z49159	41	2.5	2091.0	4636.0	6818.0	4636.0	18182.0	25.5	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN. WIDTH



TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					
							FEMALES	MALES (SEE NOTE)			TOTAL	PERCENT LARGE
								SMALL	PRERECRUIT	LARGE		
G02	7/03	57-01	167-04	Y34486 Z48911	41		569.0	1138.0	1057.0	1870.0	4634.0	40.4
G03	7/03	56-59	166-28	Y34375 Z48669	39	2.7	160.0	302.0	1358.0	22185.0	24005.0	92.4
G04	6/30	56-59	165-51	Y34251 Z48417	40		278.0	625.0	486.0	15208.0	16597.0	91.6
G05	6/30	57-00	165-13	Y34125 Z48162	38	2.1	79.0	1194.0	1194.0	28251.0	30718.0	92.0
G05	6/23	56-50	164-55	Y34129 Z48050	39	2.0	0.0	310.0	620.0	1860.0	2791.0	66.6
G06	6/23	56-50	164-36	Y34072 Z47919	39	2.4	0.0	169.0	169.0	932.0	1271.0	73.3
G06	6/24	57-04	164-45	Y34023 Z47977	37	2.5	0.0	315.0	236.0	2520.0	3071.0	82.1
G07	6/24	57-00	164-03	Y33917 Z47693	36	2.6	0.0	0.0	0.0	242.0	242.0	100.0
G08	6/20	57-01	163-21	Y33794 Z47410	36	2.8	0.0	152.0	0.0	0.0	152.0	0.0
G09	6/20	57-01	162-48	Y33708 Z47193	32	2.3	0.0	227.0	0.0	0.0	227.0	0.0
G12	6/12	57-01	160-56	Y33425 Z46443	33	3.0	0.0	0.0	84.0	0.0	84.0	0.0
G13	6/11	57-01	160-20	Y33338 Z46198	36	3.4	0.0	73.0	0.0	0.0	73.0	0.0
G18	7/08	56-58	168-20	Y34761 Z49416	46		833.0	7968.0	13863.0	6215.0	28879.0	21.5
G19	7/12	57-10	168-38	Y34762 Z49535	43		3220.0	4153.0	4322.0	1780.0	13474.0	13.2
G19	7/11	56-51	168-38	Y34861 Z49532	53		251595.0	7895.0	7887.0	2941.0	270317.0	1.1
G19	7/11	57-00	168-56	Y34887 Z49658	44		504.0	1933.0	6555.0	3697.0	12689.0	29.1
G20	7/11	57-08	169-21	Y34931 Z49819	40		49740.0	1552.0	3276.0	2931.0	57499.0	5.1
G20	7/11	57-00	169-32	Y35015 Z49894	35		0.0	501.0	5510.0	115708.0	121718.0	95.1
G20	7/10	56-50	169-17	Y34997 Z49779	44		787.0	394.0	1575.0	1654.0	4409.0	37.5
G21	7/11	56-51	169-53	Y35103 Z49993	40		325.0	253.0	0.0	10106.0	10683.0	94.6
G21	7/21	57-01	170-10	Y35132 Z50121	36	5.3	0.0	215.0	0.0	108.0	323.0	33.4
G22	7/21	57-02	170-45	X18531 Y35087	48	3.6	0.0	400.0	933.0	1333.0	2667.0	50.0
G22	7/22	57-06	170-27	X18660 Y35118	25	5.4	132.0	0.0	0.0	0.0	132.0	0.0
G22	7/23	56-50	170-26	X18563 Z50118	55	3.5	678.0	593.0	932.0	1102.0	3305.0	33.3
G23	7/24	56-59	171-24	X18268 Y35000	60	3.1	10556.0	556.0	6429.0	1825.0	19366.0	9.4
G24	7/24	57-02	172-03	X18022 Y34888	65	3.3	1709.0	1157.0	15045.0	2700.0	20611.0	13.1
G25	8/01	57-00	172-39	X17785 Y34809	67	3.1	6033.0	0.0	4132.0	2149.0	12314.0	17.5
G26	8/01	57-02	173-10	X17587 Y34726	75	3.4	900.0	400.0	0.0	300.0	1600.0	18.8
H01	7/08	57-20	167-45	Y34502 Z49162	39		2231.0	1157.0	1901.0	744.0	6033.0	12.3
H02	7/03	57-19	167-07	Y34381 Z48911	39		1515.0	2105.0	1504.0	9624.0	14748.0	65.3
H03	7/03	57-20	166-29	Y34250 Z48658	37	2.8	690.0	4022.0	4372.0	23782.0	32866.0	72.4
H04	6/30	57-20	165-52	Y34131 Z48410	38		1291.0	717.0	861.0	17790.0	20659.0	86.1
H05	6/30	57-21	165-13	Y34006 Z48153	35	2.4	244.0	488.0	244.0	3333.0	4309.0	77.3
H06	6/25	57-20	164-35	Y33898 Z47900	35	1.9	976.0	4065.0	569.0	4146.0	9756.0	42.5
H07	6/24	57-19	164-01	Y33805 Z47673	34	2.0	81.0	726.0	161.0	1290.0	2258.0	57.1

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
