



Alaska
Fisheries Science
Center

National Marine
Fisheries Service

U.S. DEPARTMENT OF COMMERCE

AFSC PROCESSED REPORT 94-07

Report to Industry on the 1994 Eastern Bering Sea Crab Survey

November 1994



This report does not constitute a publication and is for information only.
All data herein are to be considered provisional.

ERRATA NOTICE

This document is being made available in .PDF format for the convenience of users; however, the accuracy and correctness of the document can only be certified as was presented in the original hard copy format.

Inaccuracies in the OCR scanning process may influence text searches of the .PDF file. Light or faded ink in the original document may also affect the quality of the scanned document.

Cover: A resting pod of red king crab at 70 ft in Chiniak Bay, Kodiak Island. The pod is approximately 8 ft high, 18 ft in diameter, and contains 7,000 to 9,000, 5- and 6-year-old crab. This 26 September 1993 photo is the first in situ documentation of mega-podding in adult red king crab. Previously, it was believed that only juvenile crab form pods. In this megapod all but a few of the males are sexually mature, 9% of the males are of legal size, and 12% of the females are carrying egg clutches. The numbers of male and female crab are approximately equal and the average carapace width is 5 in.

Photo: C. Braxton Dew.

Alaska Fisheries Science Center
Processed Report 94-07

**REPORT TO INDUSTRY ON THE
1994
EASTERN BERING SEA
CRAB SURVEY**

by

B. G. Stevens, J. A. Haaga, and R. A. MacIntosh

National Marine Fisheries Service
Alaska Fisheries Science Center
Kodiak Facility
P.O. Box 1638
Kodiak, AK 99615

November 1994

RESULTS OF THE 1994 NMFS BERING SEA CRAB SURVEY EXECUTIVE SUMMARY

This section summarizes data presented in the following pages of this report. Numbers presented are indices of population level and do not represent absolute abundance. For further information, contact Dr. Bradley G. Stevens or Dr. Robert Otto, NMFS, P.O. Box 1638, Kodiak, AK 99615. Phone (907) 487-4961. GHL = Guideline Harvest Level.

Red king crab (*Paralithodes camtschaticus*) Bristol Bay.

Legal males: 5.5 million crabs; 25% decrease.

Pre-recruits: 38% decrease.

Large Females: 7.5 million crabs; 47% decrease.

Outlook: Total population index is at an all-time low and declining. Female abundance is below threshold.

GHL: No fishery in 1994.

Red king crab (*P. camtschaticus*) Pribilof District.

Legal males: 2.0 million crabs; no significant change.

Pre-recruits: No significant change.

Large Females: 48% decrease.

Outlook: Legal crab are concentrated at few stations, and index has low precision. Females and small males are poorly estimated.

GHL: 2.0 million lbs.

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

Legal males: 0.8 million crabs; No significant change.

Pre-recruits: No significant change.

Large Females: No significant change.

Outlook: Population low and stable. Trends difficult to detect.

GHL: No fishery in 1994.

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

Legal males: 2.5 million crabs; 31% decrease.

Pre-recruits: 29% decrease.

Large Females: Not well estimated.

Outlook: Population relatively high and stable.

GHL: 3.0 million lbs.

Tanner crab (*Chionoecetes bairdi*) Eastern District.

Legal males: 15.4 million crabs; 25% decrease.

Pre-recruits: 39% decrease.

Large Females: No significant change.

Outlook: Population still declining, but may be leveling out.

GHL: 7.5 million lbs, West of 163°W only.

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

Large males: 71.6 million crabs; 47% decrease.

Small males: No significant change.

Large Females: 15% decrease.

Outlook: Large crab continuing to decline, but may be leveling out. Strong recruitment of juveniles occurring at northern limit of survey.

GHL: 55.7 million lbs (4" carapace width).

Hair crab (*Erimacrus isenbeckii*) All districts combined.

Total males: 8.2 million crabs; 30% decrease.

Large Females: Not well estimated.

Outlook: Population at medium level and stable.

GHL: Pribilofs: 1.0 million lbs.

THE 1994 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 1994 Eastern Bering Sea (EBS) crab survey consisted of 396 successful bottom trawl tows and covered an area of approximately 140,400 square nautical miles (nmi). The 1994 survey area (Fig. 1) was identical to that of 1993, except for the addition of eight widely spaced stations north of St. Matthew Island. To maintain consistency with previous surveys, these additional stations were not included in analyses of crab population abundance. The survey was conducted aboard two chartered vessels, the *F/V Aldebaran* and *F/V Arcturus*, between June 3 and July 24. The same vessels were used in 1993. Methodology was identical to that of previous surveys; tows were made at the centers of squares defined by a 20x20 nmi grid. Near St. Matthew Island and the Pribilofs, additional tows were made at the corners of squares. Additional tows were also made at station G22 to verify abundance of red king crab.

Both vessels fished an eastern otter trawl with an 83 ft headrope and a 112 ft

footrope. This has been the standard trawl since 1981. Wing spread on this trawl ranges from 47-58 ft. For consistency with previous reports an effective width of 50 ft was assumed. Each tow was one-half hour in duration; average length was 1.47 nmi. 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 width (cw) for Tanner and snow crabs, and carapace length (cl) for all others. Surface and bottom water temperatures were recorded at most stations. Procedures for estimating abundance were similar to previous years (Appendix A). Note that population estimates are indexes and are most precise for legal crabs; they do not represent absolute abundance and are least precise for females and small crab due to vagaries in crab behavior and net performance.

Because of differences in the length of each tow, catches presented in accompanying charts and tables are standardized to the nearest whole number of crab caught per square nautical mile. Where more than one tow was made in a square (including corner tows), charts indicate average crab density for all tows. Tables 7-11 present data for all tows without averaging. It is advisable to cross-reference charts and tables.

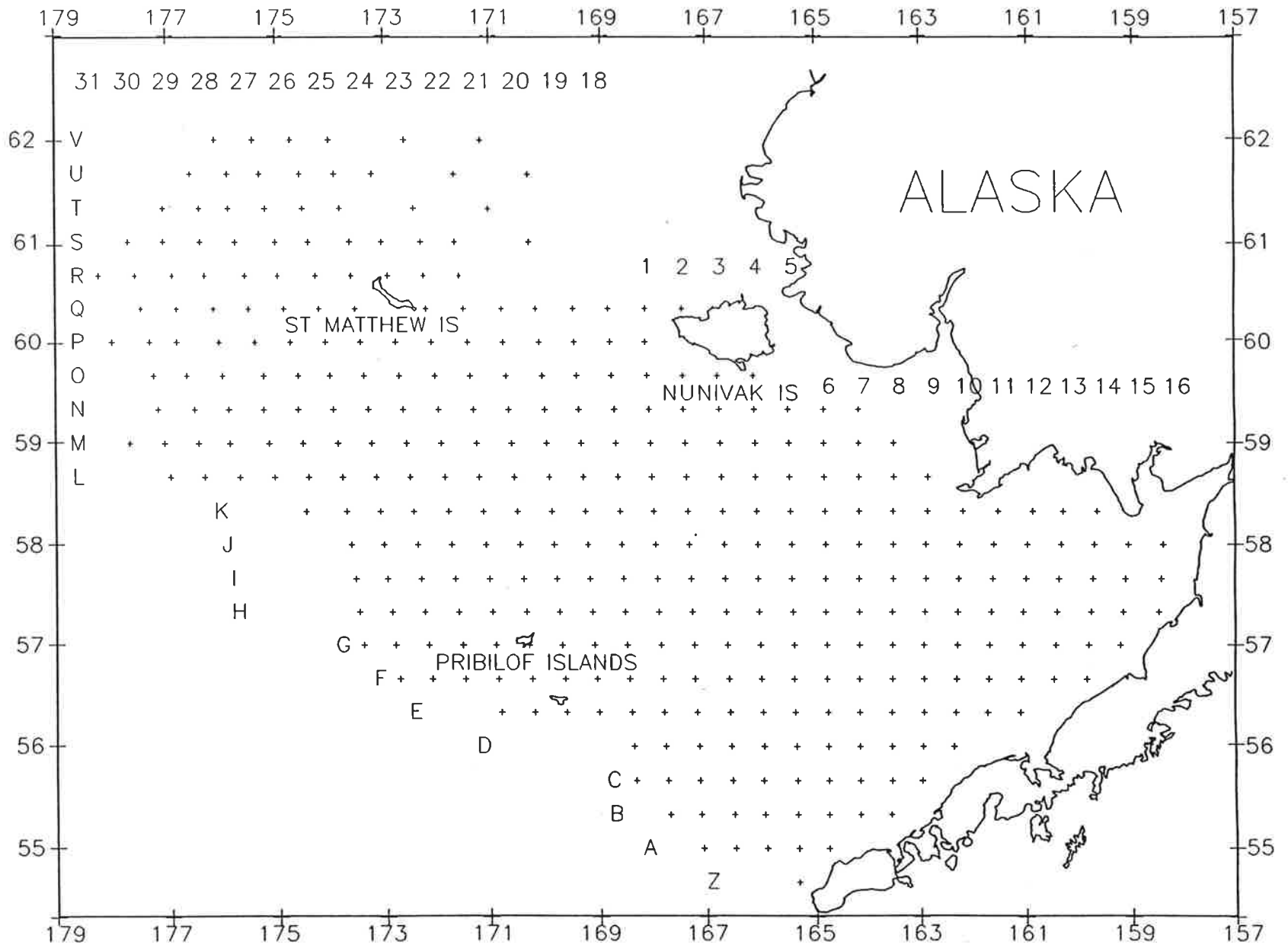
The following abbreviations are used in the text: (in) inches, (mm) millimeters, (fm) fathoms, (lbs) pounds, (°C) degrees Celsius, (cl) carapace length, and (cw) carapace width.

Distribution and Abundance of Crab Stocks

Bristol Bay Red King Crab (*P. camtschaticus*)

Legal-sized (≥ 6.5 in cw or 135 mm cl) male crabs were distributed evenly throughout central Bristol Bay (Chart 1 and Table 7). The abundance index of legal male red king

FIGURE 1. NMFS eastern Bering Sea crab survey area in 1994.



Red King Crab Bristol Bay and Pribilof District

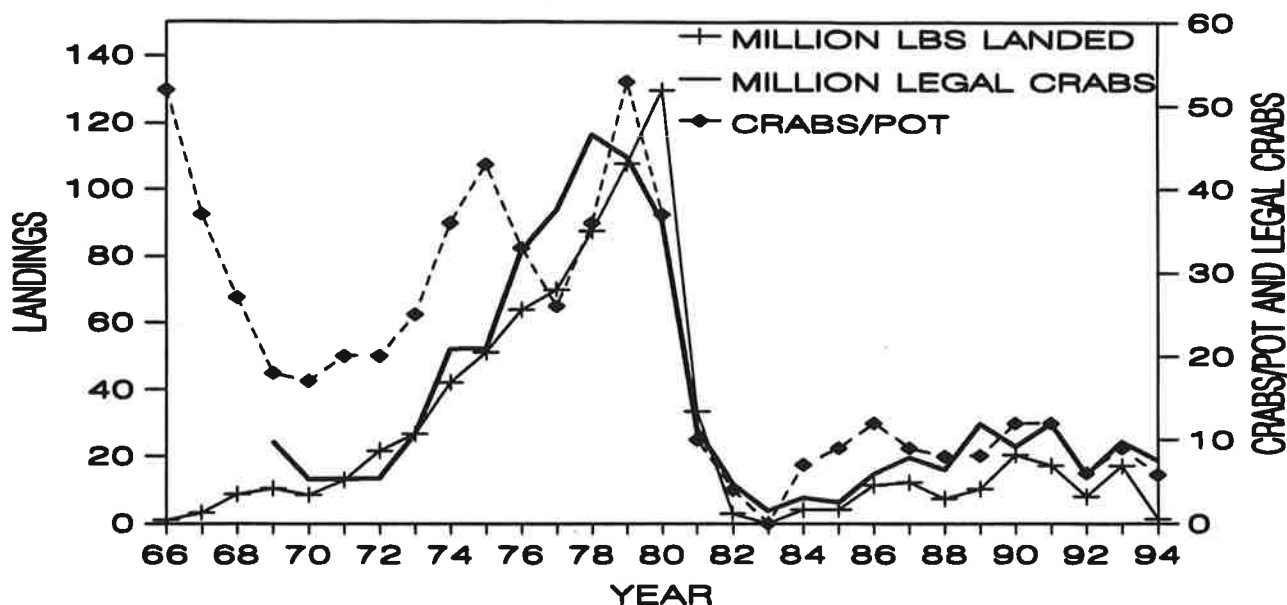


FIGURE 2. U.S. landings in millions of pounds, CPUE as crabs/pot, and abundance of legal red king crab (*P. camtschaticus*) in millions in Bristol Bay and Pribilof District, estimated from NMFS trawl surveys (1994 CPUE from Pribilofs only).

crabs in the Bristol Bay District (south of 58°39'N and east of 168°W) was 5.5 million crabs (Table 1), which represents a 25% decrease from last year. This estimate is significantly below the 24-year average (13.7 million). Pre-recruit crab (110-134 mm cl) showed a decrease of 38% (Fig. 3). Recruitment of juveniles is still poor, and their numbers are extremely low (Table 1). The abundance index for total males is now at an all-time low. Therefore the fishable stock will probably continue to decline in the future. No legal male crabs were in molting or soft-shell condition. Among legal-sized crab, 53% were oldshell crabs (see Appendix B).

The abundance index for large (≥ 90 mm cl) females in Bristol Bay was 7.5 million crabs, a decrease of 47% from last year, and the combined abundance of small and large females is now extremely low. In June, 23% of mature females were still molting or soft-shell, (vs. 8% last year). Among mature females, the proportion which had molted and extruded new, uneyed eggs was 75% compared with 80% 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 not open on November 1, 1994, because the index of large females is below a threshold value of 8.4 million crabs (see Appendix A). Last year's landings were 14.6 million lbs with a catcher-unit-of-effort (CPUE) of 9 crabs/pot-lift (Fig. 2). (Rance Morrison, Alaska Department of Fish & Game, Box 308, Dutch Harbor, AK, 99692, pers. commun., November 1994).

Pribilof Islands Red King Crab (*P. camtschaticus*)

In the Pribilof District (south of 58°39'N and west of 168°W), the abundance index for legal male red king crab was 2.0 million crabs, a decrease of 21% from last year's value. The index for large females decreased by 48%. Note that male crab were highly concentrated at one station (G22), which makes the index less reliable and resulted in poor confidence intervals of $\pm 140\%$. Three additional tows

TABLE 1. Annual abundance estimates (millions of crabs) for red king crab (*P. camtschaticus*) from NMFS surveys. Bristol Bay and Pribilof Districts are combined except where noted.

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	Juveniles	Pre-rec	Legal	Total	Small	Large	Total	
	<110 <5.2	110-134 5.2-6.5	≥135 ≥6.5		<90 <4.3	≥90 ≥4.3		
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
1992	7.0	5.5	5.8	18.3	2.2	13.4	15.6	33.9
1993	5.7	10.2	9.8	25.8	2.5	19.2	21.7	47.5
1994 (B) ²	5.9	6.0	5.5	17.4	3.4	7.5	10.9	28.4
(P)	0.2	0.7	2.0	3.0	0.0	2.6	2.6	5.6
<u>Limits³</u>								
Lower	0.0	3.3	3.5	9.2	0.0	4.2	4.4	13.6
Upper	12.7	8.6	7.5	25.6	9.0	10.9	17.5	43.1
±%	113	44	37	47	165	44	60	52

¹ Carapace length (mm).

² Separate estimates given for Bristol Bay (B) and Pribilofs (P) Districts.

³ Mean ± 2 standard errors for most recent year; Bristol Bay only.

Red King Crab Length Frequency Bristol Bay

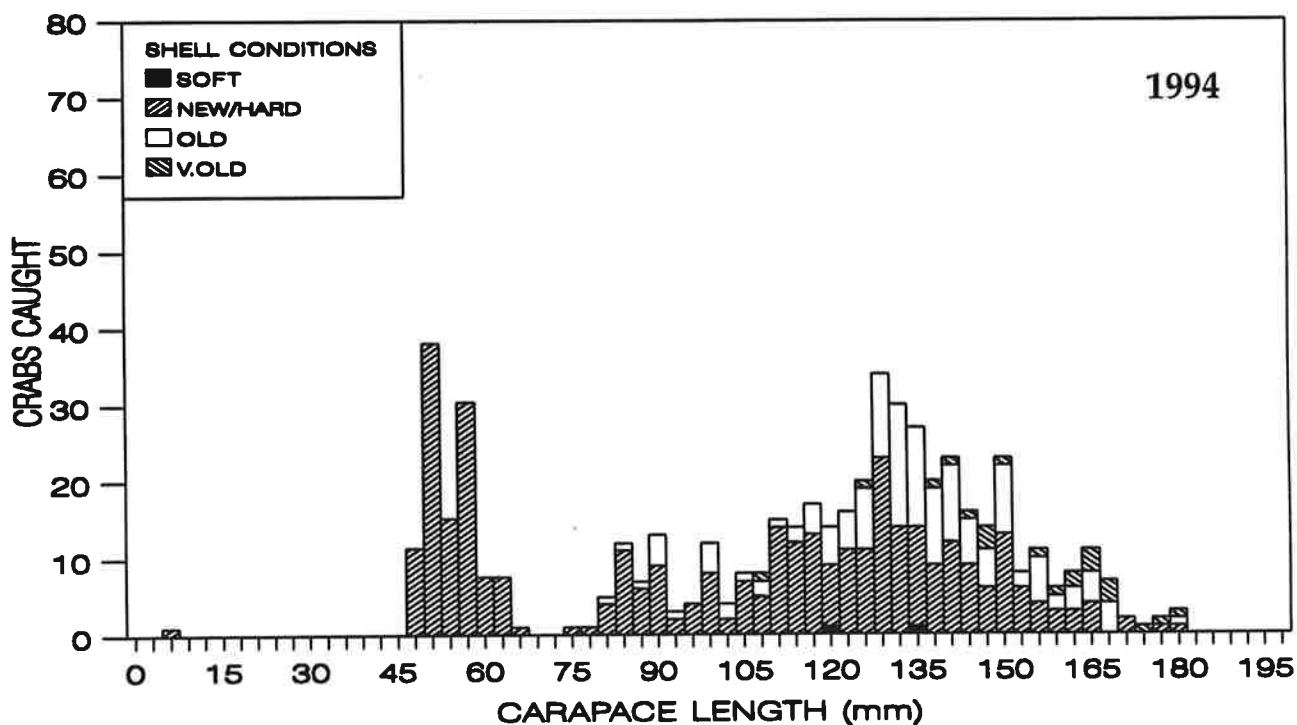
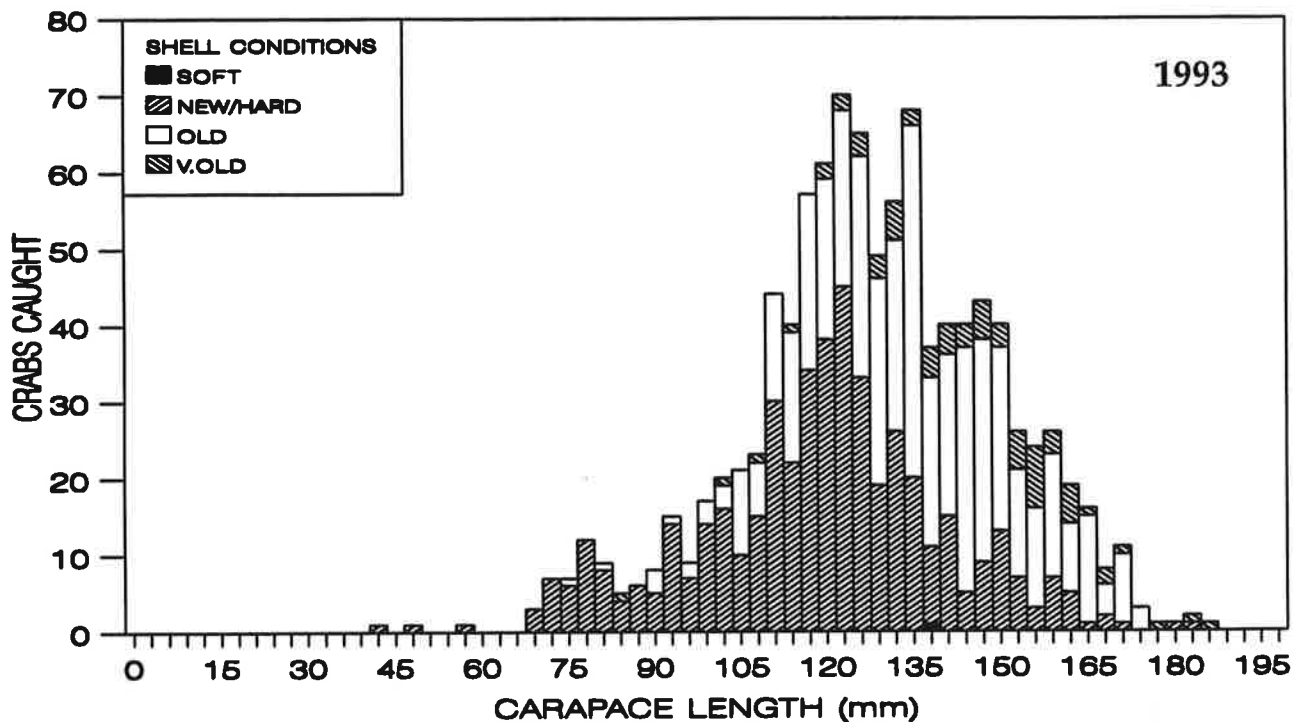


FIGURE 3. Size frequency of male red king crab (*P. camtschaticus*), by 3 mm length classes, 1993-1994.

