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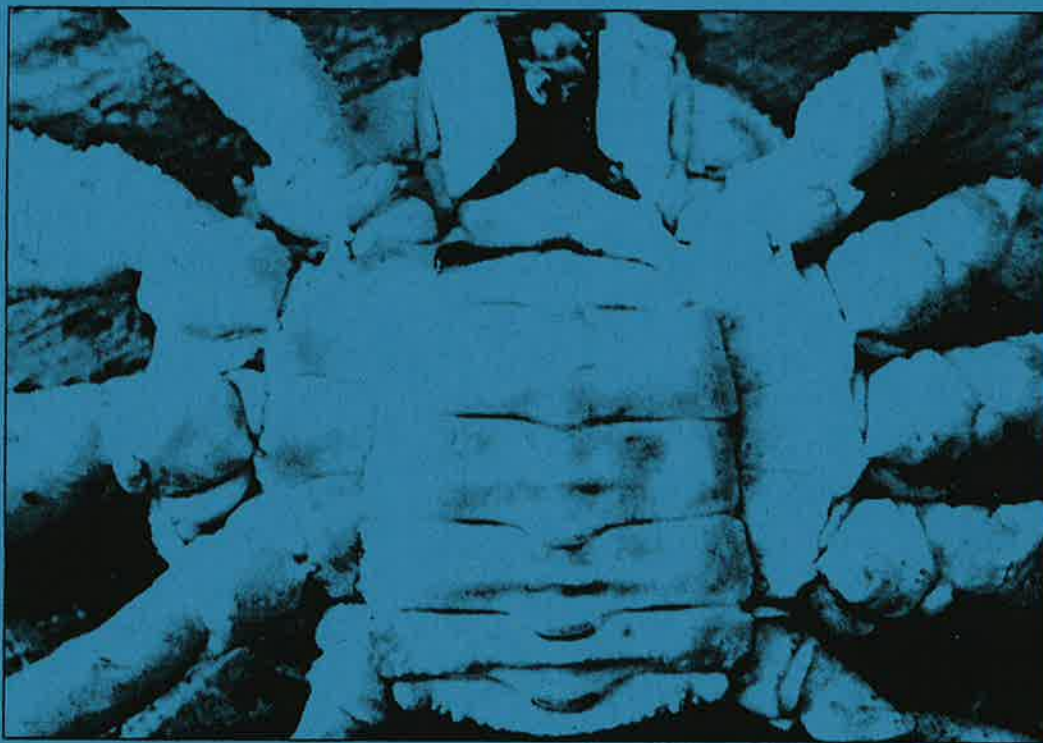
**National Marine
Fisheries Service**

US DEPARTMENT OF COMMERCE

NWAFSC PROCESSED REPORT 90-09

REPORT TO INDUSTRY ON THE 1990 EASTERN BERING SEA CRAB SURVEY

OCTOBER 1990



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Cover--Underside of a hermaphrodite *C. bairdi* Tanner crab with an abdominal flap intermediate in shape between that of a male and female. Two or three of these rare specimens were found this year in the eastern Bering Sea.

Alaska Fisheries Science Center
Processed Report 90-09

REPORT TO INDUSTRY ON THE
1990
EASTERN BERING SEA
CRAB SURVEY

by

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October 1990

EXECUTIVE SUMMARY

The following is a summary of conclusions presented in this report. All figures given are estimated total numbers of crabs, plus or minus 95% confidence intervals. Estimates for 1989 and 1990 were compared by t-test; values of t greater than 2.0 were considered significant. Some changes which appear large may not be statistically significant due to large variance in the data. See text for descriptions of size ranges.

Red king crab (*Paralithodes camtschatica*) All Districts combined.

Legal males: 9.4 million \pm 28%; Non-significant decrease of 22%.
Pre-recruits: No significant change.
Large females: No significant change.
Outlook: Populations below average and stable. Landings increasing in 1990 due to new management scheme.

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

Legal males: 409,000 \pm 69%; Non-significant increase of 80%.
Pre-recruits: Significant increase of 1200%.
Large females: Non-significant increase of 108%.
Outlook: Population low but may be increasing; trends not detectable. Fishery closed for 1990.

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

Legal males: 1.66 million \pm 49%; Non-significant increase of 12%.
Pre-recruits: No significant change.
Large females: Significant decrease of 88%.
Outlook: Population appears average and stable. Landings average.

Tanner crab (*Chionoecetes bairdi*) Eastern District.

Legal males: 45.2 million \pm 36%; Non-significant increase of 34%.
Pre-recruits: Non-significant decrease of 22%.
Large females: Non-significant increase of 53%.
Outlook: Population high and may be leveling off. Fishery increasing due to growth of pre-recruits into legal categories.

Tanner crab (*C. opilio*) All Districts combined.

Large males: 420.3 million \pm 19%; Significant increase of 125%.
Pre-recruits: Non-significant increase of 25%.
Large females: Non-significant decrease of 27%.
Outlook: Overall population high and stable with large recruitment of pre-recruits into large sizes. Fishery improving dramatically in near term.

Hair crab (*Erimacrus isenbeckii*)

Large males: 0.6 million \pm 58%; Non-significant increase of 40%.
Pre-recruits: Non-significant increase of 26%.
Large females: Non-significant increase of 84%.
Outlook: Population above average and improving due to recent recruitment. Fishery nonexistent.