H09	6/20	57-21	162-45	Y33584 Z47165	25	4.0	0.0	0.0	0.0	79.0	79.0	100.0	
H11	6/14	57-16	161-32	Y33424 Z46675	31	3.6	0.0	76.0	0.0	0.0	76.0	0.0	
H18	7/08	57-19	168-22	Y34640 Z49410	41		39474.0	18684.0	5263.0	526.0	63948.0	0.8	
H19	7/12	57-29	168-45	Y34650 Z49542	38	2.9	6911.0	2602.0	1626.0	650.0	11789.0	5.5	
H19	7/12	57-20	169-00	Y34770 Z49659	40		0.0	738.0	902.0	738.0	2377.0	31.0	
H20	7/12	57-19	169-35	Y34903 Z49890	35		0.0	914.0	3839.0	9324.0	14078.0	66.2	
H21	7/21	57-19	170-11	X18715 Y35008	27	5.4	0.0	0.0	0.0	132.0	132.0	100.0	
H22	7/21	57-19	170-50	X18523 Y34964	44	3.7	0.0	0.0	156.0	313.0	469.0	66.7	
H23	7/24	57-19	171-24	X18306 Y35882	54	3.1	66543.0	1339.0	4094.0	1890.0	73866.0	2.6	
H24	7/24	57-21	172-05	X18049 Y34766	61	2.8	266633.0	2903.0	11613.0	1452.0	282601.0	0.5	
H25	8/01	57-21	172-48	X17773 Y34667	63	3.0	159473.0	1406.0	7969.0	2578.0	171426.0	1.5	
H26	8/01	57-23	173-18	X17589 Y34580	67	3.3	508.0	339.0	1441.0	593.0	2881.0	20.6	
I01	7/08	57-40	167-47	Y34356 Z49137	36	3.4	46501.0	34425.0	12031.0	9040.0	101997.0	8.9	
I02	7/03	57-41	167-07	Y34220 Z48875	38		66142.0	22361.0	14803.0	40407.0	143714.0	28.1	
I03	7/03	57-39	166-30	Y34117 Z48636	35	2.1	6080.0	5841.0	14337.0	22302.0	48560.0	45.9	
I04	6/30	57-39	165-53	Y34005 Z48394	36		145.0	942.0	1159.0	6232.0	8478.0	73.5	
I05	6/30	57-40	165-14	Y33874 Z48133	32	1.9	625.0	3359.0	547.0	2109.0	6641.0	31.8	
I06	6/25	57-39	164-38	Y33777 Z47897	29	2.4	0.0	0.0	78.0	156.0	234.0	66.7	
I11	6/14	57-41	161-24	Y33257 Z46613	28	3.7	0.0	0.0	78.0	0.0	78.0	0.0	
I18	7/08	57-39	168-24	Y34486 Z49374	39		626390.0	227615.0	5789.0	1053.0	860848.0	0.1	
I19	7/13	57-49	168-45	Y34460 Z49466	38	2.7	265762.0	92398.0	6668.0	1905.0	365733.0	0.5	
I19	7/13	57-38	169-01	Y34616 Z49608	37	2.7	33411.0	10894.0	2602.0	1707.0	48614.0	3.5	
I20	7/12	57-30	169-19	Y34753 Z49751	37	2.5	569.0	1057.0	1301.0	732.0	3658.0	20.0	
I20	7/13	57-41	169-38	Y34685 Z49796	39		26847.0	7065.0	16956.0	36738.0	87606.0	41.9	
I21	7/20	57-31	169-58	X18698 Y34847	37	2.7	2480.0	1654.0	7441.0	24804.0	36379.0	68.2	
I21	7/20	57-49	170-00	X18625 Y34634	39	1.6	34808.0	12651.0	5839.0	28871.0	82169.0	35.1	
I21	7/20	57-39	170-14	X18625 Y34771	39	2.1	21195.0	7515.0	4652.0	15029.0	48391.0	31.1	
I22	7/20	57-30	170-35	X18576 Y34869	40	3.0	1429.0	519.0	1299.0	2338.0	5585.0	41.9	
I22	7/20	57-40	170-54	X18453 Y34736	46	3.0	34518.0	2593.0	1975.0	864.0	39950.0	2.2	
I23	7/24	57-39	171-28	X18274 Y34697	53	2.8	187334.0	1951.0	5772.0	1138.0	196196.0	0.6	
I24	7/24	57-44	172-09	X18033 Y34573	60	2.7	307419.0	1626.0	7154.0	3415.0	319614.0	1.1	
I25	8/01	57-39	172-47	X17800 Y34532	65		315847.0	2521.0	7479.0	2437.0	328284.0	0.7	
I26	8/01	57-41	173-24	X17575 Y34439	82	3.3	0.0	0.0	41282.0	1106.0	42388.0	2.6	
J01	7/08	58-00	167-48	Y34184 Z49081	36	2.4	24014.0	62522.0	20120.0	15144.0	121800.0	12.4	
J02	7/03	58-00	167-10	Y34074 Z48848	36		363563.0	449670.0	15308.0	46562.0	875103.0	5.3	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL	
								SMALL	PRERECRUIT	LARGE		
J03	7/03	57-59	166-31	Y33959 Z48601	32	2.2	1724.0	3103.0	3362.0	6121.0	14310.0	42.8