Blue King Crab Pribilof District

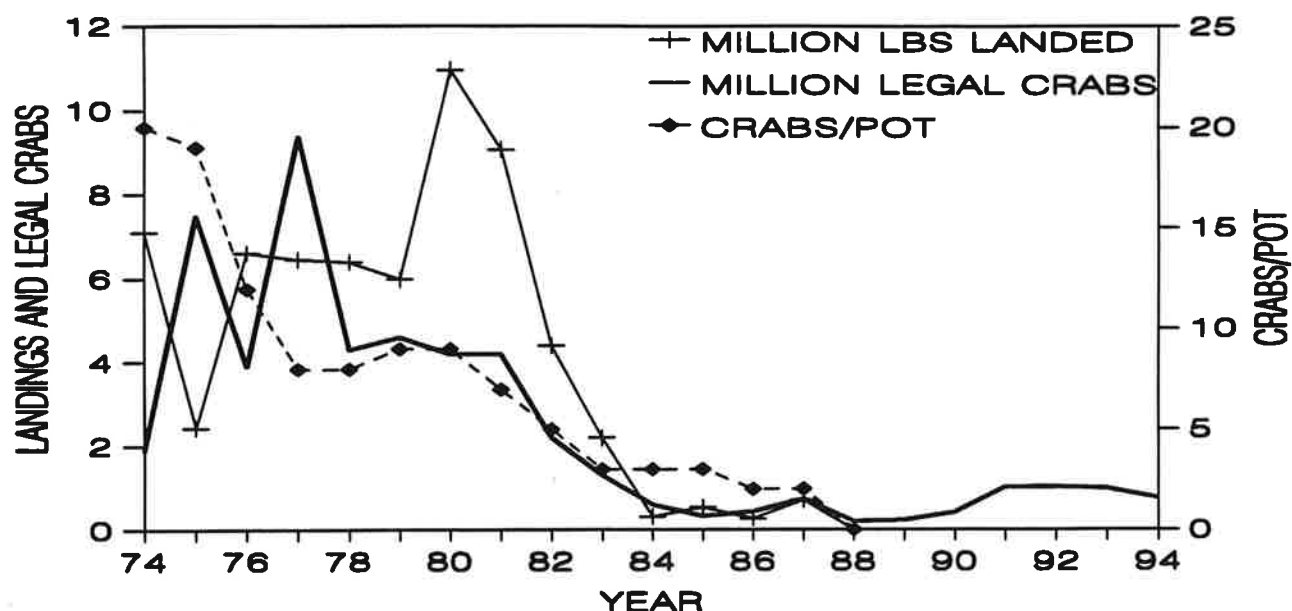


FIGURE 4. U.S. landings in millions of pounds, CPUE as crabs/pot, and abundance of legal blue king crab (*P. platypus*) in millions in the Pribilof District, estimated from NMFS trawl surveys.

were made within 5 nmi of station G22 in order to improve the reliability of the index. A fishery for red king crab in the Pribilof District opened September 15 with a conservative guideline harvest level (GHL) of 2.0 million lbs, representing an exploitation rate of 14% of the legal male biomass index value (14.5 million lbs). This year's landings were 1.3 million lbs with a CPUE of 6 crabs/potlift. (Rance Morrison, ADF&G).

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

Legal (≥ 6.5 in cw or 135 mm cl) males were found primarily north and east of St. Paul Island (Chart 2 and Table 8). The abundance index for legal males was 0.76 million crabs (Table 2 and Fig. 4), a 22% decrease from last year, and is still significantly below the 20-year average (2.36 million). The number of pre-recruits (110-134 mm cl) showed a decrease of 38% and the abundance of juveniles (<110 mm cl), showed a decrease of 69%.

Size-frequency data (Fig. 5) show that legal crab were slightly larger than last year. Shell conditions among legal males were 4% soft/molting, 42% new-hardshells, and 54% oldshells, indicating that molting was essentially complete by the time of the survey.

The abundance index for large (≥ 90 mm cl) females showed a 97% increase from last year. However, estimates of juvenile and female abundance are usually very imprecise due to the preference of such crab for rocky habitat which is not sampled well by trawls. Among mature females, 53% were new hardshells, of which 100% carried new eggs, and 46% were oldshells, of which 99% carried empty embryo cases indicating hatching had recently occurred. 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. Less than 1% of females were soft-shell, indicating that molting was completed for 1994.

This fishery has been closed since 1987 due to low stock abundance, and will not be

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

	Pribilof District							Grand Total
	Males				Females			
	Juveniles	Pre-rec	Legal	Total	Small	Large	Total	
	Size ¹ (mm) Width(in)	<110 <5.2	110-134 5.2-6.5		≥135 ≥6.5	<90 <4.3		
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 ²	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
1992	1.57	1.17	1.02	3.76	1.31	2.05	3.36	7.11
1993	0.97	0.83	0.98	2.78	0.33	2.17	2.50	5.28
1994	0.31	0.51	0.76	1.57	0.06	4.28	4.34	5.91
<u>Limits³</u>								
Lower	0.1	0.2	0.2	0.6	0.0	0.6	0.7	1.2
Upper	0.5	0.9	1.3	2.6	0.1	7.9	8.0	10.6
±%	77	70	68	65	139	85	84	79

¹ Carapace length (mm).

² Female estimates considered unreliable in 1980.

³ Mean ± 2 standard errors for most recent year.

Blue King Crab Length Frequency Pribilof District

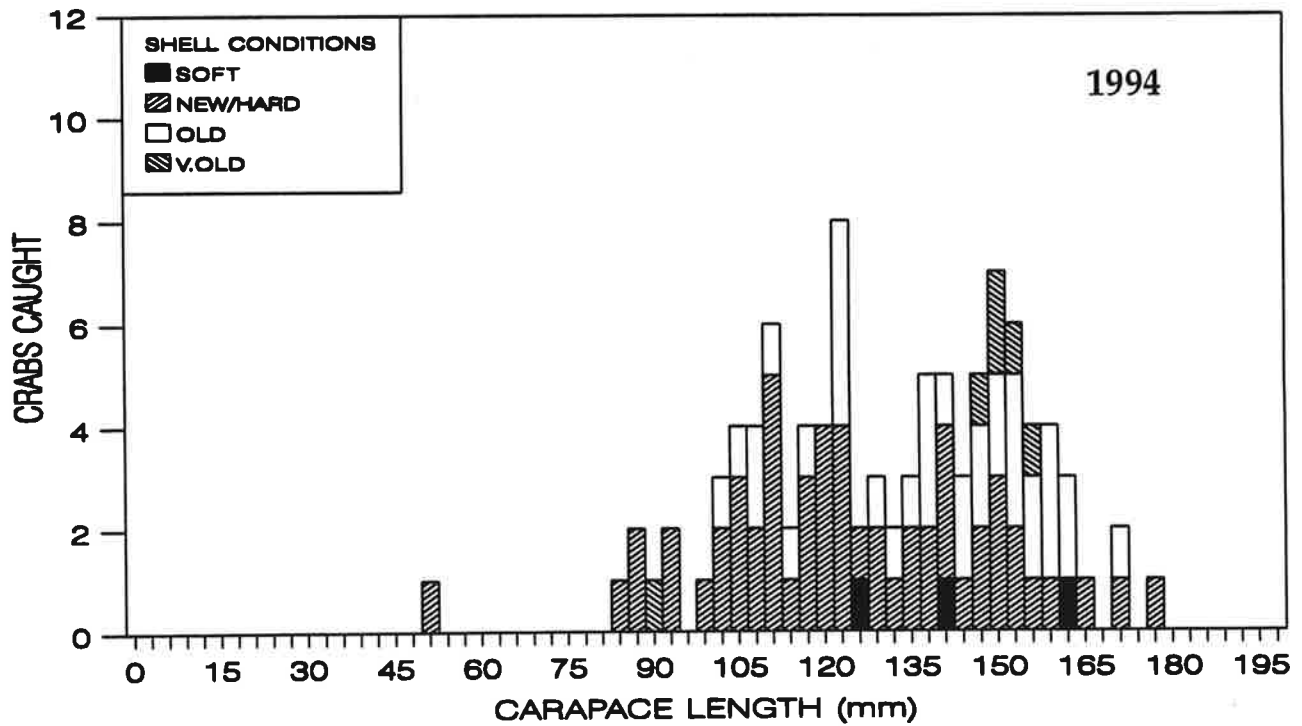
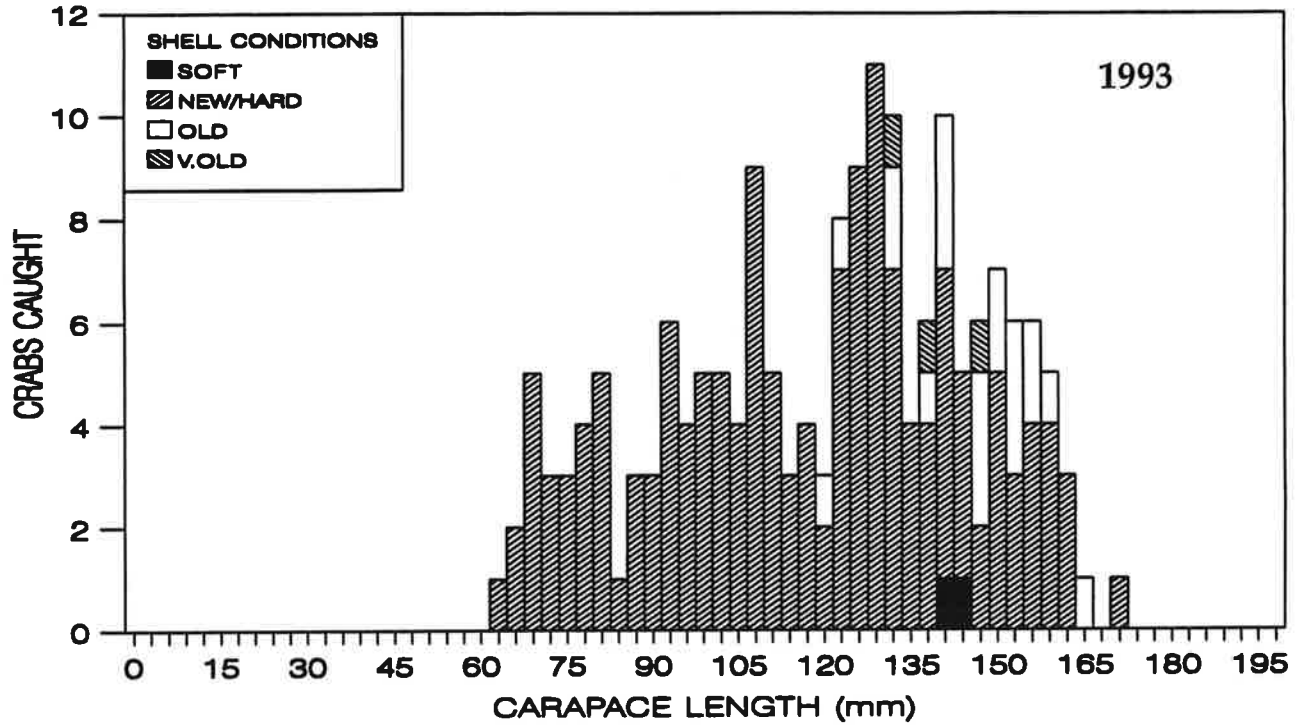


FIGURE 5. Size frequency of Pribilof District male blue king crab (*P. platypus*), by 3 mm length classes, 1993-1994.

Blue King Crab Northern District

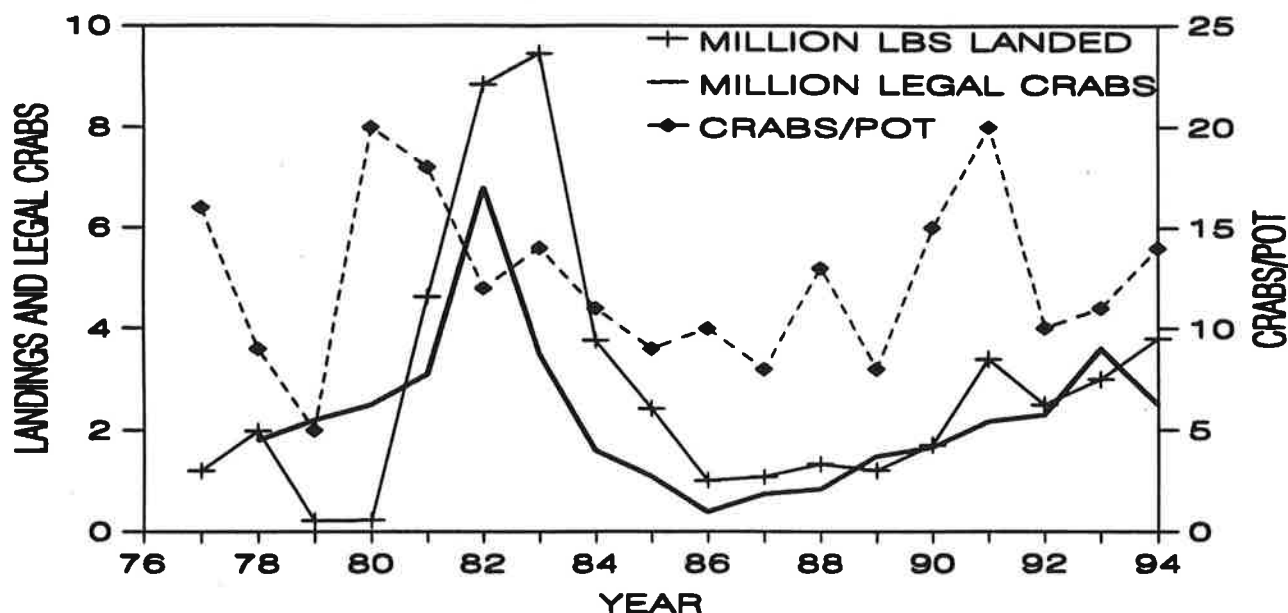


FIGURE 7. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of legal blue king crabs (*P. platypus*) in millions in the Northern District (St. Matthew Island), estimated from NMFS trawl surveys.

opened in 1994.

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

Legal (≥ 5.5 in cw or 120 mm cl) males were captured primarily southwest of St. Matthew Island (Chart 2 and Table 8). The abundance index for legal males was 2.47 million crabs (Table 3), representing a 31% decrease from last year. The abundance of pre-recruits (105-119 mm cl) showed a 29% decrease. Except for fewer juveniles, the distribution of size-frequencies (Fig. 6) shows little change over the past year. The index of legal males is near the long-term average of 2.24 million. Among legal males, 7% were softshell, 70% were new-hardshells, and 23% oldshells, similar to last year. The index for large females (≥ 80 mm cl) decreased by 87%, but abundance estimates for female blue king crabs are usually imprecise due to habitat preference, as explained above. Only 11 mature females were captured.

The 1994 fishery opened on September

15 with a guideline harvest of 3.0 million lbs, representing an exploitation rate of 31% of the legal male biomass index value (9.5 ± 3.4 million lbs). This year's landings were 3.8 million lbs with a CPUE of 14 crabs/pot-lift (Fig. 7). (Rance Morrison, ADF&G).

Tanner Crab (*C. bairdi*)

The legal minimum size of 5.5 in cw (spine tip to spine tip) is equivalent to 138 mm cw measured between the spines (scientific measure). The data included in Table 4, however, define "large" crabs as males ≥ 135 mm, because this size has been used for a long-term index since 1976.

Legal males were widely distributed with regions of relatively high abundance in outer Bristol Bay, along the Alaska Peninsula, Table 9). The abundance index for large (≥ 135 mm cw) male *C. bairdi* in the Eastern District (east of 173°W) is 20.0 million crabs (Table 4), of which 15.4 million are legal size (≥ 138 mm cw). About 48% of the legal crab were located east of 163°W , and virtually all the

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

	Northern District							Grand Total
	Males				Females			
	Juveniles	Pre-rec	Legal	Total	Small	Large	Total	
Size ¹ (mm)	<105	105-119	≥120		<80	≥80		
Width(in)	<4.3	4.3-5.5	≥5.5		<3.8	≥3.8		
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
1992	2.26	1.47	2.30	6.03	0.94	0.38	1.70	7.73
1993	4.62	1.99	3.60	10.22	1.35	3.03	4.38	14.60
1994	1.55	1.42	2.47	5.44	0.11	0.40	0.51	5.95
<u>Limits²</u>								
Lower	0.8	0.6	1.6	3.5	0.0	0.1	0.1	3.6
Upper	2.3	2.2	3.4	7.4	0.3	0.7	0.9	8.3
±%	46	57	36	36	141	75	74	39

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.

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

	Northern District							Grand Total
	Males				Females			
	Juveniles	Pre-rec	Legal	Total	Small	Large	Total	
	Size ¹ (mm)	Width(in)						
	<105	105-119	≥120		<80	≥80		
	<4.3	4.3-5.5	≥5.5		<3.8	≥3.8		
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
1992	2.26	1.47	2.30	6.03	0.94	0.38	1.70	7.73
1993	4.62	1.99	3.60	10.22	1.35	3.03	4.38	14.60
1994	1.55	1.42	2.47	5.44	0.11	0.40	0.51	5.95
<u>Limits²</u>								
Lower	0.8	0.6	1.6	3.5	0.0	0.1	0.1	3.6
Upper	2.3	2.2	3.4	7.4	0.3	0.7	0.9	8.3
±%	46	57	36	36	141	75	74	39

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.

TABLE 4. Annual abundance estimates (millions of crabs) for Tanner crabs (*C. bairdi*) from NMFS surveys. Data since 1988 are for Eastern District; all prior data for Bristol Bay and the Pribilof Districts; both areas contain virtually all legal males.

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	Juveniles	Pre-rec	Large	Total	Small	Large	Total	
	<110 <4.3	110-134 4.3-5.3	≥135 ≥5.3		<85 <3.4	≥85 ≥3.4		
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
1992	121.0	101.9	52.8	275.7	98.9	63.9	162.8	438.5
1993	76.6	63.4	27.2	167.7	57.6	29.6	87.2	254.9
1994	47.9	38.6	20.0	106.6	57.9	27.5	85.5	192.0
<u>Limits²</u>								
Lower	33.1	27.8	13.2	82.1	26.7	15.7	48.7	130.8
Upper	62.8	49.5	26.8	131.1	89.2	39.3	122.2	253.3
±%	31	28	34	23	54	43	43	32

¹ Carapace width (mm).

² Mean ± 2 standard errors for most recent year.

Tanner Crab Width Frequency Eastern District

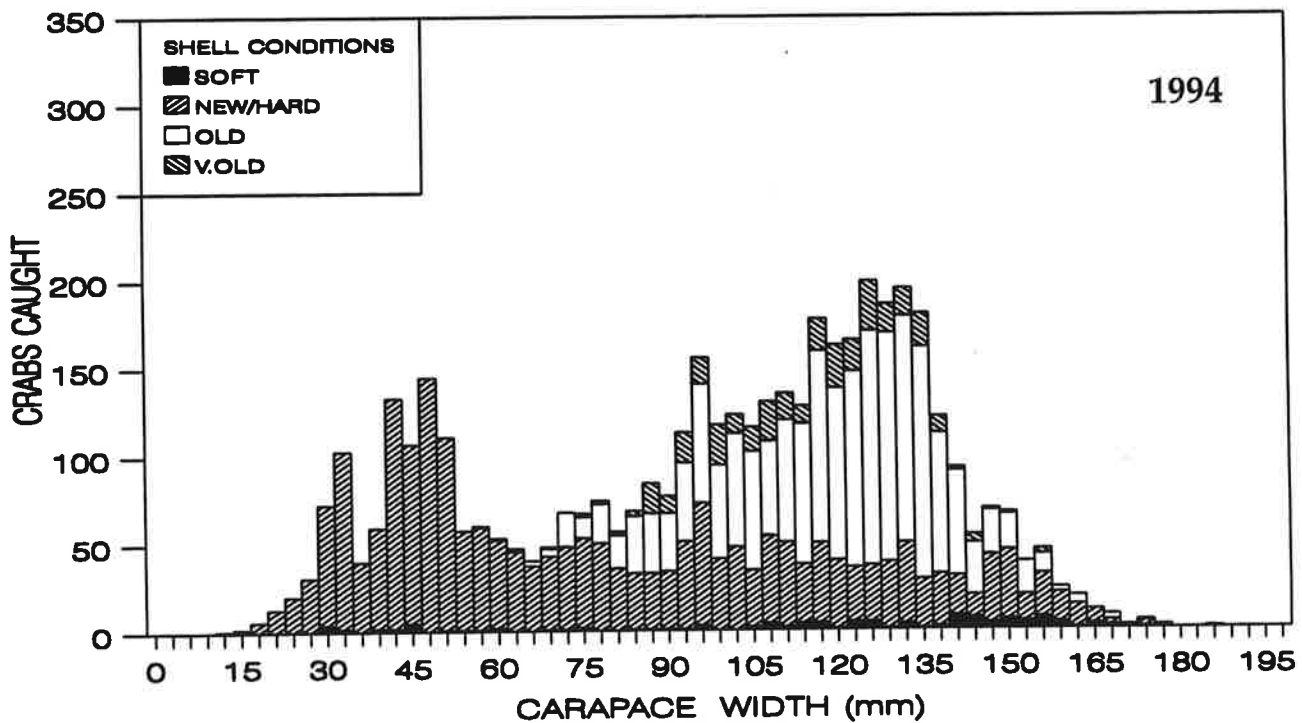
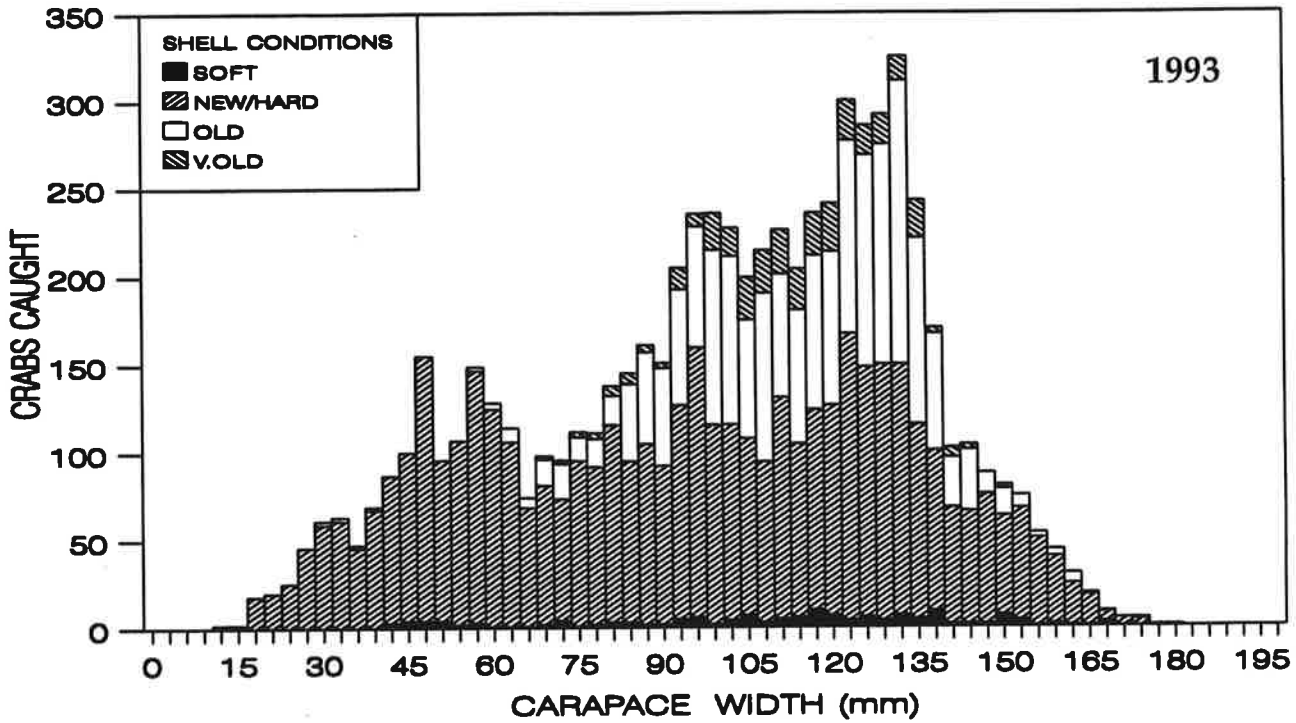


FIGURE 8. Size frequency of male Tanner crab (*C. bairdi*) in the Bristol Bay and Pribilof Districts, by 3 mm width classes, 1993-1994.

