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Report to Industry on the 1996 Eastern Bering Sea Crab Survey

February 1997



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Cover Photo: Image of a large male red king crab (*Paralithodes camtschaticus*) taken with an underwater laser line scanning system at 78 fathoms (143 m) in Chiniak Bay near Kodiak. The crab is braced on his dactyls and is probing in the sediment. The feasibility of using an underwater laser for assessing fishing-related habitat impacts and resources was tested during a cooperative project between NMFS and ADF&G in the Fall of 1996.

**Alaska Fisheries Science Center
Processed Report 97-02**

**REPORT TO INDUSTRY ON THE
1996
EASTERN BERING SEA
CRAB SURVEY**

by
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RESULTS OF THE 1996 NMFS BERING SEA CRAB SURVEY

EXECUTIVE SUMMARY

This section summarizes data presented in the Report to Industry on the 1996 Eastern Bering Sea Trawl Survey. Numbers presented are trawl survey indices of population level and do not necessarily represent absolute abundance. For further information, contact Dr. Robert Otto, NMFS, P.O. Box 1638, Kodiak, AK 99615. Phone (907) 487-5961. Guideline Harvest Levels (GHL) and landings were provided by the Alaska Department of Fish and Game. Landings are preliminary.

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

Legal males: 5.6 million crabs; 11% decrease.

Pre-recruits: 3.5 million crabs; 35% decrease.

Large females: 11.9 million crabs; 49% increase.

Outlook: Total population index continues at low levels. Fertilized female abundance is believed to be above threshold. The Alaska Department of Fish and Game's (ADF&G) length-based assessment model output indicated there was 5.3 million legal males and 10.2 million mature females. The fishery must be closed if fewer than 8.4 million fertilized females are on the grounds.

GHL: 5.0 million lbs (2,268 metric tons, mt). The Alaska Board of Fisheries' new policy calls for an exploitation rate of 10% of mature males under current stock conditions rather than 20% as in previous years. This fishery opened November 1st for the first time since 1993. Landings were 8.4 million lbs (3,810 mt).

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

Legal males: 0.5 million crabs; 81% decrease.

Pre-recruits: <0.1 million crabs; 99% decrease.

Large females: 0.9 million crabs; 63% decrease.

Outlook: Legal and pre-recruit male crab are concentrated at few stations, and index has low precision. Females and small males are poorly estimated. Both survey and fishery data indicate population declines. Historically red king crab have been relatively rare in the Pribilof Islands and are usually harvested as incidental catch in the blue king crab fishery.

GHL: Fishery combined with blue king crab fishery in 1996; preliminary red king crab landings were 0.2 million lbs (91 mt).

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

Legal males: 1.2 million crabs; 40% decrease.
Pre-recruits: 0.7 million crabs; 37% decrease.
Large females: 4.6 million crabs; 15% decrease.
Outlook: Population low and stable. Trends not easily detectable.
GHL: 1.8 million lbs (816 mt) of red and blue king crab (see Page 1). Preliminary ADF&G data indicate 0.9 million lbs (408 mt) of blue king crab were taken in the September fishery.

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

Legal males: 3.4 million crabs; 76% increase.
Pre-recruits: 2.0 million crabs; 78% increase.
Large females: Not well estimated.
Outlook: Population at above long-term average levels. Rocky grounds preclude surveying important portions of the habitat. Survey abundance may be affected by year-to-year changes in the portion of the stock available to the survey.
GHL: 4.3 million lbs (1,950 mt). Preliminary ADF&G data indicate that 3.0 million lbs (1,361 mt) were landed in the September fishery.

Tanner crab (*Chionoecetes bairdi*) Eastern District.

Legal males: 9.1 million crabs; 8% decrease.
Pre-recruits: 23.5 million crabs; 27% decrease.
Large females: 27.7 million crabs; 26% decrease.
Outlook: Population still declining; little sign of recruitment as a once large cohort continues to decay.
GHL: 6.2 million lbs (2,812 mt). Fishery opened November 1st. Preliminary data indicate that only 1.8 million lbs (816 mt) were landed.

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

Large males: 172 million crabs; 149% increase.
Small males: 2,700.0 million crabs; 34% decrease.
Large females: 1,364.0 million crabs; 43% decrease.
Outlook: Large crab enter the commercial fishery at 102 mm carapace width although the legal size is 78 mm. Anticipated recruitment to the commercial size male population has evidently occurred and will continue into 1997. The sharp drop in abundance of small crab may indicate poor recruitment on the horizon.
GHL: 117.0 million lbs (53,070 mt). Fishery opened January 15, 1997. Landing data are not yet available.

Hair crab (*Erimacrus isenbeckii*)

Total males: 8.4 million crabs; 24% decrease.
Large females: Not well estimated.
Outlook: Population at about average levels; recruitment trends not apparent.
GHL: 0.9 million lbs (408 mt), Pribilof District only. Fishery opened November 1st. Landings were 0.7 million lbs (310 mt).

THE 1996 EASTERN BERING SEA SURVEY

The National Marine Fisheries Service (NMFS) conducts an annual trawl survey 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 the fishing industry 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.

Landing statistics for 1996 are preliminary data obtained from the Alaska Department of Fish and Game (Skip Gish, ADF&G, Dutch Harbor, personal communication). Those needing final statistics should contact ADF&G directly.

Survey Area and Methods

The 1996 EBS crab survey consisted of 375 successful bottom trawl tows and covered an area of approximately 139,200 square nautical miles (nmi). This year's survey area (Fig. 1) was nearly identical to that of 1995. The survey was conducted aboard two chartered vessels, the *F/V Aldebaran* and *F/V Arcturus*, between June 8 and July 28. The same vessels were used in 1993, 1994 and 1995. Methodology was identical to that of previous surveys and most 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.

Both vessels fished an eastern otter

trawl with an 83 ft headrope and a 112 ft footrope. This has been the standard trawl since 1982. Wingspread 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 1.50 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. Crab sizes are reported as carapace width (cw) for Tanner and snow crabs, and carapace length (cl) for all others. Procedures for estimating abundance were similar to previous years (Appendix A). Note that population estimates are indexes and are most precise for large crabs; however, they may 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 nmi. 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 where each species was caught, without averaging. It is advisable to cross-reference charts and tables.

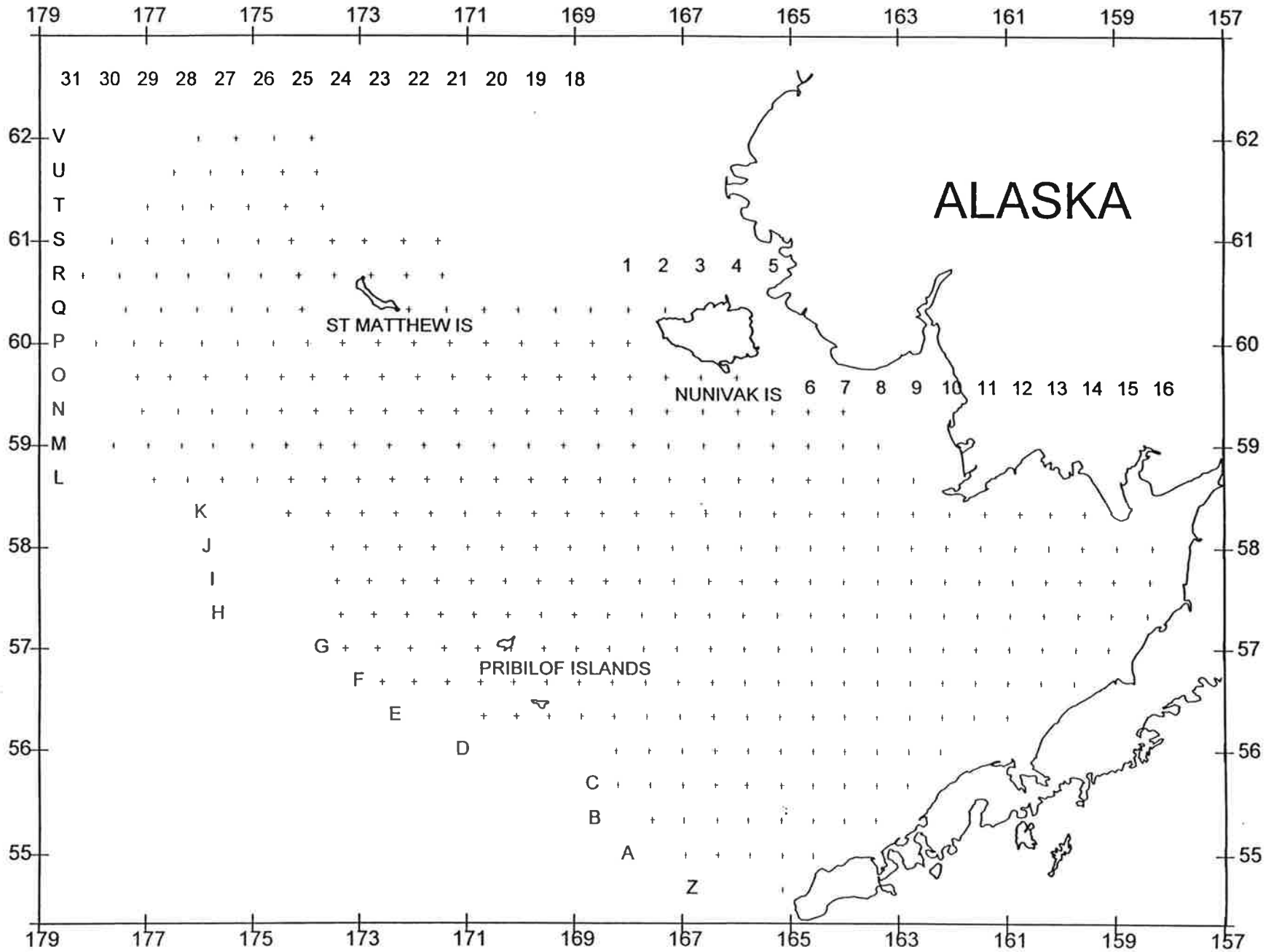
The following abbreviations are used in the text: (in) inches, (mm) millimeters, (fm) fathoms, (lbs) pounds, (°C) degrees Celsius, (cl) carapace length, and (cw) carapace width.

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).

FIGURE 1. NMFS eastern Bering Sea crab survey area in 1996.



**Red King Crab
Bristol Bay Statistical Area**

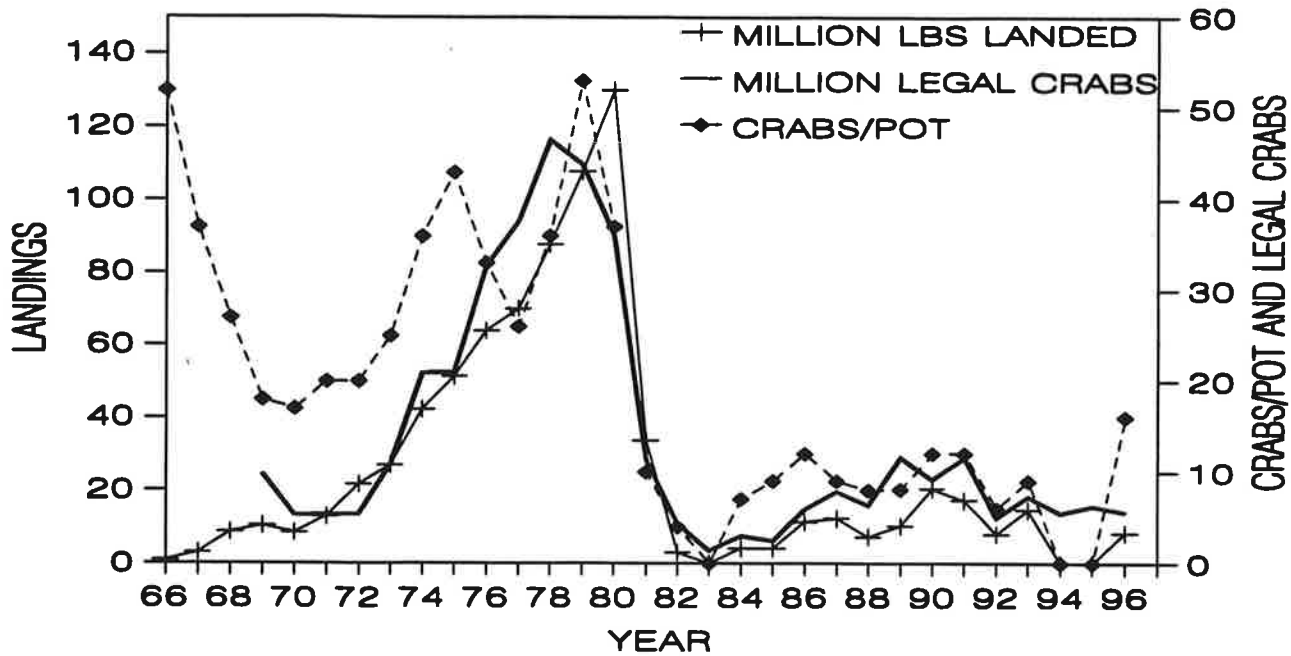


FIGURE 2. U.S. landings in millions of pounds, CPUE as crabs/per pot, and abundance of legal red king crab (*P. camtschaticus*) in millions in Bristol Bay, estimated from NMFS trawl surveys (abundance data include the Pribilof District prior to 1983).

The abundance index of legal male red king crabs in the Bristol Bay District (south of 58°39'N and east of 168°W) was 5.6 million crabs (Table 1 and Fig. 2). The estimate represents an 11% decrease from last year and is significantly below the 25-year average (13.1 million). Pre-recruit crab (110-134 mm cl) at 3.5 million showed a decrease of 35%. Abundance of juveniles increased by 79%. A mode observed at a mean size of 55 mm cl in 1994 grew to a mean size of 75 mm in 1995 (Fig. 3) and to about 88 mm in 1996. The abundance index for total males is still very low. The fishable stock will probably continue to decline in 1997 but may increase thereafter as juveniles grow and recruit to the fishery. About 5% of legal male crabs were in molting or soft-shell condition, and 55% were oldshell crabs (Appendix B).

The abundance index for large (≥ 90 mm cl) females in Bristol Bay was 11.9 million crabs. This was an increase of 49% relative to 1995 and resulted in opening of the fishery

for the first time since 1993 (see below). Females are showing a recruitment pattern similar to males. In June, 21% of sampled mature females were still molting or soft-shell (vs. 35% last year). Among sampled mature females, the proportion which had molted and extruded new, uneyed eggs was 98% compared with 82% last year. Fluctuations in the timing of molting, mating, and embryo extrusion may be related to annual variations in water temperature.

The length-based assessment (LBA) model, developed by ADF&G, was fitted to the survey time series in order to evaluate the abundance of mature females relative to the threshold and to establish a GH (ADF&G Regional Information Report 5596-12). ADF&G evaluations using the LBA model gave values of 10.2 million mature (≥ 90 mm cl) females, 4.3 million pre-recruit males (110-134 mm cl) and 5.3 million legal males. Model results were, hence, very similar to survey results. The new Alaska Board of Fisheries

Red King Crab Length Frequency Bristol Bay

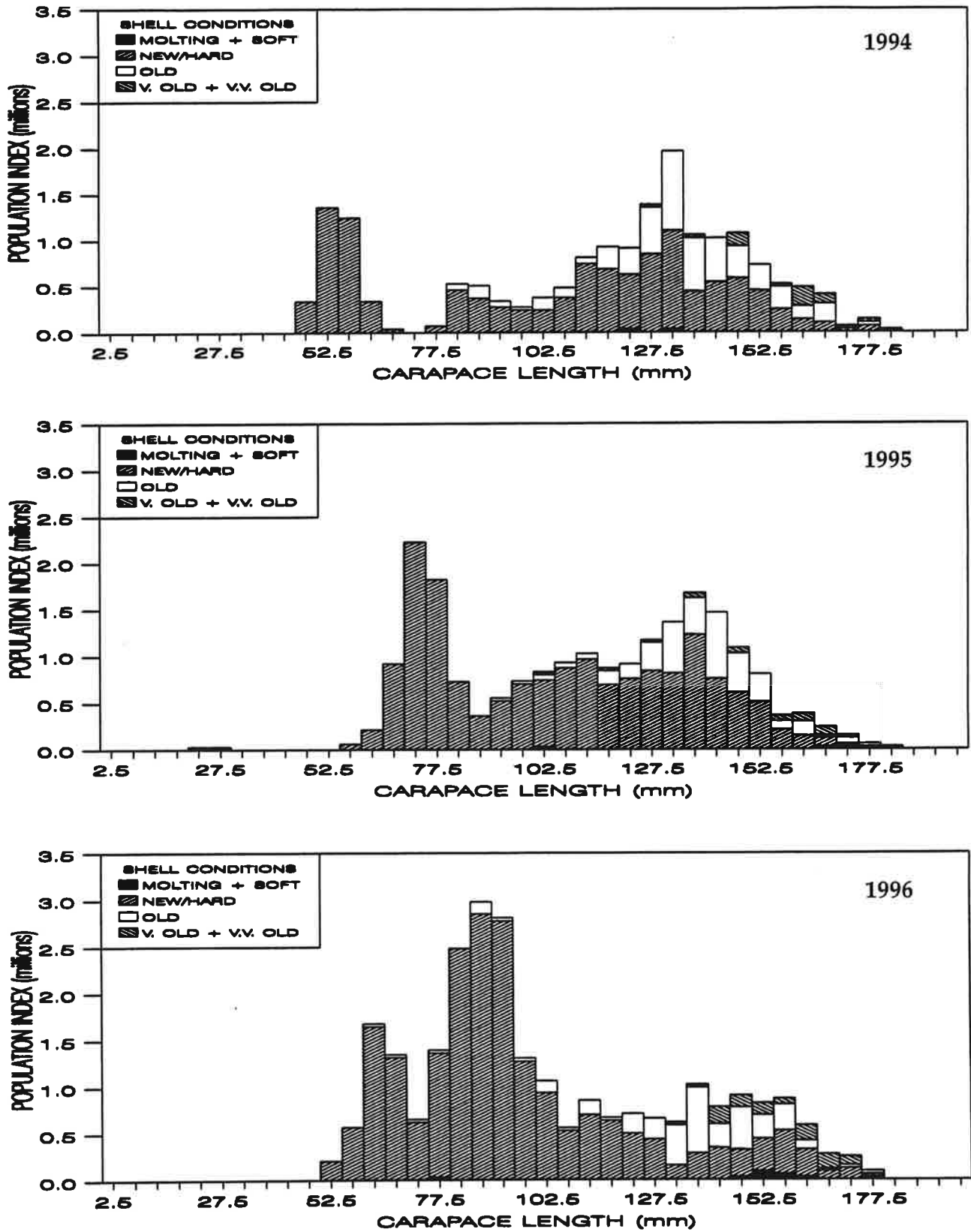


FIGURE 3. Size-frequency of male red king crab (*P. camtschaticus*) by 5 mm length classes, 1994-1996.

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	6.1	6.7	7.5	20.4	3.4	10.1	13.5	34.0
1995	9.5	5.4	6.3	21.1	4.8	8.0	12.8	33.9
1996 (B) ²	17.0	3.5	5.6	26.1	13.7	11.9	25.7	51.8
(P)	0.1	0.01	0.5	0.6	0.0	0.9	0.9	1.5
<u>Limits³</u>								
Lower	4.7	1.9	3.1	12.4	2.0	5.1	9.8	30.8
Upper	29.4	5.1	8.1	39.9	25.4	18.7	41.5	72.7
±%	73	45	45	53	85	57	62	40.5

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.