J04	6/29	57-59	165-54	Y33848 Z48365	31		267.0	533.0	0.0	133.0	934.0	14.2
J18	7/08	57-58	168-26	Y34314 Z49315	38		543230.0	270054.0	27915.0	15702.0	856900.0	1.8
J19	7/13	57-59	169-03	Y34400 Z49516	37	2.0	37549.0	27351.0	3907.0	2605.0	71412.0	3.6
J20	7/13	58-00	169-42	Y34472 Z49702	39		60061.0	28051.0	10334.0	30634.0	129080.0	23.7
J20	7/13	57-50	169-20	Y34539 Z49654	37		84803.0	48329.0	21292.0	18926.0	173350.0	10.9
J21	7/19	58-01	170-19	X18523 Y34503	40	0.8	2776.0	1388.0	11797.0	155444.0	171405.0	90.7
J22	7/19	57-50	170-35	X18507 Y34633	42	1.7	968.0	1452.0	1613.0	11129.0	15162.0	73.4
J22	7/20	57-58	170-54	X18399 Y34526	46	2.0	617.0	123.0	988.0	4815.0	6543.0	73.6
J23	7/24	57-59	171-34	X18205 Y34484	53	2.2	21539.0	4132.0	13388.0	4876.0	43936.0	11.1
J24	7/24	58-04	172-14	X17985 Y34373	58	1.7	318080.0	4453.0	11953.0	5859.0	340346.0	1.7
J25	7/31	58-00	172-52	X17773 Y34343	59	2.5	30107.0	4780.0	17298.0	7283.0	59468.0	12.2
J26	7/31	58-00	173-29	X17555 Y34277	66	2.9	319737.0	5494.0	12891.0	2747.0	340869.0	0.8
K01	7/07	58-19	167-51	Y34000 Z49021	32	1.6	41730.0	297419.0	3677.0	7213.0	350040.0	2.1
K02	7/04	58-21	167-11	Y33880 Z48785	28		7143.0	17381.0	238.0	714.0	25476.0	2.8
K03	7/04	58-19	166-32	Y33787 Z48552	24	3.7	83.0	496.0	83.0	83.0	744.0	11.2
K18	7/08	58-19	168-28	Y34095 Z49226	36		203466.0	280454.0	3528.0	5488.0	492936.0	1.1
K19	7/13	58-19	169-06	Y34182 Z49423	36	1.5	71903.0	45377.0	3157.0	789.0	121225.0	0.7
K20	7/13	58-21	169-44	Y34221 Z49578	39		104246.0	42343.0	4268.0	7470.0	158327.0	4.7
K21	7/19	58-20	170-24	X18434 Y34271	40	0.2	102323.0	29396.0	37866.0	62280.0	231866.0	26.9
K22	7/19	58-20	171-00	X18302 Y34272	45	0.5	767.0	1022.0	28106.0	40881.0	70776.0	57.8
K23	7/24	58-19	171-39	X18133 Y34255	52	1.1	1905.0	2152.0	34971.0	19100.0	58128.0	32.9
K24	7/24	58-23	172-17	X17940 Y34178	57	1.5	867712.0	6290.0	13306.0	4597.0	891906.0	0.5
K25	7/31	58-20	172-56	X17741 Y34150	59	1.7	5763.0	932.0	5508.0	3475.0	15678.0	22.2
K26	7/31	58-17	173-33	X17536 Y34122	64	2.5	96923.0	3763.0	15053.0	1646.0	117386.0	1.4
K27	8/05	58-23	174-19	X17280 Y34000	110		0.0	83.0	0.0	0.0	83.0	0.0
L01	7/07	58-40	167-52	Y33785 Z48937	24	3.7	0.0	175.0	0.0	0.0	175.0	0.0
L02	7/04	58-40	167-13	Y33689 Z48724	24		0.0	313.0	78.0	0.0	391.0	0.0
L03	7/04	58-39	166-38	Y33615 Z48526	21	4.0	0.0	76.0	76.0	0.0	152.0	0.0
L18	7/07	58-39	168-29	Y33873 Z49131	30		2339.0	11048.0	1210.0	403.0	15000.0	2.7
L19	7/13	58-39	169-09	Y33948 Z49320	33	1.6	92523.0	367920.0	0.0	1348.0	461790.0	0.3
L20	7/13	58-41	169-48	Y33984 Z49470	38		183922.0	100787.0	6355.0	4943.0	296007.0	1.7
L21	7/19	58-39	170-26	X18358 Y34029	40	-0.3	262865.0	137287.0	52492.0	143344.0	595988.0	24.1
L22	7/19	58-40	171-03	X18228 Y34035	45	0.1	1148.0	12052.0	31564.0	39024.0	83788.0	46.6

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont.)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
L23	7/25	58-39	171-42	X18068 Y34024	50	1.0	5410.0	1311.0	12213.0	5984.0	24918.0	24.0	
L24	7/25	58-40	172-22	X17886 Y33992	57	1.4	1565.0	4348.0	8174.0	3304.0	17391.0	19.0	
L25	7/31	58-40	173-01	X17691 Y33942	61	1.7	60723.0	2468.0	7792.0	8182.0	79165.0	10.3	