Tanner Crab Eastern District

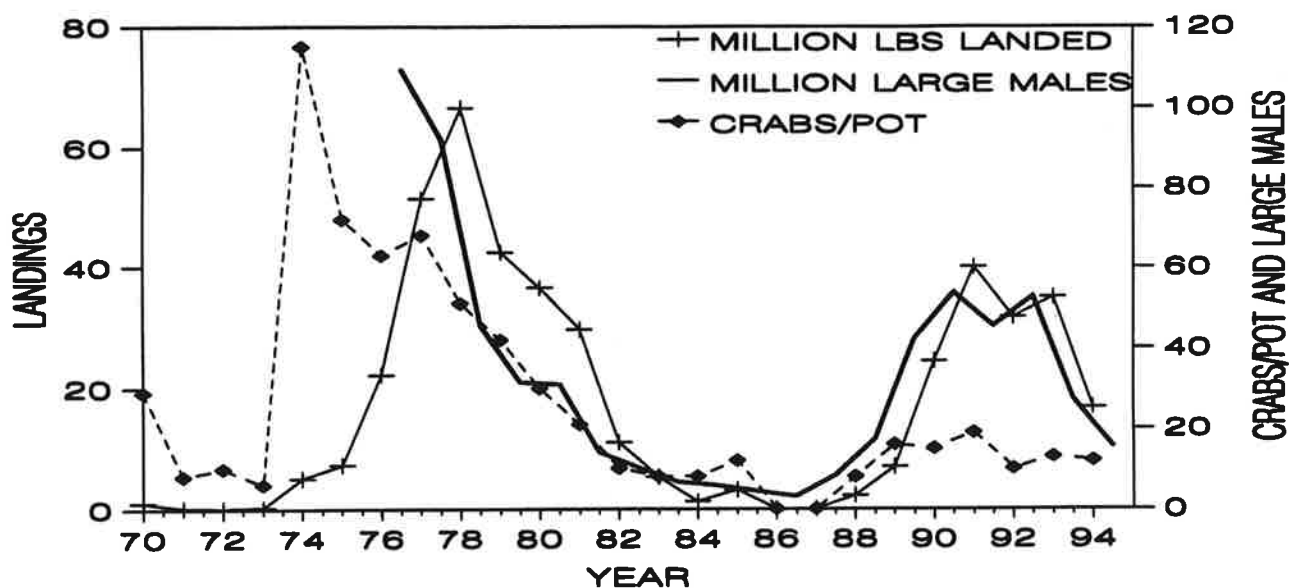


FIGURE 9. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of large male Tanner crab (*C. bairdi*) in millions in the Bristol Bay and Pribilof Districts (prior to 1989) or the Eastern District (since 1989), estimated from NMFS trawl surveys.

legal males occurred in the Eastern District. The abundance index for large crabs showed a decrease of 27% from last year and is now below the long-term average (33.5 million). The abundance index for pre-recruits (110-134 mm cw) showed a 39% decrease and the index for small males (<110 mm cw) showed a 38% decrease. A strong cohort of crabs which recruited to the fishery in 1988-1992 is now declining due to natural mortality and fishery removals. Size-frequency data (Fig. 8) show that juveniles are continuing to recruit to this population, but at lower levels than last year. Among legal males, 10% were molting or softshell, 42% were new-hardshells, and 46% were oldshells. Abundance of legal males will probably continue to decline over the next few years.

The abundance index of large (≥ 85 mm cw) females (all districts) showed no significant change and the abundance of small (<85 mm) females also showed no significant change from last year. These data indicate that this population may be leveling out. Among mature females, 1% were softshells;

6% were new-hardshells, of which 95% carried new eggs, and 93% were oldshells, of which 77% carried new eggs. The majority of the reproductive stock over the last 3 years has consisted of oldshell crabs which tend to produce more eggs than newshelled females. The period of larval hatching and embryo extrusion was completed by the time of the survey.

Due to closure of the Bristol Bay red king crab fishery, the Tanner crab fishery will only open in that region between 163°W and 173°W. The harvest guideline for 1994-95 has been set at 7.5 million lbs, for an exploitation rate of 21% of the legal male biomass index value (36.0 ± 12.0 million lbs). Last year's landings were 16.9 million lbs with average CPUE of 12 crabs/pot-lift (Fig. 9). (Rance Morrison, ADF&G).

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

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

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	Large		V. Large	Total	Small	Large		
	<102 <4.0	≥102 ≥4.0	≥110 ≥4.3		<50 <2.0	≥50 ≥2.0	Total	
1982	*	*	21.7	2073	403	2256	2658	4732
1983	*	*	22.1	1858	673	1228	1913	3760
1984	1237	153	73.9	1391	610	582	1192	2583
1985	548	75	40.7	623	258	123	382	1004
1986	1179	83	45.9	1262	791	422	1212	2474
1987	4439	151	70.0	4590	2919	2929	5849	10438
1988	3467	171	90.1	3638	1235	2323	3556	7194
1989	3646	187	81.2	3833	1923	3791	5713	9546
1990	2860	420	188.7	3281	1463	2798	4261	7542
1991	3971	484	323.0	4455	3289	3575	6864	11319
1992	3158	256	164.8	3414	2434	1914	4348	7763
1993	5597	135	77.9	5732	3990	1983	5972	11704
1994	4283	72	39.9	4354	3418	1674	5092	9446
East (%) ²	54	45	41	53	27	77	44	48
<u>Limits³</u>								
Lower	2998	54	30	3048	1982	1088	3463	6510
Upper	5567	89	50	5660	4853	2260	6721	12382
±%	30	24	25	30	42	35	32	31

¹ Carapace width (mm).

² Proportion of size group in Eastern District.

³ Mean ± 2 standard errors for most recent year.

* Estimates not available at present time.

Snow Crab Width Frequency All Districts

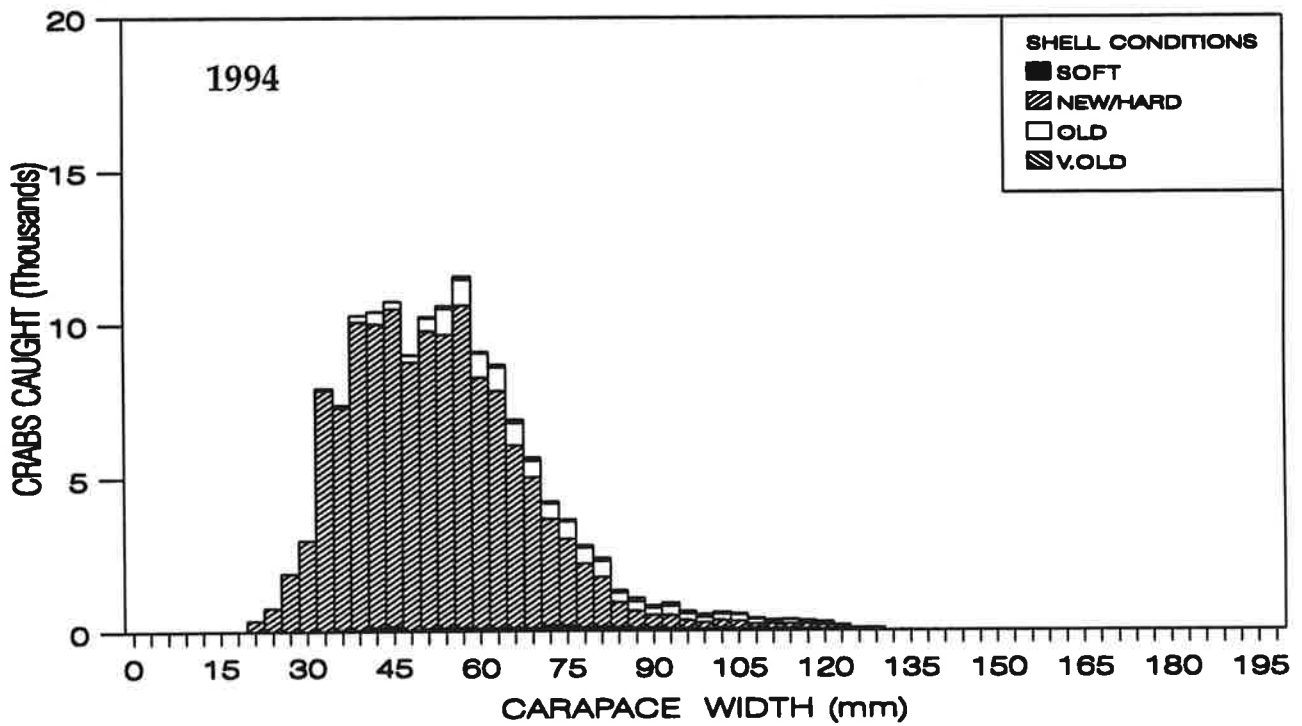
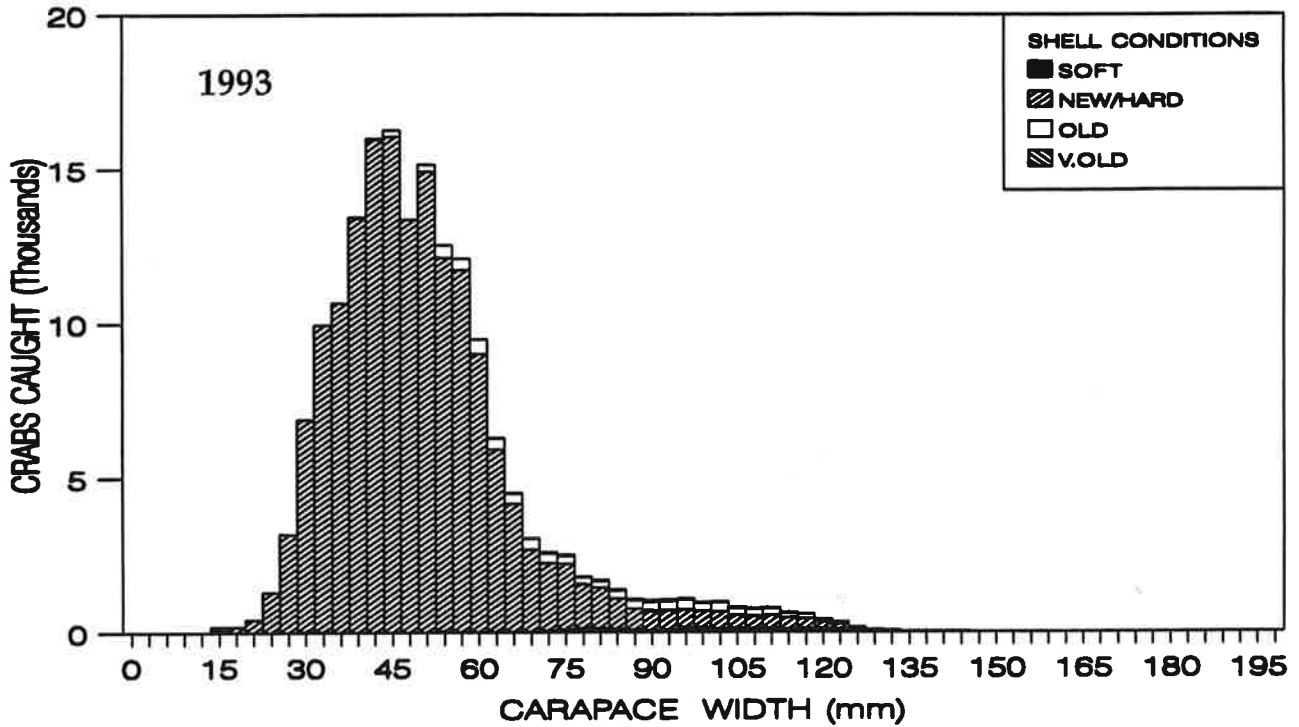


FIGURE 10. Size frequency of male snow crab (*C. opilio*), all districts combined, by 3 mm width classes, 1993-1994.

Snow Crab All Districts

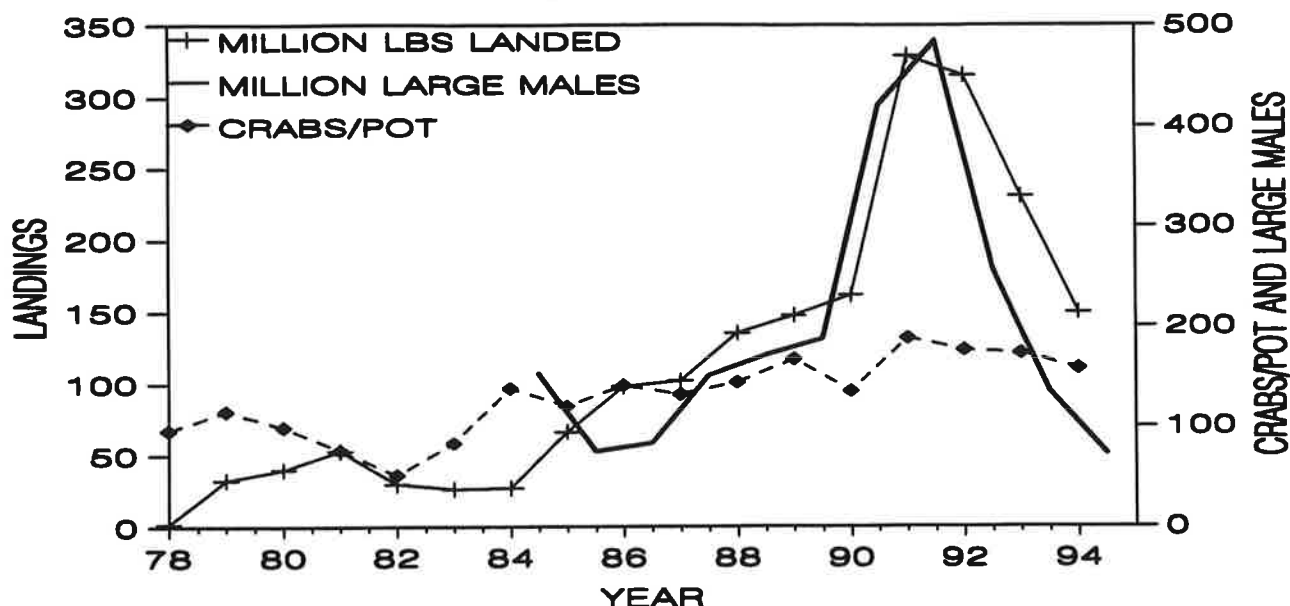


FIGURE 11. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of large male snow crab (*C. opilio*) in millions (all districts combined), estimated from NMFS trawl survey.

C. opilio used in this report are defined as follows: sublegal, <3.1 in cw (<78 mm); small, 3.1-3.9 in cw (78-101 mm); large, ≥ 4.0 in cw (≥ 102 mm); and very large ≥ 4.3 in cw (≥ 110 mm). Estimates of abundance of large males (≥ 4.0 in) are not shown prior to 1984 (Table 5 and Fig. 10) due to differences in area surveyed and minimum size landed.

The distribution of large males showed an area of high concentration extending northwest from the Pribilof Islands (Chart 4 and Table 10). The abundance index for large (≥ 102 mm cw) males (Eastern and Western Districts combined) is 71.6 million crabs, a decrease of 47% from last year. Approximately 45% of these were in the Eastern District, similar to last year. Small males (78-101 mm cw) showed no significant change, whereas sublegal males (<78mm cw) showed a 24% decrease, but are still at a high level. The abundance index for small females (<50 mm cw) showed a 14% decrease, whereas large females (≥ 50 mm cw) showed a 15% decrease. Apparently, maturation of juvenile females has tended to offset any mortality of older adults.

A major cohort consisting of one or more strong year classes was produced in the early 1980s, and recruitment to the fishery improved steadily from 1986 through 1991 as juveniles matured. The abundance of large males has been declining since then due to natural mortality and fishery removals. However, good recruitment of postlarval crab has occurred in the last few years resulting in a peak of crabs in the 35-60 mm size range (Fig. 10), possibly the result of a strong year class hatched in the period 1988-1990. These crab should grow to fishable sizes within 1-3 years, but they are concentrated at the northern limit of the survey area. Whether they will migrate south and continue to grow is questionable. The fishable stock will probably continue to decline in the near future.

Among large male crabs, 18% were in molting or softshell condition, 43% were new-hardshells indicating a recent molt, and 39% were oldshells. Among mature females, 81% were new-hardshells, of which 99% carried new eggs, and 18% were oldshells, of which 95% carried new eggs. These numbers reflect

Hair Crab All Districts

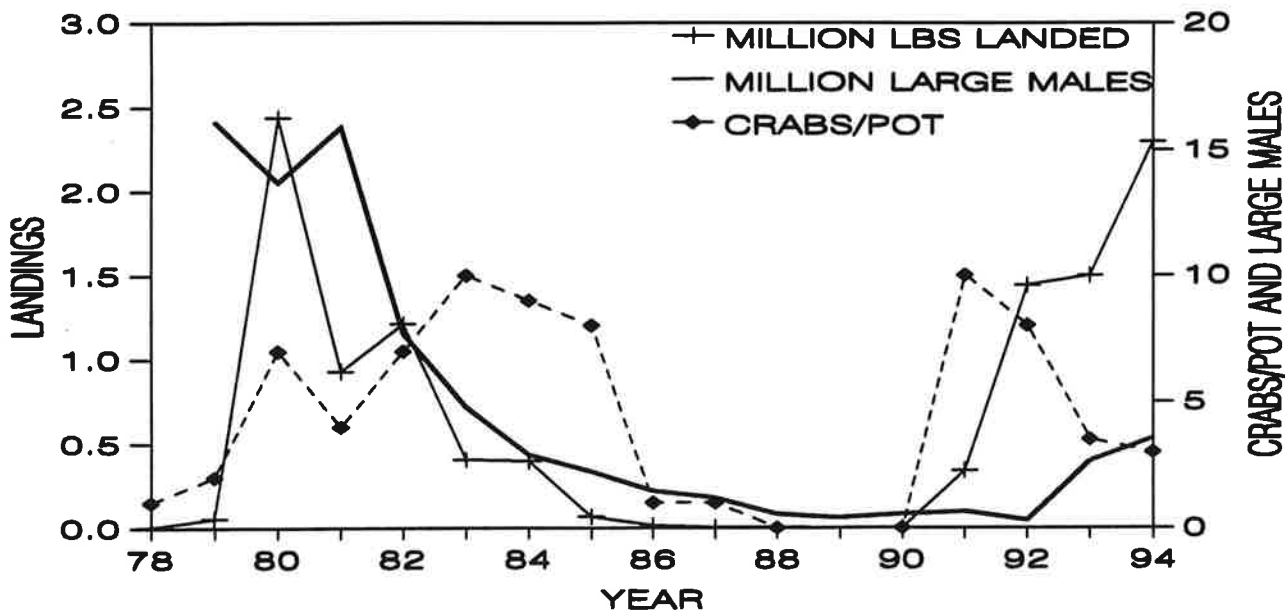


FIGURE 13. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of large male hair crab (*E. isenbeckii*) in millions (all districts combined), estimated from NMFS trawl surveys.

the maturation of younger, new-shelled crab, and indicate that hatching and extrusion were nearing completion by the time of the survey.

The harvest guideline for 1995 has been set at 55.7 million lbs for large crab (≥ 4.0 in cw). Currently there are an estimated 96.0 (± 23.0) million lbs of large males within the survey area, of which about 45% by weight were east of 173°W. In 1994, landings were 150 million lbs with an average CPUE of 158 crabs/pot-lift (Fig. 11). (Rance Morrison, ADF&G).

Hair Crab (*Erimacrus isenbeckii*)

Hair crab are widely scattered across the EBS (Chart 5 and Table 11). Historically, areas of concentration have existed just north of the Alaska Peninsula and near the Pribilof Islands. We have never found many female or small male crab during the survey and hence have little understanding of their distribution. The abundance index for large male hair crabs declined from 1981 through 1992,

and has been increasing since 1992. The current index of 8.2 million total males (Table 6) represents a 30% decrease during the past year and is slightly above the long-term average (8.0 million). The abundance index for large (≥ 3.25 in cw) males shows an increase of 35% from last year, and is now near average levels. The abundance index of total females shows a decrease of 16% from last year, but is still significantly above the long-term average. The strong cohort of males crabs first seen in 1989 and 1990 is less evident in the 1994 size-frequency plot (Fig. 12). Changes in abundance indices reflect the patchy distribution of hair crab and the inability of the survey to assess them accurately and consistently. The shell conditions for hair crab are difficult to determine, and therefore provide little useful information. The majority of males (78%) and females (93%) were new-hardshell crabs.