Blue King Crab
Pribilof District

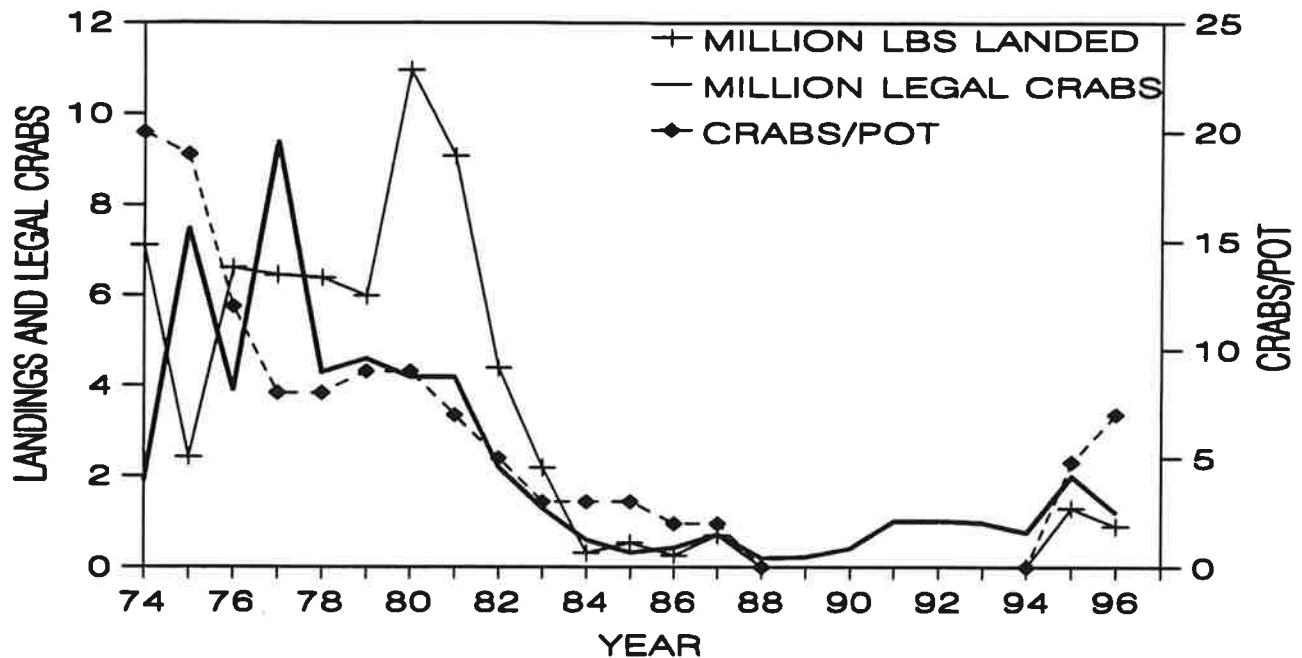


FIGURE 4. U.S. landings in millions of pounds, CPUE as crabs/pot, and abundance of legal blue king crab (*P. platypus*) in millions in the Pribilof District, estimated from NMFS trawl surveys.

policy requires a harvest rate of 10% of mature males (> 119 mm cw) under current stock conditions as compared to 20% in previous fisheries.

The Bristol Bay fishery did not open in 1994 or 1995 because the index of fertilized females was below a threshold value of 8.4 million crabs (Appendix A). The index of fertilized female abundance is derived from the number of mature females adjusted for the proportions carrying full and partial clutches. The 1996 fishery was opened on November 1 with a GHF of 5.0 million lbs. The 1996 fishery lasted four days and produced 8.4 million lbs landed by 196 vessels with a CPUE of 16 crab/pot-lift.

Pribilof Islands Red King Crab

In the Pribilof District (south of 58° 39'N and west of 168° W), the abundance index for legal male red king crab was 0.5 million crabs, a decrease of 81% from last year's 2.6 million

crabs. Most of these crabs were quite large; the mean length was 174 mm cl as compared to 165 mm cl in 1995. The index for large females declined 62%. In previous years male crab were highly concentrated at one station (G21), which resulted in additional sampling. In 1996, no such "hot spot" was found. A combined fishery for red and blue king crab in the Pribilof District opened September 15 with a GHF of 1.8 million lbs of both species. Landings were 0.2 million lbs of red king crab with a CPUE of 0.4 crab/pot-lift.

Historically, red king crab have not been abundant in the Pribilof Islands and landings were taken incidentally during the blue king crab fishery. Red king crab were relatively abundant from 1992 to 1995 but now appear to be declining to a point where their abundance relative to blue king crab is similar to historical averages. Prior to 1992, the abundance of red king crab in the Pribilofs was nearly negligible.

Blue King Crab Northern District

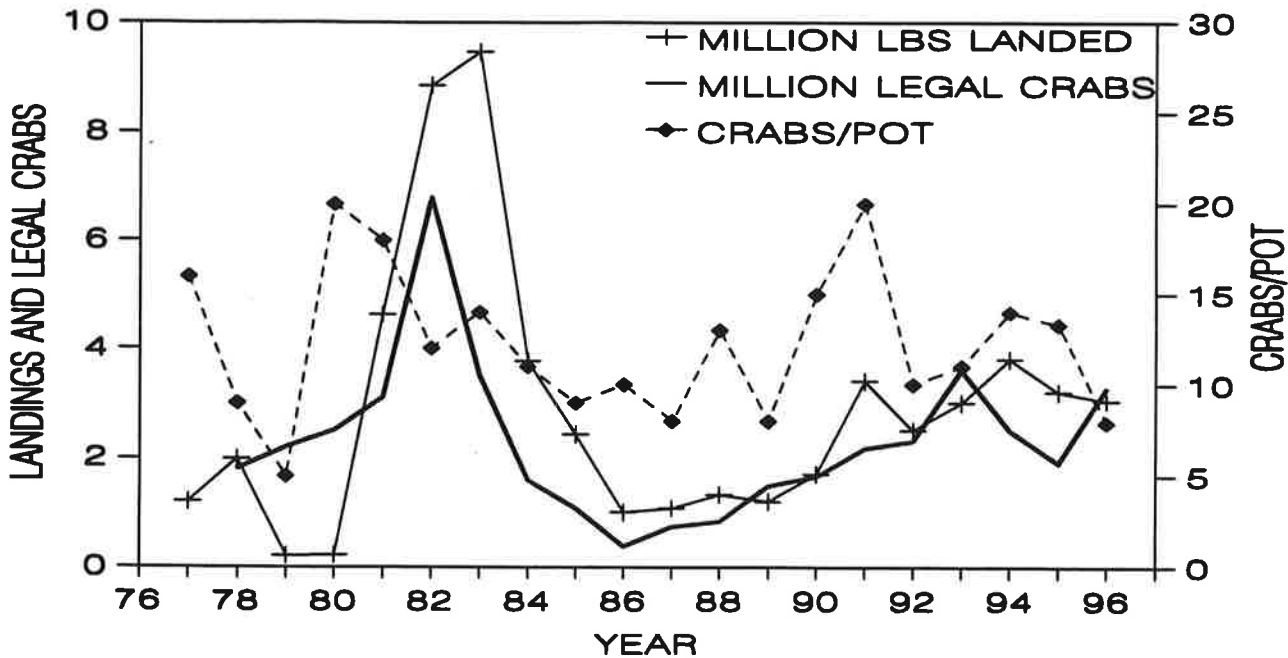


FIGURE 6. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of legal blue king crabs (*P. platypus*) in millions in the Northern District (St. Matthew Island), estimated from NMFS trawl surveys.

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 1.2 million crabs (Table 2 and Fig. 4), a 40% decrease from 1995, and is below the 22-year average (2.3 million). The number of pre-recruits (110-134 mm cl) also decreased 37% and the abundance of juveniles (<110 mm cl), showed a 58% decrease. Size-frequency data (Fig. 5) show decreases in all sizes of crab. Shell conditions among legal males were none soft or molting, 51% new-hardshells, and 49% oldshells, indicating that crabs were no longer molting during the survey.

The abundance index for large (≥ 90 mm cl) females showed little change from last year. However, estimates of juvenile and female abundance are usually very imprecise or biased due to the preference of such crab for rocky habitat which is not sampled well

by trawls. Among sampled mature females, 47% were new-hardshells, of which 99% carried new eggs, and 53% were oldshells, of which all carried empty embryo cases. Only one female carried a partial clutch of eyed eggs indicating hatching had recently occurred and was nearing completion. 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. No females had soft shells, indicating that molting was completed at the time of the survey.

This fishery was closed from 1987 through 1994 due to low stock abundance. In 1995, a combined fishery for red and blue king crabs was opened in the Pribilof District with a combined GHL of 2.5 million lbs and landings of 2.1 million lbs (1.3 million lbs were blue king crab). In 1996 the combined GHL was 1.8 million lbs and landings were 1.1 million lbs including 0.9 million lbs of blue king crab. CPUE was 4.8 blue king crab/pot-

Blue King Crab Length Frequency Pribilof District

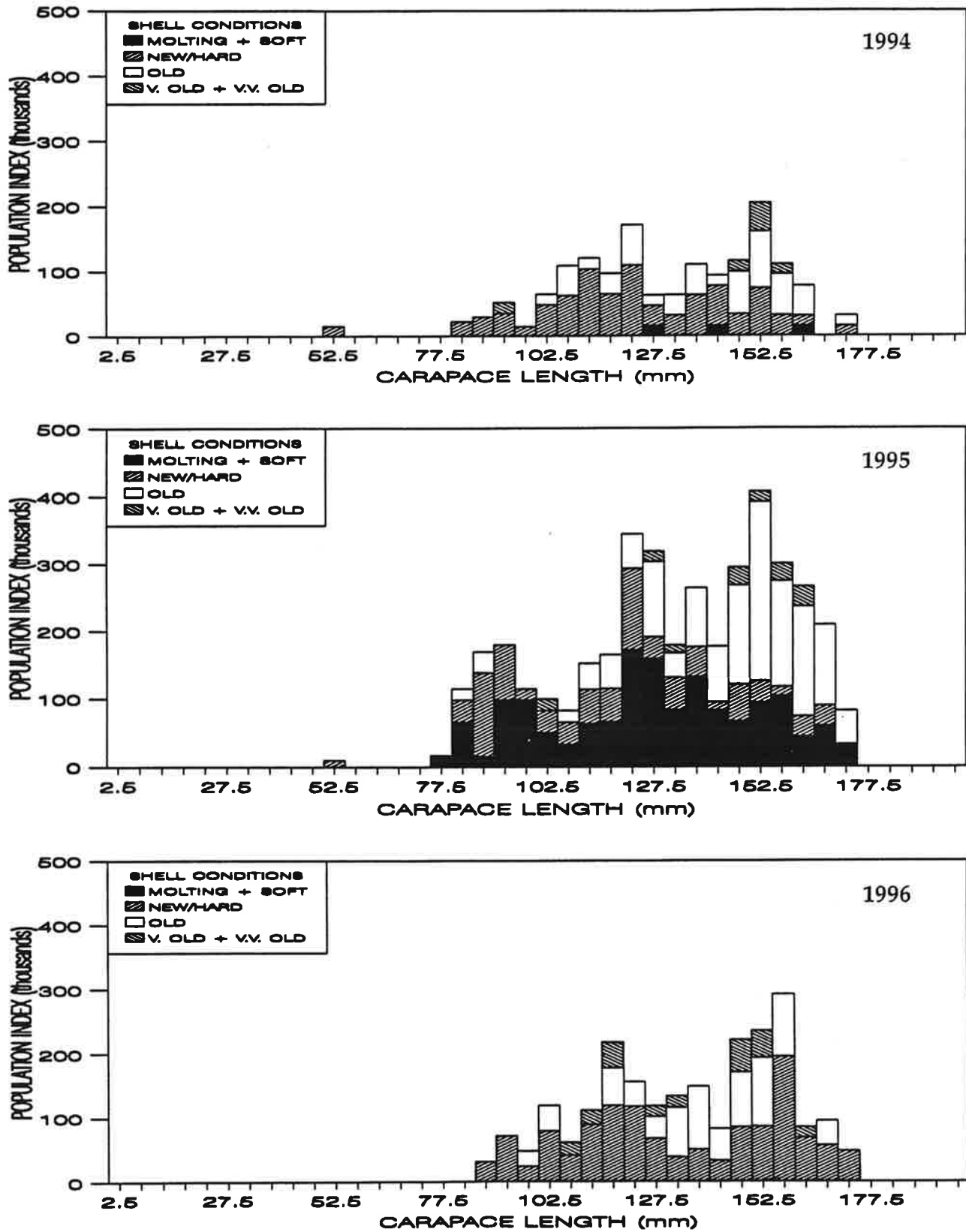


FIGURE 5. Size-frequency of Pribilof District male blue king crab (*P. platypus*), by 5 mm length classes, 1994-1996.

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)	<110	110-134	≥135		<90	≥90		
Width(in)	<5.2	5.2-6.5	≥6.5		<4.3	≥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
1995	0.79	1.16	2.00	3.95	0.44	4.02	4.46	8.41
1996	0.33	0.73	1.21	2.28	0.08	4.63	4.71	6.99
<u>Limits³</u>								
Lower	0.0	0.0	0.6	0.8	0.0	0.4	0.5	2.5
Upper	0.8	1.5	1.8	3.7	0.1	8.9	8.9	11.4
±%	137	102	49	64	200	91	89	64

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 Northern District

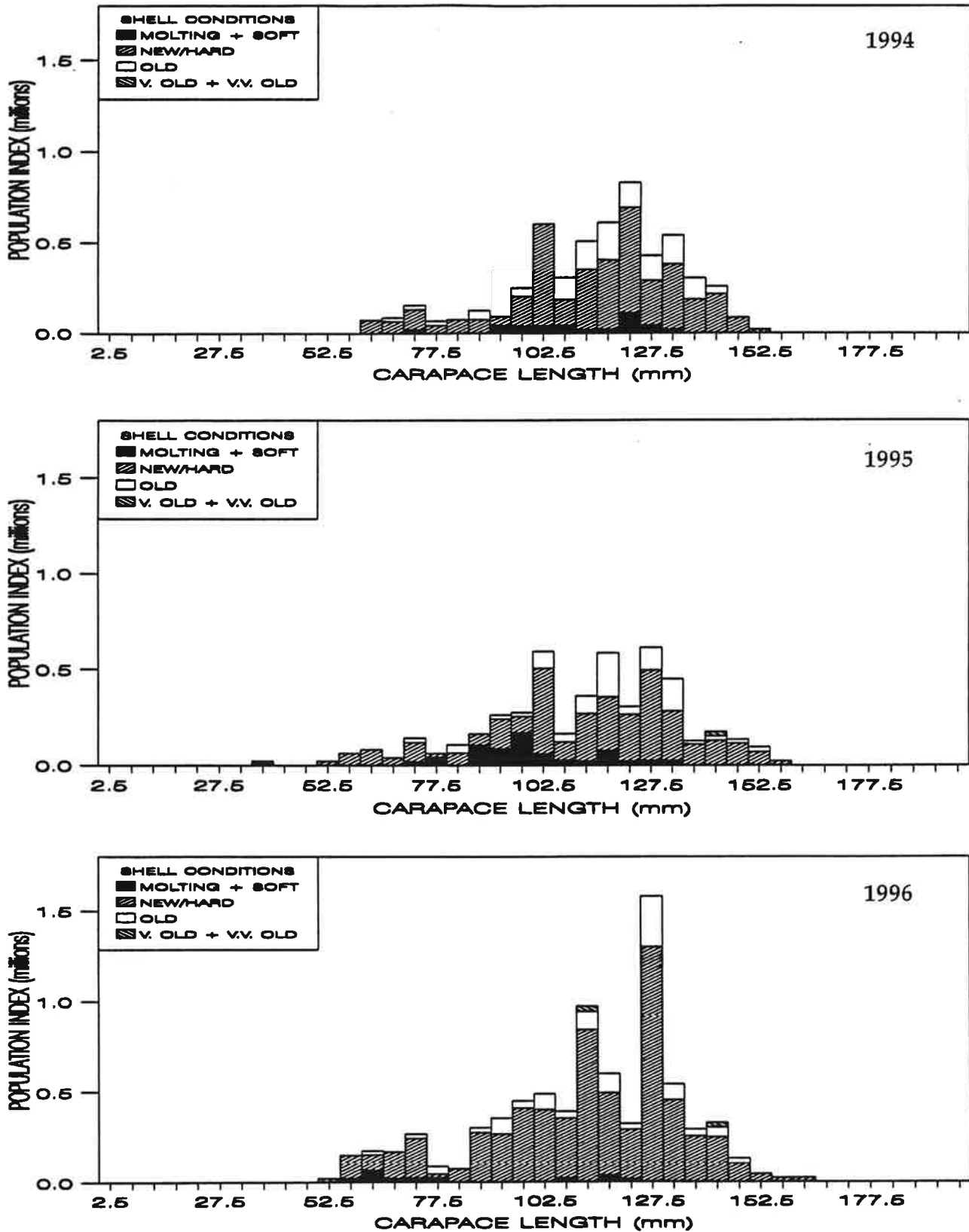


FIGURE 7. Size-frequency of Northern District (St. Matthew Island) male blue king crab (*P. platypus*), by 5 mm length classes, 1994-1996.

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 <4.3	105-119 4.3-5.5	≥120 ≥5.5		<80 <3.8	≥80 ≥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
1995	1.88	1.11	1.93	4.92	0.57	*	0.7	5.62
1996	2.59	1.97	3.40	8.00	1.13	0.86	1.99	9.96
<u>Limits²</u>								
Lower	0.7	0.6	1.8	4.0	0.0	0.0	0.0	5.0
Upper	4.5	3.4	5.0	12.0	2.6	2.3	4.9	14.9
±%	74	70	48	50	133	159	143	49

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.

*Too few crabs caught to estimate abundance.

**Tanner Crab
Eastern District**

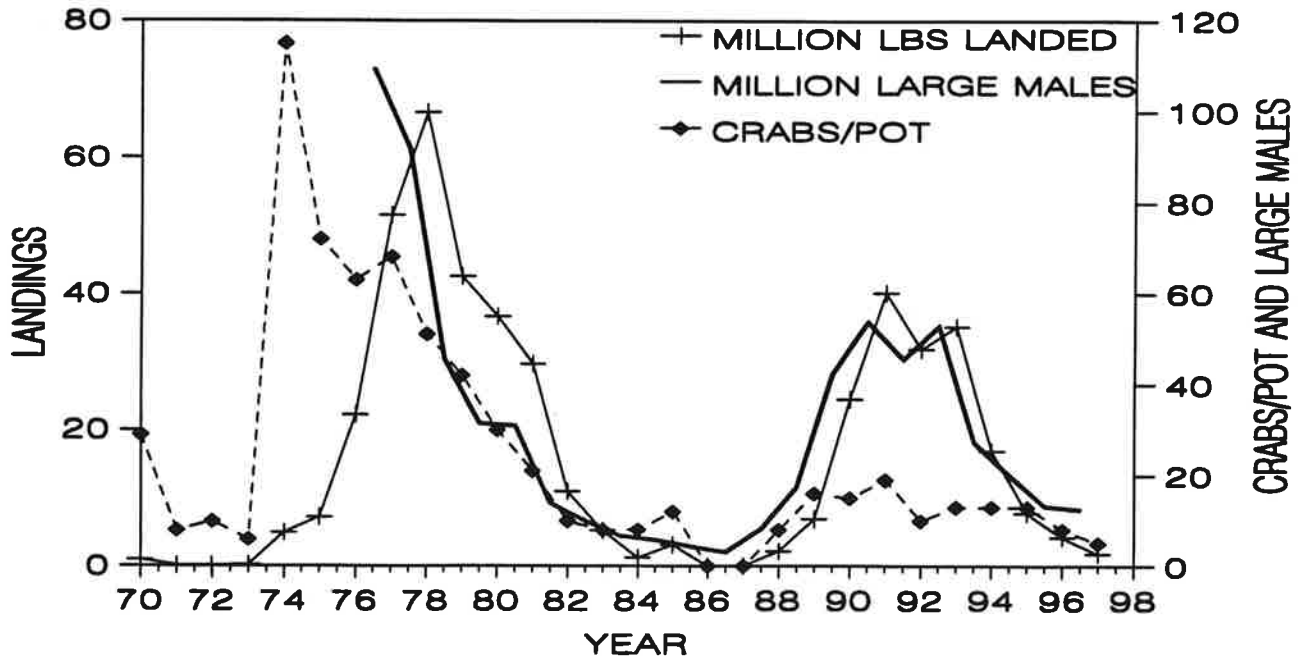


FIGURE 8. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of large male Tanner crab (*C. bairdi*) in millions in the Bristol Bay and Pribilof Districts (prior to 1989) or the Eastern District (since 1989), estimated from NMFS trawl surveys.

lift in 1995 and 6.7 crab/pot lift in 1996.