L26	7/31	58-36	173-38	X17506 Y33942	70	2.3	0.0	862.0	4569.0	603.0	6034.0	10.0	
L27	8/05	58-40	174-23	X17262 Y33847	93	3.1	0.0	0.0	338779.0	9324.0	348103.0	2.7	
L28	8/05	58-44	174-49	X17126 Y33776	95	2.8	0.0	905.0	85101.0	8148.0	94154.0	8.7	
L29	8/06	58-40	175-34	X16875 Y33746	73		0.0	0.0	118.0	235.0	353.0	66.6	
L31	8/12	58-41	176-49	X16470 Y33638	73	2.0	238.0	238.0	0.0	0.0	476.0	0.0	
M01	7/07	59-00	167-53	Y33561 Z48851	21	4.0	0.0	81.0	0.0	0.0	81.0	0.0	
M18	7/07	59-00	168-32	Y33643 Z49041	26		855.0	2051.0	0.0	0.0	2906.0	0.0	
M19	7/14	59-00	169-11	Y33701 Z49210	28	2.5	4444.0	19365.0	159.0	0.0	23968.0	0.0	
M20	7/14	59-00	169-49	Y33744 Z49357	35		233584.0	186407.0	11046.0	2209.0	433245.0	0.5	
M21	7/18	59-00	170-30	X18272 Y33778	39	-0.7	164692.0	88636.0	26686.0	2383.0	282397.0	0.8	
M22	7/18	59-00	171-07	X18147 Y33786	42	-0.8	24138.0	30474.0	26853.0	8750.0	90215.0	9.7	
M23	7/25	58-59	171-47	X18000 Y33800	47	0.3	19675.0	22166.0	21550.0	2873.0	66265.0	4.3	
M24	7/25	58-59	172-25	X17834 Y33774	55	1.1	169.0	2542.0	6441.0	4407.0	13559.0	32.5	
M25	7/31	59-00	173-05	X17649 Y33737	58	1.4	51298.0	1429.0	3613.0	3193.0	59533.0	5.4	
M26	7/31	59-01	173-43	X17462 Y33697	66	1.8	18541.0	837.0	4882.0	4185.0	28445.0	14.7	
M27	8/05	59-02	174-22	X17266 Y33642	71	2.0	328.0	0.0	14459.0	1377.0	16164.0	8.5	
M28	8/05	58-59	174-45	X17148 Y33643	72	2.2	168.0	0.0	5714.0	420.0	6302.0	6.7	
M29	8/06	58-59	175-44	X16842 Y33572	74	2.3	238.0	0.0	317.0	79.0	635.0	12.4	
M30	8/12	58-59	176-18	X16668 Y33534	75	3.0	588.0	252.0	0.0	0.0	840.0	0.0	
M31	8/11	58-58	177-01	X16439 Y33493	73	2.0	0.0	79.0	0.0	0.0	79.0	0.0	
N01	7/07	59-20	167-58	Y33339 Z48778	20	4.2	79.0	0.0	0.0	0.0	79.0	0.0	
N03	7/04	59-19	166-36	Y33192 Z48374	14	7.2	0.0	83.0	0.0	0.0	83.0	0.0	
N18	7/07	59-19	168-34	Y33418 Z48951	22		85.0	256.0	0.0	0.0	341.0	0.0	
N19	7/14	59-19	169-15	Y33480 Z49121	26	2.8	115.0	1264.0	0.0	0.0	1379.0	0.0	
N20	7/14	59-20	169-52	Y33509 Z49254	34		126923.0	228462.0	8462.0	0.0	363846.0	0.0	
N21	7/18	59-21	170-32	X18200 Y33531	35		55812.0	69254.0	11396.0	0.0	136462.0	0.0	
N22	7/18	59-19	171-08	X18086 Y33559	41	-0.9	55476.0	67047.0	10551.0	2382.0	135456.0	1.8	
N23	7/25	59-19	171-49	X17938 Y33567	43	-0.8	92709.0	53400.0	19717.0	3492.0	169317.0	2.1	
N24	7/25	59-21	172-29	X17772 Y33536	49	0.2	5268.0	12857.0	10714.0	9643.0	38482.0	25.1	
N25	7/31	59-20	173-08	X17602 Y33521	55	0.8	331.0	826.0	4380.0	4628.0	10166.0	45.5	
N26	7/31	59-17	173-50	X17413 Y33527	63	1.4	650.0	2795.0	8151.0	15138.0	26734.0	56.6	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE				TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)				
								SMALL	PRERECRUIT	LARGE		
N27	7/30	59-19	174-18	X17280 Y33486	66	1.7	114904.0	5391.0	6783.0	1043.0	128121.0	0.8
N28	8/12	59-19	175-09	X17030 Y33433	74	2.2	211539.0	1556.0	16899.0	3335.0	233330.0	1.4
N29	8/06	59-19	175-44	X16856 Y33400	75	1.0	7724.0	488.0	1301.0	732.0	10244.0	7.1
N30	8/11	59-21	176-23	X16665 Y33348	75	1.0	2114.0	813.0	3252.0	1789.0	7968.0	22.5
N31	8/11	59-19	176-58	X16487 Y33330	80	2.9	331.0	496.0	413.0	83.0	1323.0	6.3
O18	7/07	59-39	168-37	Y33182 Z48862	22		78.0	1328.0	0.0	0.0	1406.0	0.0