A directed fishery for hair crab has developed over the past several years in the Pribilof Islands. There is no minimum legal size, so we have defined large crabs equivalent to the industry-preferred minimum size

TABLE 6. Annual abundance estimates (millions of crabs) for hair crab (*E. isenbeckii*) from NMFS surveys.

Size ¹ (mm) Width (in)	Males		Females		Grand Total
	Small	Large	Total		
	<83 <3.25	≥83 ≥3.25			
1980	2.02	14.86	16.88	2.62	19.51
1981	2.84	14.33	17.16	0.87	18.03
1982	0.54	8.07	8.61	0.42	9.03
1983	0.24	4.39	4.63	0.83	5.46
1984	0.73	3.32	4.06	0.51	4.56
1985	0.30	2.56	2.86	0.26	3.12
1986	0.68	1.82	2.49	0.38	2.87
1987	1.59	1.35	2.93	0.89	3.83
1988	3.01	0.87	3.88	0.86	4.74
1989	11.38	1.46	12.84	0.67	13.51
1990	12.99	1.09	14.08	0.92	15.00
1991	4.45	1.27	5.72	1.18	6.90
1992	2.49	1.17	3.65	0.55	4.20
1993	9.14	2.64	11.77	1.50	13.28
1994	4.65	3.56	8.21	1.26	9.46
<u>Limits²</u>					
Lower	2.00	1.78	4.60	0.14	4.73
Upper	7.31	5.33	11.82	2.37	14.19
±%	57	50	44	89	50

¹ Carapace length (mm).

² Mean ± 2 standard errors for most recent year.

Hair Crab Length Frequency All Districts

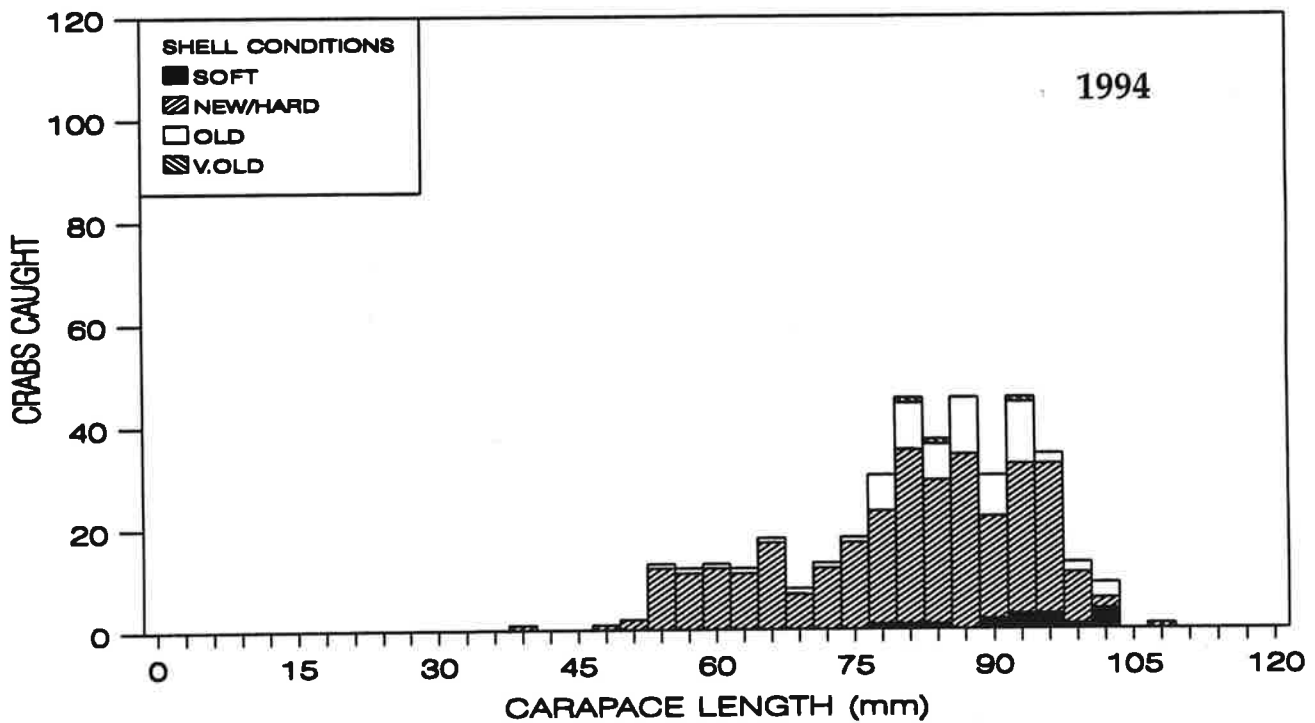
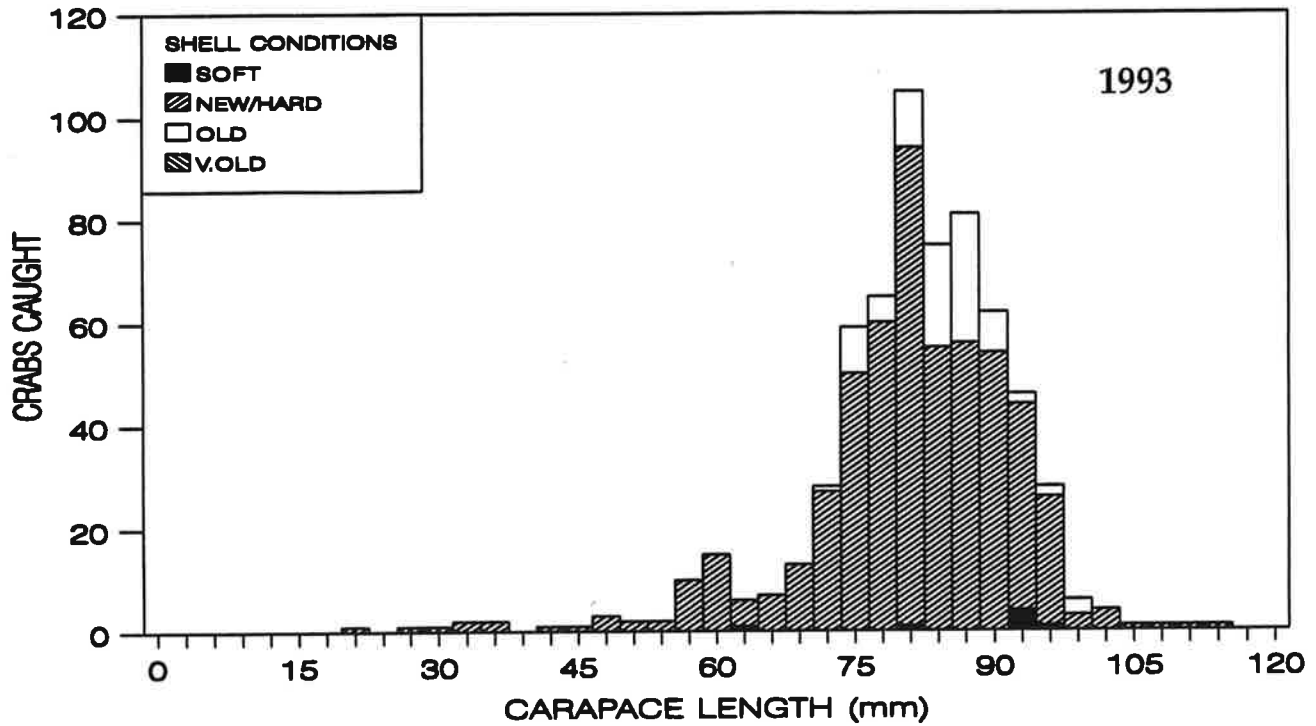


FIGURE 12. Size frequency of male hair crab (*E. isenbeckii*), by 3 mm length classes, 1993-1994.

Coastal Temperature Index

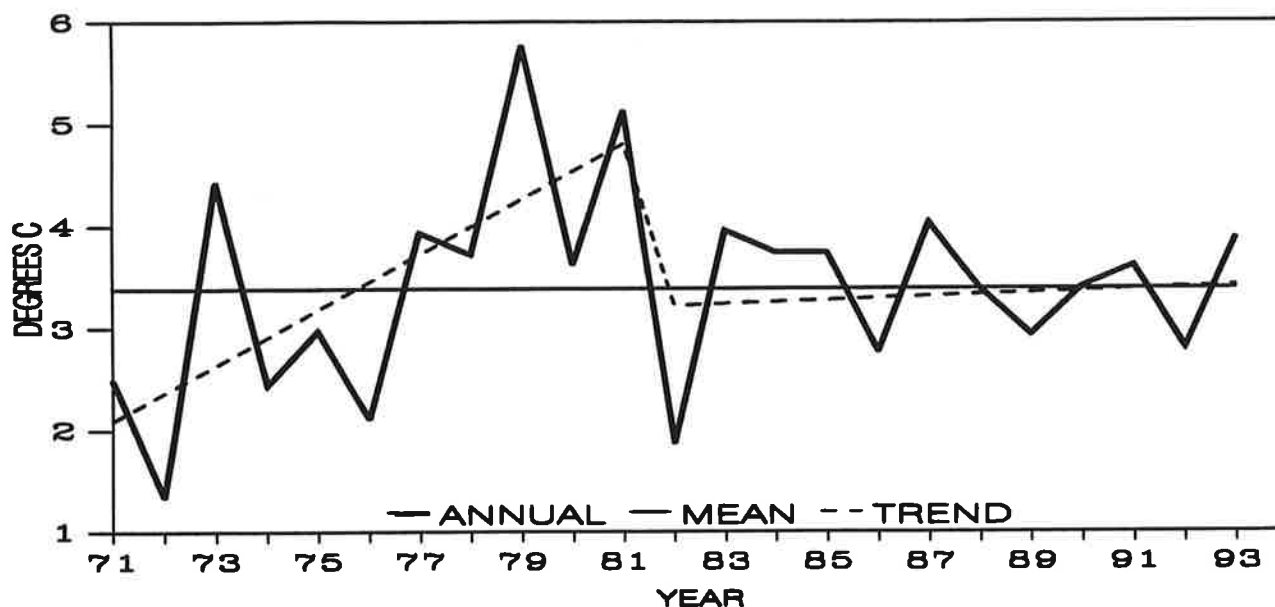


FIGURE 14. Coastal bottom temperature index (mean of 36 survey stations) along the Alaska Peninsula in degrees C for 1971 to 1993. Horizontal line is average value over the entire period.

of 3.25 in cw. Currently there are an estimated 4.4 (± 2.4) million lbs of large male crab in the Pribilof District. A harvest guideline of 1.0 million lbs has been set for the Pribilof District, for an exploitation rate of 23%. Landings in the season that ran from November 1, 1993, to April 20, 1994, were 2.3 million lbs, with CPUE of 3.0 crabs/pot-lift (Fig. 13). (Rance Morrison, ADF&G).

crucially dependent on the skipper and crews of the participating vessels. We extend special thanks to Kenneth Disrude and Norman Bakken (*F/V Aldebaran*), and Glenn Sullivan and John Ploeger (*F/V Arcturus*), and their crews.

Bottom Temperatures

Due to equipment malfunctions, reliable data on bottom water temperatures were not obtained in 1994. Average bottom water temperature at 36 stations along the Alaska Peninsula has been 3.4 °C since 1983, with little annual variation. (Fig. 14)

Acknowledgements

Successful completion of the annual eastern Bering Sea crab-groundfish survey is

APPENDIX A

Methods of Estimating Crab Population Size

Population abundance indices are determined by the 'area-swept' method, using a stratified systematic sampling design. Distance traveled by the trawl was determined from positions recorded at the beginning and ending of the trawl. Area fished (= area swept by the trawl) was calculated by multiplying the distance by the effective width of the trawl, assumed to equal 50 ft.

All stations (grid squares) within a district or management area were used for estimating the abundance of each species. Stations where multiple (corner or repeat) tows were made were grouped into strata; these include a block of 12 stations southwest of St. Matthew Island, and 16 stations around St. Paul Island.

The catch-per-unit-effort (CPUE), was calculated for each station as number of crabs per square nautical mile. Average CPUE was calculated within each multiple tow block and each management district. Abundance indices were calculated by extrapolating the aver-

age CPUE of each size/sex group over the geographic area of each district. Variance and standard error (SE) of the index were calculated arithmetically. Confidence intervals were calculated by adding or subtracting 2 SEs to the population estimate. Note that, since the data are usually not normally distributed, variance estimates and confidence intervals are approximated. Nevertheless, they are provided in order to indicate the range of the data relative to previous years' estimates.

Threshold levels have been established for certain crab stocks by the Crab Plan Team of The North Pacific Fishery Management Council. In accordance with Alaska Board of Fisheries policy, and the Alaska Department of Fish and Game's Management Plan for Westward Region Crab stocks, such fisheries will be closed if the abundance index falls below the threshold level.

APPENDIX B

Crab Shell Condition

All crabs measured in the NMFS eastern Bering Sea trawl survey are coded as to shell condition. Shell condition categorizes exoskeleton discoloration, scratching and wear, and fouling by encrusting organisms, and can be used to estimate the time since a crab has last molted. The shell condition categories used in this report and the estimated times since last molting that they imply are given below:

Molting¹: Crab will molt within days or is actively molting. Joints swollen and/or well developed second exoskeleton present.

Softshell¹: Crab has molted within weeks. Carapace is still soft and pliable from recent molt.

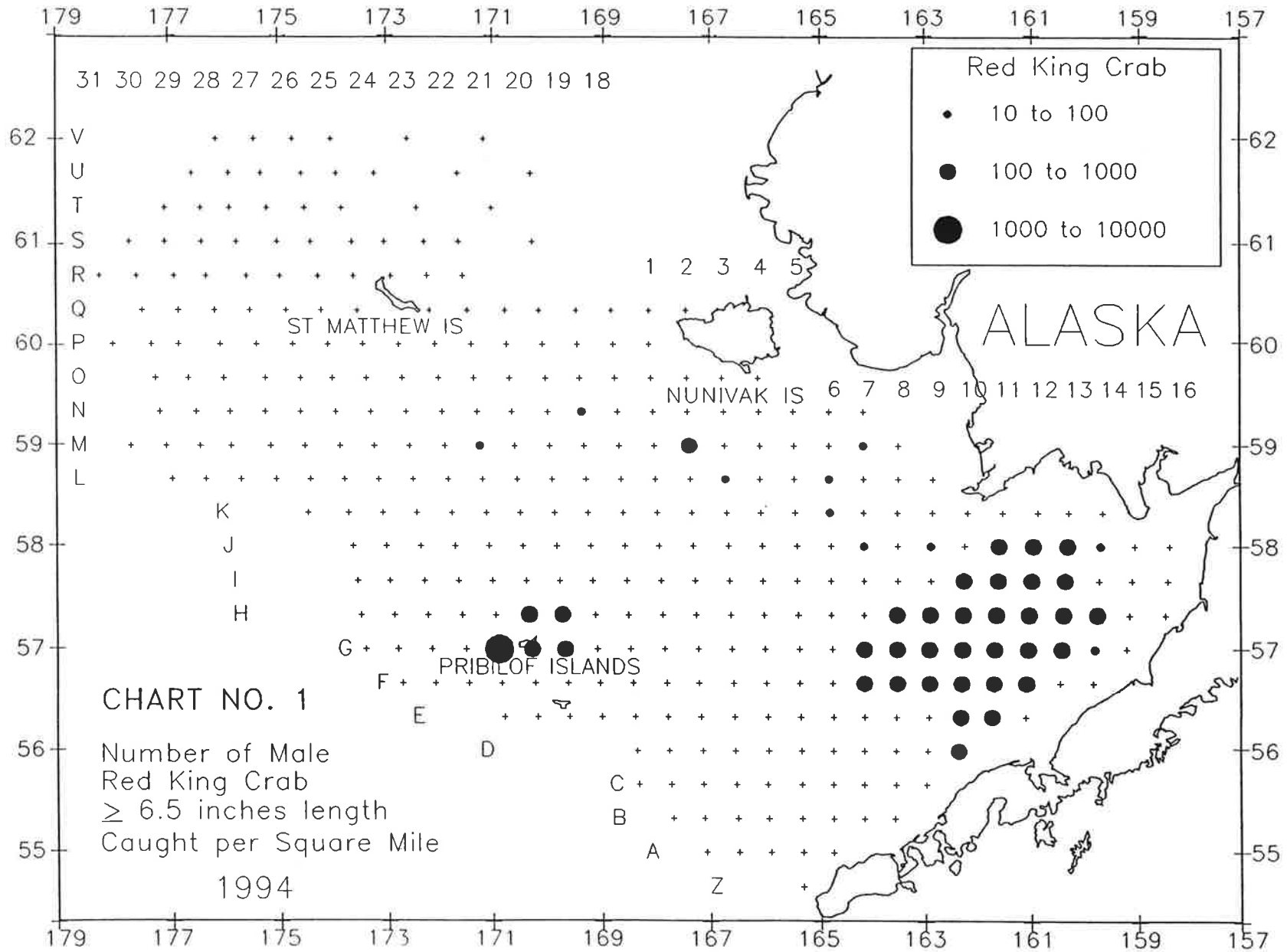
New, hardshell: Crab has molted within the last year. Carapace firm to hard and lacking

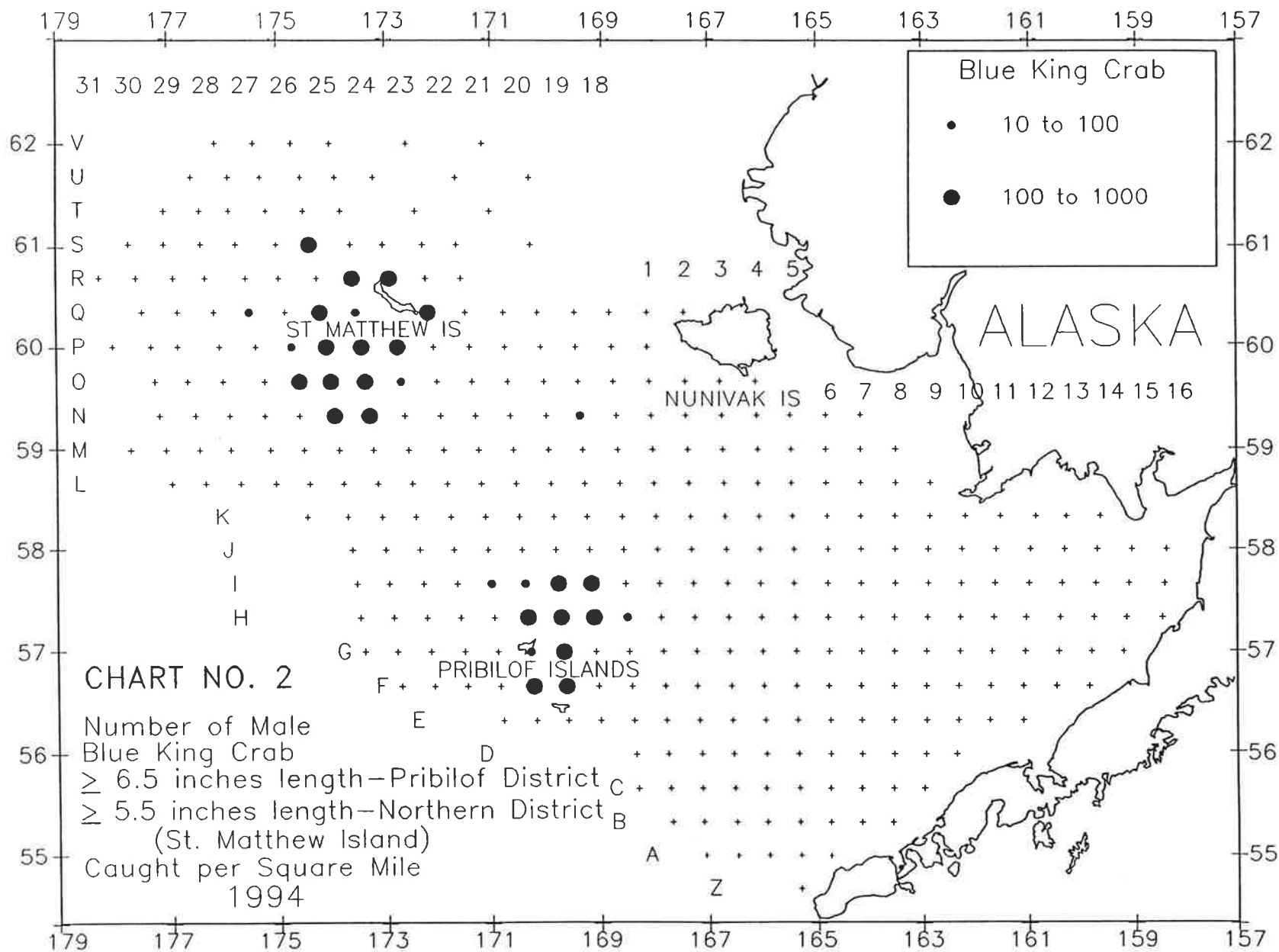
scratches, wear, discoloration, and encrusting organisms.