**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 3.4 million crabs (Table 3 and Fig. 6), representing a 76% increase from last year. The abundance of pre-recruits (105-119 mm cl) showed a 78% increase. The distribution of size-frequencies is shown in Figure 7.

At 3.4 million crabs, the index of legal males is considerably above the long-term average of 2.25 million. Among legal males, 3% were softshell, 75% were new-hardshells, and 22% oldshells, similar to last year. The index for large females (≥ 80 mm cl) is poorly determined due to a habitat preference for inshore, rocky and untrawlable grounds. Only 38 mature females were captured.

The 1995 fishery opened on September

15 with GH of 2.4 million lbs, landings of 3.2 million lbs and a CPUE of 13 crab/pot-lift (Fig. 6). Comparative figures for 1996 were a GH of 4.3 million lbs, landings of 3.0 million lbs and CPUE of 7.9 crab/pot-lift.

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 (Chart 3 and Table 9). The abundance index for large (≥ 135 mm cw) male *C. bairdi* in the Eastern District (east of 173°W) is 12.5 million crabs (Table 4), of which 9.1 million are legal size (≥ 138 mm cw). Legal crab abundance decreased by 9% relative to 1995. About 26% of the legal crab were

Tanner Crab Width Frequency Eastern District

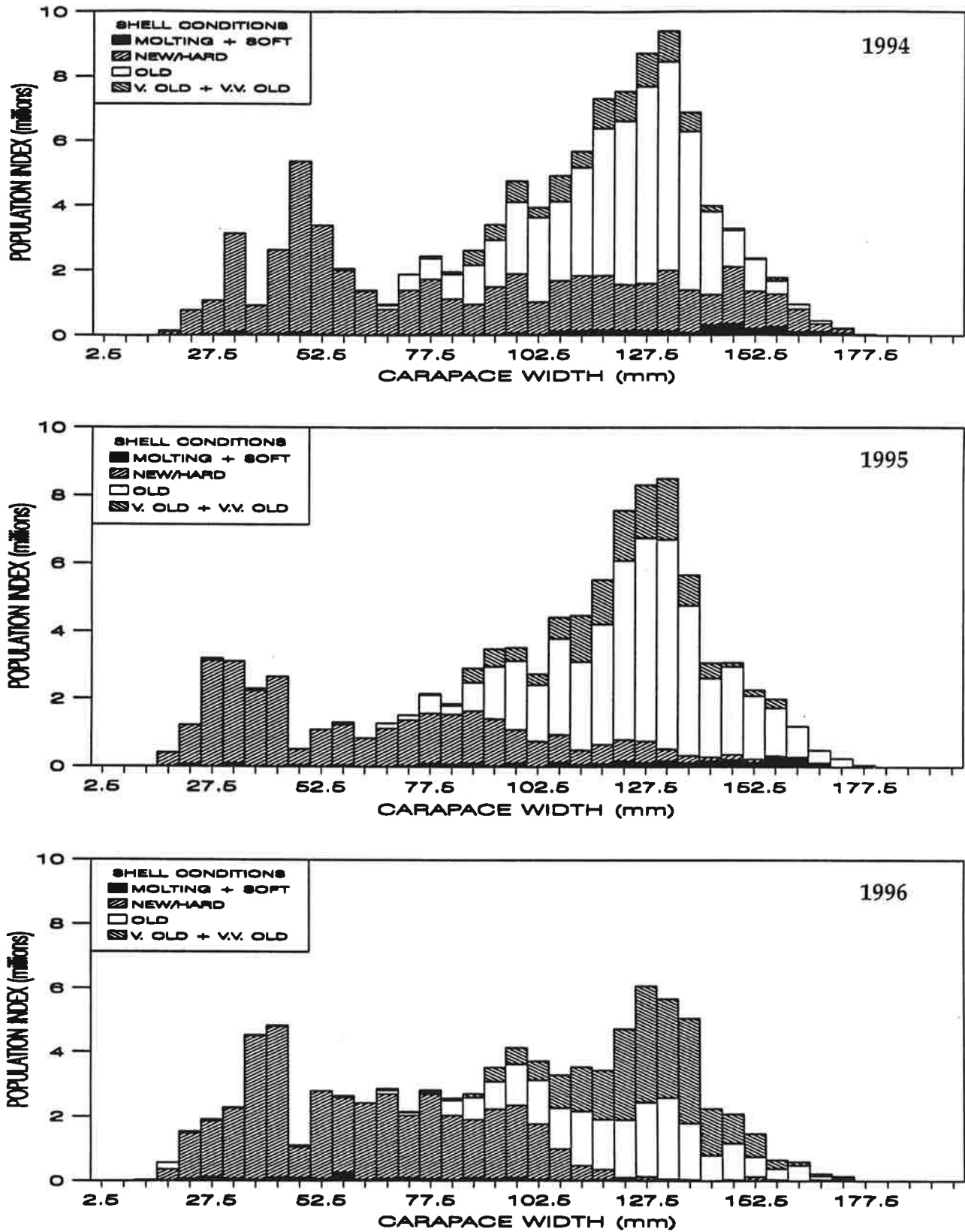


FIGURE 9. Size-frequency of male Tanner crab (*C. bairdi*) in the Bristol Bay and Pribilof Districts, by 5 mm width classes, 1994-1996.

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.

Year	Males				Females			Grand Total
	Juveniles	Pre-rec.	Large	Total	Small	Large	Total	
	Size ¹ (mm) Width(in)	<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
1995	40.4	32.4	13.3	86.1	66.6	37.2	103.8	189.9
1996	52.6	23.5	12.5	88.5	59.3	27.7	87.1	175.6
<u>Limits²</u>								
Lower	36.4	11.8	3.7	62.6	37.2	12.3	51.8	131.8
Upper	68.7	35.2	21.3	114.5	81.5	43.2	122.4	219.4
±%	31	50	71	29	37	56	41	25

¹ Carapace width (mm).

² Mean ± 2 standard errors for most recent year.

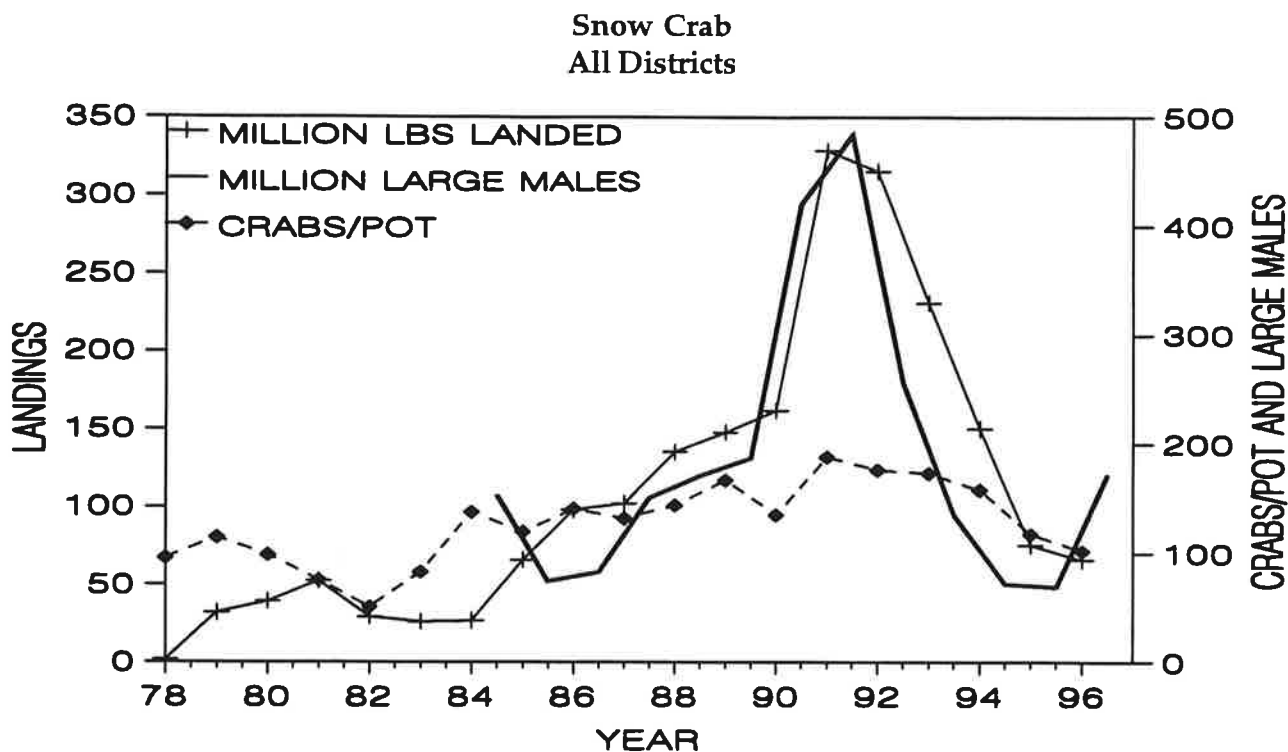


FIGURE 10. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of large male snow crab (*C. opilio*) in millions (all districts combined), estimated from NMFS trawl survey.

located east of 163°W, and virtually all the legal males occurred in the Eastern District. The abundance index for large crabs showed a decrease of 6% from last year (Table 4, Fig. 8) and is well below the 1975-1996 average (30.8 million). The abundance index for pre-recruits (110-134 mm cw) showed a 27% decrease and the index for small males (<110 mm cw) showed a 30% increase. A strong cohort of crabs which recruited to the fishery in 1988-1992 has declined due to natural mortality and fishery removals.

Low abundance of juveniles in the 45-115 mm cw range (Fig. 9) suggests that this population will continue to decline for several years.

As this population ages, the proportion of oldshell and very oldshell crabs has increased and that of newshell crabs decreased. Among large males, <1% were molting or softshell, only 2% were new-hardshells, and 98% were oldshells. Old shelled crab are not expected to molt again in their life spans.

Abundance of legal males will continue to decline over the next few years for this reason as well.

The abundance index of large (≥ 85 mm cw) females (all districts) showed a 25% decrease and the abundance of small (<85 mm) females also showed a 11% decrease from last year. Among sampled mature females, <1% were softshells; 10% were new-hardshells, of which 92% carried new eggs, and 90% were older shells, of which 66% carried new eggs. About 31% of mature females sampled had not completed spawning by the time of the survey.

In 1996, retention of Tanner crab was allowed during the Bristol Bay red king crab fishery and 0.9 million lbs were taken. Additionally, there was a GHF of 6.2 million lbs in the area west of 163°W which became available seven days after the Bristol Bay red king crab fishery closed. Only 0.9 million lbs of the GHF were taken and the fishery was closed due to its poor performance relative

**Hair Crab
All Districts**

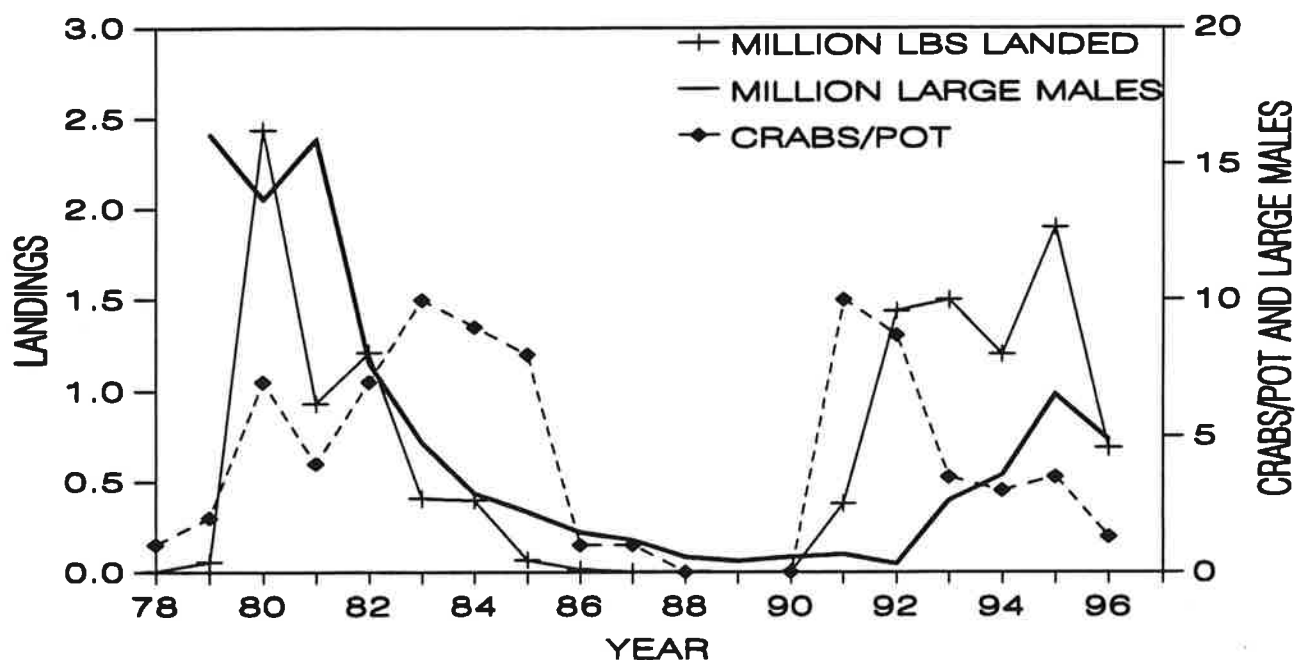


FIGURE 12. U.S. landings in millions of pounds, CPUE as crabs/pot, and the abundance of legal male hair crab (*E. isenbeckii*) in millions (all districts combined), estimated from NMFS trawl surveys.

to pre-season expectations. The 1996 CPUE was 5 crab/pot-lift as compared to 8 crab/pot-lift in 1995 (Fig. 8).

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 in cw (102 mm) and the mean size taken in the fishery is slightly above 110 mm cw. Therefore, the size ranges for male *C. opilio* used in this report are defined as follows: small, <4 in (102 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 1996 abundance index for large males was 171.6 million as compared to 69 million in 1995 and the 1984-1996 average of 186.7 million.

The distribution of large males showed an area of high concentration extending north-

west and eastward from the Pribilof Islands (Chart 4 and Table 10). The abundance index for large (≥102 mm cw) males (Eastern and Western Districts combined) is 171.6 million crabs (Table 5), and represents a 149% increase from last year. Approximately 87% of these were in the Eastern District as compared to 60% in 1995. Small males (<102 mm cw) showed a 34% decrease. The abundance index for large females (≥ 50 mm cw) showed a 43% decrease.

The abundance of large males decreased from 1991-1995 due to natural mortality and fishery removals. However, good recruitment has occurred in the last few years and a large mode in the size-distribution is now entering the fishery (Fig. 11), possibly the result of a strong year class hatched in the period 1988-1990. Continued recruitment to the large size category should offset losses due to fishing and mortality in 1998. This growth should lead to a stable abundance of large males next year but the lack of very small

Snow Crab Width Frequency All Districts

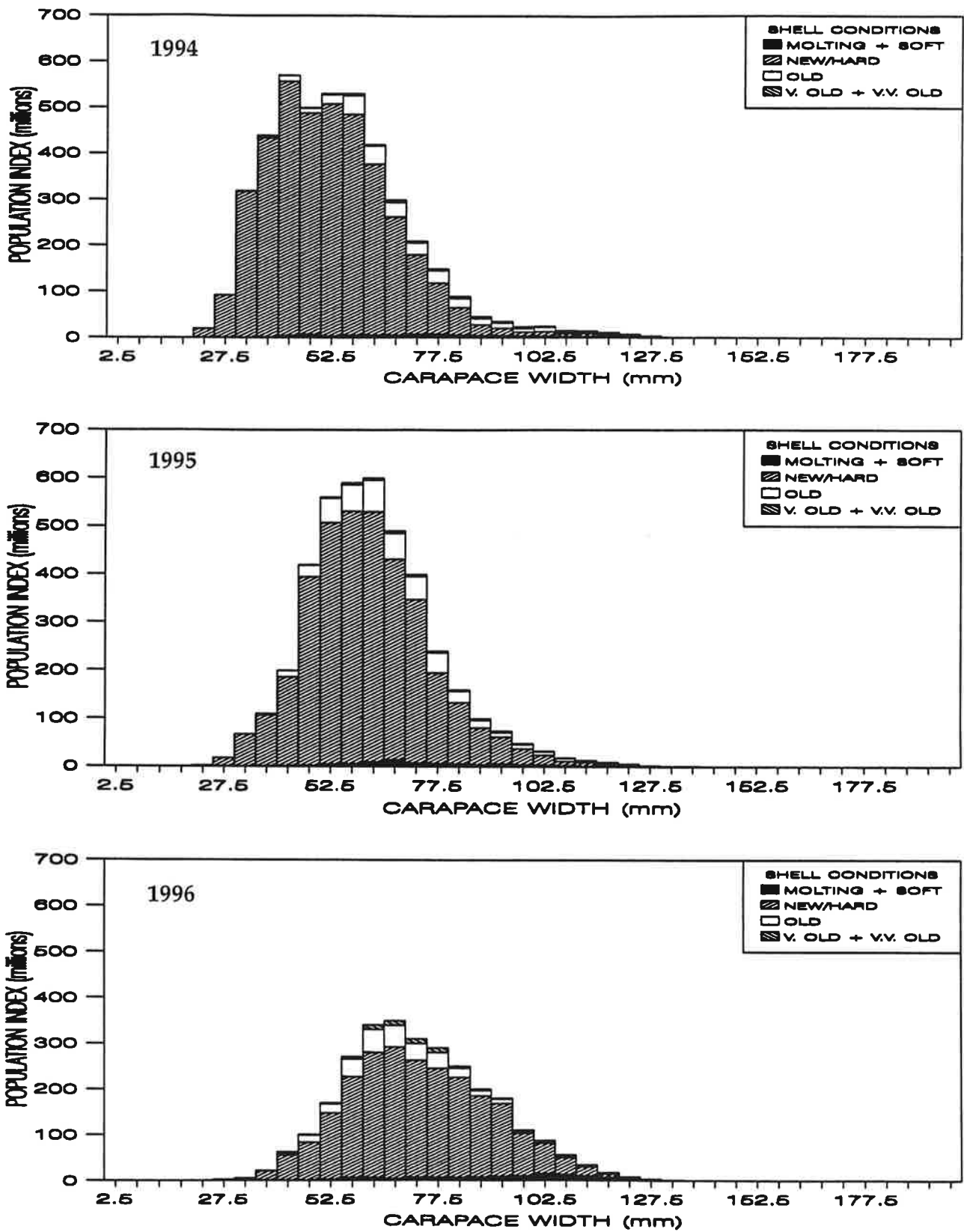


FIGURE 11. Size-frequency of male snow crab (*C. opilio*), all districts combined, by 5 mm width classes, 1994-1996.

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
	Small	Large	V. Large	Total	Small	Large	Total	
	<102 <4.0	≥102 ≥4.0	≥110 ≥4.3		<50 <2.0	≥50 ≥2.0		
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
1995	4087	69	30.9	4156	2090	2409	4500	8655
1996	2700	172	64.8	2871	1189	1364	2553	5425
East (%) ²	56	87	82	58	17	38	28	44
<u>Limits³</u>								
Lower	2209	102.3	30.8	2364	693	990	1802	2922
Upper	3191	240.9	98.8	3380	1685	1739	3304	7928
±%	18	40	53	18	42	27	29	46

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.

crabs may indicate declining abundance over a longer term.