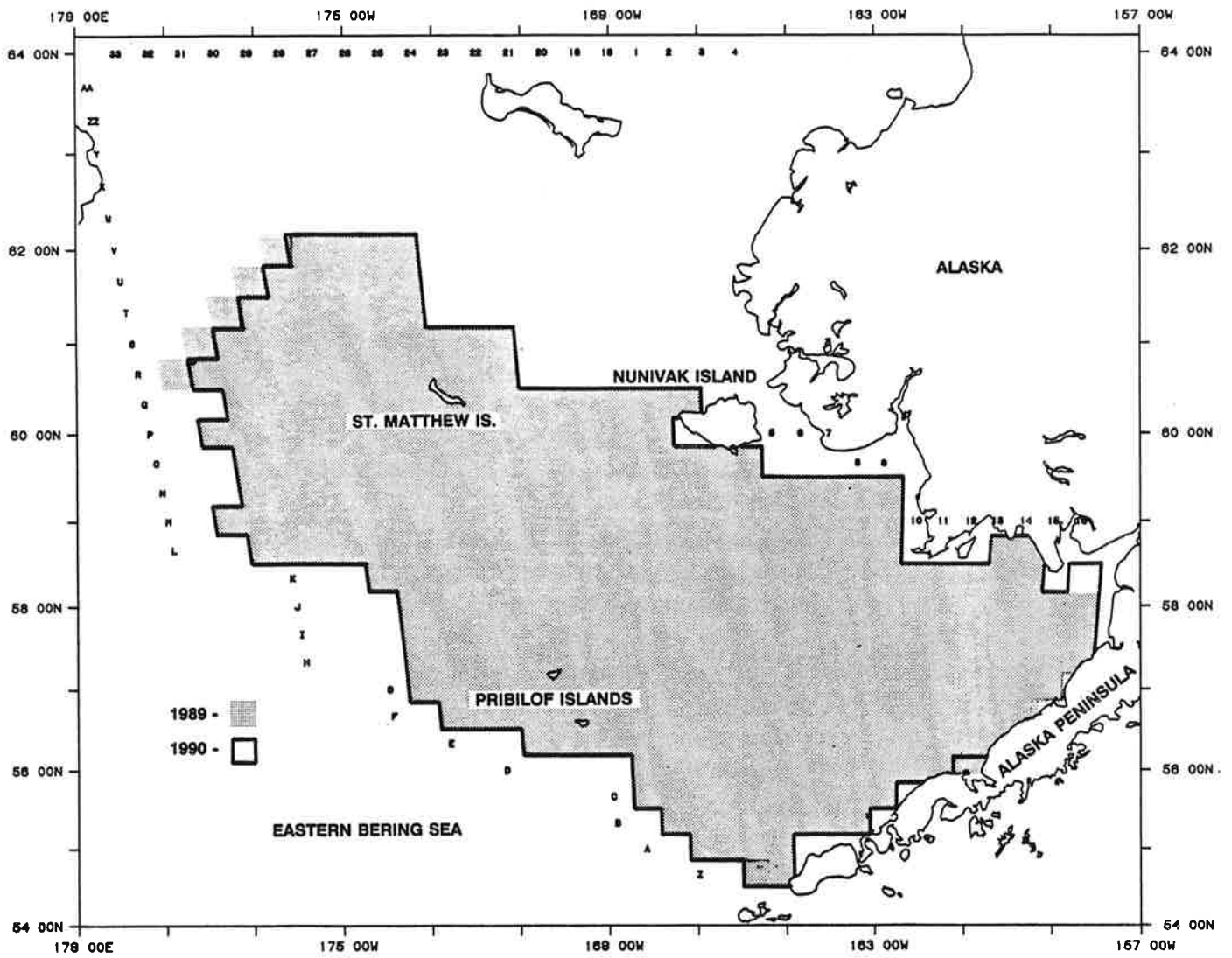


FIGURE 1. NMFS eastern Bering Sea crab survey area in 1989 and 1990.

The 1990 Eastern Bering Sea Survey

An annual trawl survey is conducted in the eastern Bering Sea (EBS) to determine the distribution and abundance of crab and groundfish resources. This report summarizes survey results for commercially important crabs. It is intended to aid fishermen and processors in locating productive grounds and judging overall availability of various species. Survey-derived data are also used as part of the basis for management decisions. Red king crab (*Paralithodes camtschatica*), blue king crab (*P. platypus*), hair crab (*Erimacrus isenbeckii*), and two species of Tanner crab (*Chionoecetes bairdi* and *C. opilio*), are of primary interest. Golden king crab were not surveyed. Information on groundfish resources is available from the Alaska Fisheries Science Center, 7600 Sand Point Way NE, BIN C15700, Seattle, Washington 98115-0070.

Survey Area and Methods

The 1990 Eastern Bering Sea (EBS) crab survey consisted of 401 successful bottom trawl tows and covered an area of approximately 142,000 square nautical miles. The 1990 survey area was similar to that of 1989 (Fig. 1). The survey was conducted aboard two chartered vessels, the F/V Ocean Hope 3 and the University of Washington's R/V Alaska between June 1 and August 6. The same two vessels were used in 1988 and 1989. Methodology was identical to that of previous surveys and most tows were made at the centers of squares defined by a 20 x 20 nautical mile grid. Near St. Matthew Island and the Pribilofs, additional tows were made at the corners of squares. Trawl gear used was similar to that used last year.

Both vessels fished an eastern otter trawl with an 83 ft headrope and a 112 ft footrope. Measured wing spread on this trawl has ranged from 47 - 58 feet. Since 1987, wing spread measurements have been made during the majority of survey tows. For consistency with previous reports an effective width of 50 feet was used. Each tow was of one-half hour duration and most tows were 1.4 to 1.8 nautical miles long. Catches were brought aboard, sorted by species and sex, and then a sample of crabs was measured (to the nearest millimeter) to provide a size frequency distribution. Note that crab sizes are reported as carapace length (cl) for king and hair crabs, and carapace width (cw) for Tanner crabs. A tracing of the surface to bottom temperature profile was taken at almost all stations.

Additional, non-standard stations were towed at 4 different locations in water 25-30 fm deep. Four extra tows were made inshore along the coast of the Alaska Peninsula to look for juvenile king crab. Of these, three were made near Port Heiden (approximately 57°N lat., 159°W long., and one was made at survey station K16 which is not usually towed. Additional tows were also made in shallow water near Togiak (2 tows) and Kuskokwim Bay (2 tows) where high catches of yellowfin sole have recently occurred. Repeat tows were made at several stations where high catches of king crab occurred; these included G19-21, I19-20, and F08-F09. Crab data from all extra stations are incorporated into population estimates.

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

nautical mile) at each trawl station was computed. Average density was then calculated for several sub-regions, then population estimates were calculated by extrapolating the average density of a given size group over the range of the species (or stock).