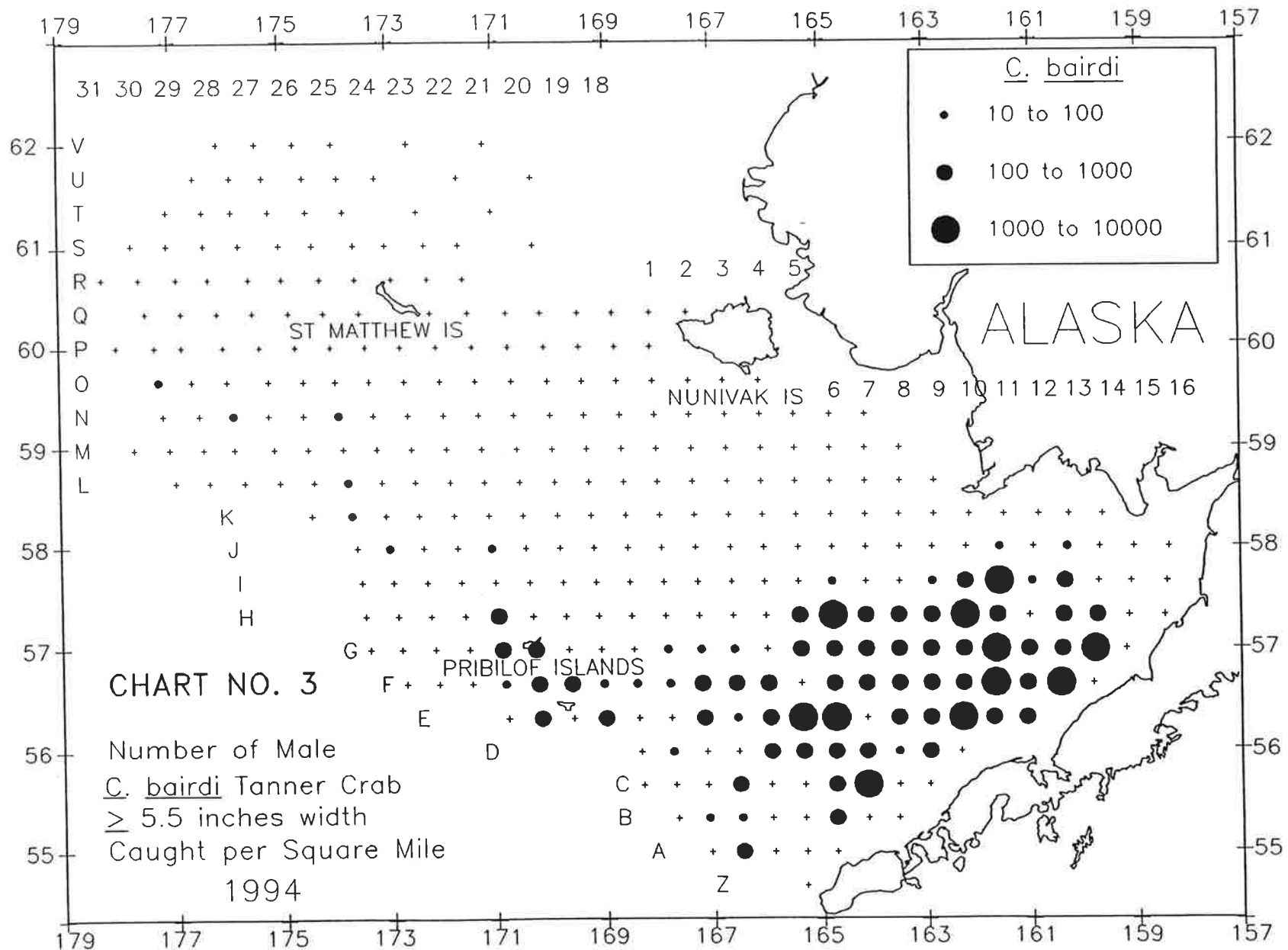
Oldshell: Crab has not molted within the last year. Usually has at least some scratching, spine wear. Crab may have darker coloration, and encrusting organisms are frequently present.

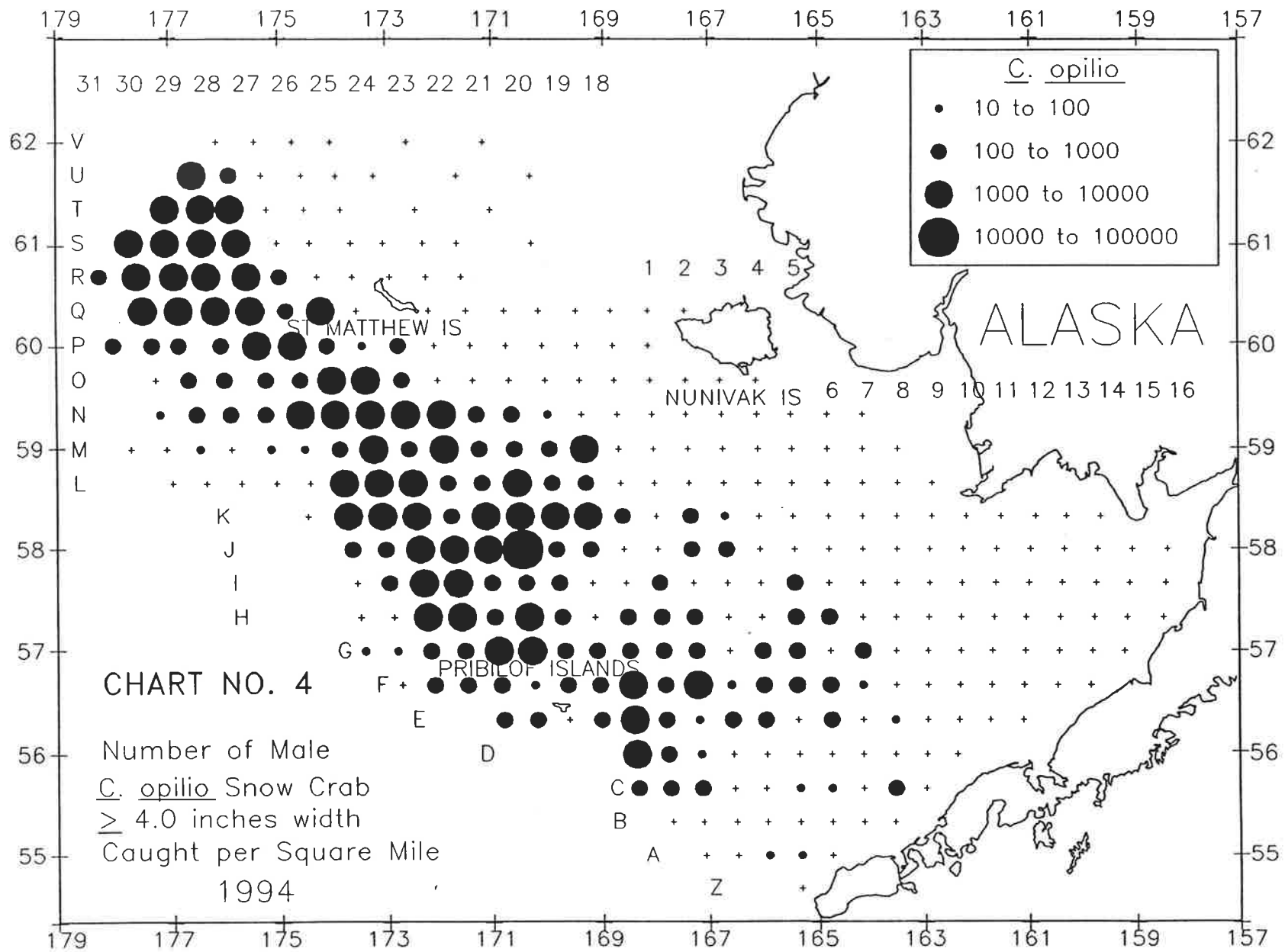
Very oldshell: A sub-category within Oldshell. Undersides of legs yellowed; abundant scratches and stains; spines and claws very worn; encrusting organisms almost always present and often abundant. It is hard to infer a time since molting. In some years, processors have paid considerably less per pound for these crabs.

¹ Note that in the report, Molting and Softshell categories are combined. The time span over which these conditions occur in a crab is only a matter of weeks. A high percentage of molting and softshell crabs in a survey population indicates that the molting season is not yet over.









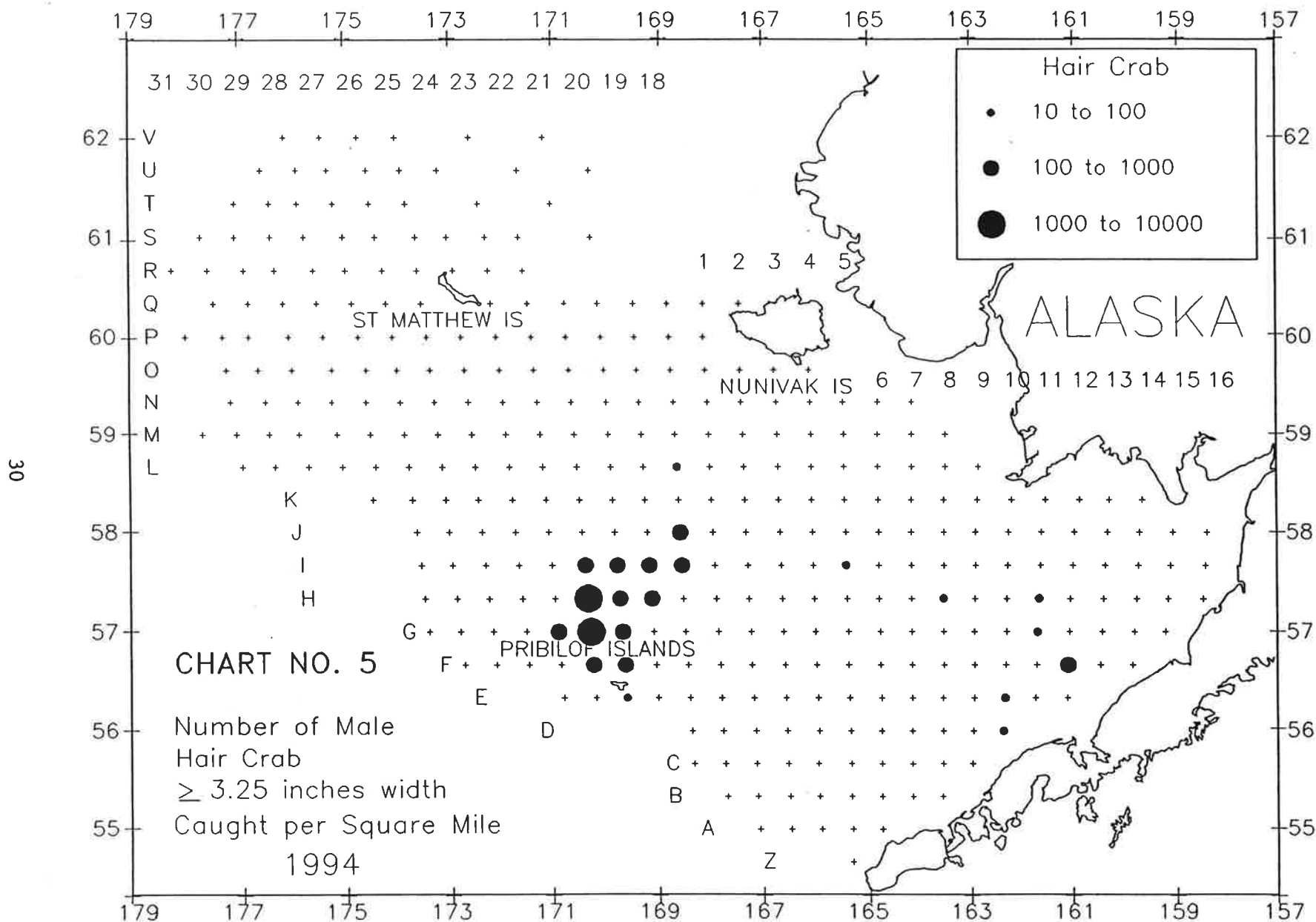


TABLE 7. Summary of crab density by tow for red king crab (*Paralithodes camtschaticus*)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
D10	06/06/94	56	.4	162	15.1	36	152	0	0	152	0	0	0	152	1	88
E08	06/09/94	56	18.7	163	24.1	45	0	0	0	0	163	0	163	163	1	88
E09	06/09/94	56	19.9	162	48.4	42	0	0	0	0	156	0	156	156	1	89
E10	06/06/94	56	19.5	162	13.3	42	162	81	0	243	162	0	162	405	1	88
E11	06/06/94	56	21.5	161	34.4	36	264	352	352	969	969	0	969	1937	1	89
E12	06/06/94	56	19.4	161	.7	28	0	0	84	84	251	0	251	335	1	89
F07	06/12/94	56	41.2	163	59.5	40	979	82	0	1060	0	0	0	1060	1	89
F08	06/09/94	56	40.3	163	23.6	40	422	0	0	422	0	0	0	422	1	88
F09	06/09/94	56	40.1	162	47.5	38	255	595	0	850	0	0	0	850	1	89
F10	06/06/94	56	39.5	162	10.1	40	380	456	304	1139	684	0	684	1823	1	88
F11	06/06/94	56	41.0	161	33.9	48	579	413	0	992	413	0	413	1405	1	89
F12	06/06/94	56	39.9	160	57.9	39	148	148	74	370	370	296	667	1037	1	88
F13	06/06/94	56	39.0	160	22.4	31	0	760	591	1350	338	0	338	1688	1	89
F14	06/03/94	56	41.2	159	45.5	18	0	162	0	162	0	81	81	243	1	88
G07	06/12/94	57	1.2	164	2.0	36	563	161	0	724	0	0	0	724	1	89
G08	06/09/94	56	58.7	163	23.9	35	567	1134	81	1782	0	0	0	1782	1	88
G09	06/09/94	56	58.5	162	48.7	33	477	1906	397	2780	635	0	635	3415	1	89
G10	06/07/94	56	59.5	162	10.3	33	549	549	157	1254	862	0	862	2117	1	88
G11	06/06/94	57	.5	161	34.2	36	749	749	499	1998	1165	83	1249	3246	1	89
G12	06/05/94	57	.3	160	54.9	37	318	238	159	715	1509	238	1747	2462	1	88
G13	06/05/94	56	58.8	160	20.8	32	486	324	81	891	648	0	648	1539	1	89
G14	06/04/94	56	59.9	159	41.9	29	77	461	154	692	77	77	154	846	1	88
G20	06/29/94	56	58.8	169	34.1	32	461	0	0	461	77	0	77	538	1	88
G21	06/30/94	57	9.9	169	53.4	26	1034	0	0	1034	776	0	776	1810	1	89
G22	06/30/94	57	7.2	170	28.0	27	7245	3350	623	11217	8880	78	8958	20176	1	88
G22	07/01/94	57	5.2	170	37.3	40	331	413	661	1405	3637	0	3637	5043	1	88
H08	06/09/94	57	20.9	163	24.7	28	170	0	0	170	85	0	85	255	1	88
H09	06/08/94	57	19.3	162	46.9	25	627	392	78	1098	235	0	235	1333	1	89
H10	06/07/94	57	19.2	162	7.1	27	368	147	147	663	516	0	516	1178	1	88
H11	06/07/94	57	20.9	161	31.9	30	770	342	257	1369	1797	86	1883	3252	1	89
H12	06/05/94	57	19.7	160	56.0	33	623	545	312	1480	1168	78	1246	2726	1	88
H13	06/05/94	57	18.7	160	19.1	32	392	314	78	784	862	0	862	1646	1	89
H14	06/04/94	57	20.7	159	40.3	30	302	453	0	755	151	0	151	906	1	88
H15	06/04/94	57	20.9	159	2.7	26	0	164	82	246	0	0	0	246	1	89

TABLE 7. Summary of crab density by tow for red king crab (*Paralithodes camtschaticus*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
H16	06/03/94	57	19.0	158	26.1	14	0	84	84	169	0	0	0	169	1	89
H20	06/29/94	57	19.1	169	36.7	33	389	78	0	467	0	0	0	467	1	88
H21	07/01/94	57	19.2	170	12.5	27	822	0	0	822	274	0	274	1096	1	89
I09	06/08/94	57	39.6	162	45.8	22	0	82	0	82	0	0	0	82	1	89
I10	06/07/94	57	38.7	162	8.7	24	493	411	82	985	1067	0	1067	2053	1	88
I11	06/07/94	57	39.6	161	29.3	28	510	935	595	2040	1360	340	1700	3739	1	89
I12	06/05/94	57	39.9	160	53.5	29	426	640	497	1563	782	71	853	2416	1	88
I13	06/05/94	57	39.2	160	16.7	29	320	320	0	640	560	0	560	1199	1	89
I14	06/04/94	57	40.6	159	38.1	26	0	79	158	237	0	0	0	237	1	88
J07	06/12/94	58	.0	164	2.1	24	85	0	0	85	0	0	0	85	1	89
J09	06/08/94	57	59.2	162	45.6	21	82	0	0	82	0	0	0	82	1	89
J11	06/07/94	58	.0	161	29.7	28	159	477	397	1033	477	79	556	1589	1	89
J12	06/05/94	57	59.7	160	50.9	24	106	0	317	423	106	0	106	528	1	88
J13	06/05/94	57	59.0	160	13.6	26	237	0	79	316	79	0	79	395	1	89
J14	06/04/94	58	1.1	159	36.9	21	77	0	8565	8642	77	7237	7314	15956	1	88
K06	06/13/94	58	19.9	164	38.7	23	80	0	0	80	0	0	0	80	1	88
K10	06/07/94	58	18.3	162	3.8	23	0	161	80	241	80	0	80	322	1	88
L01	06/24/94	58	40.2	167	52.1	24	0	0	0	0	74	0	74	74	1	89
L03	06/25/94	58	40.3	166	34.4	21	80	0	0	80	0	0	0	80	1	88
L06	06/13/94	58	40.2	164	41.4	19	80	0	0	80	0	0	0	80	1	88
L08	06/08/94	58	40.0	163	21.2	16	0	0	81	81	0	0	0	81	1	88
L22	07/02/94	58	40.2	171	4.7	45	0	0	0	0	79	0	79	79	1	88
M02	06/25/94	58	59.8	167	14.2	21	164	0	82	246	0	0	0	246	1	88
M06	06/13/94	58	58.6	164	40.5	14	0	0	80	80	0	0	0	80	1	88
M07	06/13/94	59	.2	164	.1	14	80	0	0	80	0	0	0	80	1	89
M22	07/02/94	59	.1	171	7.1	43	79	0	0	79	0	0	0	79	1	88
N01	06/25/94	59	19.7	167	55.0	20	0	82	0	82	0	0	0	82	1	89
N18	06/25/94	59	20.2	168	32.8	21	0	0	0	0	0	79	79	79	1	89
N19	06/27/94	59	20.5	169	13.7	26	87	0	0	87	87	0	87	174	1	89
O19	06/27/94	59	40.6	169	15.8	25	0	83	0	83	0	0	0	83	1	89

NOTE - Minimum carapace widths used are:

LARGE > 6.50"; MEDIUM > 5.20".

TABLE 8. Summary of crab density by tow for blue king crab (*Paralithodes platypus*)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F20	06/29/94	56	49.8	169	18.5	43	82	0	0	82	246	0	246	328	1	88
F20	06/29/94	56	40.7	169	33.1	43	156	0	0	156	5375	0	5375	5531	1	88
F21	06/30/94	56	49.7	169	52.1	40	312	156	0	467	779	0	779	1246	1	89
G19	06/29/94	57	9.8	168	38.3	40	0	0	0	0	125	0	125	125	1	89
G20	06/29/94	57	10.0	169	19.3	38	78	78	0	156	701	0	701	857	1	88
G20	06/29/94	56	58.8	169	34.1	32	461	231	77	769	6999	154	7153	7922	1	88
G21	06/30/94	57	.4	170	9.2	37	77	232	77	387	851	0	851	1238	1	89
G21	06/30/94	57	9.9	169	53.4	26	86	259	259	603	1551	0	1551	2155	1	89
G22	07/01/94	57	5.2	170	37.3	40	0	0	0	0	496	0	496	496	1	88
H18	06/19/94	57	19.5	168	22.0	39	81	0	0	81	0	0	0	81	1	88
H19	06/29/94	57	29.4	168	45.2	38	86	0	0	86	257	0	257	342	1	89
H19	06/29/94	57	19.6	168	58.6	37	1260	810	360	2430	4681	0	4681	7111	1	89
H20	06/28/94	57	29.6	169	22.1	38	237	0	316	552	79	158	237	789	1	88
H20	06/29/94	57	19.1	169	36.7	33	312	234	312	857	467	0	467	1324	1	88
H21	07/01/94	57	19.2	170	12.5	27	91	0	0	91	0	0	0	91	1	89
H21	07/01/94	57	29.5	169	59.1	35	116	231	231	579	0	0	0	579	1	89
I19	06/28/94	57	40.1	169	1.3	37	238	79	0	318	0	0	0	318	1	89
I20	06/28/94	57	49.6	169	21.2	36	0	81	0	81	0	0	0	81	1	88
I20	06/28/94	57	39.7	169	39.3	38	240	320	0	560	0	0	0	560	1	88
I21	07/01/94	57	39.5	170	15.9	39	0	0	0	0	115	0	115	115	1	89
I21	07/01/94	57	49.8	169	58.8	39	78	0	0	78	0	0	0	78	1	89
I22	07/01/94	57	31.2	170	34.0	40	78	0	0	78	0	0	0	78	1	88
N19	06/27/94	59	20.5	169	13.7	26	87	0	0	87	0	0	0	87	1	89
N25	07/08/94	59	20.4	173	9.3	54	243	162	0	405	0	0	0	405	1	88
N26	07/08/94	59	20.3	173	47.9	60	599	86	0	685	0	0	0	685	1	89
N26	07/08/94	59	29.4	173	30.7	56	962	437	525	1923	0	0	0	1923	1	89
N27	07/10/94	59	18.4	174	29.2	66	0	77	0	77	0	0	0	77	1	88
O01	06/26/94	59	39.7	167	58.6	18	0	0	124	124	0	0	0	124	1	89
O03	06/26/94	59	40.1	166	39.6	13	0	0	0	0	76	0	76	76	1	88
O24	07/03/94	59	49.7	172	15.6	41	0	0	81	81	0	0	0	81	1	88
O24	07/04/94	59	40.0	172	33.9	46	89	0	0	89	0	0	0	89	1	89
O25	07/08/94	59	40.2	173	14.4	52	644	80	0	724	0	0	0	724	1	88
O25	07/04/94	59	30.0	172	52.8	51	84	0	84	169	0	0	0	169	1	89
O26	07/08/94	59	39.6	173	52.2	57	556	0	0	556	0	0	0	556	1	89

TABLE 8. Summary of crab density by tow for blue king crab (*Paralithodes platypus*) (Cont'd)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
O26	07/08/94	59	49.7	174	13.4	58	389	78	156	623	0	0	0	623	1	89
O27	07/10/94	59	39.5	174	27.2	62	163	163	163	489	0	0	0	489	1	88
P23	07/03/94	60	.0	171	58.3	36	0	0	81	81	81	0	81	162	1	88
P24	07/03/94	60	.2	172	39.5	35	175	350	350	874	262	0	262	1137	1	89
P24	07/03/94	59	50.6	172	54.4	42	331	248	165	744	0	0	0	744	1	89
P25	07/09/94	59	59.5	173	18.3	41	810	162	243	1215	162	0	162	1377	1	88
P26	07/08/94	59	50.5	173	35.5	52	666	1332	333	2331	0	0	0	2331	1	88
P26	07/09/94	59	59.9	173	57.3	53	616	264	176	1057	0	0	0	1057	1	89
P26	07/09/94	60	7.6	173	44.7	48	255	255	425	935	0	0	0	935	1	89
P27	07/10/94	59	59.6	174	35.4	59	77	0	0	77	0	0	0	77	1	88
Q23	07/03/94	60	19.9	172	3.1	32	0	85	595	680	170	170	340	1020	1	89
Q23	07/03/94	60	10.0	172	20.1	30	506	675	928	2110	422	0	422	2532	1	89
Q25	07/09/94	60	19.9	173	25.0	34	82	82	326	489	163	245	408	897	1	88
Q26	07/09/94	60	10.0	174	19.9	54	503	251	0	754	0	0	0	754	1	89
Q26	07/09/94	60	19.4	174	5.6	50	400	80	80	560	0	0	0	560	1	89
Q28	07/10/94	60	19.9	175	22.9	61	83	0	0	83	0	0	0	83	1	89
R24	07/09/94	60	40.3	172	45.9	23	489	245	245	979	0	0	0	979	1	88
R25	07/09/94	60	40.1	173	27.9	35	163	82	326	571	82	0	82	652	1	88
R28	07/10/94	60	39.2	175	25.1	58	0	0	86	86	0	0	0	86	1	89
R30	07/22/94	60	40.0	176	47.9	71	0	0	0	0	80	0	80	80	1	88
S26	07/20/94	61	1.2	174	11.1	44	135	0	0	135	0	0	0	135	1	89
T29	07/21/94	61	20.3	176	18.3	58	0	79	0	79	0	0	0	79	1	88

NOTE - Minimum carapace widths used are:

NORTHERN DISTRICT: LARGE > 5.5"; MEDIUM > 4.3".