Among large male crabs, 27% were in molting or softshell condition, 61% were new-hardshells indicating a recent molt, and 12% were oldshells. Among sampled mature females, 39% were new-hardshells, of which 99% carried new eggs, and 61% were oldshells, of which 93% carried new eggs. These numbers indicate that hatching and extrusion were nearly completed by the time of the survey.

The GHL for 1997 has been set at 117.0 million lbs for large crab (≥ 4.0 in cw). The fishery opened at noon on January 15. In 1996 the GHL was 55.7 million lbs, landings were 66 million lbs and the average CPUE was 102 crab/pot-lift (Fig. 10).

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 1981-1992 but has generally increased since 1992 (Fig. 12). The current index of 8.4 million total males (Table 6) represents a 24% decrease during the past year but is similar to the 1980-1996 average (8.2 million). The abundance index of 4.9 million large (≥ 3.25 in cw) males is similarly 26% lower than last year. The abundance index of total females shows an increase of 52% from last year, but is unreliable and based on capture of only 42 crabs. Size-frequency data (Fig. 13) indicate that the large cohort first seen in 1989-90 is maturing and recruitment of juveniles is decreasing. Changes in abundance indexes of hair crab are difficult to interpret due to patchy distribution, burying habits, inshore distribution and suspected variability in catchability between years. Further, changes in fishery practices and management over the time series decreases the usefulness

of correlations between fishery and survey data. The majority of males (80%) and females (81%) were new-hardshell crabs.

The directed fishery for hair crab in the Pribilof Islands has no minimum legal size, so we have defined large crabs equivalent to the industry-preferred minimum size of 3.25 cw. Currently there are an estimated 4.4 million lbs of large male crab in the Pribilof District. A GHL of 0.9 million lbs was set for the Pribilof District in 1996 and 0.7 million lbs were taken by 21 vessels. CPUE was 1.3 crab/pot-lift. Landings in 1995 were 1.89 million lbs, with CPUE of 3.4 crab/pot-lift (Fig. 12).

Acknowledgements

Successful completion of the annual EBS crab and groundfish survey is crucially dependent on the skipper and crews of the participating vessels. We wish to extend a special thanks to Glenn Sullivan and John Ploeger of the *F/V Arcturus* (listed as Vessel #88 in Tables 7-11) and Kenneth Disrude and Norman Bakken of the *F/V Aldebaran* (listed as Vessel #89 in Tables 7-11) and their crews.

Hair Crab Length Frequency All Districts

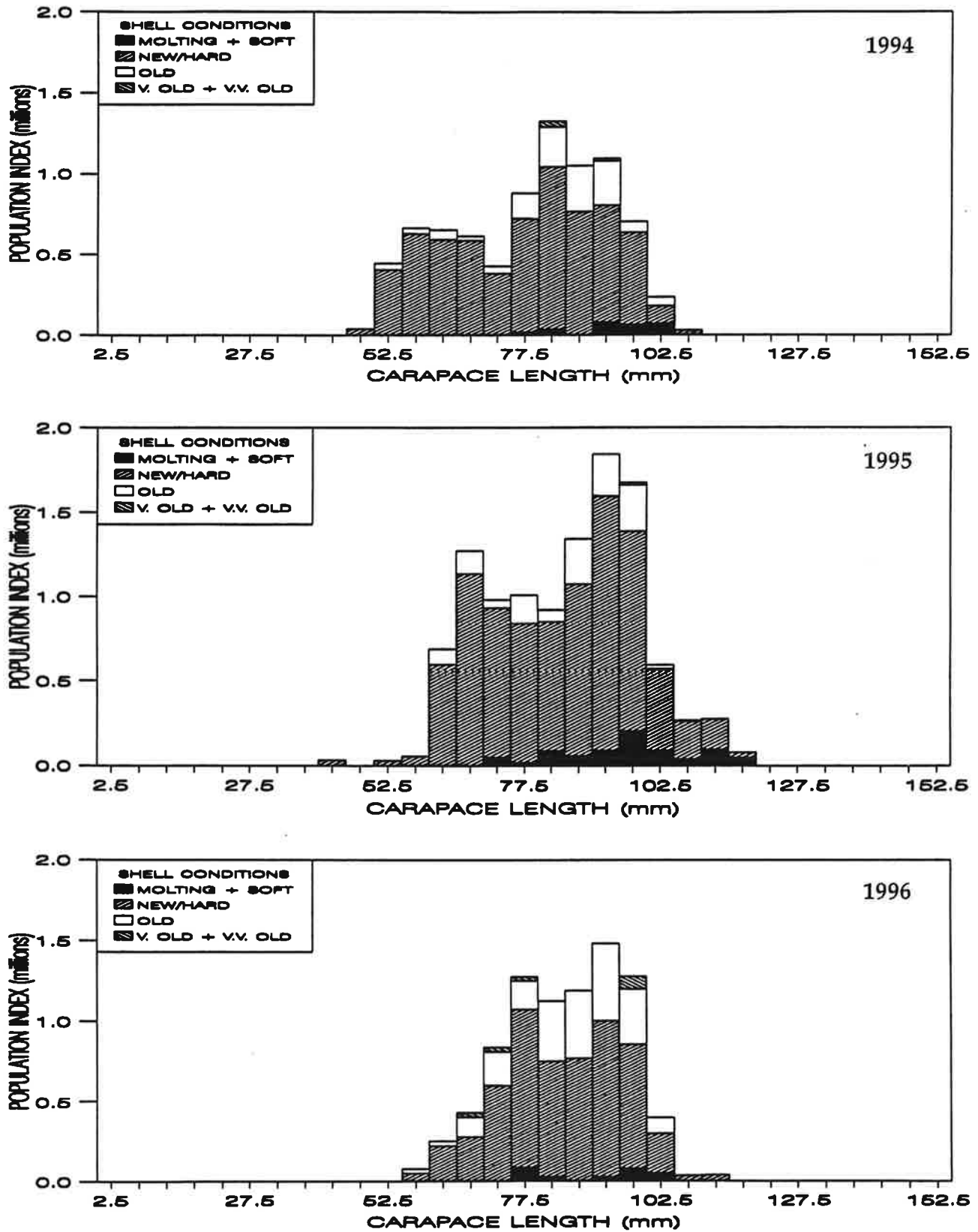


FIGURE 13. Size-frequency of male hair crab (*E. isenbeckii*), by 5 mm length classes, 1994-1996.

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

Size ¹ (mm) Width (in)	Males		Total	Females	Grand Total
	Small <83 <3.25	Large ≥83 ≥3.25		Total	
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
1995	4.56	6.54	11.10	0.69	11.79
1996	3.56	4.87	8.43	1.05	9.48
<u>Limits²</u>					
Lower	1.58	2.30	4.66	0.56	5.68
Upper	5.54	7.44	12.19	1.54	13.27
±%	56	53	45	47	40

¹ Carapace length (mm).

² Mean ± 2 standard errors for most recent year.

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 indi-

ces were calculated by extrapolating the average 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 approximate. 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: Joints swollen and/or well developed second exoskeleton present. Crab will molt within days or is actively molting.

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

New, hardshell: Carapace firm to hard and lacking scratches, wear, discoloration, and en-

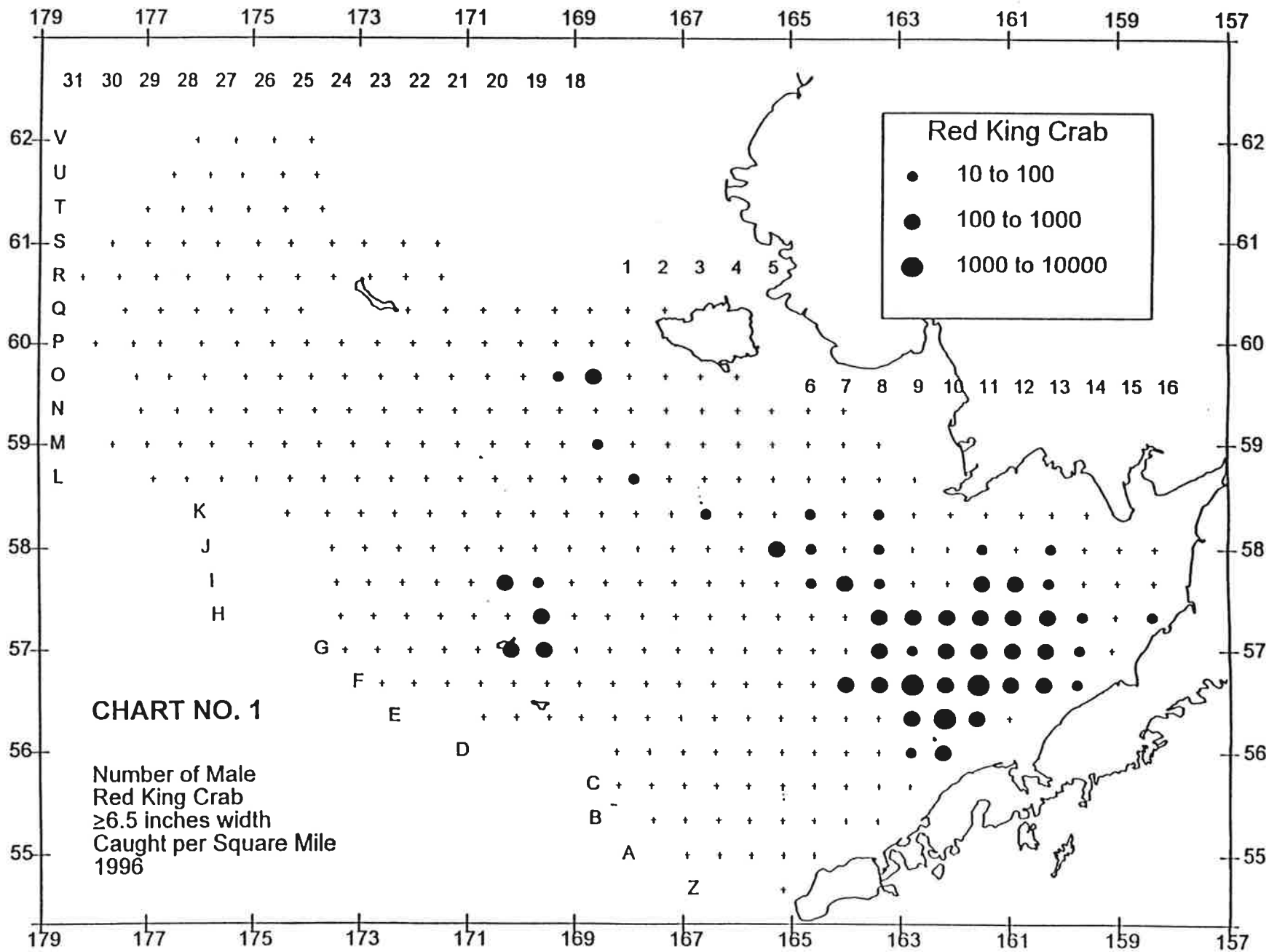
crusting organisms. Crab has probably molted within the last year.

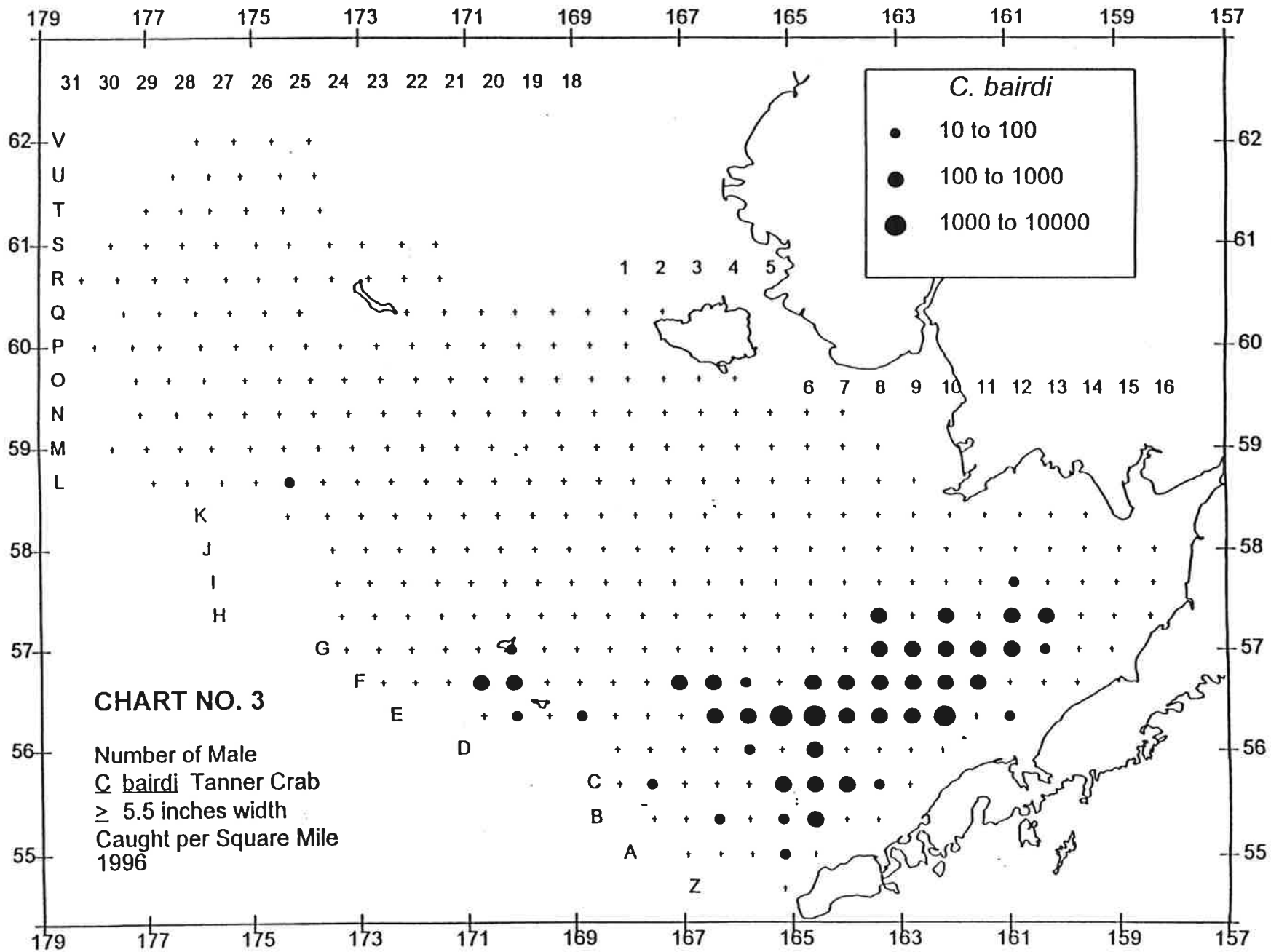
Oldshell: Usually has at least some scratching, spine wear. Crab may have darker coloration, and encrusting organisms are frequently present. Crab has probably not molted within the last year.

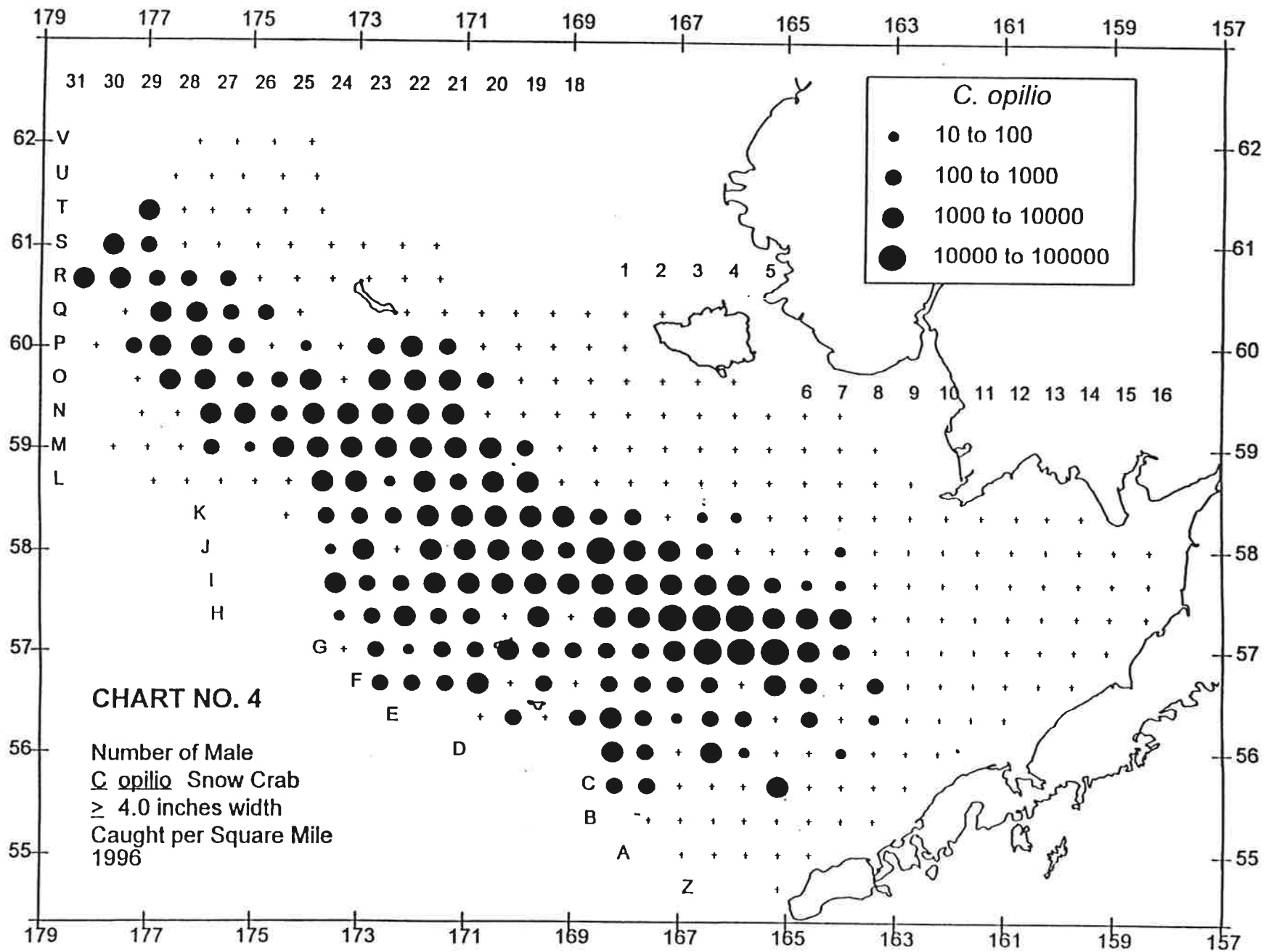
Very oldshell: Undersides of legs yellowed; abundant scratches and stains; spines and claws very worn; encrusting organisms almost always present and often abundant. Time since the last molting is almost certainly greater than one year but not definitely known.

Very, very oldshell: Shells extensively stained and usually with extensive cover of encrusting organisms. Time since the last molting not definitely known.

¹ Note that in the report, Molting and Softshell categories are frequently 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.