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

Interpreting Tables and Charts

Because of differences in the length of tow between vessels and stations, catches presented in accompanying charts and tables are standardized to the number of crab caught per square nautical mile (rounded to whole numbers on charts). Charts are based on 20 by 20 nautical mile squares. In cases where more than one tow was made in a square (including corner tows), the average crab density is presented. For this reason, values on the charts may not match exactly the values in Tables 7-11, which are listed by tow. It is advisable to cross-reference charts and tables to obtain more exact information. Charts and tables showing the percentage of legal crab should also be carefully cross-referenced since high percentages of legal crab are often found in areas of low abundance.

Distribution and Abundance of King Crab Stocks

Red King Crab

The majority of the legal (≥ 6.5 in cw, ≥ 135 mm cl) male crabs occurred in Bristol

Bay (Area T; Charts 1 and 2, Table 7), and their overall distribution was similar to that of 1989. A few red king crabs were also found near the Pribilof Islands and in the Northern District (north of 58°39'N lat.), but their contribution to overall abundance in the EBS is negligible. The highest catch of legal crabs occurred at station G08.

The estimated abundance of legal male red king crabs in the Bristol Bay District (south of 58°39'N lat. and east of 168°W long.) and the Pribilof District (south of 58°39'N lat. and west of 168°W long.) was 9.2 million crabs which represents a non-significant¹ decrease of 22% from last year (Table 1). Pre-recruit (110-134 mm cl) and juvenile (< 110 mm cl) crab showed no significant change. There has been little recruitment of juveniles to this population in several years (Fig. 2).

Legal male crabs were found between 7 and 51 fm (average 36.6 fm) and from 1.9 to 10.8°C (average 2.6°C). The percentages of legal crab taken at each station (Chart 2) show that legal crab were occasionally found as solitary individuals at the periphery of the stock's distribution.

In 1990 we found less than 0.1% of male crabs in molting or soft-shell condition (vs 1.3% last year). Among legal-sized crab, 44.2% were oldshell, skipmolt crabs (vs 51.5% last year). Molting of male crabs appears to have been completed prior to the survey.

The estimated abundance of large² (≥ 90 mm cl) females in the Bristol Bay and Pribilof Districts showed no significant change from last year and now stands at 17.5 million crabs. The estimated abundance of small females showed a non-significant increase of 62%. In

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

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

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

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	<110 <5.2	110-134 5.2-6.5	≥135 ≥6.5	Total	<90 <3.5	≥90 ≥3.5	Total	
1969	41.0	20.3	9.8	71.1	18.3	28.5	46.8	117.9
1970	9.5	8.4	5.3	23.2	4.9	13.0	17.9	41.1
1972 ²	14.1	8.0	5.4	27.5	7.0	12.1	19.1	46.6
1973 ³	50.0	25.9	10.8	86.7	24.8	76.8	101.6	188.3
1974 ³	59.0	31.2	20.9	111.1	37.7	72.0	109.7	220.8
1975	84.9	31.7	21.0	137.6	70.8	58.9	129.7	267.3
1976	70.2	49.3	32.7	152.2	35.9	71.8	107.7	259.9
1977	80.2	63.9	37.6	181.7	33.5	150.1	183.6	365.3
1978	62.9	47.9	46.6	157.4	38.2	128.4	166.6	324.0
1979	48.1	37.2	43.9	129.2	45.1	110.9	156.0	285.2
1980	56.8	23.9	36.1	116.8	44.8	67.6	112.5	229.3
1981	56.6	18.4	11.3	86.3	36.3	67.3	103.6	189.9
1982	107.2	17.4	4.7	129.3	77.2	54.8	132.0	261.3
1983	43.3	10.4	1.5	55.2	24.3	9.7	34.0	89.2
1984	81.8	12.6	3.1	97.6	57.6	17.6	75.1	172.7
1985	13.7	10.1	2.5	26.3	6.9	6.8	13.7	39.9
1986	11.8	12.3	5.9	30.1	4.5	5.4	9.8	39.9
1987	20.1	12.6	7.9	40.6	16.8	18.3	35.1	75.7
1988	8.5	6.4	6.4	21.3	2.7	15.7	18.4	39.7
1989	8.6	9.4	11.9	29.9	4.4	16.9	21.2	51.1
1990	8.2	10.2	9.2	27.6	7.2	17.5	24.7	52.2
Limits ⁴								
Lower	4.1	4.9	6.5	18.5	0.0	6.0	8.6	27.1
Upper	12.3	15.4	11.9	36.7	14.9	29.1	40.7	77.4
±%	50	52	29	33	108	66	65	48

1 Carapace length (mm).

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

3 1973 and 1974 estimates considered unreliable.