O20	7/14	59-39	169-55	Y33275 Z49154	32		129873.0	331898.0	0.0	0.0	461771.0	0.0
O21	7/18	59-39	170-35	X18130 Y33302	36	-0.3	30093.0	64817.0	8681.0	0.0	103591.0	0.0
O22	7/17	59-40	171-15	X18005 Y33319	39	-0.8	97065.0	52803.0	7765.0	0.0	157634.0	0.0
O23	7/25	59-49	172-14	X17772 Y33218	40	-1.0	344637.0	157670.0	17257.0	4707.0	524272.0	0.9
O23	7/25	59-39	171-54	X17871 Y33336	42	-1.0	107821.0	75469.0	15465.0	3712.0	202466.0	1.8
O24	7/25	59-39	172-36	X17708 Y33323	47	-0.8	351233.0	65539.0	13490.0	2260.0	432523.0	0.5
O25	7/25	59-30	172-51	X17660 Y33420	53	0.1	2195.0	1626.0	11870.0	3740.0	19431.0	19.2
O25	7/30	59-38	173-16	X17543 Y33325	53	0.6	496.0	165.0	2727.0	4711.0	8099.0	58.2
O25	7/30	59-49	173-34	X17449 Y33197	53	0.2	0.0	336.0	1933.0	10840.0	13109.0	82.7
O26	7/30	59-30	173-32	X17483 Y33400	56	0.8	424.0	424.0	3220.0	7203.0	11271.0	63.9
O26	7/30	59-40	173-50	X17392 Y33288	57	0.7	0.0	0.0	650.0	2683.0	3333.0	80.5
O27	7/30	59-35	174-25	X17239 Y33318	65	1.2	3984.0	1016.0	1875.0	1406.0	8281.0	17.0
O28	8/13	59-40	175-07	X17042 Y33241	69	1.6	559202.0	10534.0	15464.0	2689.0	587890.0	0.5
O29	8/07	59-40	175-52	X16832 Y33208	75	1.3	1405.0	8057.0	117191.0	5127.0	131780.0	3.9
O30	8/11	59-39	176-31	X16643 Y33183	75	1.1	661.0	1503.0	11858.0	3006.0	17028.0	17.7
O31	8/10	59-40	177-12	X16447 Y33140	97	2.1	1304.0	87.0	174.0	522.0	2087.0	25.0
P18	7/07	59-58	168-40	Y32953 Z48776	22		88.0	351.0	0.0	0.0	439.0	0.0
P20	7/14	60-00	169-58	Y33024 Z49051	31		30425.0	71802.0	0.0	0.0	102227.0	0.0
P21	7/17	60-01	170-37	X18061 Y33047	35	-0.1	9322.0	41186.0	2034.0	0.0	52542.0	0.0
P22	7/17	60-00	171-17	X17944 Y33079	37	-0.5	163364.0	67267.0	3392.0	0.0	234023.0	0.0
P23	7/26	60-09	172-18	X17713 Y32985	30	2.3	1467.0	1600.0	0.0	133.0	3200.0	4.2
P23	7/26	59-59	171-56	X17812 Y33096	36	0.0	35345.0	32276.0	931.0	621.0	69173.0	0.9
P24	7/26	59-50	172-52	X17622 Y33203	45	-1.0	233046.0	113793.0	3218.0	1264.0	351322.0	0.4
P24	7/26	60-09	173-00	X17557 Y32986	33	1.2	1212.0	1212.0	808.0	0.0	3232.0	0.0
P24	7/26	59-59	172-38	X17662 Y33104	37	-0.6	14549.0	9524.0	1048.0	0.0	25120.0	0.0
P26	7/30	59-59	173-57	X17343 Y33089	53	0.1	1756.0	1069.0	3740.0	3206.0	9771.0	32.8
P26	7/30	60-07	173-44	X17386 Y33007	48	-0.6	105948.0	19481.0	11169.0	1429.0	138026.0	1.0

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
P27	7/30	60-08	174-23	X17223 Y32986	57	0.3	221.0	2068.0	12251.0	1432.0	15973.0	9.0	
P27	7/30	59-50	174-16	X17269 Y33173	61	0.8	98595.0	2866.0	13851.0	5970.0	121282.0	4.9	
P27	7/30	59-59	174-36	X17176 Y33075	61	0.7	667.0	1537.0	10121.0	1794.0	14118.0	12.7	
P28	8/13	59-59	175-17	X17991 Y33049	65	1.0	68847.0	5122.0	8537.0	2927.0	85432.0	3.4	
P29	8/07	60-00	175-55	X16823 Y33023	70	1.6	179590.0	2250.0	8250.0	1417.0	191507.0	0.7	
P30	8/10	60-01	176-42	X16610 Y32990	78	0.9	17209.0	581.0	4535.0	2093.0	24418.0	8.6	
P31	8/10	60-01	177-13	X16471 Y32971	75	0.9	4677.0	2258.0	5323.0	726.0	12983.0	5.6	
P32	8/10	59-59	177-52	X16290 Y32957	77	0.9	2118.0	353.0	1294.0	118.0	3883.0	3.0	
Q20	7/14	60-20	170-02	Y32786 Z48961	29		41390.0	100889.0	0.0	4311.0	146591.0	2.9	