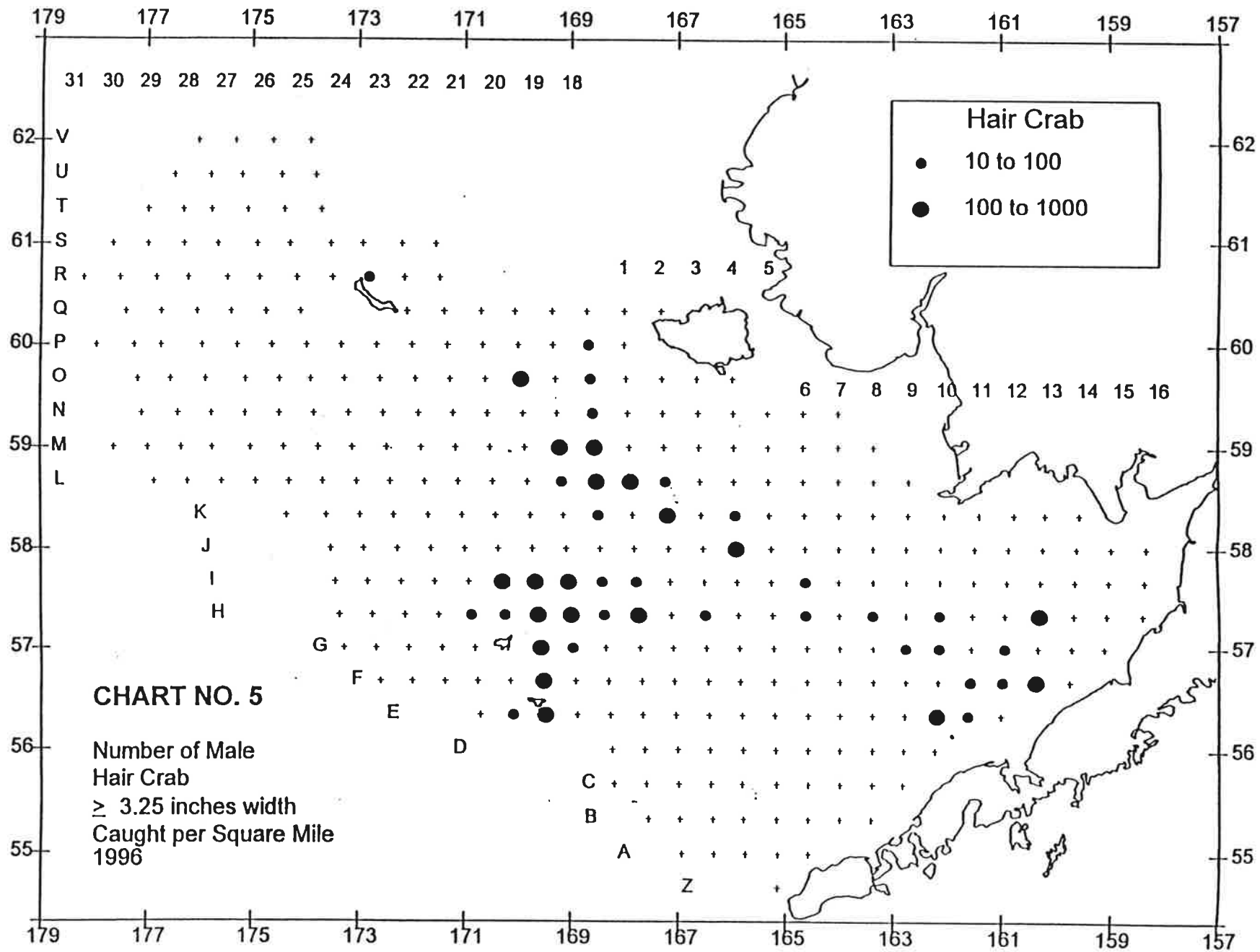


TABLE 7. Summary of crab density by tow for red king crab (*Paralithodes camtschaticus*)

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			
D09	06/14/96	55	59.7	162	51.3	42	79	1112	715	1906	715	0	715	2621	1	88
D10	06/13/96	56	.0	162	14.0	38	354	236	0	590	0	0	0	590	1	89
E09	06/13/96	56	19.2	162	48.2	43	266	0	0	266	89	0	89	355	1	88
E10	06/13/96	56	19.6	162	13.1	42	1057	528	0	1585	528	0	528	2113	1	89
E11	06/10/96	56	19.5	161	36.1	35	255	340	340	935	3994	0	3994	4929	1	88
F07	06/15/96	56	39.2	164	.4	42	240	0	0	240	0	0	0	240	1	88
F08	06/15/96	56	39.9	163	22.9	41	154	0	0	154	0	0	0	154	1	89
F09	06/13/96	56	38.4	162	48.2	39	1305	163	0	1468	0	0	0	1468	1	88
F10	06/13/96	56	39.8	162	11.5	39	935	156	0	1091	234	78	312	1402	1	89
F11	06/10/96	56	39.2	161	32.9	48	2077	308	615	3000	5692	769	6461	9460	1	88
F12	06/10/96	56	40.2	160	58.3	38	302	75	12530	12907	1887	11397	13284	26191	1	89
F13	06/10/96	56	39.2	160	21.5	30	351	632	702	1686	140	421	562	2248	1	88
F14	06/10/96	56	39.8	159	45.3	20	80	0	0	80	0	0	0	80	1	89
G08	06/15/96	57	.2	163	23.1	36	240	0	0	240	0	0	0	240	1	89
G09	06/13/96	56	59.2	162	47.9	32	71	429	0	500	0	0	0	500	1	88
G10	06/13/96	56	59.6	162	10.1	33	152	835	3494	4481	1443	760	2203	6684	1	89
G11	06/11/96	57	.6	161	33.0	38	171	0	257	428	513	171	685	1113	1	88
G12	06/11/96	57	.1	160	56.0	37	627	314	235	1176	1333	470	1803	2979	1	89
G13	06/10/96	56	58.7	160	20.3	33	483	80	1690	2253	2736	885	3622	5875	1	88
G14	06/10/96	57	.1	159	42.9	31	78	78	78	234	78	0	78	312	1	89
G20	07/04/96	57	9.5	169	18.8	40	211	0	0	211	0	0	0	211	1	88
G20	07/07/96	57	.3	169	33.2	33	471	0	283	754	3391	0	3391	4145	1	89
G21	07/07/96	57	.4	170	8.6	37	80	0	161	241	402	0	402	644	1	88
G21	07/06/96	56	50.8	169	54.5	39	150	0	0	150	0	0	0	150	1	89
G21	07/07/96	57	9.9	169	52.1	28	320	0	0	320	480	0	480	799	1	89
H08	06/15/96	57	20.1	163	23.2	29	193	0	0	193	96	0	96	289	1	89
H09	06/13/96	57	19.8	162	44.6	27	304	684	3190	4177	1063	1139	2203	6380	1	88
H10	06/13/96	57	20.2	162	9.0	26	331	83	7027	7440	2315	8597	10912	18352	1	89
H11	06/11/96	57	18.9	161	37.9	30	422	84	3544	4051	1435	3122	4557	8608	1	88
H12	06/11/96	57	20.2	160	55.9	34	312	156	467	935	389	389	779	1714	1	89
H13	06/09/96	57	19.9	160	17.5	17	923	615	1077	2615	1000	538	1538	4153	1	88
H14	06/09/96	57	19.6	159	39.2	30	81	81	162	324	0	0	0	324	1	89
H16	06/08/96	57	20.3	158	23.4	19	69	0	0	69	0	0	0	69	1	89
H20	07/07/96	57	20.4	169	36.9	34	382	76	0	459	306	0	306	764	1	89
H22	07/07/96	57	10.2	170	29.6	32	0	0	102	102	0	0	0	102	1	88

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

STA- TION	DATE	N.LAT. DEG MIN	W.LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
I06	06/18/96	57 40.0	164 36.2	29	80	0	0	80	0	0	0	80	1	89
I07	06/16/96	57 41.5	164 1.2	26	161	80	0	241	0	0	0	241	1	88
I07	06/16/96	57 41.5	164 1.2	26	161	80	0	241	0	0	0	241	1	88
I08	06/15/96	57 40.3	163 22.1	24	78	0	0	78	0	0	0	78	1	89
I09	06/13/96	57 39.5	162 44.4	25	0	225	0	225	0	0	0	225	1	88
I10	06/12/96	57 39.9	162 8.1	25	0	0	549	549	392	784	1176	1725	1	89
I11	06/11/96	57 39.2	161 31.7	28	473	237	1815	2525	473	1973	2446	4971	1	88
I12	06/11/96	57 40.0	160 53.4	30	575	328	1724	2628	2053	1150	3202	5830	1	89
I13	06/09/96	57 41.3	160 17.6	30	78	78	545	701	467	312	779	1480	1	88
I14	06/09/96	57 39.7	159 39.0	27	0	304	76	380	0	0	0	380	1	89
I16	06/08/96	57 40.1	158 21.1	20	0	0	76	76	0	0	0	76	1	89
I20	07/04/96	57 30.4	169 21.3	36	75	0	0	75	0	0	0	75	1	88
I20	07/07/96	57 40.0	169 39.1	38	78	0	0	78	0	0	0	78	1	89
I21	07/07/96	57 30.8	169 59.5	38	447	0	0	447	0	0	0	447	1	89
J05	06/17/96	58 .5	165 13.3	25	158	0	0	158	0	0	0	158	1	88
J06	06/18/96	58 .1	164 37.6	25	76	0	0	76	152	0	152	228	1	89
J08	06/15/96	58 .0	163 22.3	23	78	0	0	78	0	0	0	78	1	89
J09	06/12/96	57 59.9	162 44.9	22	0	84	0	84	84	169	253	338	1	88
J10	06/12/96	57 59.5	162 8.5	20	0	73	73	146	0	73	73	220	1	89
J11	06/12/96	57 59.7	161 27.5	31	77	77	542	697	155	774	929	1625	1	88
J12	06/11/96	58 .0	160 49.9	24	0	0	400	400	240	80	320	720	1	89
J13	06/09/96	57 59.7	160 12.7	28	80	240	560	879	160	560	720	1599	1	88
J16	06/08/96	57 59.7	158 19.7	19	0	0	73	73	0	0	0	73	1	89
K03	06/22/96	58 20.8	166 33.2	26	78	0	0	78	0	0	0	78	1	88
K06	06/17/96	58 19.9	164 38.7	24	75	0	0	75	0	0	0	75	1	89
K08	06/16/96	58 20.2	163 22.2	20	76	76	0	153	153	0	153	306	1	89
K11	06/12/96	58 12.8	161 32.9	19	0	0	363	363	0	0	0	363	1	88
L01	07/01/96	58 40.6	167 52.5	33	79	0	0	79	0	0	0	79	1	88
L02	07/01/96	58 40.3	167 13.2	24	0	0	77	77	0	0	0	77	1	89
L05	06/17/96	58 39.6	165 14.2	22	0	0	0	0	75	0	75	75	1	88
M01	07/01/96	59 1.3	167 52.2	21	0	75	75	149	0	0	0	149	1	88
M06	06/17/96	59 .1	164 38.8	15	0	0	0	0	79	0	79	79	1	89
M18	07/03/96	59 .0	168 32.0	25	82	0	0	82	0	0	0	82	1	89
N01	07/01/96	59 21.0	167 55.8	22	0	0	397	397	0	159	159	556	1	88
N02	07/01/96	59 20.1	167 14.0	17	0	0	82	82	0	0	0	82	1	89

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

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			
N03	06/23/96	59 20.4	166 39.0	15	0	0	159	159	0	0	0	159	1	88
N19	07/02/96	59 20.6	169 16.4	28	0	0	74	74	0	0	0	74	1	88
O01	07/01/96	59 39.7	167 57.8	20	0	78	0	78	0	0	0	78	1	88
O18	07/02/96	59 39.9	168 37.4	21	153	0	76	229	0	0	0	229	1	89
O19	07/02/96	59 39.1	169 16.0	27	79	0	79	158	0	0	0	158	1	88
P19	07/02/96	59 59.3	169 18.2	24	0	0	0	0	79	0	79	79	1	88
Q18	07/02/96	60 19.6	168 39.2	18	0	75	0	75	0	0	0	75	1	88

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. DEG MIN	W. LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F20	07/06/96	56 40.9	169 30.6	43	322	80	0	402	8531	0	8531	8933	1	89
G19	07/04/96	56 59.2	168 57.3	44	162	81	0	243	243	0	243	486	1	88
G19	07/04/96	56 50.3	168 37.1	51	77	0	0	77	0	0	0	77	1	89
G20	07/04/96	57 9.5	169 18.8	40	106	0	106	211	1691	0	1691	1902	1	88
G20	07/04/96	56 50.2	169 17.8	44	0	0	0	0	1334	0	1334	1334	1	88
G20	07/07/96	57 .3	169 33.2	33	0	0	0	0	1225	0	1225	1225	1	89
G21	07/07/96	57 .4	170 8.6	37	0	0	0	0	0	80	80	80	1	88
G21	07/06/96	56 50.8	169 54.5	39	600	0	0	600	5251	0	5251	5851	1	89
G21	07/07/96	57 9.9	169 52.1	28	160	0	0	160	160	0	160	320	1	89
H01	06/30/96	57 19.4	167 43.4	40	0	73	0	73	0	0	0	73	1	88
H18	07/04/96	57 19.9	168 21.2	39	76	76	0	153	0	0	0	153	1	89
H19	07/04/96	57 20.2	168 59.1	40	231	1620	1042	2893	3241	0	3241	6134	1	88
H20	07/07/96	57 20.4	169 36.9	34	76	0	0	76	76	153	229	306	1	89
I18	07/04/96	57 39.9	168 23.7	38	169	0	0	169	0	0	0	169	1	89
I19	07/04/96	57 39.6	169 1.9	38	380	152	0	532	0	0	0	532	1	88
I19	07/04/96	57 30.1	168 44.6	38	338	0	0	338	84	84	169	506	1	89
I20	07/03/96	57 49.0	169 21.7	36	445	0	0	445	0	0	0	445	1	88
I20	07/04/96	57 30.4	169 21.3	36	375	375	375	1125	600	75	675	1800	1	88
I20	07/07/96	57 40.0	169 39.1	38	78	78	0	156	0	0	0	156	1	89
I21	07/07/96	57 40.2	170 15.8	40	815	74	0	889	0	0	0	889	1	88
I21	07/07/96	57 30.8	169 59.5	38	895	820	75	1789	0	0	0	1789	1	89
J18	07/03/96	57 59.9	168 26.3	37	100	0	0	100	0	0	0	100	1	89
J21	07/08/96	58 .4	170 21.1	41	76	0	0	76	0	0	0	76	1	88
M18	07/03/96	59 .0	168 32.0	25	82	0	0	82	0	0	0	82	1	89
M25	07/12/96	58 59.9	173 4.6	57	0	156	0	156	0	0	0	156	1	88
N24	07/12/96	59 19.7	172 30.3	47	76	0	0	76	0	0	0	76	1	88
N25	07/12/96	59 20.3	173 9.3	54	237	79	0	316	0	0	0	316	1	88
N25	07/12/96	59 29.6	172 51.8	50	477	0	0	477	0	0	0	477	1	88
N26	07/11/96	59 29.8	173 29.8	55	322	241	0	563	0	0	0	563	1	88
N26	07/22/96	59 20.2	173 47.4	59	145	72	0	217	0	0	0	217	1	89
N27	07/22/96	59 17.8	174 27.2	65	82	82	0	163	0	0	0	163	1	89
O24	07/11/96	59 39.8	172 33.9	45	240	0	80	320	0	0	0	320	1	89
O25	07/11/96	59 49.8	173 34.5	51	787	0	0	787	0	0	0	787	1	88
O25	07/11/96	59 40.1	173 14.7	51	754	251	84	1090	0	0	0	1090	1	88
O26	07/22/96	59 39.0	173 52.4	56	461	385	77	923	0	0	0	923	1	89

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 TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
O27	07/23/96	59	39.6	174	24.9	62	0	0	83	83	0	0	0	83	1	88
P19	07/02/96	59	59.3	169	18.2	24	0	0	79	79	0	0	0	79	1	88
P23	07/09/96	60	.2	171	57.5	36	0	0	241	241	0	0	0	241	1	88
P23	07/09/96	60	9.8	172	19.9	31	473	552	1341	2367	237	395	631	2999	1	88
P23	07/11/96	59	50.5	172	14.9	42	0	0	69	69	0	0	0	69	1	89
P24	07/11/96	60	9.7	172	59.7	33	545	156	2493	3194	2415	2571	4986	8179	1	89
P24	07/11/96	60	.2	172	39.4	36	75	149	298	522	0	149	149	671	1	89
P24	07/11/96	59	50.5	172	53.9	43	207	69	69	345	0	0	0	345	1	89
P25	07/11/96	59	59.4	173	17.0	40	444	355	1153	1951	177	798	976	2927	1	88
P26	07/11/96	60	8.0	173	44.0	46	2416	1464	659	4539	0	0	0	4539	1	88
P26	07/22/96	59	50.5	174	14.1	57	480	160	160	799	0	0	0	799	1	89
P26	07/23/96	59	59.7	173	56.9	52	1190	255	85	1530	0	0	0	1530	1	89
P27	07/23/96	60	.5	174	36.3	59	232	0	0	232	0	0	0	232	1	88
Q02	07/02/96	60	19.9	167	19.0	16	86	0	0	86	0	0	0	86	1	89
Q23	07/10/96	60	20.0	172	4.0	32	76	0	152	228	0	76	76	304	1	89
Q26	07/23/96	60	19.5	174	5.1	49	1590	454	114	2158	0	0	0	2158	1	89
Q27	07/23/96	60	10.5	174	21.4	54	331	165	165	661	0	0	0	661	1	89
Q29	07/26/96	60	20.8	176	1.9	65	0	0	0	0	77	0	77	77	1	89
R24	07/10/96	60	40.2	172	47.1	25	467	1402	1324	3194	156	0	156	3350	1	88
R25	07/10/96	60	40.2	173	28.1	37	0	0	83	83	0	0	0	83	1	88
R26	07/23/96	60	40.4	174	7.9	47	0	215	0	215	0	0	0	215	1	89
U26	07/24/96	61	39.8	174	26.4	42	0	76	0	76	0	0	0	76	1	89

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	06/27/96	55	.0	166	55.8	84	0	0	2692	2692	308	4999	5307	7999	1	89
A03	06/20/96	55	2.2	166	22.5	77	0	434	2344	2778	1128	1562	2691	5469	1	88
A04	06/20/96	54	50.3	165	31.4	83	0	77	4373	4451	0	5418	5418	9869	1	89
A04	06/20/96	55	.3	165	45.3	69	0	77	923	1000	385	1308	1692	2692	1	89
A05	06/19/96	54	59.4	165	9.1	60	84	84	253	422	84	169	253	675	1	88
A06	06/19/96	55	.0	164	36.6	34	0	76	0	76	0	0	0	76	1	89
B01	06/29/96	55	22.2	167	31.7	79	0	179	983	1162	89	1608	1698	2859	1	88
B02	06/29/96	55	20.4	166	57.9	75	0	79	874	953	79	318	397	1350	1	89
B03	06/21/96	55	20.9	166	21.9	72	82	408	816	1305	816	2528	3344	4649	1	88
B04	06/21/96	55	19.8	165	46.7	65	0	154	2769	2923	308	1923	2230	5153	1	89
B05	06/19/96	55	19.4	165	9.7	60	84	591	253	1013	169	169	338	1350	1	88
B06	06/19/96	55	20.3	164	35.1	55	917	1758	382	3057	764	841	1605	4662	1	89
B07	06/14/96	55	21.6	163	58.7	41	0	0	95	95	0	0	0	95	1	88
B08	06/14/96	55	20.1	163	26.7	29	0	79	631	710	0	79	79	789	1	89
C01	06/29/96	55	39.8	167	35.2	74	86	172	517	776	345	259	603	1379	1	88
C02	06/29/96	55	40.2	166	59.4	72	0	0	243	243	0	81	81	324	1	89
C03	06/21/96	55	40.7	166	23.2	68	0	575	493	1067	246	328	575	1642	1	88
C04	06/21/96	55	40.3	165	48.0	63	0	151	755	906	453	1736	2189	3095	1	89
C05	06/19/96	55	40.6	165	8.4	59	181	544	181	907	0	181	181	1088	1	88
C06	06/19/96	55	39.7	164	35.8	51	331	331	165	827	496	83	579	1405	1	89
C07	06/14/96	55	40.6	164	3.4	50	643	1859	2216	4718	3217	4361	7577	12295	1	88
C08	06/14/96	55	40.1	163	24.4	43	83	0	331	413	0	165	165	579	1	89
C09	06/14/96	55	40.1	162	51.8	30	0	245	2691	2936	163	734	897	3833	1	89
C18	07/05/96	55	40.1	168	11.5	73	0	77	385	461	0	308	308	769	1	89
D01	06/29/96	55	59.7	167	37.6	72	0	85	340	425	0	255	255	680	1	88
D02	06/29/96	56	.4	166	59.2	72	0	78	78	156	0	0	0	156	1	89
D03	06/21/96	56	.3	166	24.2	67	0	0	599	599	86	0	86	685	1	88
D04	06/21/96	56	.2	165	47.0	57	78	156	0	234	0	78	78	312	1	89
D05	06/19/96	55	59.2	165	9.7	53	0	0	166	166	250	83	333	499	1	88
D06	06/19/96	55	59.8	164	34.4	50	237	237	3867	4340	710	3393	4103	8443	1	89
D07	06/14/96	55	59.2	163	59.5	49	0	338	13573	13910	253	8045	8383	22293	1	88
D08	06/14/96	56	.0	163	24.2	47	0	119	2264	2383	238	2264	2502	4885	1	89
D09	06/14/96	55	59.7	162	51.3	42	0	0	0	0	0	79	79	79	1	88
D18	07/05/96	56	.3	168	14.7	83	0	78	2901	2979	235	2352	2587	5567	1	89
E02	06/29/96	56	20.4	167	2.2	61	0	318	159	477	159	79	238	715	1	89