4 Mean ± 2 standard errors for most recent year.

Red King Crab Length Frequency

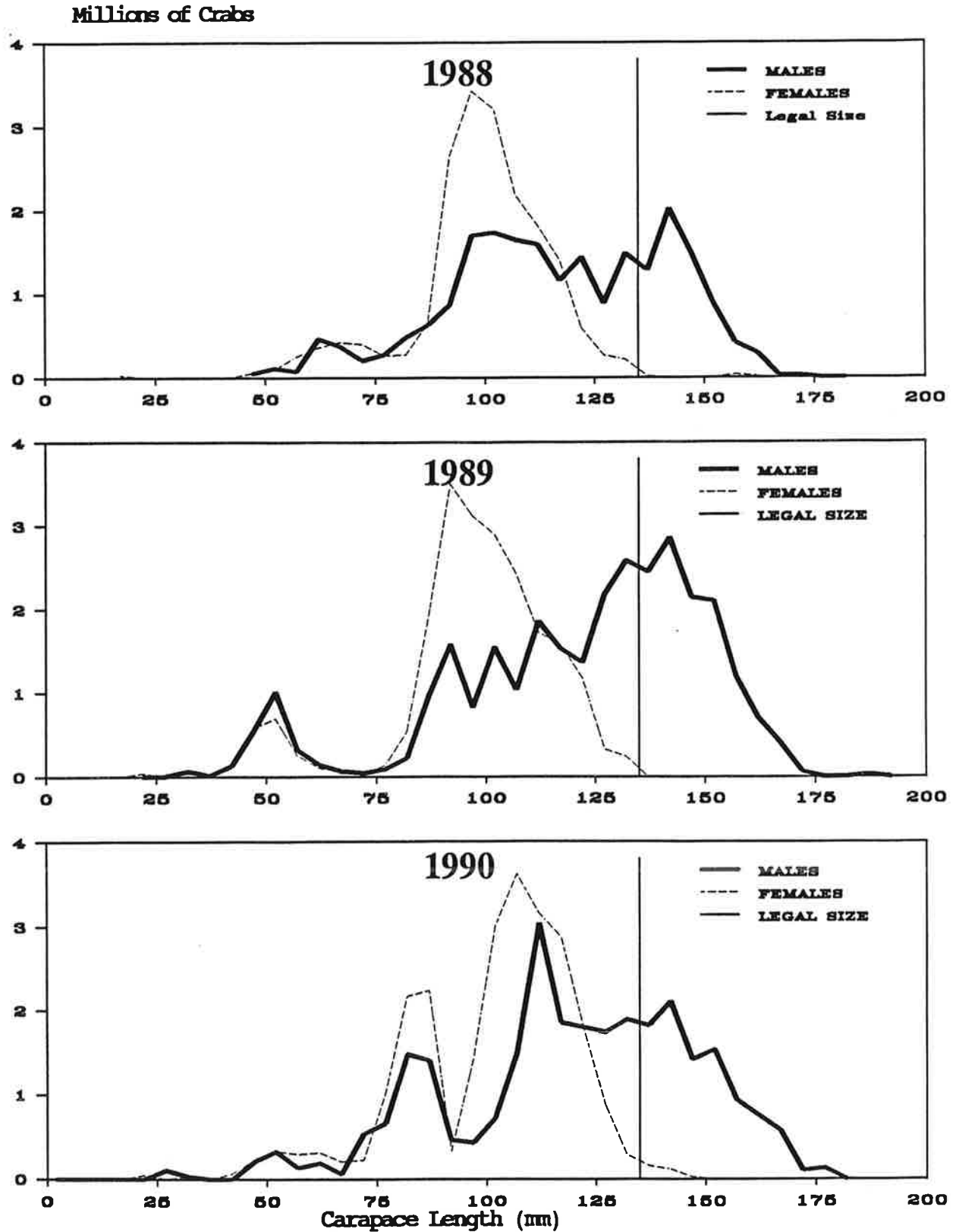


FIGURE 2. Estimates of abundance for red king crab (*P. camtschatica*) by 5 mm length classes, 1988-1990. Vertical line indicates lower limit of legal size.

Red King Crab, Bristol Bay

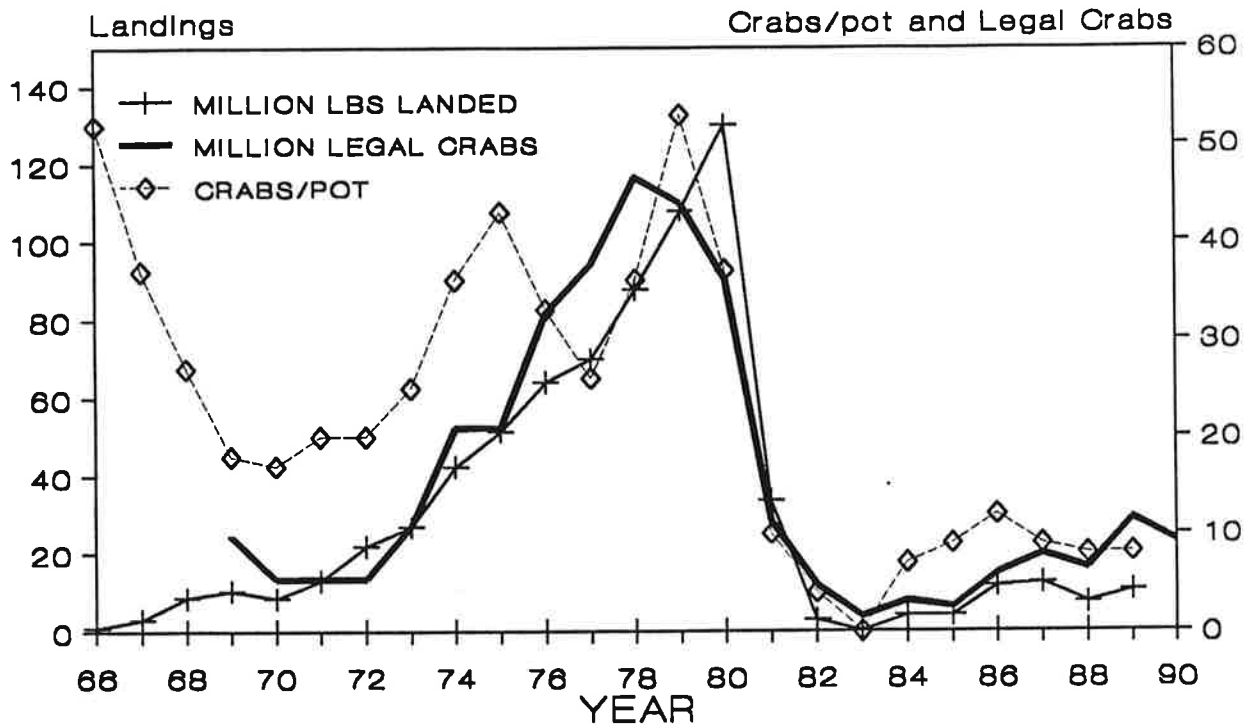


FIGURE 3. U.S. landings in millions of lbs, catch-per-unit-of-effort as crabs/pot, and the abundance of legal red king crabs (*P. camtschatica*) in millions in Bristol Bay, estimated from the NMFS trawl surveys.

June, 14.7% of all females were still molting or soft-shell (vs 41.7% last year), including 19.7% of large females. Among large females, the proportion which had molted and extruded new, uneyed eggs was 97.2% compared to 51.1% in June, 1989, and 94% in 1988. Fluctuations in the timing of molting, mating, and embryo extrusion may be related to annual variations in water temperature, particularly following the unusually cold winter of 1989.