Q21	7/17	60-19	170-41	X17999 Y32827	33	0.2	13576.0	45695.0	993.0	0.0	60265.0	0.0	
Q22	7/17	60-19	171-19	X17886 Y32850	35	-0.5	106013.0	57084.0	1747.0	0.0	164844.0	0.0	
Q23	7/26	60-19	172-04	X17742 Y32874	31		0.0	15000.0	1538.0	0.0	16538.0	0.0	
Q26	7/29	60-22	174-16	X17240 Y32839	52		45714.0	23214.0	8884.0	0.0	77813.0	0.0	
Q27	7/30	60-18	174-37	X17156 Y32878	58	-0.3	2605.0	22715.0	16599.0	1456.0	43376.0	3.4	
Q28	8/13	60-22	175-17	X16989 Y32830	60	0.5	3256.0	814.0	9419.0	698.0	14186.0	4.9	
Q29	8/07	60-19	176-03	X16794 Y32847	67	1.2	31331.0	508.0	1780.0	593.0	34212.0	1.7	
Q30	8/10	60-19	176-43	X16620 Y32824	76	1.0	1544747.0	6649.0	8383.0	1879.0	1561657.0	0.1	
Q31	8/09	60-21	177-24	X16444 Y32793	82	0.8	69395.0	598.0	1880.0	598.0	72472.0	0.8	
R21	7/15	60-40	170-44	Y32576 Z48981	31	0.0	22931.0	96636.0	0.0	0.0	119567.0	0.0	
R22	7/15	60-40	171-27	Y32609 Z49094	35		122559.0	187181.0	4457.0	0.0	314196.0	0.0	
R23	7/27	60-39	172-04	X17697 Y32641	33	-1.0	226763.0	164535.0	0.0	0.0	391298.0	0.0	
R24	7/27	60-40	172-46	X17552 Y32637	25	2.1	1097350.0	1267849.0	0.0	0.0	2365199.0	0.0	
R25	7/29	60-41	173-28	X17404 Y32644	35	0.4	10407.0	20407.0	163.0	0.0	30976.0	0.0	
R26	7/29	60-40	174-07	X17259 Y32654	49	-1.4	72955.0	71302.0	9835.0	0.0	154092.0	0.0	
R27	8/06	60-41	174-46	X17105 Y32642	55	-1.2	4144.0	46847.0	12613.0	601.0	64204.0	0.9	
R28	8/07	60-40	175-27	X16942 Y32655	61	-0.3	1949.0	4068.0	14915.0	3220.0	24152.0	13.3	
R29	8/07	60-39	176-02	X16802 Y32657	64	0.8	45585.0	726.0	5887.0	1613.0	53811.0	3.0	
R30	8/09	60-39	176-58	X16572 Y32643	73	0.9	2800.0	997.0	8139.0	5481.0	17416.0	31.5	
R31	8/09	60-39	177-28	X16444 Y32635	81		353.0	118.0	4235.0	3529.0	8235.0	42.9	
R32	8/09	60-40	178-08	X16277 Y32615	89	1.4	2135008.0	4607.0	11518.0	4838.0	2155971.0	0.2	
S18	7/06	60-59	168-41	Y32220 Z48500	19		0.0	163.0	0.0	0.0	163.0	0.0	
S20	7/15	60-59	170-05	Y32316 Z48777	25	-0.6	61632.0	149010.0	780.0	0.0	211422.0	0.0	
S22	7/15	60-59	171-31	Y32384 Z49008	34		90966.0	92366.0	1399.0	2799.0	187530.0	1.5	
S23	7/27	60-59	172-10	X17635 Y32409	34	-0.2	70524.0	96686.0	0.0	0.0	167210.0	0.0	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 10 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO SNOW CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					PERCENT	
							FEMALES	MALES (SEE NOTE)			TOTAL	LARGE	
								SMALL	PRERECRUIT	LARGE			
S24	7/27	61-01	172-49	X17504 Y32402	38	-1.1	33781.0	47017.0	0.0	0.0	80798.0	0.0	
S25	7/29	61-00	173-30	X17367 Y32430	41	-1.5	98411.0	115689.0	2254.0	0.0	216354.0	0.0	
S26	7/29	60-59	174-10	X17228 Y32461	47	-1.5	71763.0	106689.0	30665.0	1278.0	210395.0	0.6	
S27	8/06	61-00	174-53	X17068 Y32453	52	-1.5	4472.0	25290.0	12444.0	401.0	42607.0	0.9	
S28	8/07	60-59	175-34	X16911 Y32466	58	-1.3	1597.0	3866.0	9916.0	1681.0	17059.0	9.9	
S29	8/07	60-57	176-13	X16757 Y32484	62	-0.2	2619.0	1071.0	7262.0	2500.0	13452.0	18.6	
S30	8/09	60-58	177-00	X16574 Y32471	68	0.4	3577.0	4194.0	26309.0	12583.0	46663.0	27.0	
S31	8/08	61-01	177-34	X16442 Y32442	74		168.0	840.0	6483.0	4562.0	12053.0	37.8	
T23	7/27	61-19	172-11	X17591 Y32181	34	-1.3	112300.0	76410.0	386.0	772.0	189868.0	0.4	