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

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			
E03	06/21/96	56 20.0	166 25.0	56	168	1257	670	2095	251	84	335	2430	1	88
E04	06/21/96	56 20.1	165 47.5	49	314	862	314	1490	392	78	470	1960	1	89
E05	06/18/96	56 20.0	165 12.7	47	7241	7491	1415	16147	8490	8323	16897	33044	1	88
E06	06/18/96	56 19.8	164 35.1	47	3394	5770	2036	11200	12603	9002	21604	32805	1	89
E07	06/15/96	56 20.4	164 .7	45	237	473	5366	6076	3156	5682	8838	14914	1	88
E08	06/14/96	56 20.3	163 24.1	46	157	235	78	470	549	235	784	1254	1	89
E09	06/13/96	56 19.2	162 48.2	43	444	621	1331	2395	444	266	710	3105	1	88
E10	06/13/96	56 19.6	162 13.1	42	1057	302	75	1434	0	75	75	1510	1	89
E11	06/10/96	56 19.5	161 36.1	35	0	0	0	0	170	0	170	170	1	88
E12	06/10/96	56 20.0	161 .3	28	80	0	80	161	161	0	161	322	1	89
E18	07/05/96	56 17.9	168 14.2	83	0	78	5018	5096	314	6899	7213	12309	1	89
E19	07/05/96	56 20.5	168 53.2	71	79	631	631	1341	79	789	868	2209	1	88
E20	07/05/96	56 25.6	169 29.2	57	0	0	234	234	0	0	0	234	1	88
E21	07/05/96	56 20.2	170 5.0	60	75	300	1425	1800	225	2625	2851	4651	1	88
E22	07/16/96	56 19.8	170 41.2	66	0	83	999	1082	166	916	1082	2164	1	89
F01	06/29/96	56 39.9	167 39.9	57	0	75	75	149	149	0	149	298	1	88
F02	06/29/96	56 40.3	167 4.0	51	234	2103	1636	3973	1558	623	2181	6154	1	89
F03	06/21/96	56 41.6	166 24.1	45	552	8562	7365	16479	11477	17553	29030	45509	1	88
F04	06/21/96	56 38.7	165 49.6	43	76	760	2962	3798	1435	6599	8034	11832	1	89
F05	06/18/96	56 40.0	165 13.2	41	0	0	1771	1771	161	1690	1851	3622	1	88
F06	06/18/96	56 39.7	164 36.5	40	270	2025	1620	3916	810	3077	3886	7802	1	89
F07	06/15/96	56 39.2	164 .4	42	320	1679	959	2958	1599	720	2319	5277	1	88
F08	06/15/96	56 39.9	163 22.9	41	538	1308	1384	3230	1769	692	2461	5692	1	89
F09	06/13/96	56 38.4	162 48.2	39	408	408	734	1550	816	408	1223	2773	1	88
F10	06/13/96	56 39.8	162 11.5	39	234	467	623	1324	467	0	467	1792	1	89
F11	06/10/96	56 39.2	161 32.9	48	615	77	77	769	231	0	231	1000	1	88
F12	06/10/96	56 40.2	160 58.3	38	0	75	0	75	0	75	75	151	1	88
F13	06/10/96	56 39.2	160 21.5	30	0	70	70	140	70	0	70	211	1	88
F14	06/10/96	56 39.8	159 45.3	20	0	0	0	0	80	0	80	80	1	89
F19	07/05/96	56 38.1	168 54.7	55	0	253	253	506	253	0	253	760	1	88
F20	07/06/96	56 40.9	169 30.6	43	0	0	241	241	0	0	0	241	1	89
F21	07/06/96	56 41.0	170 8.0	53	113	1238	1013	2363	1800	1125	2926	5288	1	88
F22	07/16/96	56 40.3	170 43.2	61	150	300	825	1275	0	600	600	1875	1	89
F23	07/16/96	56 40.0	171 20.6	64	0	0	81	81	0	81	81	162	1	88
F24	07/16/96	56 39.7	171 57.8	68	0	0	246	246	0	164	164	411	1	88

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	VESSEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F25	07/16/96	56	40.2	172	35.0	74	0	0	1519	1519	0	1679	1679	3198	1	88
G01	06/30/96	57	.5	167	41.3	41	0	0	2604	2604	0	2604	2604	5208	1	88
G02	06/30/96	57	.4	167	5.3	40	0	0	2550	2550	75	3751	3826	6376	1	89
G03	06/22/96	57	.5	166	27.1	41	0	238	1271	1509	159	477	635	2145	1	88
G04	06/21/96	57	.6	165	50.6	39	0	0	2755	2755	0	1944	1944	4699	1	89
G05	06/18/96	57	.4	165	12.4	39	0	80	1279	1359	0	480	480	1839	1	88
G06	06/18/96	56	59.8	164	36.1	37	0	0	1333	1333	157	706	862	2195	1	89
G07	06/15/96	57	.0	164	.0	37	0	320	4877	5197	640	6156	6796	11992	1	88
G08	06/15/96	57	.2	163	23.1	36	160	80	80	320	320	160	480	799	1	89
G09	06/13/96	56	59.2	162	47.9	32	643	429	572	1644	858	0	858	2502	1	88
G10	06/13/96	56	59.6	162	10.1	33	911	228	304	1443	684	152	835	2279	1	89
G11	06/11/96	57	.6	161	33.0	38	770	171	86	1027	342	0	342	1369	1	88
G12	06/11/96	57	.1	160	56.0	37	157	0	0	157	0	0	0	157	1	89
G13	06/10/96	56	58.7	160	20.3	33	80	80	0	161	80	0	80	241	1	88
G15	06/08/96	57	.2	159	6.5	19	0	0	84	84	0	0	0	84	1	88
G18	07/04/96	57	.5	168	20.0	43	0	0	0	0	0	231	231	231	1	89
G19	07/04/96	56	50.3	168	37.1	51	0	77	385	461	0	154	154	615	1	89
G20	07/04/96	57	9.5	169	18.8	40	0	0	0	0	106	106	211	211	1	88
G20	07/04/96	56	50.2	169	17.8	44	0	0	148	148	0	148	148	296	1	88
G20	07/07/96	57	.3	169	33.2	33	0	0	659	659	94	754	848	1507	1	89
G21	07/07/96	57	.4	170	8.6	37	0	0	4909	4909	563	241	805	5714	1	88
G21	07/06/96	56	50.8	169	54.5	39	150	1200	2700	4051	2550	2700	5251	9302	1	89
G21	07/07/96	57	9.9	169	52.1	28	0	0	320	320	0	0	0	320	1	89
G22	07/06/96	56	51.0	170	29.6	55	0	158	473	631	0	631	631	1263	1	88
G22	07/16/96	56	59.8	170	47.3	52	0	0	1823	1823	87	521	608	2430	1	89
G23	07/16/96	56	59.9	171	24.7	60	0	0	563	563	0	450	450	1013	1	89
G24	07/16/96	57	.4	172	1.1	64	0	0	160	160	0	320	320	480	1	88
G25	07/15/96	57	.1	172	39.2	66	0	0	1851	1851	0	724	724	2575	1	88
G26	07/15/96	56	59.8	173	14.7	77	0	0	810	810	0	1053	1053	1863	1	88
H02	06/30/96	57	20.2	167	6.9	38	0	0	82	82	0	0	0	82	1	89
H03	06/22/96	57	19.6	166	29.9	38	0	0	248	248	0	165	165	413	1	88
H04	06/21/96	57	19.9	165	52.2	37	0	0	701	701	0	0	0	701	1	89
H05	06/18/96	57	18.8	165	13.9	37	0	0	810	810	0	81	81	891	1	88
H06	06/18/96	57	19.8	164	36.9	37	0	0	3782	3782	241	1207	1449	5231	1	89
H07	06/15/96	57	20.3	164	.0	33	0	158	7575	7733	552	3235	3788	11521	1	88

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

STA- TION	DATE	N. LAT. DEG MIN	W. LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
H08	06/15/96	57 20.1	163 23.2	29	193	96	1543	1832	675	772	1447	3279	1	89
H09	06/13/96	57 19.8	162 44.6	27	0	228	304	532	0	76	76	608	1	88
H10	06/13/96	57 20.2	162 9.0	26	165	83	83	331	248	0	248	579	1	89
H11	06/11/96	57 18.9	161 37.9	30	0	0	0	0	84	0	84	84	1	88
H12	06/11/96	57 20.2	160 55.9	34	234	0	0	234	0	0	0	234	1	89
H13	06/09/96	57 19.9	160 17.5	17	154	154	0	308	77	0	77	385	1	88
H14	06/09/96	57 19.6	159 39.2	30	0	0	0	0	81	0	81	81	1	89
H20	07/07/96	57 20.4	169 36.9	34	0	0	229	229	0	0	0	229	1	89
H22	07/07/96	57 10.2	170 29.6	32	0	0	306	306	102	0	102	408	1	88
H22	07/15/96	57 20.8	170 50.6	45	0	221	0	221	110	110	221	442	1	89
H23	07/15/96	57 20.2	171 29.2	55	0	77	846	923	0	0	0	923	1	89
H24	07/15/96	57 19.8	172 4.7	59	0	0	210	210	0	0	0	210	1	89
H25	07/15/96	57 20.8	172 48.9	63	0	0	3314	3314	710	5760	6471	9785	1	88
H26	07/15/96	57 19.8	173 20.3	66	0	0	2615	2615	769	2846	3615	6230	1	88
I02	06/30/96	57 40.1	167 8.2	36	0	0	80	80	0	0	0	80	1	89
I03	06/22/96	57 40.5	166 30.5	36	0	0	437	437	0	0	0	437	1	88
I04	06/21/96	57 40.3	165 53.2	34	0	0	764	764	76	76	153	917	1	89
I05	06/18/96	57 40.2	165 14.4	33	0	0	1458	1458	162	81	243	1701	1	88
I06	06/18/96	57 40.0	164 36.8	29	0	0	80	80	0	0	0	80	1	89
I07	06/16/96	57 41.5	164 1.2	26	0	0	241	241	161	80	241	483	1	88
I10	06/12/96	57 39.9	162 8.1	25	0	78	0	78	0	0	0	78	1	89
I11	06/11/96	57 39.2	161 31.7	28	0	79	79	158	0	0	0	158	1	88
I12	06/11/96	57 40.0	160 53.4	30	82	0	0	82	0	0	0	82	1	89
I13	06/09/96	57 41.3	160 17.6	30	0	156	0	156	0	0	0	156	1	88
I19	07/03/96	57 49.9	168 44.5	37	0	0	324	324	0	0	0	324	1	89
I20	07/03/96	57 49.0	169 21.7	36	0	0	370	370	0	815	815	1186	1	88
I20	07/07/96	57 40.0	169 39.1	38	0	0	156	156	0	234	234	389	1	89
I21	07/07/96	57 40.2	170 15.8	40	0	0	148	148	0	74	74	222	1	88
I21	07/07/96	57 30.8	169 59.5	38	0	0	447	447	75	0	75	522	1	89
I22	07/07/96	57 49.8	170 37.1	42	0	0	155	155	0	155	155	310	1	88
I22	07/15/96	57 40.1	170 55.6	47	0	0	225	225	0	0	0	225	1	89
I23	07/15/96	57 40.2	171 32.0	55	0	0	77	77	0	0	0	77	1	89
I24	07/14/96	57 40.8	172 10.2	58	0	0	80	80	0	0	0	80	1	88
I25	07/14/96	57 39.6	172 47.4	64	0	0	805	805	80	0	80	885	1	88
I26	07/14/96	57 40.3	173 23.9	79	0	0	296	296	0	370	370	667	1	88

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	VESSEL
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
J02	06/30/96	58	.3	167	10.2	33	0	0	467	467	78	0	78	545	1	89
J03	06/22/96	57	59.8	166	32.0	34	0	0	1772	1772	253	169	422	2194	1	88
J04	06/21/96	58	.3	165	53.8	31	0	0	228	228	0	76	76	304	1	89
J05	06/17/96	58	.5	165	13.3	25	0	0	237	237	0	79	79	316	1	88
J06	06/18/96	58	.1	164	37.6	25	0	0	0	0	152	0	152	152	1	89
J11	06/12/96	57	59.7	161	27.5	31	0	0	0	0	77	0	77	77	1	88
J12	06/11/96	58	.0	160	49.9	24	0	0	80	80	0	0	0	80	1	89
J13	06/09/96	57	59.7	160	12.7	28	0	0	80	80	0	0	0	80	1	88
J18	07/03/96	57	59.9	168	26.3	37	0	0	1042	1042	0	0	0	1042	1	89
J21	07/08/96	58	.4	170	21.1	41	0	0	152	152	0	380	380	532	1	88
J21	07/07/96	57	50.1	169	58.7	40	0	0	199	199	0	199	199	398	1	89
J22	07/14/96	58	.4	170	58.9	47	0	0	163	163	0	0	0	163	1	89
J23	07/14/96	58	.1	171	35.5	53	0	0	81	81	0	0	0	81	1	89
J24	07/14/96	58	.2	172	14.7	56	0	0	202	202	0	405	405	607	1	89
J25	07/14/96	58	.3	172	52.5	59	0	83	416	499	166	416	583	1082	1	89
J26	07/14/96	57	59.7	173	27.9	62	0	0	395	395	0	237	237	631	1	88
K01	06/30/96	58	20.7	167	51.9	37	0	0	81	81	0	0	0	81	1	88
K02	06/30/96	58	20.2	167	11.2	28	0	0	78	78	0	0	0	78	1	89
K03	06/22/96	58	20.8	166	33.2	26	0	0	234	234	78	0	78	312	1	88
K04	06/21/96	58	20.2	165	55.0	24	0	0	157	157	235	0	235	392	1	89
K18	07/03/96	58	19.8	168	27.4	35	0	0	77	77	77	0	77	155	1	89
K23	07/13/96	58	20.2	171	39.8	52	0	0	79	79	0	0	0	79	1	89
K25	07/14/96	58	19.7	172	56.2	59	0	76	456	532	76	228	304	835	1	89
K26	07/14/96	58	19.4	173	35.0	62	0	80	1771	1851	1127	4265	5392	7243	1	88
K27	07/13/96	58	19.9	174	19.1	97	0	0	289	289	0	96	96	386	1	88
L01	07/01/96	58	40.6	167	52.5	33	0	0	316	316	158	0	158	473	1	88
L02	07/01/96	58	40.3	167	13.2	24	0	0	77	77	77	0	77	155	1	89
L18	07/03/96	58	39.9	168	29.6	29	0	0	165	165	0	0	0	165	1	89
L25	07/13/96	58	39.6	172	59.9	62	0	0	160	160	80	0	80	240	1	88
L26	07/13/96	58	40.2	173	38.2	68	0	0	77	77	0	0	0	77	1	88
L27	07/13/96	58	40.3	174	15.8	83	79	237	1973	2288	0	1026	1026	3314	1	88
L28	07/28/96	58	40.4	174	55.2	114	0	0	2083	2083	0	1562	1562	3646	1	89
L29	07/28/96	58	40.6	175	33.0	72	0	0	397	397	0	397	397	794	1	89
L30	07/28/96	58	40.0	176	12.1	76	0	0	80	80	0	241	241	322	1	88
L31	07/28/96	58	40.0	176	50.6	73	0	0	84	84	0	251	251	335	1	88

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			
M01	07/01/96	59	1.3	167	52.2	21	0	0	447	447	0	0	0	447	1	88
M02	07/01/96	59	.1	167	13.6	22	0	0	0	0	78	0	78	78	1	89
M18	07/03/96	59	.0	168	32.0	25	0	0	0	0	82	0	82	82	1	89
M19	07/03/96	58	59.5	169	12.8	31	0	0	80	80	0	0	0	80	1	88
M25	07/12/96	58	59.9	173	4.6	57	0	0	156	156	0	78	78	234	1	88
M26	07/22/96	59	1.0	173	43.9	63	0	0	159	159	0	0	0	159	1	89
M27	07/22/96	59	.7	174	23.8	68	0	0	1084	1084	0	619	619	1703	1	88
M28	07/22/96	58	59.7	175	.8	69	0	0	237	237	0	237	237	473	1	88
M29	07/28/96	59	.2	175	45.0	71	0	0	1006	1006	168	587	754	1760	1	89
M30	07/28/96	59	.1	176	19.0	73	0	0	2517	2517	347	1736	2083	4600	1	89
M31	07/28/96	58	59.7	176	57.1	74	0	0	595	595	0	1020	1020	1615	1	88
M32	07/28/96	59	.0	177	36.5	73	0	0	1359	1359	0	1519	1519	2878	1	88
N01	07/01/96	59	21.0	167	55.8	22	0	0	159	159	0	0	0	159	1	88
N25	07/12/96	59	20.3	173	9.3	54	0	0	79	79	0	79	79	158	1	88
N25	07/12/96	59	29.6	172	51.8	50	0	79	159	238	0	79	79	318	1	88
N26	07/11/96	59	29.8	173	29.8	55	0	0	1080	1080	0	0	0	1080	1	88
N28	07/22/96	59	20.3	175	5.7	71	0	0	77	77	0	77	77	155	1	88
N29	07/27/96	59	20.8	175	57.3	73	0	0	79	79	0	0	0	79	1	89
N30	07/27/96	59	21.0	176	23.5	73	0	253	1435	1688	169	1013	1181	2869	1	89
N31	07/27/96	59	19.9	177	4.4	82	0	0	1067	1067	0	1067	1067	2135	1	88
O26	07/22/96	59	39.0	173	52.4	56	0	0	77	77	0	0	0	77	1	89
O30	07/27/96	59	40.1	176	31.7	73	0	0	1341	1341	0	789	789	2131	1	89
O31	07/27/96	59	39.8	177	9.0	94	0	340	255	595	85	0	85	680	1	88
P31	07/27/96	60	.4	177	13.3	74	0	0	84	84	0	0	0	84	1	88
Q02	07/02/96	60	19.9	167	19.0	16	0	0	342	342	86	0	86	428	1	89
Q18	07/02/96	60	19.6	168	39.2	18	0	0	0	0	0	75	75	75	1	88
R31	07/26/96	60	39.8	177	30.2	80	0	0	162	162	0	162	162	324	1	88
R32	07/26/96	60	40.0	178	10.8	88	0	0	749	749	0	583	583	1332	1	88
Z05	06/19/96	54	40.2	165	9.0	44	0	0	345	345	0	431	431	776	1	88