The Bristol Bay fishery will open on November 1, 1990 with a guideline harvest of 17.1 million lbs relative to an estimated stock of 55.1 ± 16.0 million lbs. The target exploitation rate was set at 31% of the legal male biomass, as determined according to Board of Fisheries policy. In 1989, 10.3 million lbs were landed, with a CPUE of 8 crabs/pot-lift (Fig. 3)³.

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

Legal (≥ 6.5 in, or ≥ 135 mm cl) males were found primarily to the east of St. Paul Island (Charts 3&4 and Table 8). Legal crab occurred at temperatures between 1.9 and 3.3°C (average 2.5°C), and at depths between 33 and 43 fm (average 38.4 fm). The estimated abundance of legal males was 409,000 crabs (Table 2), a non-significant increase of 80% from last year. The number of pre-recruits increased by 1200% and is now higher than it has been since 1982. The abundance of juveniles (< 110 mm cl), however, showed a non-significant decline of 43%. Size-frequency data (Fig. 4) indicate that recruitment of juveniles to larger size groups has improved, continuing a trend started in 1988. This population is still depressed (Fig. 5), and the fishery will not be opened in 1990. Among

3. Alaska Dept. Fish and Game, 1990. Westward Region shellfish report to the Alaska Board of Fisheries. ADF&G, Div. of Commercial Fisheries, Westward Regional Office, 211 Mission Rd., Kodiak, AK 99615, 295 p.

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

Pribilof District								
Size ¹ (mm) Width(in)	Males				Females			Grand Total
	<110 <5.2	110-134 5.2-6.5	≥135 ≥6.5	Total	<90 <3.5	≥90 ≥3.5	Total	
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 ³	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
Limits ²								
Lower	0.28	0.11	0.13	0.87	0.00	0.45	0.76	1.6
Upper	3.39	2.36	0.69	6.09	3.80	4.87	8.20	14.3
±%	85	91	69	75	109	83	83	80

1 Carapace length (mm).

2 Mean ± 2 standard errors for most recent year.

3 Female estimates considered unreliable in 1980.

legal males, 36.4% were in new, hardshell condition and the remainder (63.6%) were oldshells.

The estimated abundance of large (≥90 mm cl) females showed a non-significant increase of 108% from last years level. Historically, estimates of female abundance have been imprecise due to the preference of females for rocky habitat which is not sampled well by trawls. Among large females, 85.3% were new hardshells, and 14.7% oldshells. Blue king crab

are predominantly biennial spawners. Only a portion of the female population spawns in a given year, while the remainder is in the non-embryo-bearing phase. Among mature females 79.4% carried new, uneyed embryos and 20.6% carried empty embryo cases. No males or females were in molting or soft-shell condition indicating that molting was completed for 1990.

Blue King Crab Length Frequency

Pribilof District

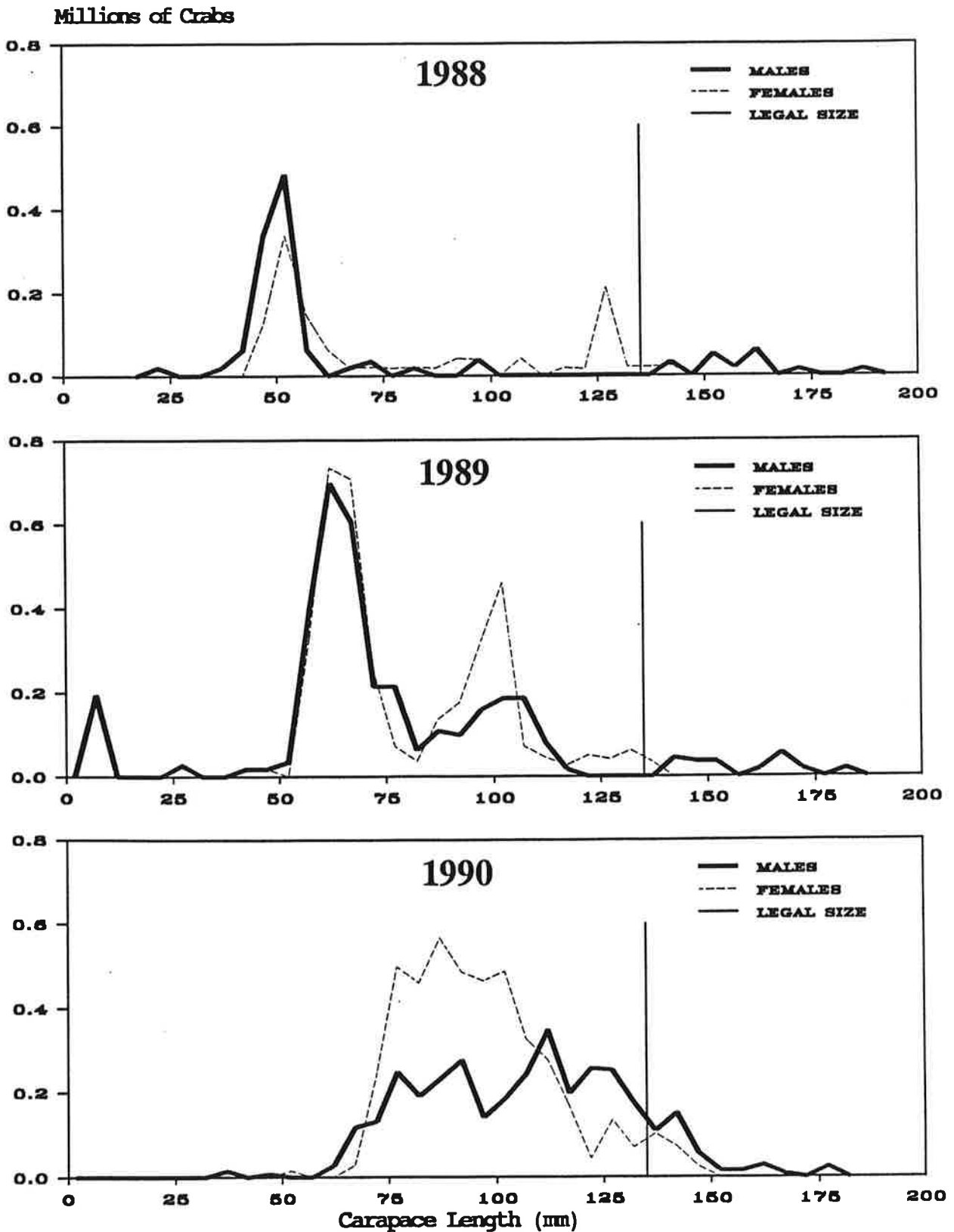


FIGURE 4. Estimates of abundance for Pribilof District blue king crab (*P. platypus*) by 5 mm length classes, 1988-1990. Vertical line indicates lower limit of legal size.