T25	7/29	61-20	173-33	X17329 Y32216	40	-1.6	94021.0	65702.0	0.0	0.0	159723.0	0.0	
T26	7/29	61-21	174-19	X17170 Y32230	44	-1.5	73736.0	82473.0	3411.0	0.0	159620.0	0.0	
T27	8/06	61-20	175-00	X17028 Y32250	50	-1.5	9281.0	27104.0	5503.0	236.0	42124.0	0.6	
T28	8/07	61-19	175-39	X16884 Y32272	56	-1.4	6053.0	13881.0	6941.0	174.0	27048.0	0.6	
T29	8/08	61-21	176-24	X16719 Y32267	59	0.0	28185.0	1067.0	11431.0	2744.0	43427.0	6.3	
T30	8/08	61-20	176-56	X16599 Y32278	64	0.0	1667.0	1615.0	8883.0	3069.0	15234.0	20.1	
U24	7/27	61-38	173-04	X17396 Y32008	37	-1.5	218322.0	148595.0	0.0	0.0	366917.0	0.0	
U25	7/29	61-40	173-39	X17282 Y32007	38	-1.7	177083.0	143690.0	0.0	0.0	320773.0	0.0	
U26	7/29	61-39	174-21	X17148 Y32047	43	-1.6	134243.0	116064.0	2553.0	0.0	252860.0	0.0	
U27	8/06	61-41	175-09	X16984 Y32047	49	-1.6	15333.0	31237.0	2921.0	76.0	49567.0	0.2	
U28	8/07	61-40	175-48	X16847 Y32072	54	-1.5	30886.0	26113.0	5574.0	100.0	62673.0	0.2	
U29	8/08	61-38	176-26	X16715 Y32109	57	-0.1	1057.0	3203.0	13657.0	1855.0	19772.0	9.4	
V23	7/27	61-59	172-20	X17489 Y31739	29	-1.3	238081.0	432591.0	0.0	0.0	670672.0	0.0	
V25	7/29	62-00	173-41	X17250 Y31796	33	-1.6	188939.0	245358.0	0.0	1312.0	435609.0	0.3	
V26	7/28	61-59	174-34	X17084 Y31847	41	-1.7	192629.0	219631.0	0.0	0.0	412260.0	0.0	
V27	8/06	61-54	175-15	X16956 Y31921	48	-1.6	14065.0	18314.0	1057.0	81.0	33517.0	0.2	
V28	8/07	61-55	175-44	X16855 Y31927	53	-1.6	40785.0	37043.0	4321.0	0.0	82150.0	0.0	
W24	7/28	62-21	173-10	X17315 Y31551	39	-1.3	318560.0	309106.0	0.0	0.0	627666.0	0.0	
W26	7/28	62-21	174-30	X17077 Y31629	39	-1.6	274304.0	290552.0	0.0	0.0	564856.0	0.0	
X23	7/28	62-39	172-25	X17409 Y31305	28	-1.1	60204.0	219682.0	0.0	2562.0	282448.0	0.9	
X25	7/28	62-39	174-00	X17150 Y31417	39	-1.5	142017.0	160581.0	0.0	0.0	302598.0	0.0	
Y24	7/28	63-00	173-12	X17254 Y31148	37	-1.6	116702.0	185351.0	0.0	1144.0	303197.0	0.4	
Z05	7/01	54-44	165-09	Y34599 Z48036	49	5.1	0.0	132.0	0.0	921.0	1053.0	87.5	

NOTE: PRE-RECRUIT = 3.1-4.0 IN. WIDTH; LARGE = 4.0 IN. OR GREATER IN WIDTH

TABLE 11 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE KOREAN HAIR CRAB WERE TAKEN

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
D10	6/15	56-03	162-12	Y33891 Z46967	42	3.3	0.0	81.0	0.0	81.0	163.0	49.7	
E05	6/30	56-20	165-13	Y34321 Z48161	46	2.1	0.0	0.0	0.0	83.0	83.0	100.0	
E07	6/22	56-19	164-02	Y34121 Z47695	46	1.3	0.0	76.0	0.0	0.0	76.0	0.0	
E11	6/14	56-19	161-40	Y33739 Z46749	34	3.8	186.0	124.0	0.0	0.0	310.0	0.0	
E12	6/12	56-16	160-49	Y33626 Z46409	18	5.0	0.0	0.0	66.0	0.0	66.0	0.0	
F13	6/11	56-40	160-25	Y33454 Z46241	34	3.4	0.0	141.0	70.0	0.0	211.0	0.0	
F24	7/23	56-45	171-56	X18007 Z50171	67	3.5	52.0	0.0	0.0	0.0	52.0	0.0	
G01	7/08	57-00	167-41	Y34615 Z49159	41	1.1	91.0	0.0	0.0	0.0	91.0	0.0	
G02	7/03	57-01	167-04	Y34486 Z48911	41		0.0	0.0	81.0	0.0	81.0	0.0	
G09	6/20	57-01	162-48	Y33708 Z47193	32	2.3	0.0	0.0	0.0	76.0	76.0	100.0	
G11	6/14	56-59	161-33	Y33524 Z46691	38	3.0	83.0	0.0	0.0	0.0	83.0	0.0	
G13	6/11	57-01	160-20	Y33338 Z46198	36	3.4	146.0	584.0	584.0	73.0	1387.0	5.3	