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			
A02	06/27/96	55	.0	166	55.8	84	0	0	0	0	0	77	77	77	1	89
A03	06/20/96	55	2.2	166	22.5	77	0	87	0	87	0	0	0	87	1	88
A04	06/20/96	54	50.3	165	31.4	83	0	0	77	77	0	0	0	77	1	89
A04	06/20/96	55	.3	165	45.3	69	0	0	77	77	0	0	0	77	1	89
B04	06/21/96	55	19.8	165	46.7	65	0	0	0	0	0	154	154	154	1	89
B05	06/19/96	55	19.4	165	9.7	60	0	84	0	84	0	0	0	84	1	88
B06	06/19/96	55	20.3	164	35.1	55	0	153	0	153	0	0	0	153	1	89
C01	06/29/96	55	39.8	167	35.2	74	259	172	0	431	1207	0	1207	1638	1	88
C05	06/19/96	55	40.6	165	8.4	59	3809	1179	91	5079	0	0	0	5079	1	88
C06	06/19/96	55	39.7	164	35.8	51	0	83	165	248	0	0	0	248	1	89
C07	06/14/96	55	40.6	164	3.4	50	0	214	357	572	0	0	0	572	1	88
C18	07/05/96	55	40.1	168	11.5	73	154	385	0	538	231	0	231	769	1	89
D01	06/29/96	55	59.7	167	37.6	72	340	255	595	1190	8838	0	8838	10028	1	88
D02	06/29/96	56	.4	166	59.2	72	0	0	78	78	0	78	78	156	1	89
D03	06/21/96	56	.3	166	24.2	67	1968	1968	2910	6846	16589	0	16589	23436	1	88
D04	06/21/96	56	.2	165	47.0	57	78	78	0	156	78	0	78	234	1	89
D05	06/19/96	55	59.2	165	9.7	53	0	250	166	416	0	0	0	416	1	88
D06	06/19/96	55	59.8	164	34.4	50	0	158	237	395	0	0	0	395	1	89
D07	06/14/96	55	59.2	163	59.5	49	84	422	1772	2279	0	0	0	2279	1	88
D08	06/14/96	56	.0	163	24.2	47	0	0	357	357	0	0	0	357	1	89
D09	06/14/96	55	59.7	162	51.3	42	0	79	159	238	0	0	0	238	1	88
D18	07/05/96	56	.3	168	14.7	83	1382	14615	5332	21329	7703	0	7703	29032	1	89
E01	06/29/96	56	19.1	167	40.0	71	692	3319	6639	10650	96567	0	96567	107217	1	88
E02	06/29/96	56	20.4	167	2.2	61	79	159	477	715	0	79	79	794	1	89
E03	06/21/96	56	20.0	166	25.0	56	251	838	1676	2766	670	0	670	3436	1	88
E04	06/21/96	56	20.1	165	47.5	49	157	0	157	314	392	0	392	706	1	89
E05	06/18/96	56	20.0	165	12.7	47	0	83	916	999	0	0	0	999	1	88
E06	06/18/96	56	19.8	164	35.1	47	245	408	1468	2121	0	0	0	2121	1	89
E07	06/15/96	56	20.4	164	.7	45	0	473	2209	2683	0	0	0	2683	1	88
E08	06/14/96	56	20.3	163	24.1	46	78	0	470	549	0	0	0	549	1	89
E09	06/13/96	56	19.2	162	48.2	43	0	0	177	177	0	0	0	177	1	88
E18	07/05/96	56	17.9	168	14.2	83	1360	24135	15637	41131	4155	0	4155	45286	1	89
E19	07/05/96	56	20.5	168	53.2	71	142	3974	7097	11213	122947	0	122947	134160	1	88
E21	07/05/96	56	20.2	170	5.0	60	150	1575	2325	4051	29093	0	29093	33144	1	88
E22	07/16/96	56	19.8	170	41.2	66	0	83	83	166	0	0	0	166	1	89

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

STA-TION	DATE	N.LAT. DEG MIN	W.LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES-SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
F01	06/29/96	56 39.9	167 39.9	57	149	3877	6188	10214	2162	0	2162	12376	1	88
F02	06/29/96	56 40.3	167 4.0	51	312	545	857	1714	0	0	0	1714	1	89
F03	06/21/96	56 41.6	166 24.1	45	460	1105	6168	7733	0	0	0	7733	1	88
F04	06/21/96	56 38.7	165 49.6	43	0	294	7342	7636	76	152	228	7864	1	89
F05	06/18/96	56 40.0	165 13.2	41	1449	563	644	2656	0	0	0	2656	1	88
F06	06/18/96	56 39.7	164 36.5	40	231	538	3846	4615	0	0	0	4615	1	89
F07	06/15/96	56 39.2	164 .4	42	0	640	3358	3997	0	0	0	3997	1	88
F08	06/15/96	56 39.9	163 22.9	41	154	385	3769	4307	0	0	0	4307	1	89
F09	06/13/96	56 38.4	162 48.2	39	0	0	489	489	0	0	0	489	1	88
F10	06/13/96	56 39.8	162 11.5	39	0	78	0	78	0	0	0	78	1	89
F11	06/10/96	56 39.2	161 32.9	48	0	77	77	154	0	0	0	154	1	88
F18	07/05/96	56 40.3	168 17.5	57	357	6344	8310	15012	83230	0	83230	98241	1	89
F19	07/05/96	56 38.1	168 54.7	55	0	12495	14837	27332	109462	2670	112132	139464	1	88
F20	07/06/96	56 40.9	169 30.6	43	966	161	80	1207	0	0	0	1207	1	89
F21	07/06/96	56 41.0	170 8.0	53	0	563	225	788	0	0	0	788	1	88
F22	07/16/96	56 40.3	170 43.2	61	1725	825	300	2851	75	75	150	3001	1	89
F23	07/16/96	56 40.0	171 20.6	64	486	2755	1134	4375	75243	2150	77392	81767	1	88
F24	07/16/96	56 39.7	171 57.8	68	493	9114	3449	13055	0	0	0	13055	1	88
F25	07/16/96	56 40.2	172 35.0	74	879	480	0	1359	0	0	0	1359	1	88
G01	06/30/96	57 .5	167 41.3	41	121	2909	12605	15636	237	79	316	15951	1	88
G02	06/30/96	57 .4	167 5.3	40	3151	2025	3901	9077	0	375	375	9452	1	89
G03	06/22/96	57 .5	166 27.1	41	20773	13849	4462	39084	0	0	0	39084	1	88
G04	06/21/96	57 .6	165 50.6	39	30169	46259	2346	78774	324	0	324	79098	1	89
G05	06/18/96	57 .4	165 12.4	39	65917	27010	2572	95499	0	0	0	95499	1	88
G06	06/18/96	56 59.8	164 36.1	37	1888	858	4462	7208	78	0	78	7286	1	89
G07	06/15/96	57 .0	164 .0	37	959	160	1519	2638	0	0	0	2638	1	88
G08	06/15/96	57 .2	163 23.1	36	0	300	9609	9910	0	0	0	9910	1	89
G09	06/13/96	56 59.2	162 47.9	32	0	71	286	357	0	0	0	357	1	88
G10	06/13/96	56 59.6	162 10.1	33	0	0	152	152	0	0	0	152	1	89
G18	07/04/96	57 .5	168 20.0	43	116	6828	5555	12499	116	0	116	12615	1	89
G19	07/04/96	56 59.2	168 57.3	44	567	3743	4650	8960	1215	0	1215	10175	1	88
G19	07/04/96	56 50.3	168 37.1	51	385	3615	7845	11845	25125	0	25125	36970	1	89
G20	07/04/96	57 9.5	169 18.8	40	1162	5072	3381	9616	211	0	211	9827	1	88
G20	07/04/96	56 50.2	169 17.8	44	889	5187	1334	7410	148	0	148	7558	1	88
G20	07/07/96	57 .3	169 33.2	33	188	659	188	1036	0	0	0	1036	1	89

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 TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
G21	07/07/96	57	.4	170	8.6	37	3219	1610	2092	6921	0	0	0	6921	1	88
G21	07/06/96	56	50.8	169	54.5	39	6189	50543	7736	64469	0	0	0	64469	1	89
G22	07/06/96	56	51.0	170	29.6	55	473	79	0	552	0	0	0	552	1	88
G22	07/16/96	56	59.8	170	47.3	52	694	1128	521	2344	87	0	87	2430	1	89
G23	07/16/96	56	59.9	171	24.7	60	675	2475	675	3826	113	0	113	3938	1	89
G24	07/16/96	57	.4	172	1.1	64	80	799	560	1439	1359	0	1359	2798	1	88
G25	07/15/96	57	.1	172	39.2	66	161	161	0	322	0	0	0	322	1	88
H01	06/30/96	57	19.4	167	43.4	40	1612	35224	691	37526	0	0	0	37526	1	88
H02	06/30/96	57	20.2	167	6.9	38	14329	81991	796	97115	0	0	0	97115	1	89
H03	06/22/96	57	19.6	166	29.9	38	30399	73598	4800	108797	400	0	400	109197	1	88
H04	06/21/96	57	19.9	165	52.2	37	15340	19377	2691	37408	0	0	0	37408	1	89
H05	06/18/96	57	18.8	165	13.9	37	4051	2349	7291	13692	0	0	0	13692	1	88
H06	06/18/96	57	19.8	164	36.9	37	2243	3140	11214	16597	0	0	0	16597	1	89
H07	06/15/96	57	20.3	164	.0	33	1026	789	1105	2920	79	0	79	2999	1	88
H08	06/15/96	57	20.1	163	23.2	29	0	0	482	482	0	0	0	482	1	89
H18	07/04/96	57	19.9	168	21.2	39	2369	14550	2199	19118	76	0	76	19194	1	89
H19	07/04/96	57	10.1	168	37.2	41	0	1671	1215	2886	0	0	0	2886	1	89
H20	07/07/96	57	20.4	169	36.9	34	8603	14170	253	23026	0	0	0	23026	1	89
H22	07/07/96	57	10.2	170	29.6	32	102	0	102	204	0	0	0	204	1	88
H22	07/15/96	57	20.8	170	50.6	45	331	221	221	773	110	0	110	884	1	89
H23	07/15/96	57	20.2	171	29.2	55	615	2692	2000	5307	308	0	308	5615	1	88
H24	07/15/96	57	19.8	172	4.7	59	2305	2165	279	4749	1536	0	1536	6286	1	89
H25	07/15/96	57	20.8	172	48.9	63	395	868	552	1815	1894	0	1894	3709	1	88
H26	07/15/96	57	19.8	173	20.3	66	77	77	0	154	231	0	231	385	1	88
I01	06/30/96	57	38.6	167	45.2	38	4269	77322	7116	88707	0	0	0	88707	1	88
I02	06/30/96	57	40.1	167	8.2	36	7353	41547	1103	50004	0	0	0	50004	1	89
I03	06/22/96	57	40.5	166	30.5	36	3410	7519	7693	18622	0	0	0	18622	1	88
I04	06/21/96	57	40.3	165	53.2	34	3897	6624	5065	15586	229	0	229	15815	1	89
I05	06/18/96	57	40.2	165	14.4	33	972	810	486	2268	0	0	0	2268	1	88
I06	06/18/96	57	40.0	164	36.8	29	80	80	0	161	0	0	0	161	1	89
I07	06/16/96	57	41.5	164	1.2	26	80	0	0	80	0	0	0	80	1	88
I18	07/04/96	57	39.9	168	23.7	38	2587	35569	1940	40095	0	0	0	40095	1	89
I19	07/04/96	57	39.6	169	1.9	38	1261	13713	1891	16866	228	0	228	17093	1	89
I19	07/03/96	57	49.9	168	44.5	37	1911	38599	11465	51974	0	0	0	51974	1	89
I19	07/04/96	57	30.1	168	44.6	38	6089	25518	2610	34217	84	0	84	34301	1	89

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

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			
I20	07/03/96	57 49.0	169 21.7	36	2436	40592	8930	51958	370	0	370	52328	1	88
I20	07/04/96	57 30.4	169 21.3	36	3281	5606	2461	11348	0	0	0	11348	1	88
I20	07/07/96	57 40.0	169 39.1	38	7004	24643	3632	35278	156	0	156	35434	1	89
I21	07/07/96	57 40.2	170 15.8	40	3853	10077	1260	15190	74	0	74	15264	1	88
I21	07/07/96	57 30.8	169 59.5	38	3575	8663	1925	14163	2013	596	2609	16773	1	89
I22	07/07/96	57 31.0	170 34.5	41	7256	9554	967	17777	258	129	387	18164	1	88
I22	07/07/96	57 49.8	170 37.1	42	2715	10061	4312	17088	2709	310	3019	20106	1	88
I22	07/15/96	57 40.1	170 55.6	47	2363	1575	788	4726	3376	1688	5063	9789	1	89
I23	07/15/96	57 40.2	171 32.0	55	1384	2615	2000	5999	0	154	154	6153	1	89
I24	07/14/96	57 40.8	172 10.2	58	959	2718	400	4077	1279	560	1839	5916	1	88
I25	07/14/96	57 39.6	172 47.4	64	885	4909	2334	8128	151478	73444	224922	233050	1	88
I26	07/14/96	57 40.3	173 23.9	79	2477	10133	2139	14750	5730	1074	6805	21555	1	88
J01	06/30/96	57 59.7	167 49.0	37	2239	35324	6965	44528	0	0	0	44528	1	88
J02	06/30/96	58 .3	167 10.2	33	4702	13919	2633	21255	0	0	0	21255	1	89
J03	06/22/96	57 59.8	166 32.0	34	844	1603	4051	6498	0	0	0	6498	1	88
J04	06/21/96	58 .3	165 53.8	31	0	304	228	532	76	0	76	608	1	89
J05	06/17/96	58 .5	165 13.3	25	0	0	79	79	0	0	0	79	1	88
J07	06/16/96	58 1.8	164 1.9	25	77	0	0	77	0	0	0	77	1	88
J18	07/03/96	57 59.9	168 26.3	37	23973	120907	8338	153218	0	0	0	153218	1	89
J19	07/03/96	57 59.8	169 4.6	39	435	25453	3046	28934	0	0	0	28934	1	88
J20	07/08/96	57 59.6	169 42.1	38	6072	54143	11132	71347	1645	183	1827	73175	1	89
J21	07/08/96	58 .4	170 21.1	41	2661	20578	11886	35125	1671	304	1975	37100	1	88
J21	07/07/96	57 50.1	169 58.7	40	7407	27257	6222	40886	1893	0	1893	42779	1	89
J22	07/14/96	58 .4	170 58.9	47	1876	2528	979	5383	245	897	1142	6525	1	89
J23	07/14/96	58 .1	171 35.5	53	4132	7453	2106	13692	2550	7257	9807	23499	1	89
J24	07/14/96	58 .2	172 14.7	56	0	5667	14775	20442	79944	137503	217447	237889	1	89
J25	07/14/96	58 .3	172 52.5	59	1538	13846	19744	35128	59502	12454	71956	107085	1	89
J26	07/14/96	57 59.7	173 27.9	62	79	2604	4971	7654	92392	22398	114790	122444	1	88
K01	06/30/96	58 20.7	167 51.9	37	324	1215	891	2430	0	0	0	2430	1	88
K02	06/30/96	58 20.2	167 11.2	28	0	314	235	549	0	0	0	549	1	89
K03	06/22/96	58 20.8	166 33.2	26	78	234	312	623	0	0	0	623	1	88
K04	06/21/96	58 20.2	165 55.0	24	78	0	0	78	0	0	0	78	1	89
K18	07/03/96	58 19.8	168 27.4	35	314	40880	11950	53144	0	0	0	53144	1	89
K19	07/03/96	58 19.3	169 7.4	37	1115	59653	28990	89758	0	0	0	89758	1	88
K20	07/08/96	58 20.2	169 44.4	38	2686	39277	11078	53041	1222	0	1222	54264	1	89

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

STA-TION	DATE	N. LAT. DEG MIN	W. LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES-SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
K21	07/08/96	58 19.9	170 24.0	39	3878	35938	9308	49124	0	0	0	49124	1	88
K22	07/13/96	58 20.5	171 1.0	45	4246	19530	10473	34248	4637	1039	5676	39925	1	89
K23	07/13/96	58 20.2	171 39.8	52	2622	6816	3146	12584	14231	1655	15885	28469	1	89
K24	07/13/96	58 20.3	172 17.5	56	206	5559	18117	23881	107606	183328	290934	314815	1	89
K25	07/14/96	58 19.7	172 56.2	59	608	4253	7443	12304	1367	2051	3418	15722	1	89
K26	07/14/96	58 19.4	173 35.0	62	483	7243	3300	11026	644	402	1046	12072	1	88
L01	07/01/96	58 40.6	167 52.5	33	0	0	158	158	0	0	0	158	1	88
L02	07/01/96	58 40.3	167 13.2	24	0	0	77	77	0	0	0	77	1	89
L18	07/03/96	58 39.9	168 29.6	29	0	165	248	413	0	0	0	413	1	89
L19	07/03/96	58 40.2	169 8.3	35	0	51405	85342	136748	0	0	0	136748	1	88
L20	07/08/96	58 40.2	169 47.5	37	1213	20622	29841	51676	701	0	701	52377	1	89
L21	07/08/96	58 40.0	170 26.4	41	3803	21920	20578	46301	3646	0	3646	49947	1	88
L22	07/13/96	58 39.9	171 5.4	45	544	33764	31542	65850	108269	48257	156527	222377	1	89
L23	07/13/96	58 40.1	171 42.3	50	1118	3280	5442	9841	447	0	447	10288	1	89
L24	07/13/96	58 40.5	172 22.3	55	78	545	3116	3739	1870	1402	3272	7011	1	88
L25	07/13/96	58 39.6	172 59.9	62	1599	3358	2159	7115	66374	79649	146023	153139	1	88
L26	07/13/96	58 40.2	173 38.2	68	3328	4412	2399	10140	60158	55702	115861	126001	1	88
L27	07/13/96	58 40.3	174 15.8	83	0	0	0	0	1578	1736	3314	3314	1	88
L29	07/28/96	58 40.6	175 33.0	72	0	0	0	0	0	79	79	79	1	89
L30	07/28/96	58 40.0	176 12.1	76	0	0	402	402	0	483	483	885	1	88
M18	07/03/96	59 .0	168 32.0	25	0	0	163	163	0	0	0	163	1	89
M19	07/03/96	58 59.5	169 12.8	31	0	1919	1599	3518	0	0	0	3518	1	88
M20	07/08/96	58 59.8	169 49.2	34	322	20446	139150	159919	917	0	917	160836	1	89
M21	07/08/96	59 .1	170 28.2	39	1185	21328	36732	59244	2538	0	2538	61783	1	88
M22	07/12/96	59 .7	171 7.7	42	1981	32687	42097	76764	1519	84	1603	78368	1	89
M23	07/12/96	58 59.6	171 47.4	47	2788	15335	15800	33923	1350	318	1668	35590	1	89
M24	07/12/96	58 59.7	172 26.3	53	2542	6275	3177	11993	1112	397	1509	13502	1	88
M25	07/12/96	58 59.9	173 4.6	57	2337	4207	3973	10516	16500	26812	43312	53828	1	88
M26	07/22/96	59 1.0	173 43.9	63	2394	6883	4788	14065	58554	24723	83276	97342	1	89
M27	07/22/96	59 .7	174 23.8	68	2798	6470	699	9967	387	310	697	10664	1	88
M28	07/22/96	58 59.7	175 .8	69	79	237	158	473	0	158	158	631	1	88
M29	07/28/96	59 .2	175 45.0	71	335	0	84	419	0	754	754	1173	1	89
M30	07/28/96	59 .1	176 19.0	73	0	0	174	174	0	694	694	868	1	89
M31	07/28/96	58 59.7	176 57.1	74	0	0	0	0	0	170	170	170	1	88
M32	07/28/96	59 .0	177 36.5	73	0	0	320	320	0	400	400	720	1	88