SOUTHERN DISTRICT: LARGE > 6.5"; MEDIUM > 5.2".

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
A02	06/17/94	54	59.9	166	57.1	84	0	0	14952	14952	231	34255	34486	49438	1	88
A03	06/17/94	55	.2	166	22.7	79	160	160	1839	2159	879	2398	3278	5437	1	89
A04	06/16/94	54	59.8	165	45.1	70	0	0	654	654	935	1496	2430	3085	1	88
A04	06/16/94	54	50.1	165	30.3	84	0	80	1127	1207	0	0	0	1207	1	89
A05	06/10/94	54	59.6	165	9.9	60	0	499	832	1332	0	83	83	1415	1	89
A06	06/10/94	55	2.3	164	34.8	34	0	76	0	76	0	0	0	76	1	88
B01	06/20/94	55	20.2	167	32.3	80	0	0	1275	1275	0	595	595	1870	1	89
B02	06/17/94	55	19.9	166	57.9	75	74	147	5623	5844	663	6484	7147	12991	1	88
B03	06/17/94	55	20.3	166	21.0	72	79	552	3867	4498	1499	5129	6628	11126	1	89
B04	06/16/94	55	18.6	165	47.0	65	0	78	1091	1168	78	857	935	2103	1	88
B05	06/10/94	55	20.6	165	10.7	60	0	374	561	935	0	0	0	935	1	89
B06	06/10/94	55	19.1	164	33.6	55	644	1381	460	2486	92	0	92	2578	1	88
B08	06/10/94	55	19.5	163	24.8	28	0	201	100	301	0	0	0	301	1	88
C01	06/20/94	55	39.9	167	35.6	73	0	328	3120	3449	821	1232	2053	5501	1	89
C02	06/17/94	55	39.9	166	58.1	73	0	146	873	1019	73	509	582	1601	1	88
C03	06/17/94	55	40.2	166	22.9	68	234	234	3038	3505	467	4090	4557	8063	1	89
C04	06/16/94	55	40.8	165	48.4	64	0	0	357	357	179	715	894	1251	1	88
C05	06/16/94	55	39.7	165	11.7	58	0	0	335	335	0	84	84	419	1	89
C06	06/11/94	55	39.8	164	35.4	52	608	2170	347	3125	0	0	0	3125	1	88
C07	06/11/94	55	40.0	164	1.2	51	2682	5029	1928	9638	3185	2011	5196	14834	1	89
C08	06/10/94	55	40.5	163	24.1	45	0	234	117	351	0	117	117	467	1	88
C09	06/09/94	55	39.1	162	54.4	26	0	657	328	985	0	0	0	985	1	89
C18	06/20/94	55	39.9	168	12.7	73	0	81	324	405	0	405	405	810	1	88
D01	06/20/94	56	.3	167	37.4	72	83	666	666	1415	666	1082	1748	3163	1	89
D02	06/17/94	55	59.9	166	59.8	74	0	0	226	226	0	75	75	302	1	88
D03	06/17/94	56	.3	166	24.0	67	0	245	408	652	82	652	734	1386	1	89
D04	06/16/94	56	.1	165	48.1	57	157	78	0	235	0	157	157	392	1	88
D05	06/16/94	56	.2	165	11.1	51	115	459	688	1261	688	1605	2293	3554	1	89
D06	06/11/94	55	59.1	164	35.5	50	335	838	587	1760	670	168	838	2598	1	88
D07	06/11/94	56	1.0	164	2.3	48	257	1198	1113	2567	856	1369	2225	4792	1	89
D08	06/09/94	56	.3	163	23.7	48	76	459	841	1376	459	535	994	2369	1	88
D09	06/09/94	55	59.9	162	49.4	41	324	243	324	891	81	0	81	972	1	89
D10	06/06/94	56	.4	162	15.1	36	0	76	0	76	0	0	0	76	1	88
D18	06/20/94	55	59.7	168	13.3	81	0	243	1215	1458	81	891	972	2430	1	88

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA-TION	DATE	N. LAT. DEG	MIN	W. LON. DEG	MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
							LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
E01	06/19/94	56	19.9	167	38.4	70	0	85	765	850	85	425	510	1360	1	89
E02	06/17/94	56	19.5	167	1.4	62	155	464	929	1548	0	542	542	2090	1	88
E03	06/17/94	56	20.2	166	25.5	56	81	324	243	648	243	486	729	1377	1	89
E04	06/16/94	56	19.2	165	47.9	49	459	803	1605	2866	688	1146	1834	4700	1	88
E05	06/15/94	56	19.7	165	11.9	46	3099	5709	1957	10766	7157	8458	15777	26543	1	89
E06	06/11/94	56	19.8	164	35.4	46	3043	5325	634	9002	8816	4217	13033	22035	1	88
E07	06/11/94	56	20.2	164	.7	46	0	948	862	1810	1034	431	1465	3275	1	89
E08	06/09/94	56	18.7	163	24.1	45	326	1142	734	2202	1305	326	1631	3833	1	88
E09	06/09/94	56	19.9	162	48.4	42	312	623	0	935	156	0	156	1091	1	89
E10	06/06/94	56	19.5	162	13.3	42	1134	486	162	1782	405	81	486	2268	1	88
E11	06/06/94	56	21.5	161	34.4	36	440	616	176	1233	0	0	0	1233	1	89
E12	06/06/94	56	19.4	161	.7	28	335	84	335	754	0	0	0	754	1	89
E18	06/19/94	56	20.3	168	14.3	80	0	185	1478	1662	0	1361	1361	3023	1	88
E19	07/26/94	56	20.2	168	52.0	71	160	480	1039	1679	240	2718	2958	4637	1	89
E20	06/29/94	56	20.5	169	25.4	77	0	0	153	153	0	0	0	153	1	88
E21	06/30/94	56	19.5	170	3.4	59	171	770	3937	4878	1540	4621	6162	11040	1	89
E22	06/30/94	56	20.8	170	41.5	66	0	86	1551	1638	0	603	603	2241	1	88
F01	06/19/94	56	39.9	167	39.7	56	82	82	164	328	0	0	0	328	1	89
F02	06/18/94	56	40.8	167	2.8	51	152	1595	1747	3494	320	2721	3041	6534	1	88
F03	06/18/94	56	40.5	166	25.7	46	503	2849	1760	5112	1341	2095	3436	8548	1	89
F04	06/15/94	56	38.8	165	50.7	42	584	6228	4671	11483	2743	11657	14400	25883	1	88
F05	06/15/94	56	39.7	165	12.4	41	0	464	774	1238	155	310	464	1703	1	89
F06	06/12/94	56	39.1	164	35.9	40	320	1839	2159	4317	959	879	1839	6156	1	88
F07	06/12/94	56	41.2	163	59.5	40	652	2284	734	3670	1550	816	2365	6035	1	89
F08	06/09/94	56	40.3	163	23.6	40	253	591	591	1435	760	0	760	2194	1	88
F09	06/09/94	56	40.1	162	47.5	38	850	2125	170	3144	850	0	850	3994	1	89
F10	06/06/94	56	39.5	162	10.1	40	684	228	228	1139	152	0	152	1291	1	88
F11	06/06/94	56	41.0	161	33.9	48	1075	165	83	1323	992	0	992	2315	1	89
F12	06/06/94	56	39.9	160	57.9	39	148	222	74	445	519	0	519	963	1	88
F13	06/06/94	56	39.0	160	22.4	31	1013	84	338	1435	0	0	0	1435	1	89
F14	06/03/94	56	41.2	159	45.5	18	0	81	81	162	81	0	81	243	1	88
F18	06/19/94	56	39.0	168	17.6	57	81	405	1053	1539	243	405	648	2187	1	88
F19	06/29/94	56	49.6	168	36.8	52	0	0	1096	1096	0	274	274	1371	1	89
F19	06/29/94	56	39.9	168	54.6	54	156	779	1870	2804	389	2259	2649	5453	1	89

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA-TION	DATE	N. LAT. DEG	MIN	W. LON. DEG	MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
							LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F20	06/29/94	56	49.8	169	18.5	43	164	657	493	1314	164	82	246	1560	1	88
F20	06/29/94	56	40.7	169	33.1	43	234	545	857	1636	78	0	78	1714	1	88
F21	06/30/94	56	39.5	170	6.4	52	549	2195	2744	5488	14665	19064	33728	39217	1	89
F21	06/30/94	56	49.7	169	52.1	40	312	2882	4518	7712	4313	3081	7393	15105	1	89
F22	06/30/94	56	39.9	170	43.0	62	82	652	1550	2284	326	652	979	3262	1	88
F23	07/06/94	56	40.3	171	20.0	65	0	80	80	161	241	161	402	563	1	88
F24	07/06/94	56	40.3	171	57.8	68	0	0	1127	1127	0	402	402	1529	1	89
F25	07/07/94	56	39.6	172	32.3	79	0	0	3300	3300	0	3300	3300	6599	1	88
G01	06/19/94	57	.1	167	42.3	41	83	0	661	744	0	0	0	744	1	89
G02	06/18/94	56	59.4	167	8.0	40	79	953	2065	3098	635	1589	2224	5322	1	88
G03	06/18/94	57	.2	166	27.9	39	82	1060	1631	2773	163	734	897	3670	1	89
G04	06/15/94	57	.6	165	49.9	38	0	0	2032	2032	0	166	166	2197	1	88
G05	06/15/94	57	.1	165	12.9	38	499	333	2164	2996	0	0	0	2996	1	89
G06	06/12/94	56	59.4	164	37.0	37	161	644	885	1690	161	322	483	2173	1	88
G07	06/12/94	57	1.2	164	2.0	36	241	644	966	1851	885	0	885	2736	1	89
G08	06/09/94	56	58.7	163	23.9	35	162	729	405	1296	891	0	972	2268	1	88
G09	06/09/94	56	58.5	162	48.7	33	715	874	477	2065	1271	0	1271	3336	1	89
G10	06/07/94	56	59.5	162	10.3	33	706	941	235	1882	784	0	784	2666	1	88
G11	06/06/94	57	.5	161	34.2	36	2497	749	166	3413	1415	0	1415	4828	1	89
G12	06/05/94	57	.3	160	54.9	37	318	556	0	874	159	0	159	1033	1	88
G13	06/05/94	56	58.8	160	20.8	32	162	0	243	405	0	0	0	405	1	89
G14	06/04/94	56	59.9	159	41.9	29	1077	154	154	1384	231	0	231	1615	1	88
G15	06/04/94	57	1.0	159	4.9	15	0	0	82	82	0	0	0	82	1	89
G18	06/19/94	57	.1	168	21.7	43	0	87	1574	1661	0	1049	1049	2710	1	88
G19	06/29/94	57	9.8	168	38.3	40	0	0	376	376	0	0	0	376	1	89
G19	06/29/94	57	.2	168	56.6	42	0	0	372	372	0	0	0	372	1	89
G20	06/29/94	57	10.0	169	19.3	38	0	156	935	1091	78	78	156	1246	1	88
G20	06/29/94	56	58.8	169	34.1	32	0	77	923	1000	0	1615	1615	2615	1	88
G21	06/30/94	57	.4	170	9.2	37	1749	1749	4372	7869	1006	929	1935	9804	1	89
G21	06/30/94	57	9.9	169	53.4	26	0	0	259	259	0	259	259	517	1	89
G22	06/30/94	56	50.2	170	29.7	55	166	416	10071	10654	583	4994	5577	16231	1	88
G22	06/30/94	57	.2	170	47.2	52	0	79	395	473	79	316	395	868	1	88
G22	06/30/94	57	7.2	170	28.0	27	0	0	312	312	78	78	156	467	1	88
G22	07/01/94	57	5.2	170	37.3	40	496	3720	4629	8846	7605	909	8515	17360	1	88

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
G23	07/06/94	56	59.6	171	24.2	59	0	84	591	675	169	422	591	1266	1	88
G24	07/06/94	57	1.4	172	1.9	63	0	0	259	259	86	431	517	776	1	89
G25	07/07/94	57	.6	172	39.0	67	0	0	3380	3380	805	4265	5070	8450	1	88
G26	07/07/94	57	.4	173	15.0	77	0	0	2319	2319	0	1839	1839	4157	1	89
H01	06/19/94	57	19.9	167	44.1	39	0	0	164	164	0	82	82	246	1	89
H02	06/18/94	57	19.6	167	8.6	37	0	0	199	199	0	0	0	199	1	88
H04	06/15/94	57	18.5	165	49.7	37	0	0	879	879	0	0	0	879	1	88
H05	06/15/94	57	19.8	165	14.2	36	552	395	1263	2209	0	79	79	2288	1	89
H06	06/12/94	57	19.5	164	37.0	35	1266	1097	4895	7258	253	0	253	7511	1	88
H07	06/12/94	57	20.2	164	.1	33	483	483	1368	2334	402	80	483	2817	1	89
H08	06/09/94	57	20.9	163	24.7	28	425	1105	2464	3994	340	0	340	4334	1	88
H09	06/08/94	57	19.3	162	46.9	25	784	784	627	2195	78	0	78	2274	1	89
H10	06/07/94	57	19.2	162	7.1	27	1841	1105	516	3462	0	0	0	3462	1	88
H11	06/07/94	57	20.9	161	31.9	30	513	685	0	1198	86	0	86	1284	1	89
H12	06/05/94	57	19.7	160	56.0	33	0	78	0	78	234	0	234	312	1	88
H13	06/05/94	57	18.7	160	19.1	32	157	314	235	706	0	0	0	706	1	89
H14	06/04/94	57	20.7	159	40.3	30	604	226	75	906	75	0	75	981	1	88
H15	06/04/94	57	20.9	159	2.7	26	0	0	82	82	0	82	82	164	1	89
H18	06/19/94	57	19.5	168	22.0	39	0	0	0	0	0	81	81	81	1	88
H19	06/29/94	57	19.6	168	58.6	37	0	0	810	810	0	0	0	810	1	89
H20	06/28/94	57	29.6	169	22.1	38	0	0	158	158	0	0	0	158	1	88
H20	06/29/94	57	19.1	169	36.7	33	0	0	234	234	0	78	78	312	1	88
H21	07/01/94	57	19.2	170	12.5	27	0	0	91	91	0	0	0	91	1	89
H21	07/01/94	57	29.5	169	59.1	35	0	0	231	231	0	0	0	231	1	89
H22	07/01/94	57	21.7	170	53.5	45	226	1132	302	1661	604	377	981	2642	1	88
H23	07/06/94	57	19.6	171	28.3	54	0	83	331	413	0	83	83	496	1	88
H24	07/06/94	57	20.4	172	6.1	59	0	0	856	856	171	428	599	1455	1	89
H25	07/07/94	57	20.4	172	47.4	63	0	0	1053	1053	0	0	0	1053	1	88
H26	07/07/94	57	20.3	173	19.8	66	0	80	2817	2897	322	1127	1449	4346	1	89
I06	06/12/94	57	39.2	164	37.0	29	81	0	243	324	0	0	0	324	1	88
I07	06/12/94	57	39.9	163	59.7	27	0	168	335	503	0	0	0	503	1	89
I08	06/08/94	57	38.5	163	22.6	24	0	78	312	389	0	78	78	467	1	88
I09	06/08/94	57	39.6	162	45.8	22	82	0	82	163	0	0	0	163	1	89
I10	06/07/94	57	38.7	162	8.7	24	328	164	246	739	0	0	0	739	1	88

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
I11	06/07/94	57	39.6	161	29.3	28	1105	680	0	1785	85	0	85	1870	1	89
I12	06/05/94	57	39.9	160	53.5	29	71	213	213	497	142	0	142	640	1	88
I13	06/05/94	57	39.2	160	16.7	29	400	80	240	720	0	0	0	720	1	89
I14	06/04/94	57	40.6	159	38.1	26	0	79	79	158	0	0	0	158	1	88
I19	06/28/94	57	40.1	169	1.3	37	0	0	159	159	0	0	0	159	1	89
I21	07/01/94	57	49.8	169	58.8	39	0	0	2195	2195	0	1254	1254	3450	1	89
I22	07/01/94	57	31.2	170	34.0	40	0	0	935	935	0	156	156	1091	1	88
I22	07/01/94	57	40.3	170	52.8	46	0	78	1947	2025	0	156	156	2181	1	88
I23	07/06/94	57	39.7	171	31.4	54	0	79	477	556	0	0	0	556	1	88
I24	07/06/94	57	40.3	172	10.2	58	0	86	259	345	0	172	172	517	1	89
I25	07/07/94	57	40.4	172	48.0	65	0	0	1760	1760	84	335	419	2179	1	88
I26	07/07/94	57	40.1	173	23.9	78	0	0	959	959	0	80	80	1039	1	89
J01	06/24/94	58	.0	167	48.7	36	0	0	253	253	0	0	0	253	1	89
J02	06/24/94	58	.2	167	10.2	34	0	0	383	383	0	0	0	383	1	88
J03	06/24/94	58	.6	166	30.0	33	0	0	969	969	0	0	0	969	1	88
J06	06/12/94	58	.4	164	39.3	24	0	0	328	328	0	82	82	411	1	88
J07	06/12/94	58	.0	164	2.1	24	0	0	85	85	0	0	0	85	1	89
J11	06/07/94	58	.0	161	29.7	28	79	79	0	159	0	0	0	159	1	89
J12	06/05/94	57	59.7	160	50.9	24	0	0	106	106	0	0	0	106	1	88
J13	06/05/94	57	59.0	160	13.6	26	79	0	0	79	0	0	0	79	1	89
J15	06/04/94	57	58.8	158	59.3	19	0	0	86	86	0	0	0	86	1	89
J20	06/28/94	57	59.6	169	41.8	38	0	0	78	78	0	0	0	78	1	88
J21	07/01/94	57	59.9	170	19.7	40	0	0	4266	4266	0	0	0	4266	1	89
J22	07/02/94	57	50.3	170	37.7	42	80	0	161	241	0	80	80	322	1	88
J22	07/02/94	58	.1	170	58.7	47	0	81	243	324	0	0	0	324	1	88
J23	07/06/94	58	.8	171	35.9	54	0	0	159	159	0	0	0	159	1	88
J24	07/06/94	57	58.6	172	13.9	57	0	0	351	351	117	234	351	701	1	89
J25	07/07/94	58	.4	172	51.8	60	78	78	4155	4312	314	3606	3920	8232	1	88
J26	07/07/94	58	.3	173	29.4	64	0	0	841	841	76	459	535	1376	1	89
K02	06/24/94	58	20.5	167	11.7	27	0	0	0	0	0	76	76	76	1	88
K04	06/14/94	58	20.4	165	55.2	23	0	0	328	328	0	0	0	328	1	88
K19	06/28/94	58	19.7	169	6.9	36	0	0	82	82	0	0	0	82	1	89
K21	07/01/94	58	19.7	170	22.7	40	0	0	82	82	0	0	0	82	1	89
K23	07/04/94	58	19.8	171	38.4	52	0	0	158	158	0	0	0	158	1	88