Blue King Crab, Pribilof District

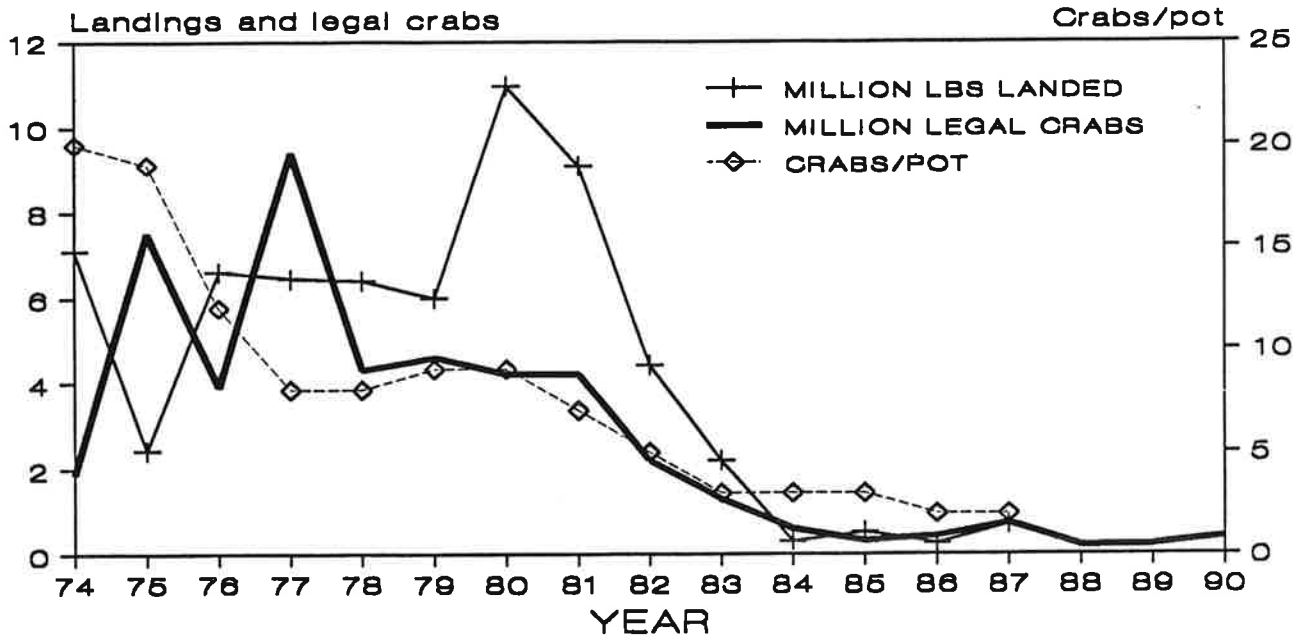


FIGURE 5. U.S. landings in millions of lbs, catch-per-unit-of-effort (CPUE) as abundance of legal blue king crabs (*P. platypus*) in millions in the Pribilof District, estimated from the NMFS trawl surveys.

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

Legal (≥ 5.5 in cw, or ≥ 120 mm cl) males occurred primarily southwest of the island (Charts 3&4 and Table 8) and were captured at 12 stations in 1990. Legal males were found in depths from 26 to 63 fm (average 46.9 fm) and temperatures from -1.5 to 2.5°C (average 0.3°C). The estimated abundance of legal crabs was 1.66 million crabs (Table 3), a non-significant increase of 12% from last year. The abundance of pre-recruits showed a non-significant decline of 22%. The abundance of juvenile males showed a large and unexplainable decrease, but estimates for this size group are typically imprecise. Size-frequency data (Fig. 6) show that what appeared to be improving recruitment in 1989 may have been an artifact. The abundance of large females (≥ 80 mm cl) showed a significant decrease of 88% but estimates of

female abundance are usually imprecise, probably due to habitat preference, as explained above. Among legal males, 7.4% were molting or softshell, 83.2% were new hardshells, and 9.5% oldshells. For large females, these figures were 27%, 64% and 9%, respectively. Of the two mature females caught, one was carrying new uneyed embryos and the other was in the process of hatching eyed embryos.

The 1990 fishery opened on September 1 with a guideline harvest of 1.9 million lbs out of an estimated stock of 6.8 million lbs. Preliminary ADF&G statistics for the 1990 fishery indicate that 31 vessels landed 1.7 million lbs, with CPUE of 15 crabs/pot-lift (Ken Griffin, ADF&G, P.O. Box 308, Dutch Harbor, AK 99692, pers. commun., September 1990). The target exploitation rate was 29% (by weight). In comparison, during 1989, 69 vessels landed 1.2 million pounds or 248,000 crabs for an