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

STA- TION	DATE	N.LAT. DEG MIN	W.LON. DEG MIN	DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
					LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
N18	07/02/96	59 20.1	168 34.4	22	0	81	243	324	0	0	0	324	1	89
N20	07/08/96	59 20.1	169 50.7	33	0	40520	65642	106162	437	0	437	106599	1	89
N21	07/08/96	59 20.1	170 31.9	37	0	12390	79975	92365	2638	0	2638	95004	1	88
N22	07/12/96	59 20.0	171 11.5	41	1988	38437	67595	108020	12525	522	13047	121067	1	89
N23	07/12/96	59 20.1	171 50.4	43	2743	60354	42979	106076	4755	453	5208	111284	1	89
N24	07/12/96	59 19.7	172 30.3	47	2033	29133	6775	37940	0	0	0	37940	1	88
N25	07/12/96	59 20.3	173 9.3	54	2186	26862	6247	35295	3156	1026	4182	39477	1	88
N25	07/12/96	59 29.6	172 51.8	50	2295	25938	7575	35809	3256	1509	4766	40574	1	88
N26	07/11/96	59 29.8	173 29.8	55	1728	16203	5401	23332	12233	966	13198	36530	1	88
N26	07/22/96	59 20.2	173 47.4	59	1562	2698	3551	7811	81420	25816	107237	115048	1	89
N27	07/22/96	59 17.8	174 27.2	65	998	11977	16768	29744	60715	41396	102111	131855	1	89
N28	07/22/96	59 20.3	175 5.7	71	1359	5436	9241	16036	72301	17674	89975	106011	1	88
N29	07/27/96	59 20.8	175 57.3	73	3156	868	473	4498	20669	18947	39616	44114	1	89
N30	07/27/96	59 21.0	176 23.5	73	0	0	169	169	591	591	1181	1350	1	89
N31	07/27/96	59 19.9	177 4.4	82	0	0	821	821	0	1560	1560	2381	1	88
O18	07/02/96	59 39.9	168 37.4	21	0	0	153	153	0	0	0	153	1	89
O20	07/09/96	59 40.0	169 54.4	31	0	8205	20884	29089	675	0	675	29764	1	89
O21	07/09/96	59 39.9	170 35.1	37	954	954	75365	77273	2897	161	3058	80331	1	88
O22	07/12/96	59 39.8	171 14.9	39	1510	12583	74997	89090	31262	6100	37362	126452	1	89
O23	07/11/96	59 40.2	171 53.3	41	2338	17539	78923	98800	14610	953	15562	114363	1	89
O24	07/11/96	59 39.8	172 33.9	45	1679	34559	30499	66736	2718	799	3518	70254	1	89
O25	07/11/96	59 49.8	173 34.5	51	0	38962	64172	103134	0	525	525	103658	1	88
O25	07/11/96	59 40.1	173 14.7	51	0	25153	25852	51005	2430	587	3017	54022	1	88
O26	07/22/96	59 39.0	173 52.4	56	2466	11304	4316	18086	3420	1408	4828	22913	1	89
O27	07/23/96	59 39.6	174 24.9	62	728	5338	9949	16015	45172	69371	114543	130559	1	88
O28	07/22/96	59 40.0	175 5.5	67	310	3251	8747	12307	112094	118687	230781	243088	1	88
O29	07/27/96	59 40.6	175 51.8	73	1139	1443	3266	5848	48741	87734	136475	142323	1	89
O30	07/27/96	59 40.1	176 31.7	73	4735	1263	868	6865	7690	3364	11055	17920	1	89
O31	07/27/96	59 39.8	177 9.0	94	0	0	85	85	85	170	255	340	1	88
P18	07/02/96	59 59.7	168 39.5	21	0	76	2658	2734	0	1063	1063	3798	1	89
P19	07/02/96	59 59.3	169 18.2	24	0	0	237	237	0	0	0	237	1	88
P20	07/09/96	60 .4	169 58.4	30	0	3120	3777	6897	0	0	0	6897	1	89
P21	07/09/96	60 .0	170 38.1	36	0	559	7822	8381	489	0	489	8870	1	88
P22	07/09/96	59 59.9	171 20.2	37	509	5854	18326	24689	7056	470	7527	32215	1	88
P23	07/09/96	60 .2	171 57.5	36	1155	15473	12009	28637	885	161	1046	29683	1	88

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 TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
P23	07/09/96	60	9.8	172	19.9	31	0	158	710	868	0	0	0	868	1	88
P23	07/11/96	59	50.5	172	14.9	42	5837	41833	78801	126471	9202	800	10002	136472	1	89
P24	07/11/96	60	9.7	172	59.7	33	0	9793	14456	24249	234	234	467	24716	1	89
P24	07/11/96	60	.2	172	39.4	36	702	23150	21396	45248	1342	1044	2386	47634	1	89
P24	07/11/96	59	50.5	172	53.9	43	622	36079	47276	83977	1864	760	2624	86600	1	89
P25	07/11/96	59	59.4	173	17.0	40	0	16124	77932	94056	1774	0	1774	95830	1	88
P26	07/11/96	60	8.0	173	44.0	46	0	30238	272141	302379	5371	4028	9399	311778	1	88
P26	07/22/96	59	50.5	174	14.1	57	144	5052	13424	18620	65899	38940	104840	123460	1	89
P26	07/23/96	59	59.7	173	56.9	52	0	32690	128943	161633	2379	510	2889	164523	1	89
P27	07/23/96	60	.5	174	36.3	59	0	11582	92658	104240	13566	2110	15676	119916	1	88
P28	07/23/96	60	.5	175	15.9	63	973	4543	9572	15088	44484	76835	121319	136408	1	88
P29	07/27/96	60	.2	175	56.2	69	3620	14483	40780	58882	214334	224077	438411	497293	1	89
P30	07/26/96	59	59.1	176	42.6	77	1941	1772	3713	7426	66052	96075	162127	169553	1	88
P31	07/27/96	60	.4	177	13.3	74	754	335	922	2011	6457	5133	11590	13601	1	88
P32	07/27/96	60	.1	177	56.4	77	0	84	0	84	168	251	419	503	1	88
Q19	07/02/96	60	18.8	169	18.7	22	0	232	697	929	0	0	0	929	1	88
Q20	07/09/96	60	20.2	170	3.2	29	0	1378	56971	58349	679	0	679	59029	1	89
Q21	07/09/96	60	20.2	170	40.7	34	0	644	45425	46069	15521	337	15858	61927	1	89
Q22	07/09/96	60	20.2	171	21.4	36	0	2916	42078	44994	1000	308	1308	46302	1	89
Q23	07/10/96	60	20.0	172	4.0	32	0	1063	7975	9038	987	228	1215	10253	1	89
Q26	07/23/96	60	19.5	174	5.1	49	0	1927	119451	121378	69359	7707	77065	198443	1	89
Q27	07/23/96	60	20.2	174	42.4	55	351	2107	44600	47059	143114	14554	157668	204726	1	88
Q27	07/23/96	60	10.5	174	21.4	54	0	6365	86995	93360	199451	19096	218548	311908	1	89
Q28	07/23/96	60	20.2	175	22.7	60	474	4505	16359	21338	7786	8652	16438	37776	1	88
Q29	07/26/96	60	20.8	176	1.9	65	1296	2754	9396	13446	8710	20324	29035	42481	1	89
Q30	07/26/96	60	19.3	176	41.6	74	1368	724	6197	8289	95803	249922	345725	354015	1	88
Q31	07/26/96	60	19.8	177	22.8	80	0	0	0	0	0	82	82	82	1	88
R22	07/10/96	60	40.8	171	25.7	34	0	1457	77962	79419	43035	5004	48039	127458	1	89
R23	07/10/96	60	39.9	172	7.3	33	0	484	48913	49397	53245	4840	58086	107483	1	89
R24	07/10/96	60	40.2	172	47.1	25	0	0	312	312	0	0	0	312	1	88
R25	07/10/96	60	40.2	173	28.1	37	0	83	2976	3059	331	744	1075	4133	1	88
R26	07/23/96	60	40.4	174	7.9	47	0	1140	63837	64977	59277	13679	72956	137933	1	89
R27	07/24/96	60	39.7	174	48.7	52	0	952	53815	54767	125933	41290	167223	221990	1	88
R28	07/24/96	60	39.9	175	27.2	57	683	6490	27670	34844	7668	1958	9626	44470	1	88
R29	07/26/96	60	40.5	176	12.5	63	962	7379	11229	19570	13212	92485	105697	125268	1	89

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 TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
R30	07/26/96	60	40.7	176	48.8	69	974	4382	18990	24346	31455	67876	99331	123677	1	89
R31	07/26/96	60	39.8	177	30.2	80	6918	16997	1384	25298	81	405	486	25785	1	88
R32	07/26/96	60	40.0	178	10.8	88	2331	166	916	3413	666	3662	4328	7741	1	88
S22	07/10/96	61	.1	171	28.6	32	0	957	43522	44478	16748	3190	19938	64417	1	89
S23	07/10/96	61	.1	172	9.9	34	0	229	25163	25391	19972	6657	26629	52020	1	89
S24	07/10/96	61	.0	172	48.0	37	0	234	4518	4752	2259	2882	5141	9893	1	88
S25	07/10/96	61	.2	173	28.7	41	0	4743	119369	124112	6359	2435	8794	132906	1	88
S26	07/23/96	60	59.7	174	11.0	44	0	6233	109081	115314	28049	15583	43632	158947	1	89
S27	07/24/96	61	.3	174	52.9	50	0	1175	18652	19827	18026	9197	27222	47050	1	88
S28	07/24/96	60	59.4	175	34.4	55	0	2372	39435	41807	13342	5781	19123	60930	1	88
S29	07/26/96	60	59.9	176	16.6	60	0	13155	98666	111821	2819	1879	4698	116520	1	89
S30	07/26/96	60	59.8	176	58.1	65	734	5141	97687	103562	19097	7345	26441	130004	1	89
S31	07/25/96	60	59.7	177	37.4	74	1175	3328	19772	24275	10691	411613	422304	446579	1	88
T25	07/24/96	61	19.5	173	35.9	39	0	0	63920	63920	29771	17512	47283	111204	1	89
T26	07/24/96	61	19.9	174	3.8	41	0	20852	133454	154306	11121	20852	31973	186279	1	89
T27	07/24/96	61	20.8	174	59.9	47	0	804	44201	45004	17403	14056	31459	76463	1	88
T28	07/25/96	61	20.9	175	39.5	53	0	1883	39819	41702	17865	9251	27116	68818	1	88
T29	07/25/96	61	20.1	176	18.3	58	0	1430	69344	70774	36215	8450	44665	115440	1	88
T30	07/25/96	61	20.3	176	57.8	63	1436	4309	7821	13567	1665	1831	3496	17063	1	88
U25	07/24/96	61	40.0	173	41.6	38	0	0	156154	156154	24756	85694	110450	266604	1	89
U26	07/24/96	61	39.8	174	26.4	42	0	11369	111414	122783	14779	73897	88677	211459	1	89
U27	07/25/96	61	40.8	175	3.8	45	0	0	68885	68885	9841	29522	39363	108248	1	89
U28	07/25/96	61	40.5	175	46.8	51	0	0	42935	42935	15153	17048	32201	75136	1	89
U29	07/25/96	61	40.2	176	27.7	57	0	2646	89307	91953	77957	33949	111905	203858	1	88
V25	07/24/96	61	59.1	173	44.7	34	0	0	85249	85249	15044	89010	104054	189303	1	89
V26	07/25/96	62	.5	174	28.7	39	0	3262	212052	215315	88083	192478	280562	495876	1	89
V27	07/25/96	61	59.7	175	10.7	43	0	3631	90773	94403	4841	49622	54464	148867	1	89
V28	07/25/96	62	.0	175	49.5	49	0	0	51379	51379	5928	19761	25689	77068	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.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
D08	06/14/96	56	.0	163	24.2	47	0	0	0	0	119	0	119	119	1	89
E10	06/13/96	56	19.6	162	13.1	42	151	0	0	151	0	0	0	151	1	89
E11	06/10/96	56	19.5	161	36.1	35	85	0	0	85	170	0	170	255	1	88
E20	07/05/96	56	25.6	169	29.2	57	234	0	0	234	0	0	0	234	1	88
E21	07/05/96	56	20.2	170	5.0	60	75	0	0	75	0	0	0	75	1	88
F11	06/10/96	56	39.2	161	32.9	48	77	0	0	77	0	0	0	77	1	88
F12	06/10/96	56	40.2	160	58.3	38	75	75	0	151	75	0	75	226	1	89
F13	06/10/96	56	39.2	160	21.5	30	281	0	0	281	70	0	70	351	1	88
F20	07/06/96	56	40.9	169	30.6	43	644	80	0	724	0	0	0	724	1	89
G01	06/30/96	57	.5	167	41.3	41	0	158	0	158	0	79	79	237	1	88
G02	06/30/96	57	.4	167	5.3	40	0	0	0	0	75	0	75	75	1	89
G08	06/15/96	57	.2	163	23.1	36	0	0	0	0	80	0	80	80	1	89
G09	06/13/96	56	59.2	162	47.9	32	71	0	71	143	0	0	0	143	1	88
G10	06/13/96	56	59.6	162	10.1	33	76	0	0	76	152	0	152	228	1	89
G12	06/11/96	57	.1	160	56.0	37	78	78	0	157	0	0	0	157	1	89
G13	06/10/96	56	58.7	160	20.3	33	0	0	0	0	161	0	161	161	1	88
G14	06/10/96	57	.1	159	42.9	31	0	78	0	78	0	0	0	78	1	89
G19	07/04/96	56	59.2	168	57.3	44	81	0	0	81	0	0	0	81	1	88
G20	07/04/96	57	9.5	169	18.8	40	106	0	0	106	0	0	0	106	1	88
G20	07/07/96	57	.3	169	33.2	33	754	94	0	848	94	94	188	1036	1	89
G21	07/07/96	57	.4	170	8.6	37	1529	563	0	2092	0	80	80	2173	1	88
G21	07/06/96	56	50.8	169	54.5	39	5251	900	150	6301	0	0	0	6301	1	89
G21	07/07/96	57	9.9	169	52.1	28	1279	959	320	2558	0	0	0	2558	1	89
H01	06/30/96	57	19.4	167	43.4	40	291	0	0	291	0	0	0	291	1	88
H02	06/30/96	57	20.2	167	6.9	38	0	82	0	82	0	0	0	82	1	89
H03	06/22/96	57	19.6	166	29.9	38	83	83	0	165	0	0	0	165	1	88
H06	06/18/96	57	19.8	164	36.9	37	80	80	0	161	0	0	0	161	1	89
H08	06/15/96	57	20.1	163	23.2	29	96	0	0	96	0	0	0	96	1	89
H10	06/13/96	57	20.2	162	9.0	26	83	0	0	83	0	0	0	83	1	89
H13	06/09/96	57	19.9	160	17.5	17	154	77	0	231	77	0	77	308	1	88
H18	07/04/96	57	19.9	168	21.2	39	76	0	0	76	76	0	76	153	1	89
H19	07/04/96	57	20.2	168	59.1	40	1968	347	0	2315	347	347	694	3009	1	88
H19	07/04/96	57	10.1	168	37.2	41	0	0	152	152	0	0	0	152	1	89
H20	07/07/96	57	20.4	169	36.9	34	153	76	0	229	76	76	153	382	1	89
H21	07/07/96	57	20.5	170	15.1	32	77	0	0	77	0	0	0	77	1	88

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

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
H22	07/07/96	57	10.2	170	29.6	32	102	0	0	102	0	0	0	102	1	88
I01	06/30/96	57	38.6	167	45.2	38	84	0	0	84	0	84	84	169	1	88
I02	06/30/96	57	40.1	167	8.2	36	0	0	0	0	0	80	80	80	1	89
I06	06/18/96	57	40.0	164	36.8	29	80	0	0	80	0	0	0	80	1	89
I18	07/04/96	57	39.9	168	23.7	38	84	84	0	169	0	0	0	169	1	89
I19	07/04/96	57	39.6	169	1.9	38	152	76	0	228	0	0	0	228	1	88
I19	07/03/96	57	49.9	168	44.5	37	81	0	0	81	0	0	0	81	1	89
I19	07/04/96	57	30.1	168	44.6	38	84	84	0	169	0	0	0	169	1	89
I20	07/03/96	57	49.0	169	21.7	36	222	0	148	370	0	0	0	370	1	88
I20	07/04/96	57	30.4	169	21.3	36	1125	225	75	1425	225	225	450	1875	1	88
I20	07/07/96	57	40.0	169	39.1	38	78	0	0	78	0	78	78	156	1	89
I21	07/07/96	57	30.8	169	59.5	38	298	0	0	298	75	224	298	596	1	89
J04	06/21/96	58	.3	165	53.8	31	152	0	0	152	0	0	0	152	1	89
K01	06/30/96	58	20.7	167	51.9	37	0	81	0	81	0	0	0	81	1	88
K02	06/30/96	58	20.2	167	11.2	28	157	0	0	157	0	0	0	157	1	89
K03	06/22/96	58	20.8	166	33.2	26	0	78	0	78	0	0	0	78	1	88
K04	06/21/96	58	20.2	165	55.0	24	78	0	0	78	0	0	0	78	1	89
K18	07/03/96	58	19.8	168	27.4	35	77	0	0	77	77	0	77	155	1	89
L01	07/01/96	58	40.6	167	52.5	33	158	158	0	316	0	0	0	316	1	88
L02	07/01/96	58	40.3	167	13.2	24	77	0	0	77	0	0	0	77	1	89
L18	07/03/96	58	39.9	168	29.6	29	413	83	0	496	0	0	0	496	1	89
L19	07/03/96	58	40.2	169	8.3	35	80	0	0	80	0	0	0	80	1	88
L20	07/08/96	58	40.2	169	47.5	37	0	0	0	0	0	78	78	78	1	89
M01	07/01/96	59	1.3	167	52.2	21	0	75	0	75	0	0	0	75	1	88
M18	07/03/96	59	.0	168	32.0	25	163	1386	82	1631	82	0	82	1713	1	89
M19	07/03/96	58	59.5	169	12.8	31	720	720	0	1439	0	0	0	1439	1	88
M20	07/08/96	58	59.8	169	49.2	34	0	80	0	80	0	0	0	80	1	89
M21	07/08/96	59	.1	170	28.2	39	0	77	0	77	0	0	0	77	1	88
N01	07/01/96	59	21.0	167	55.8	22	0	318	0	318	0	0	0	318	1	88
N18	07/02/96	59	20.1	168	34.4	22	81	1863	0	1944	0	0	0	1944	1	89
O01	07/01/96	59	39.7	167	57.8	20	0	78	0	78	0	0	0	78	1	88
O18	07/02/96	59	39.9	168	37.4	21	76	153	76	306	0	0	0	306	1	89
O19	07/02/96	59	39.1	169	16.0	27	0	79	0	79	0	0	0	79	1	88
O20	07/09/96	59	40.0	169	54.4	31	169	0	0	169	0	0	0	169	1	89
P18	07/02/96	59	59.7	168	39.5	21	76	228	228	532	0	76	76	608	1	89

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

STA- TION	DATE	N. LAT.		W. LON.		DEPTH (FM)	MALES				FEMALES			GRAND TOWS TOTAL	VES- SEL	
		DEG	MIN	DEG	MIN		LARGE	MEDIUM	SMALL	TOTAL	LARGE	SMALL	TOTAL			
P19	07/02/96	59	59.3	169	18.2	24	0	158	0	158	0	0	0	158	1	88
P23	07/09/96	60	9.8	172	19.9	31	0	79	0	79	0	0	0	79	1	88
R24	07/10/96	60	40.2	172	47.1	25	78	0	0	78	0	0	0	78	1	88
S24	07/10/96	61	.0	172	48.0	37	0	78	0	78	0	0	0	78	1	88

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