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
K25	07/08/94	58	20.1	172	55.2	60	0	0	1275	1275	935	1190	2125	3399	1	88
K26	07/07/94	58	20.5	173	34.3	63	77	692	2307	3077	1384	4153	5538	8614	1	89
K27	07/11/94	58	18.9	174	17.1	90	0	0	1458	1458	0	729	729	2187	1	88
L01	06/24/94	58	40.2	167	52.1	24	0	0	0	0	0	147	147	147	1	89
L03	06/25/94	58	40.3	166	34.4	21	0	0	799	799	0	720	720	1519	1	88
L23	07/04/94	58	39.8	171	43.9	51	0	0	80	80	0	0	0	80	1	88
L24	07/04/94	58	40.2	172	21.7	55	0	0	82	82	0	82	82	164	1	89
L25	07/08/94	58	40.5	172	59.9	61	0	160	400	560	80	240	320	879	1	88
L26	07/08/94	58	40.6	173	38.2	69	84	0	4861	4945	335	1844	2179	7124	1	89
L27	07/11/94	58	39.0	174	16.1	84	0	0	2798	2798	0	1439	1439	4237	1	88
L28	07/11/94	58	42.5	174	51.3	97	0	0	3855	3855	0	3436	3436	7291	1	89
L29	07/24/94	58	40.2	175	33.7	74	0	80	1039	1119	320	1759	2079	3198	1	88
L30	07/24/94	58	40.2	176	11.7	76	0	0	322	322	0	80	80	402	1	88
L31	07/24/94	58	40.5	176	49.8	73	0	0	318	318	0	556	556	874	1	89
M02	06/25/94	58	59.8	167	14.2	21	0	0	0	0	0	164	164	164	1	88
M03	06/25/94	59	1.5	166	34.4	17	0	0	0	0	0	71	71	71	1	88
M22	07/02/94	59	.1	171	7.1	43	0	0	79	79	0	0	0	79	1	88
M24	07/04/94	58	59.8	172	26.0	53	0	0	81	81	0	0	0	81	1	89
M25	07/08/94	59	.3	173	4.9	58	0	82	1232	1314	0	164	164	1478	1	88
M26	07/08/94	58	59.7	173	43.5	64	0	1636	3661	5297	701	1168	1870	7167	1	89
M27	07/11/94	58	59.7	174	21.7	69	0	157	10584	10741	470	10976	11447	22188	1	88
M28	07/11/94	59	.3	175	.3	71	0	0	621	621	0	532	532	1153	1	89
M29	07/24/94	59	.1	175	42.9	73	0	0	972	972	405	1134	1539	2511	1	88
M30	07/23/94	59	.2	176	18.7	74	0	0	1806	1806	0	657	657	2463	1	88
M31	07/24/94	59	.0	176	58.1	74	0	0	739	739	0	411	411	1150	1	89
M32	07/24/94	59	.0	177	37.9	74	0	86	4621	4707	0	3252	3252	7959	1	89
N02	06/25/94	59	20.4	167	17.3	16	0	0	83	83	0	0	0	83	1	88
N25	07/08/94	59	20.4	173	9.3	54	0	0	891	891	0	81	81	972	1	88
N26	07/08/94	59	20.3	173	47.9	60	86	342	685	1113	0	0	0	1113	1	89
N26	07/08/94	59	29.4	173	30.7	56	0	0	350	350	0	0	0	350	1	89
N27	07/10/94	59	18.4	174	29.2	66	0	77	851	929	232	542	774	1703	1	88
N28	07/10/94	59	20.5	175	3.4	72	0	0	255	255	85	0	85	340	1	89
N29	07/23/94	59	19.6	175	45.2	74	80	0	724	805	80	0	80	885	1	88
N30	07/23/94	59	20.0	176	23.2	74	0	0	1657	1657	158	158	316	1973	1	88

TABLE 9. Summary of crab density by tow for Tanner Crab (*Chionoecetes bairdi*) (Cont'd)

STA- TION	DATE	N. LAT. DEG MIN	W. LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
N31	07/23/94	59 20.1	177 3.9	82	0	0	805	805	0	483	483	1288	1	89
O03	06/26/94	59 40.1	166 39.6	13	0	0	306	306	0	0	0	306	1	88
O23	07/04/94	59 40.0	171 54.1	42	0	0	79	79	0	0	0	79	1	88
O25	07/08/94	59 40.2	173 14.4	52	0	0	161	161	0	0	0	161	1	88
O25	07/04/94	59 30.0	172 52.8	51	0	0	169	169	0	0	0	169	1	89
O27	07/10/94	59 39.5	174 27.2	62	0	0	82	82	0	0	0	82	1	88
O28	07/10/94	59 40.2	175 6.8	67	0	0	164	164	0	0	0	164	1	89
O30	07/23/94	59 39.9	176 32.7	74	0	340	595	935	85	340	425	1360	1	89
O31	07/23/94	59 40.1	177 10.1	97	85	170	425	680	0	340	340	1020	1	89
P31	07/23/94	60 .0	177 14.5	75	0	0	266	266	0	89	89	355	1	89
P32	07/23/94	60 .2	177 54.8	77	0	0	413	413	0	0	0	413	1	89
Q30	07/22/94	60 20.0	176 44.9	76	0	0	81	81	0	81	81	162	1	89
R23	07/18/94	60 39.8	172 5.7	33	0	0	82	82	0	0	0	82	1	88
R31	07/22/94	60 40.2	177 31.1	80	0	0	81	81	0	0	0	81	1	89
T29	07/21/94	61 20.3	176 18.3	58	0	79	0	79	0	0	0	79	1	88
Z05	06/10/94	54 41.1	165 10.2	46	0	0	86	86	0	0	0	86	1	89

NOTE - Minimum carapace widths used are:
 LARGE > 5.50"; MEDIUM > 4.30".

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
A03	06/17/94	55	.2	166	22.7	79	0	0	80	80	0	0	0	80	1	89
A04	06/16/94	54	59.8	165	45.1	70	93	0	0	93	0	0	0	93	1	88
A05	06/10/94	54	59.6	165	9.9	60	83	0	0	83	0	0	0	83	1	89
B01	06/20/94	55	20.2	167	32.3	80	0	0	85	85	0	0	0	85	1	89
C01	06/20/94	55	39.9	167	35.6	73	164	411	246	821	2463	0	2463	3284	1	89
C02	06/17/94	55	39.9	166	58.1	73	291	218	73	582	73	0	73	655	1	88
C03	06/17/94	55	40.2	166	22.9	68	0	117	0	117	0	0	0	117	1	89
C05	06/16/94	55	39.7	165	11.7	58	84	0	0	84	0	0	0	84	1	89
C06	06/11/94	55	39.8	164	35.4	52	87	0	0	87	0	0	0	87	1	88
C08	06/10/94	55	40.5	163	24.1	45	117	0	0	117	0	0	0	117	1	88
C18	06/20/94	55	39.9	168	12.7	73	162	81	0	243	0	0	0	243	1	88
D01	06/20/94	56	.3	167	37.4	72	916	2331	2913	6159	39416	0	39416	45575	1	89
D02	06/17/94	55	59.9	166	59.8	74	75	0	151	226	75	0	75	302	1	88
D06	06/11/94	55	59.1	164	35.5	50	0	84	0	84	0	0	0	84	1	88
D08	06/09/94	56	.3	163	23.7	48	0	76	0	76	0	0	0	76	1	88
D18	06/20/94	55	59.7	168	13.3	81	2025	3646	324	5995	81	0	81	6076	1	88
E01	06/19/94	56	19.9	167	38.4	70	510	850	340	1700	170	0	170	1870	1	89
E02	06/17/94	56	19.5	167	1.4	62	77	0	77	155	0	0	0	155	1	88
E03	06/17/94	56	20.2	166	25.5	56	162	0	0	162	162	0	162	324	1	89
E04	06/16/94	56	19.2	165	47.9	49	229	229	115	573	115	0	115	688	1	88
E05	06/15/94	56	19.7	165	11.9	46	0	82	82	163	0	0	0	163	1	89
E06	06/11/94	56	19.8	164	35.4	46	489	0	82	571	0	0	0	571	1	88
E08	06/09/94	56	18.7	163	24.1	45	82	82	0	163	0	0	0	163	1	88
E18	06/19/94	56	20.3	168	14.3	80	5611	19826	10100	35537	1823	0	1823	37360	1	88
E19	07/26/94	56	20.2	168	52.0	71	400	640	640	1679	80	0	80	1759	1	89
E21	06/30/94	56	19.5	170	3.4	59	685	1113	1540	3338	2311	0	2311	5648	1	89
E22	06/30/94	56	20.8	170	41.5	66	172	1379	862	2413	3878	0	3878	6292	1	88
F01	06/19/94	56	39.9	167	39.7	56	328	739	328	1396	82	0	82	1478	1	89
F02	06/18/94	56	40.8	167	2.8	51	1671	1519	9418	12608	16238	0	16798	29406	1	88
F03	06/18/94	56	40.5	166	25.7	46	84	168	1257	1509	1006	0	1006	2514	1	89
F04	06/15/94	56	38.8	165	50.7	42	245	163	1223	1631	0	0	0	1631	1	88
F05	06/15/94	56	39.7	165	12.4	41	155	77	77	310	77	0	77	387	1	89
F06	06/12/94	56	39.1	164	35.9	40	240	80	80	400	0	0	0	400	1	88
F07	06/12/94	56	41.2	163	59.5	40	82	82	163	326	0	0	0	326	1	89

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F08	06/09/94	56	40.3	163	23.6	40	0	0	84	84	0	0	0	84	1	88
F18	06/19/94	56	39.0	168	17.6	57	1296	4942	4942	11180	1377	0	1377	12557	1	88
F19	06/29/94	56	49.6	168	36.8	52	640	640	6213	7492	32337	0	32337	39829	1	89
F19	06/29/94	56	39.9	168	54.6	54	1246	1558	3973	6777	14367	0	14367	21145	1	89
F20	06/29/94	56	49.8	169	18.5	43	411	8211	18310	26932	246	0	246	27178	1	88
F20	06/29/94	56	40.7	169	33.1	43	78	156	312	545	0	0	0	545	1	88
F21	06/30/94	56	39.5	170	6.4	52	157	392	235	784	1333	0	1333	2117	1	89
F21	06/30/94	56	49.7	169	52.1	40	0	156	389	545	389	0	389	935	1	89
F22	06/30/94	56	39.9	170	43.0	62	489	489	163	1142	0	0	0	1142	1	88
F23	07/06/94	56	40.3	171	20.0	65	885	2736	1690	5312	62095	0	62095	67407	1	88
F24	07/06/94	56	40.3	171	57.8	68	161	1449	241	1851	644	0	644	2495	1	89
F25	07/07/94	56	39.6	172	32.3	79	0	483	241	724	2414	0	2414	3139	1	88
G01	06/19/94	57	.1	167	42.3	41	331	3803	7275	11408	83	0	83	11491	1	89
G02	06/18/94	56	59.4	167	8.0	40	953	1589	4051	6592	477	0	477	7069	1	88
G03	06/18/94	57	.2	166	27.9	39	0	326	734	1060	0	0	0	1060	1	89
G04	06/15/94	57	.6	165	49.9	38	496	3640	4633	8770	9272	0	9272	18042	1	88
G05	06/15/94	57	.1	165	12.9	38	333	1998	1165	3496	0	0	0	3496	1	89
G06	06/12/94	56	59.4	164	37.0	37	0	80	161	241	0	0	0	241	1	88
G07	06/12/94	57	1.2	164	2.0	36	322	161	0	483	0	0	0	483	1	89
G08	06/09/94	56	58.7	163	23.9	35	0	0	81	81	0	0	0	81	1	88
G11	06/06/94	57	.5	161	34.2	36	0	83	0	83	0	0	0	83	1	89
G18	06/19/94	57	.1	168	21.7	43	350	699	1399	2448	87	0	87	2535	1	88
G19	06/29/94	57	9.8	168	38.3	40	125	626	1879	2631	0	0	0	2631	1	89
G19	06/29/94	57	.2	168	56.6	42	496	1116	744	2356	248	0	248	2604	1	89
G20	06/29/94	57	10.0	169	19.3	38	701	1636	1402	3739	78	0	78	3817	1	88
G20	06/29/94	56	58.8	169	34.1	32	615	461	461	1538	0	0	0	1538	1	88
G21	06/30/94	57	.4	170	9.2	37	5743	2930	1055	9729	155	0	155	9883	1	89
G21	06/30/94	57	9.9	169	53.4	26	172	172	0	345	0	0	0	345	1	89
G22	06/30/94	56	50.2	170	29.7	55	166	83	166	416	83	0	83	499	1	88
G22	06/30/94	57	.2	170	47.2	52	0	79	0	79	0	0	0	79	1	88
G22	07/01/94	57	5.2	170	37.3	40	4133	1240	661	6035	0	0	0	6035	1	88
G23	07/06/94	56	59.6	171	24.2	59	844	2532	591	3966	5992	0	5992	9958	1	88
G24	07/06/94	57	1.4	172	1.9	63	172	689	1034	1896	9222	0	9222	11118	1	89
G25	07/07/94	57	.6	172	39.0	67	80	322	241	644	322	0	322	966	1	88

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
G26	07/07/94	57	.4	173	15.0	77	80	160	80	320	80	0	80	400	1	89
H01	06/19/94	57	19.9	167	44.1	39	411	575	903	1889	0	0	0	1889	1	89
H02	06/18/94	57	19.6	167	8.6	37	198	2575	13271	16045	7343	0	7343	23387	1	88
H03	06/18/94	57	20.3	166	29.3	32	0	9998	36660	46658	106054	0	106054	152712	1	89
H04	06/15/94	57	18.5	165	49.7	37	0	7473	26375	33848	10991	0	10991	44839	1	88
H05	06/15/94	57	19.8	165	14.2	36	148	11854	5779	17780	0	0	0	17780	1	89
H06	06/12/94	57	19.5	164	37.0	35	928	422	253	1603	0	0	0	1603	1	88
H07	06/12/94	57	20.2	164	.1	33	0	0	161	161	80	0	80	241	1	89
H18	06/19/94	57	19.5	168	22.0	39	162	486	2917	3565	972	0	972	4537	1	88
H19	06/29/94	57	29.4	168	45.2	38	0	1626	4022	5648	0	0	0	5648	1	89
H19	06/29/94	57	19.6	168	58.6	37	0	0	450	450	0	0	0	450	1	89
H20	06/28/94	57	29.6	169	22.1	38	158	1499	2052	3709	158	0	158	3867	1	88
H20	06/29/94	57	19.1	169	36.7	33	467	1091	3739	5297	5063	78	5141	10438	1	88
H21	07/01/94	57	19.2	170	12.5	27	5128	5128	20510	30765	305108	5128	310235	341001	1	89
H21	07/01/94	57	29.5	169	59.1	35	231	2893	4514	7639	4166	0	4166	11805	1	89
H22	07/01/94	57	21.7	170	53.5	45	1132	302	0	1434	453	0	453	1887	1	88
H23	07/06/94	57	19.6	171	28.3	54	1488	2976	1405	5869	15798	510	16307	22177	1	88
H24	07/06/94	57	20.4	172	6.1	59	2824	3594	1968	8387	71609	1256	72865	81252	1	89
H25	07/07/94	57	20.4	172	47.4	63	0	81	81	162	162	0	162	324	1	88
H26	07/07/94	57	20.3	173	19.8	66	0	80	0	80	0	0	0	80	1	89
I01	06/19/94	57	40.0	167	45.2	37	168	1676	12907	14750	4526	0	4526	19276	1	89
I02	06/18/94	57	39.2	167	8.1	36	0	4215	26696	30911	77669	0	77669	108580	1	88
I03	06/18/94	57	40.4	166	30.0	36	0	4227	57363	61590	207336	0	207336	268926	1	89
I04	06/15/94	57	39.8	165	52.1	34	0	9389	215943	225332	26935	1796	29090	254422	1	88
I05	06/15/94	57	40.0	165	14.8	32	248	83	1323	1653	413	0	413	2067	1	89
I06	06/12/94	57	39.2	164	37.0	29	0	0	162	162	0	0	0	162	1	88
I18	06/19/94	57	39.6	168	23.9	37	0	1140	35327	36467	599888	0	599888	636355	1	88
I19	06/28/94	57	49.5	168	44.0	38	0	0	89475	89475	344143	0	344143	433618	1	89
I19	06/28/94	57	40.1	169	1.3	37	0	635	1668	2303	1350	79	1430	3733	1	89
I20	06/28/94	57	49.6	169	21.2	36	324	1701	14583	16608	54685	3500	58185	74793	1	88
I20	06/28/94	57	39.7	169	39.3	38	480	2878	3758	7115	2159	80	2239	9354	1	88
I21	07/01/94	57	39.5	170	15.9	39	344	1376	1376	3095	229	0	229	3325	1	89
I21	07/01/94	57	49.8	169	58.8	39	392	3763	8075	12231	1646	1411	3058	15288	1	89
I22	07/01/94	57	31.2	170	34.0	40	389	1714	1013	3116	78	78	156	3272	1	88

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
I22	07/01/94	57	40.3	170	52.8	46	234	2025	1792	4051	7790	1636	9426	13477	1	88
I23	07/06/94	57	39.7	171	31.4	54	2224	6672	4051	12946	38041	3032	41073	54019	1	88
I24	07/06/94	57	40.3	172	10.2	58	2743	5008	3935	11686	102125	6484	108609	120295	1	89
I25	07/07/94	57	40.4	172	48.0	65	838	1173	419	2430	14080	1006	15086	17516	1	88
J01	06/24/94	58	.0	167	48.7	36	0	2340	27455	29795	12003	0	12003	41799	1	89
J02	06/24/94	58	.2	167	10.2	34	383	8432	176685	185500	105398	1533	106931	292431	1	88
J03	06/24/94	58	.6	166	30.0	33	969	10663	338294	349926	44589	0	44589	394515	1	88
J04	06/15/94	57	58.7	165	52.9	30	0	13982	225709	239691	7597	400	7996	247687	1	88
J05	06/14/94	57	59.8	165	15.1	26	0	0	82	82	0	0	0	82	1	89
J18	06/24/94	58	.0	168	26.0	37	0	9719	291562	301280	200205	1944	202149	503429	1	89
J19	06/28/94	58	.5	169	4.0	38	571	1142	3344	5057	571	245	816	5872	1	89
J20	06/28/94	57	59.6	169	41.8	38	157	2744	7840	10741	7056	549	7605	18346	1	88
J21	07/01/94	57	59.9	170	19.7	40	13876	7472	11741	33089	85386	5337	90722	123812	1	89
J22	07/02/94	57	50.3	170	37.7	42	6116	2736	2012	10865	885	241	1127	11991	1	88
J22	07/02/94	58	.1	170	58.7	47	9803	4861	972	15636	162	243	405	16041	1	88
J23	07/06/94	58	.8	171	35.9	54	1430	3812	2383	7625	2224	635	2859	10484	1	88
J24	07/06/94	57	58.6	172	13.9	57	24081	72243	40135	136458	96323	38529	134853	271311	1	89
J25	07/07/94	58	.4	172	51.8	60	862	2430	1176	4469	70070	4341	74410	78879	1	88
J26	07/07/94	58	.3	173	29.4	64	229	1376	229	1834	0	0	0	1834	1	89
K01	06/24/94	58	20.0	167	50.4	32	0	4041	144459	148500	21923	1633	23555	172055	1	89
K02	06/24/94	58	20.5	167	11.7	27	228	1291	12836	14355	1443	76	1519	15874	1	88
K03	06/24/94	58	20.2	166	32.4	25	80	1610	11589	13279	885	80	966	14245	1	88
K04	06/14/94	58	20.4	165	55.2	23	0	0	246	246	0	0	0	246	1	88
K18	06/24/94	58	19.9	168	28.1	35	822	4111	105235	110168	55249	6656	61905	172073	1	89
K19	06/28/94	58	19.7	169	6.9	36	1454	6542	28711	36706	19529	4068	23597	60303	1	89
K20	06/28/94	58	19.7	169	44.6	37	2145	5480	15647	23272	19012	4702	23714	46986	1	88
K21	07/01/94	58	19.7	170	22.7	40	5406	8847	8847	23099	49336	3610	52946	76045	1	89
K22	07/02/94	58	20.3	171	1.4	46	1780	2786	1625	6192	155	77	232	6424	1	88
K23	07/04/94	58	19.8	171	38.4	52	237	3551	4971	8759	67607	66088	133695	142454	1	88
K24	07/04/94	58	20.0	172	17.6	58	2121	11311	10604	24036	46656	31811	78467	102503	1	89
K25	07/08/94	58	20.1	172	55.2	60	3059	3909	3484	10453	114470	15323	129793	140245	1	88
K26	07/07/94	58	20.5	173	34.3	63	1538	0	154	1692	154	0	154	1846	1	89
L01	06/24/94	58	40.2	167	52.1	24	0	2170	109596	111766	6481	1326	7807	119573	1	89
L02	06/24/94	58	40.2	167	13.7	23	0	0	929	929	464	0	464	1393	1	88

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA-TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
L03	06/25/94	58	40.3	166	34.4	21	0	0	400	400	400	0	400	799	1	88
L18	06/25/94	58	40.0	168	28.6	28	0	2722	77124	79846	3752	1631	5383	85229	1	89
L19	06/28/94	58	39.8	169	9.2	33	906	5436	117771	124113	64315	37140	101455	225568	1	89
L20	06/28/94	58	39.2	169	47.6	36	549	2509	13563	16621	59804	21404	81208	97829	1	88
L21	07/02/94	58	40.1	170	26.2	40	1597	8072	6564	16233	17457	2579	20036	36268	1	89
L22	07/02/94	58	40.2	171	4.7	45	631	4656	1973	7260	3235	2683	5918	13178	1	88
L23	07/04/94	58	39.8	171	43.9	51	161	2897	2334	5392	483	2092	2575	7967	1	88
L24	07/04/94	58	40.2	172	21.7	55	1212	7512	7754	16478	24140	41038	65179	81657	1	89
L25	07/08/94	58	40.5	172	59.9	61	3358	4557	3278	11193	28024	4408	32433	43625	1	88
L26	07/08/94	58	40.6	173	38.2	69	1341	168	84	1592	1844	0	1844	3436	1	89
L28	07/11/94	58	42.5	174	51.3	97	0	0	168	168	0	168	168	335	1	89
L30	07/24/94	58	40.2	176	11.7	76	0	0	0	0	0	80	80	80	1	88
L31	07/24/94	58	40.5	176	49.8	73	0	0	0	0	79	0	79	79	1	89
M01	06/25/94	59	.0	167	53.3	22	0	0	67681	67681	5749	14896	20646	88327	1	89
M18	06/25/94	59	.0	168	31.8	24	0	657	8950	9607	575	821	1396	11003	1	89
M19	06/27/94	59	.2	169	9.8	28	1762	1762	137463	140987	44061	200916	244977	385964	1	89
M20	06/27/94	58	59.5	169	49.7	34	296	5326	29882	35504	54978	38276	93254	128758	1	88
M21	07/02/94	59	.4	170	28.7	38	243	3079	5833	9155	7777	1620	9398	18552	1	89
M22	07/02/94	59	.1	171	7.1	43	874	12073	6592	19539	6751	3812	10564	30103	1	88
M23	07/04/94	58	59.5	171	47.5	47	1212	23227	9897	34335	6688	4125	10813	45149	1	88
M24	07/04/94	58	59.8	172	26.0	53	810	567	1377	2755	486	486	972	3727	1	89
M25	07/08/94	59	.3	173	4.9	58	1150	1314	1560	4023	9196	7308	16504	20527	1	88
M26	07/08/94	58	59.7	173	43.5	64	234	156	234	623	78	234	312	935	1	89
M27	07/11/94	58	59.7	174	21.7	69	78	0	470	549	78	2195	2274	2822	1	88
M28	07/11/94	59	.3	175	.3	71	89	89	89	266	177	177	355	621	1	89
M30	07/23/94	59	.2	176	18.7	74	82	0	411	493	328	575	903	1396	1	88
M31	07/24/94	59	.0	176	58.1	74	0	0	82	82	82	164	246	328	1	89
M32	07/24/94	59	.0	177	37.9	74	0	0	86	86	0	599	599	685	1	89
N01	06/25/94	59	19.7	167	55.0	20	0	0	146278	146278	10836	37927	48764	195042	1	89
N18	06/25/94	59	20.2	168	32.8	21	0	649	68827	69476	4544	38295	42839	112315	1	89
N19	06/27/94	59	20.5	169	13.7	26	0	7350	102906	110256	13477	62482	75959	186215	1	89
N20	06/27/94	59	19.7	169	51.5	32	79	3971	11755	15806	10859	16985	27844	43650	1	88
N21	07/02/94	59	20.2	170	32.2	36	235	3920	6899	11055	11651	6923	18575	29629	1	89
N22	07/03/94	59	20.1	171	11.4	41	286	7434	38884	46603	83359	14372	97732	144335	1	88