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

Northern District								
Size ¹ (mm)	Males			Total	Females		Total	Grand Total
	<105	105-119	≥120		<80	≥80		
Width(in)	<4.3	4.3-5.5	≥5.5		<3.2	≥3.2		
1978	5.6	2.4	1.8	9.8	0.8	0.4	1.2	11.0
1979	4.9	2.3	2.2	9.4	1.7	0.9	2.6	12.0
1980	3.4	2.2	2.5	8.1	0.8	2.2	3.0	11.1
1981	1.2	1.8	3.1	6.3	0.0	0.5	0.5	6.8
1982	3.2	2.6	6.8	12.5	0.4	0.7	1.1	13.7
1983	1.8	1.6	3.5	6.9	0.2	2.4	2.7	9.6
1984	1.4	0.6	1.6	3.6	0.2	0.5	0.7	4.3
1985	0.46	0.35	1.08	1.89	0.08	0.13	0.21	2.10
1986	0.56	0.40	0.38	1.34	0.25	0.06	0.31	1.65
1987	1.07	0.73	0.74	2.53	0.46	0.22	0.68	3.21
1988	1.44	0.65	0.83	2.92	0.90	0.79	1.70	4.62
1989	4.80	0.97	1.48	7.25	1.58	1.68	3.27	10.52
1990	1.44	0.75	1.66	3.85	0.45	0.20	0.65	4.50
Limits ²								
Lower	0.14	0.21	0.85	1.69	0.04	0.00	0.05	1.75
Upper	2.74	1.29	2.47	6.01	0.86	0.42	1.24	7.25
±%	90	72	49	56	91	114	92	61

- 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.

Blue King Crab Length Frequency Northern District

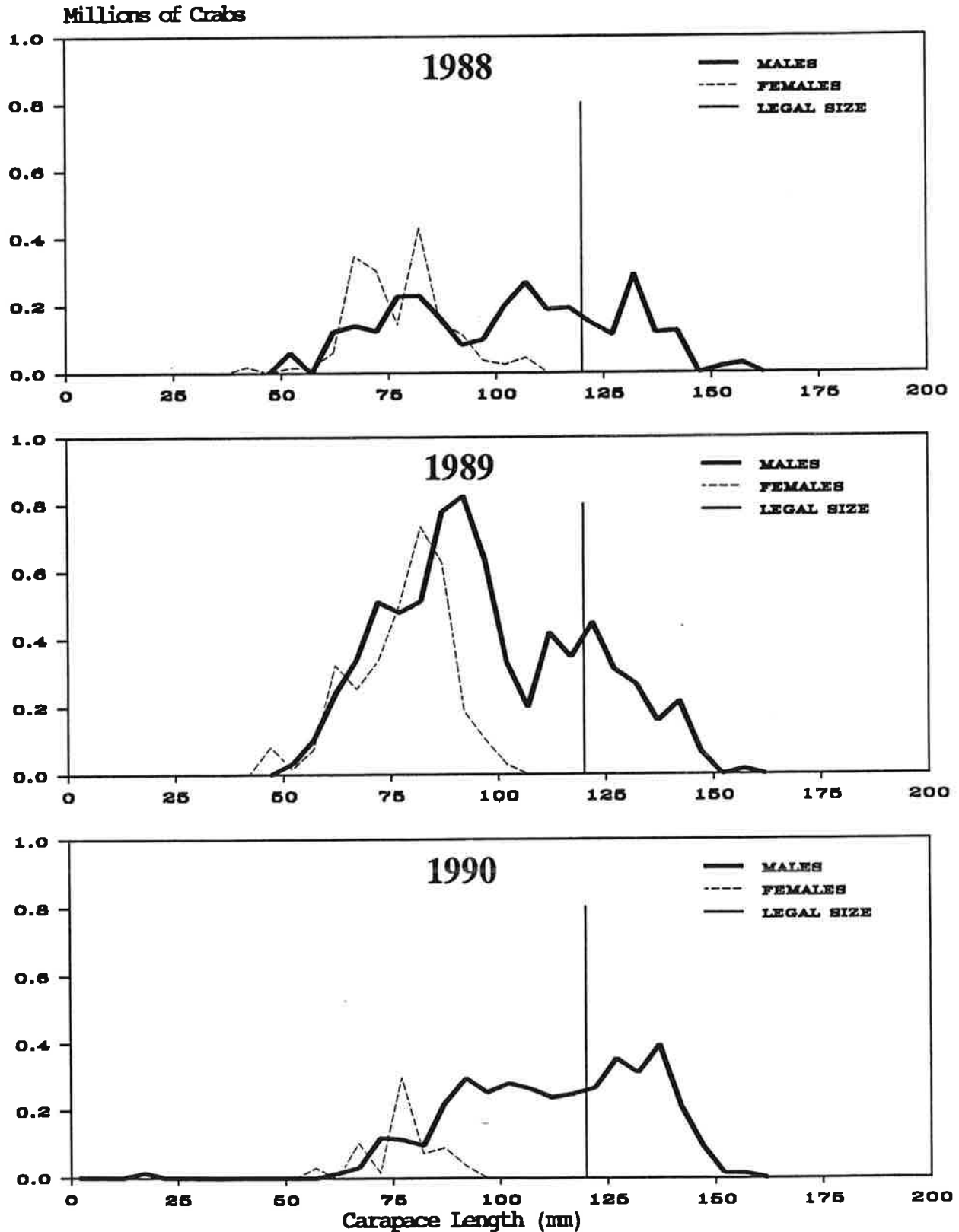


FIGURE 6. Estimates of abundance for St. Matthew Island (Northern District) blue king crab (*P. platypus*) by 5 mm length classes, 1988-1990. Vertical line indicates lower limit of legal size.