G14	6/09	56-59	159-44	Y33268 Z45960	32	3.6	65.0	65.0	65.0	0.0	196.0	0.0	
G18	7/08	56-58	168-20	Y34761 Z49416	46		167.0	83.0	0.0	0.0	250.0	0.0	
G19	7/12	57-10	168-38	Y34762 Z49535	43		0.0	0.0	85.0	0.0	85.0	0.0	
G21	7/11	56-51	169-53	Y35103 Z49993	40		1138.0	813.0	813.0	81.0	2845.0	2.8	
G21	7/21	57-01	170-10	Y35132 Z50121	36	5.3	108.0	0.0	215.0	108.0	431.0	25.1	
G21	7/21	57-08	169-57	Y35077 Z50065	25	5.9	241.0	964.0	361.0	0.0	1566.0	0.0	
G22	7/22	57-06	170-27	X18660 Y35118	25	5.4	526.0	3816.0	3553.0	526.0	8421.0	6.2	
H12	6/12	57-21	160-56	Y33310 Z46433	32	3.3	85.0	169.0	0.0	0.0	254.0	0.0	
H13	6/11	57-22	160-12	Y33201 Z46136	32	3.5	172.0	86.0	86.0	0.0	344.0	0.0	
H15	6/07	57-20	159-02	X18724 Z45673	27		0.0	76.0	0.0	0.0	76.0	0.0	
H18	7/08	57-19	168-22	Y34640 Z49410	41		0.0	1053.0	0.0	0.0	1053.0	0.0	
H19	7/12	57-20	169-00	Y34770 Z49659	40		0.0	164.0	164.0	0.0	328.0	0.0	
H20	7/12	57-19	169-35	Y34903 Z49890	35		78.0	625.0	1953.0	234.0	2891.0	8.1	
H21	7/21	57-19	170-11	X18715 Y35008	27	5.4	0.0	526.0	658.0	263.0	1447.0	18.2	
I01	7/08	57-40	167-47	Y34356 Z49137	36	3.4	0.0	80.0	0.0	0.0	80.0	0.0	
I11	6/14	57-41	161-24	Y33257 Z46613	28	3.7	313.0	313.0	234.0	0.0	860.0	0.0	
I12	6/13	57-40	160-53	Y33190 Z46410	31	3.2	325.0	163.0	0.0	0.0	488.0	0.0	
I13	6/10	57-38	160-16	Y33120 Z46159	29	3.2	136.0	0.0	0.0	0.0	136.0	0.0	
I19	7/13	57-49	168-45	Y34460 Z49466	38	2.7	0.0	0.0	81.0	0.0	81.0	0.0	
I19	7/13	57-38	169-01	Y34616 Z49608	37	2.7	81.0	81.0	244.0	163.0	569.0	28.6	
I20	7/12	57-30	169-19	Y34753 Z49751	37	2.5	0.0	0.0	81.0	0.0	81.0	0.0	
I20	7/13	57-41	169-38	Y34685 Z49796	39		0.0	153.0	0.0	0.0	153.0	0.0	

NOTE: PRE-RECRUIT = 3.0-3.5 IN. WIDTH; LARGE = 3.5 IN. OR GREATER IN WIDTH



TABLE 11 DATA FROM THE 1991 EASTERN BERING SEA TRAWL SURVEY WHERE KOREAN HAIR CRAB WERE TAKEN (Cont)

STATION	DATE	LATITUDE	LONGITUDE	LORAN C	DEPTH FTMS	BOTTOM TEMP	NUMBER PER SQUARE MILE					TOTAL	PERCENT LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRERECRUIT	LARGE			
I21	7/20	57-31	169-58	X18698 Y34847	37	2.7	0.0	0.0	79.0	0.0	79.0	0.0	
J01	7/08	58-00	167-48	Y34184 Z49081	36	2.4	0.0	0.0	81.0	0.0	81.0	0.0	
J20	7/13	57-50	169-20	Y34539 Z49654	37		85.0	0.0	85.0	0.0	170.0	0.0	
K03	7/04	58-19	166-32	Y33787 Z48552	24	3.7	0.0	0.0	0.0	165.0	165.0	100.0	
K18	7/08	58-19	168-28	Y34095 Z49226	36		0.0	0.0	0.0	81.0	81.0	100.0	
K19	7/13	58-19	169-06	Y34182 Z49423	36	1.5	0.0	0.0	120.0	0.0	120.0	0.0	
L19	7/13	58-39	169-09	Y33948 Z49320	33	1.6	0.0	0.0	123.0	0.0	123.0	0.0	
M01	7/07	59-00	167-53	Y33561 Z48851	21	4.0	0.0	81.0	0.0	0.0	81.0	0.0	
M19	7/14	59-00	169-11	Y33701 Z49210	28	2.5	0.0	0.0	0.0	317.0	317.0	100.0	
N18	7/07	59-19	168-34	Y33418 Z48951	22		85.0	0.0	171.0	0.0	256.0	0.0	
O18	7/07	59-39	168-37	Y33182 Z48862	22		0.0	0.0	78.0	0.0	78.0	0.0	
P21	7/17	60-01	170-37	X18061 Y33047	35	-0.1	85.0	0.0	0.0	0.0	85.0	0.0	
R19	7/14	60-39	169-26	Y32512 Z48746	22	1.7	0.0	357.0	0.0	0.0	357.0	0.0	
S18	7/06	60-59	168-41	Y32220 Z48500	19		81.0	0.0	0.0	0.0	81.0	0.0	
Z04	7/01	54-49	165-31	Y34642 Z48174	91		0.0	65.0	0.0	0.0	65.0	0.0	

NOTE: PRE-RECRUIT = 3.0-3.5 IN. WIDTH; LARGE = 3.5 IN. OR GREATER IN WIDTH