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
N23	07/04/94	59	19.5	171	50.1	43	1771	12877	17061	31708	21359	5285	26644	58352	1	88
N24	07/04/94	59	19.8	172	30.1	48	5609	9248	6368	21225	174	3906	4080	25305	1	89
N25	07/08/94	59	20.4	173	9.3	54	2268	1458	972	4699	1458	1134	2592	7291	1	88
N26	07/08/94	59	20.3	173	47.9	60	770	941	1369	3081	8130	3594	11724	14805	1	89
N26	07/08/94	59	29.4	173	30.7	56	1574	1661	4109	7344	5409	9557	14966	22310	1	89
N27	07/10/94	59	18.4	174	29.2	66	2709	2322	774	5805	77	542	619	6424	1	88
N28	07/10/94	59	20.5	175	3.4	72	340	85	85	510	1275	765	2040	2549	1	89
N29	07/23/94	59	19.6	175	45.2	74	161	80	241	483	161	80	241	724	1	88
N30	07/23/94	59	20.0	176	23.2	74	316	79	79	473	0	0	0	473	1	88
N31	07/23/94	59	20.1	177	3.9	82	80	0	0	80	80	241	322	402	1	89
O01	06/26/94	59	39.7	167	58.6	18	0	248	6448	6696	496	1364	1860	8556	1	89
O18	06/26/94	59	38.9	168	36.7	20	0	1769	189298	191068	7078	127404	134482	325550	1	89
O19	06/27/94	59	40.6	169	15.8	25	0	3279	92618	95896	14042	44467	58509	154405	1	89
O20	06/27/94	59	39.7	169	54.8	30	0	4724	37116	41840	20583	41840	62423	104263	1	88
O21	07/02/94	59	40.0	170	34.4	36	0	2284	22551	24835	34940	35625	70565	95399	1	89
O22	07/03/94	59	40.1	171	15.3	39	0	3605	75496	79101	52078	64884	116962	196063	1	88
O23	07/04/94	59	40.0	171	54.1	42	0	17744	161178	178922	49505	267325	316830	495752	1	88
O24	07/03/94	59	49.7	172	15.6	41	690	11037	98646	110373	38818	36662	75480	185854	1	88
O24	07/04/94	59	40.0	172	33.9	46	683	14350	97719	112753	31439	19137	50575	163328	1	89
O25	07/08/94	59	40.2	173	14.4	52	3943	3300	25174	32417	483	38022	38505	70922	1	88
O25	07/04/94	59	30.0	172	52.8	51	4350	2559	13050	19959	630	9767	10397	30356	1	89
O26	07/08/94	59	39.6	173	52.2	57	11606	13540	52226	77371	90911	137334	228245	305616	1	89
O26	07/08/94	59	49.7	174	13.4	58	2082	4805	5446	12334	2025	3817	5842	18176	1	89
O27	07/10/94	59	39.5	174	27.2	62	816	979	1468	3262	3507	1957	5464	8727	1	88
O28	07/10/94	59	40.2	175	6.8	67	575	657	328	1560	20100	12218	32318	33878	1	89
O29	07/23/94	59	39.7	175	51.6	75	966	322	161	1449	0	80	80	1529	1	88
O30	07/23/94	59	39.9	176	32.7	74	510	170	1360	2040	595	2209	2804	4844	1	89
O31	07/23/94	59	40.1	177	10.1	97	0	85	340	425	0	255	255	680	1	89
P18	06/26/94	60	.0	168	37.6	20	0	0	378752	378752	7147	175094	182240	560992	1	89
P19	06/27/94	59	59.6	169	19.1	23	0	3809	83790	87599	8418	52309	60727	148326	1	89
P20	06/27/94	59	59.3	169	58.1	29	0	7221	79788	87009	14802	65708	80510	167519	1	88
P21	07/02/94	60	.5	170	37.7	35	0	3265	47881	51146	20064	65926	85990	137136	1	89
P22	07/03/94	60	.7	171	18.3	37	0	1261	63292	64553	9481	49562	59043	123596	1	88
P23	07/03/94	60	.0	171	58.3	36	0	626	30036	30662	4878	19324	24202	54864	1	88

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
P24	07/03/94	60	.2	172	39.5	35	174	1392	17918	19484	4896	1137	6032	25516	1	89
P24	07/03/94	59	50.6	172	54.4	42	413	1405	4877	6696	83	6117	6200	12896	1	89
P25	07/09/94	59	59.5	173	18.3	41	81	7939	13367	21388	1215	567	1782	23170	1	88
P26	07/08/94	59	50.5	173	35.5	52	1748	916	4744	7408	83	3912	3995	11403	1	88
P26	07/09/94	59	59.9	173	57.3	53	352	1497	2554	4403	616	969	1585	5988	1	89
P26	07/09/94	60	7.6	173	44.7	48	630	29592	64221	94442	3229	2379	5609	100051	1	89
P27	07/10/94	59	59.6	174	35.4	59	1077	2846	1692	5615	1154	2230	3384	8999	1	88
P28	07/10/94	60	.1	175	15.8	64	1653	1405	992	4051	5869	5621	11491	15542	1	89
P29	07/22/94	59	59.5	175	56.0	71	571	245	82	897	2691	1223	3915	4812	1	88
P30	07/23/94	60	.0	176	42.7	78	688	153	1223	2064	459	917	1376	3439	1	88
P31	07/23/94	60	.0	177	14.5	75	798	444	20535	21776	2129	20224	22353	44129	1	89
P32	07/23/94	60	.2	177	54.8	77	827	413	1323	2563	248	1653	1901	4464	1	89
Q18	06/26/94	60	19.4	168	41.2	18	0	0	240152	240152	6927	87745	94672	334824	1	89
Q19	06/27/94	60	19.7	169	20.0	22	0	10550	162206	172756	9233	76499	85732	258488	1	89
Q20	06/27/94	60	18.3	170	2.4	28	0	2231	77639	79870	27836	55672	83508	163377	1	88
Q21	07/03/94	60	20.1	170	39.8	33	0	5197	115205	120402	25119	79686	104805	225207	1	89
Q22	07/03/94	60	19.8	171	21.7	35	0	4059	106357	110416	21104	45455	66559	176975	1	89
Q23	07/03/94	60	19.9	172	3.1	32	0	833	40503	41336	2209	4419	6628	47965	1	89
Q23	07/03/94	60	10.0	172	20.1	30	0	675	4304	4979	253	253	506	5485	1	89
Q25	07/09/94	60	19.9	173	25.0	34	0	0	82	82	0	0	0	82	1	88
Q26	07/09/94	60	10.0	174	19.9	54	9260	6430	3344	19034	84	84	168	19202	1	89
Q26	07/09/94	60	19.4	174	5.6	50	1445	10530	12182	24158	9570	2175	11745	35902	1	89
Q27	07/10/94	60	19.5	174	42.6	57	483	2575	3461	6519	7565	11911	19476	25995	1	88
Q28	07/10/94	60	19.9	175	22.9	61	6700	8854	1436	16990	7651	14345	21995	38986	1	89
Q29	07/22/94	60	19.8	176	2.1	66	2836	1134	891	4861	4861	3727	8588	13448	1	88
Q30	07/22/94	60	20.0	176	44.9	76	1701	1539	1620	4861	78051	31220	109271	114132	1	89
Q31	07/22/94	60	20.7	177	23.3	82	1498	83	416	1998	83	583	666	2664	1	89
R22	07/18/94	60	40.3	171	26.0	34	0	1075	66660	67735	6451	31180	37631	105366	1	88
R23	07/18/94	60	39.8	172	5.7	33	0	5402	49387	54789	30867	43214	74080	128869	1	88
R24	07/09/94	60	40.3	172	45.9	23	0	245	816	1060	0	163	163	1223	1	88
R25	07/09/94	60	40.1	173	27.9	35	0	0	1876	1876	82	408	489	2365	1	88
R26	07/09/94	60	39.6	174	8.0	47	0	6637	107302	113939	85174	64157	149332	263271	1	89
R27	07/10/94	60	40.0	174	49.3	54	840	10360	52639	63838	67670	24833	92504	156342	1	88
R28	07/10/94	60	39.2	175	25.1	58	8047	8825	10383	27254	1293	3878	5171	32426	1	89

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
R29	07/22/94	60	39.7	176	12.1	65	2125	1700	2634	6459	425	1530	1955	8413	1	88
R30	07/22/94	60	40.0	176	47.9	71	2978	966	2736	6680	1368	6116	7484	14164	1	88
R31	07/22/94	60	40.2	177	31.1	80	7858	1134	0	8993	162	324	486	9479	1	89
R32	07/22/94	60	40.3	178	11.0	88	326	245	1713	2284	0	1142	1142	3425	1	89
S20	07/18/94	61	.0	170	6.2	25	0	0	102603	102603	8385	22196	30581	133183	1	89
S22	07/18/94	61	.0	171	30.3	32	0	3040	121600	124640	22293	68907	91200	215840	1	88
S23	07/18/94	61	.1	172	10.8	34	0	0	173545	173545	24558	75312	99870	273415	1	88
S24	07/18/94	60	59.9	172	49.7	36	0	1424	95430	96854	5697	72640	78337	175191	1	88
S25	07/19/94	61	.1	173	31.0	41	0	2296	192867	195163	27552	299632	327185	522347	1	88
S26	07/20/94	61	1.2	174	11.1	44	0	17757	252147	269904	37500	196876	234376	504280	1	89
S27	07/20/94	60	59.8	174	53.3	50	0	5192	80849	86042	50438	48955	99393	185434	1	88
S28	07/21/94	61	.7	175	32.8	56	4352	2710	57418	64479	71223	112313	183537	248016	1	89
S29	07/21/94	61	.1	176	16.9	62	3116	1714	4518	9348	1792	1091	2882	12230	1	88
S30	07/22/94	60	59.3	176	57.9	67	1984	1405	9507	12896	14550	4299	18848	31745	1	88
S31	07/22/94	61	.1	177	38.3	74	5774	1551	17634	24959	1961	17086	19047	44007	1	89
T21	07/18/94	61	19.5	170	39.5	25	0	941	213537	214478	62130	87547	149678	364156	1	89
T23	07/19/94	61	20.2	172	14.5	33	0	0	597858	597858	139607	203594	343201	941059	1	89
T25	07/19/94	61	20.5	173	35.4	40	0	1105	134860	135965	30951	300670	331621	467587	1	88
T26	07/20/94	61	20.7	174	20.0	42	0	5875	270264	276139	22676	447856	470532	746671	1	89
T27	07/20/94	61	19.4	175	.2	47	0	2292	94723	97015	12222	99306	111529	208544	1	88
T28	07/21/94	61	19.5	175	39.6	53	2234	2055	537810	542099	89546	805917	895463	1437562	1	89
T29	07/21/94	61	20.3	176	18.3	58	1986	953	2462	5401	23469	21286	44756	50157	1	88
T30	07/21/94	61	19.8	176	58.6	63	1098	862	3920	5880	862	4155	5018	10898	1	88
U20	07/18/94	61	40.4	170	10.8	24	0	0	269781	269781	34499	83595	118094	387875	1	89
U22	07/19/94	61	40.4	171	37.1	30	0	7563	990792	998355	41345	346261	387606	1385961	1	89
U24	07/19/94	61	39.7	172	57.5	35	0	0	1049033	1049033	101835	477839	579674	1628707	1	89
U25	07/19/94	61	40.5	173	40.4	38	0	0	241656	241656	12499	233323	245822	487478	1	88
U26	07/20/94	61	40.0	174	26.4	41	0	5341	411220	416561	27276	430960	458236	874796	1	89
U27	07/20/94	61	39.6	175	5.3	46	0	2754	228593	231347	24787	256135	280922	512269	1	88
U28	07/21/94	61	39.5	175	46.7	52	422	253	108472	109147	61001	400862	461863	571010	1	89
U29	07/21/94	61	40.0	176	28.2	57	2299	657	9361	12316	21554	53884	75438	87755	1	88
V21	07/18/94	62	.1	170	57.1	26	0	0	281456	281456	8209	77400	85609	367065	1	89
V23	07/19/94	61	59.6	172	20.7	29	0	0	865965	865965	35591	185071	220662	1086628	1	89

TABLE 10. Summary of crab density by tow for snow crab (*Chionoecetes opilio*) (Cont'd)

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
V25	07/19/94	62	.4	173	45.4	33	0	0	211592	211592	2325	158113	160438	372030	1	88
V26	07/20/94	62	.3	174	37.8	40	0	0	1161802	1161802	0	1368534	1368534	2530336	1	89
V27	07/20/94	62	.0	175	10.5	44	0	11363	556799	568162	45453	693158	738611	1306774	1	88
V28	07/21/94	61	59.6	175	50.0	50	0	0	238773	238773	52531	367718	420249	659021	1	89

NOTE - Minimum carapace widths used are:
 LARGE > 4.00"; MEDIUM > 3.10".

TABLE 11. Summary of crab density by tow for hair crab (*Erimacrus isenbeckii*)

STA- TION	DATE	N. LAT. DEG MIN	W. LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
D10	06/06/94	56 .4	162 15.1	36	76	0	0	76	0	0	0	76	1	88
E10	06/06/94	56 19.5	162 13.3	42	81	81	0	162	0	0	0	162	1	88
E20	06/29/94	56 20.5	169 25.4	77	76	0	0	76	0	0	0	76	1	88
F01	06/19/94	56 39.9	167 39.7	56	0	0	0	0	0	82	82	82	1	89
F12	06/06/94	56 39.9	160 57.9	39	148	74	0	222	0	0	0	222	1	88
F13	06/06/94	56 39.0	160 22.4	31	0	169	0	169	0	0	0	169	1	89
F20	06/29/94	56 49.8	169 18.5	43	82	0	0	82	0	0	0	82	1	88
F20	06/29/94	56 40.7	169 33.1	43	1324	78	0	1402	0	0	0	1402	1	88
F21	06/30/94	56 49.7	169 52.1	40	545	234	0	779	0	0	0	779	1	89
G01	06/19/94	57 .1	167 42.3	41	0	0	83	83	0	0	0	83	1	89
G10	06/07/94	56 59.5	162 10.3	33	0	157	0	157	0	0	0	157	1	88
G11	06/06/94	57 .5	161 34.2	36	83	0	0	83	0	0	0	83	1	89
G13	06/05/94	56 58.8	160 20.8	32	0	162	0	162	0	0	0	162	1	89
G14	06/04/94	56 59.9	159 41.9	29	0	154	0	154	0	0	0	154	1	88
G18	06/19/94	57 .1	168 21.7	43	0	0	87	87	0	0	0	87	1	88
G20	06/29/94	56 58.8	169 34.1	32	1000	308	0	1308	0	0	0	1308	1	88
G21	06/30/94	57 .4	170 9.2	37	3810	1270	0	5080	0	0	0	5080	1	89
G21	06/30/94	57 9.9	169 53.4	26	517	431	0	948	0	0	0	948	1	89
G22	06/30/94	57 7.2	170 28.0	27	1870	857	78	2804	0	78	78	2882	1	88
G22	07/01/94	57 5.2	170 37.3	40	496	248	0	744	0	0	0	744	1	88
H08	06/09/94	57 20.9	163 24.7	28	85	0	0	85	0	0	0	85	1	88
H11	06/07/94	57 20.9	161 31.9	30	86	86	0	171	0	0	0	171	1	89
H13	06/05/94	57 18.7	160 19.1	32	0	78	0	78	0	0	0	78	1	89
H18	06/19/94	57 19.5	168 22.0	39	0	81	0	81	0	0	0	81	1	88
H19	06/29/94	57 29.4	168 45.2	38	342	0	0	342	0	0	0	342	1	89
H19	06/29/94	57 19.6	168 58.6	37	1620	990	0	2610	90	0	90	2700	1	89
H20	06/28/94	57 29.6	169 22.1	38	710	79	0	789	0	0	0	789	1	88
H20	06/29/94	57 19.1	169 36.7	33	857	701	78	1636	0	0	0	1636	1	88
H21	07/01/94	57 19.2	170 12.5	27	1462	1096	274	2832	0	0	0	2832	1	89
H21	07/01/94	57 29.5	169 59.1	35	926	463	0	1389	0	0	0	1389	1	89
I05	06/15/94	57 40.0	165 14.8	32	83	0	0	83	0	0	0	83	1	89
I06	06/12/94	57 39.2	164 37.0	29	0	81	0	81	0	0	0	81	1	88
I12	06/05/94	57 39.9	160 53.5	29	0	284	0	284	0	0	0	284	1	88
I18	06/19/94	57 39.6	168 23.9	37	148	0	0	148	0	74	74	222	1	88

TABLE 11. Summary of crab density by tow for hair crab (*Erimacrus isenbeckii*) (Cont'd)

STA- TION	DATE	N. LAT. DEG	MIN	W. LON. DEG	-DEPTH MIN (FM)	MALES				FEMALES			GRAND TOTAL	TOWS	VES SEL	
						LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL				
I19	06/28/94	57	40.1	169	1.3	37	397	159	0	556	79	0	79	635	1	89
I20	06/28/94	57	49.6	169	21.2	36	81	0	0	81	0	0	0	81	1	88
I20	06/28/94	57	39.7	169	39.3	38	240	0	0	240	0	160	160	400	1	88
I21	07/01/94	57	39.5	170	15.9	39	115	0	0	115	0	0	0	115	1	89
I21	07/01/94	57	49.8	169	58.8	39	157	0	0	157	78	78	157	314	1	89
J04	06/15/94	57	58.7	165	52.9	30	0	79	0	79	0	0	0	79	1	88
J18	06/24/94	58	.0	168	26.0	37	168	0	0	168	0	0	0	168	1	89
K01	06/24/94	58	20.0	167	50.4	32	0	0	84	84	0	0	0	84	1	89
K02	06/24/94	58	20.5	167	11.7	27	0	76	0	76	0	0	0	76	1	88
K19	06/28/94	58	19.7	169	6.9	36	0	0	0	0	82	0	82	82	1	89
L18	06/25/94	58	40.0	168	28.6	28	82	0	0	82	82	0	82	163	1	89
L19	06/28/94	58	39.8	169	9.2	33	0	84	0	84	84	0	84	169	1	89
L20	06/28/94	58	39.2	169	47.6	36	0	0	0	0	0	78	78	78	1	88
M01	06/25/94	59	.0	167	53.3	22	0	159	0	159	0	0	0	159	1	89
M18	06/25/94	59	.0	168	31.8	24	0	82	82	164	0	0	0	164	1	89
M19	06/27/94	59	.2	169	9.8	28	0	79	0	79	79	0	79	159	1	89
M20	06/27/94	58	59.5	169	49.7	34	0	159	0	159	0	79	79	238	1	88
N01	06/25/94	59	19.7	167	55.0	20	0	82	0	82	0	0	0	82	1	89
N18	06/25/94	59	20.2	168	32.8	21	0	635	1271	1906	0	794	794	2700	1	89
N19	06/27/94	59	20.5	169	13.7	26	0	260	87	347	0	87	87	434	1	89
N21	07/02/94	59	20.2	170	32.2	36	0	0	0	0	0	78	78	78	1	89
O01	06/26/94	59	39.7	167	58.6	18	0	0	248	248	0	0	0	248	1	89
O18	06/26/94	59	38.9	168	36.7	20	0	201	2410	2611	0	1205	1205	3816	1	89
O19	06/27/94	59	40.6	169	15.8	25	0	166	0	166	0	0	0	166	1	89
P18	06/26/94	60	.0	168	37.6	20	0	0	84	84	0	0	0	84	1	89
Q18	06/26/94	60	19.4	168	41.2	18	0	86	86	172	0	0	0	172	1	89
Q19	06/27/94	60	19.7	169	20.0	22	0	84	0	84	0	84	84	169	1	89
Q20	06/27/94	60	18.3	170	2.4	28	0	0	0	0	79	0	79	79	1	88
R23	07/18/94	60	39.8	172	5.7	33	0	82	0	82	0	0	0	82	1	88
R24	07/09/94	60	40.3	172	45.9	23	0	163	0	163	0	0	0	163	1	88
T21	07/18/94	61	19.5	170	39.5	25	0	171	0	171	0	0	0	171	1	89

NOTE - Minimum carapace widths used are:
 LARGE > 3.25"; MEDIUM > 2.50".