Blue King Crab: Northern District

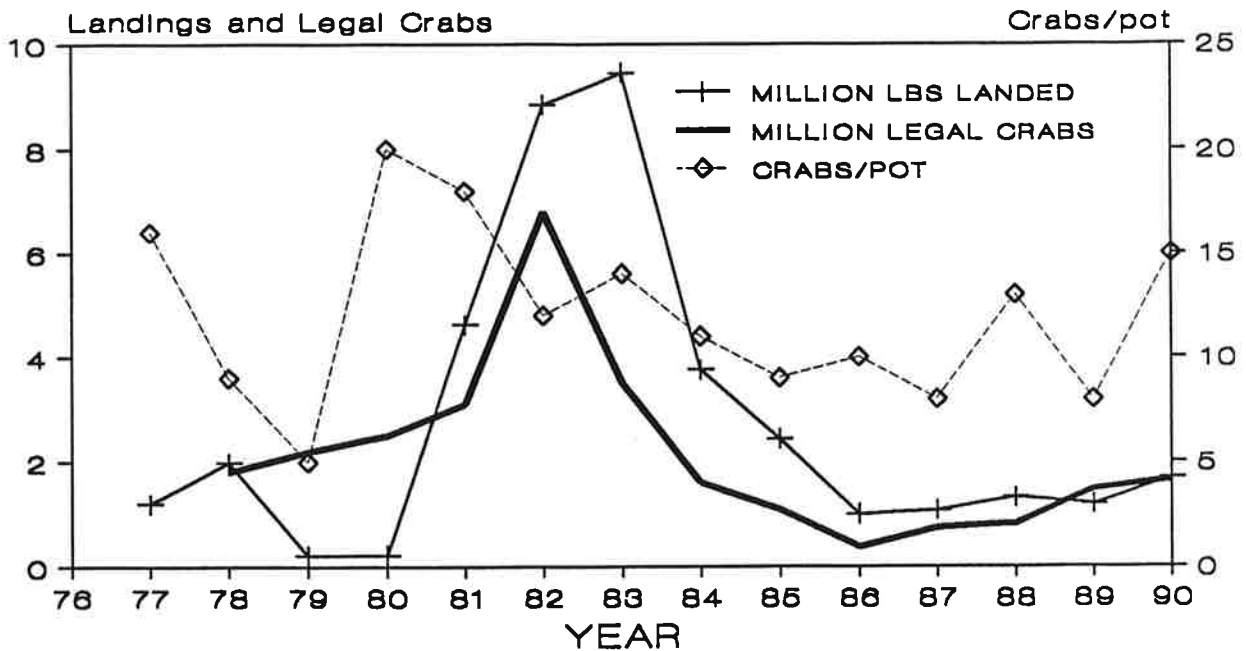


FIGURE 7. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of legal blue king crabs (*P. platypus*) in millions in the Northern District, estimated from the NMFS trawl surveys.

estimated exploitation rate of 20% and an average CPUE of 8 crabs per pot-lift³.

Distribution and Abundance of Tanner Crabs

C. bairdi

Although the legal minimum size of 5.5 in cw is equivalent to 140 mm cw, legal crabs are defined in this report as ≥ 138 mm cw because of the difference between scientific measure (between spines) and commercial measure (spine tip to spine tip). The data included in Table 4, however, show large crabs as males ≥ 135 mm, because this is closer to the lower limit of sizes landed, and has been used for a long-term index since 1976.

Large males were widely distributed in Bristol Bay and continental slope areas with

regions of relatively high abundance in mid-Bristol Bay and the Pribilof Islands (Charts 5&6, Table 9). Most legal crab were found at 20 to 115 fm (average 39.1 fm) and at temperatures ranging from -0.5 to 4.9°C with an average temperature of 2.8°C. The estimated abundance of legal (≥ 138 mm cw) male *C. bairdi* in the Eastern District is 45.2 million crabs (with 53.7 million ≥ 135 mm cw; Table 4). About 78% of the legal crab were located east of 166°W long. The Eastern District (east of 173°W long.) includes 99.7% of large males, (prior to 1989, all estimates were for the combined Bristol Bay and Pribilof Districts, which included 98.4% of large males in 1988). The estimated total abundance of legal crabs increased by 34% from last year. This group has increased each year since 1986. This years increase is not as great as the previous three

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

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	<110 <4.3	110-134 4.3-5.3	≥135 ≥5.3	Total	<85 <3.4	≥85 ≥3.4	Total	
1976	180.2	136.6	109.5	426.3	174.7	220.4	395.1	821.4
1977	255.0	116.3	92.1	463.4	328.4	215.8	544.2	1,007.6
1978	124.2	81.2	45.6	251.0	116.1	73.3	189.4	440.4
1979	133.1	47.7	31.5	212.3	122.6	42.1	164.7	377.0
1980	453.3	65.0	31.0	549.3	326.9	106.8	433.7	983.0
1981	303.8	24.0	14.0	341.8	324.2	79.1	403.3	745.1
1982	88.8	46.9	10.1	145.8	126.4	83.6	210.0	355.8
1983	146.3	32.0	6.7	185.0	180.1	45.4	225.5	410.5
1984	85.1	21.2	5.8	112.1	107.0	33.4	140.4	252.5
1985	31.1	9.4	4.4	44.9	24.2	15.6	39.8	84.7
1986	110.4	12.9	3.1	126.4	68.2	13.7	81.9	208.3
1987	230.1	19.7	8.3	258.0	193.3	35.5	228.8	486.8
1988	287.3	59.7	17.4	364.4	184.8	81.0	265.8	630.2
1989	403.0	102.1	42.3	547.5	338.6	63.8	402.4	949.9
1990	286.1	78.8	53.7	418.6	266.5	97.4	363.9	782.5
Limits ²								
Lower	208.9	61.5	35.5	334.9	175.9	51.6	251.1	586.0
Upper	363.3	96.1	72.0	502.3	357.1	143.2	476.7	979.1
± %	27	22	34	20	34	47	31	25

1 Carapace width (mm).

2 Mean ± 2 standard errors for most recent year.

and may indicate that this population is nearing peak abundance and is leveling off. The estimated abundance of pre-recruits (110-134 mm cw) showed a non-significant decrease of 22%, and the estimate of small males (<110 mm cw) showed a similar decrease. The past 3 years have been characterized by substantial recruitment of small males and growth of those into pre-recruit and legal sizes. A relatively small proportion (6%) of legal males were molting or softshell, whereas new hardshells comprised 83%, and oldshells were 11%.

The abundance of large (≥85 mm cw)

females (all Districts) showed a non-significant increase of 53%, but the abundance of small (<85 mm) females showed a non-significant decline of 27% from last year. Only 29% of large females were new hardshells, whereas 70% were oldshells, and <1% molting or softshell. This is additional evidence that recruitment is slowing as this population nears peak abundance. Over 96% of large females were ovigerous, and 99% of those were carrying new, uneyed embryos, showing that the period of larval hatching and embryo extrusion was completed by the time of the survey.

C. bairdi Width Frequency

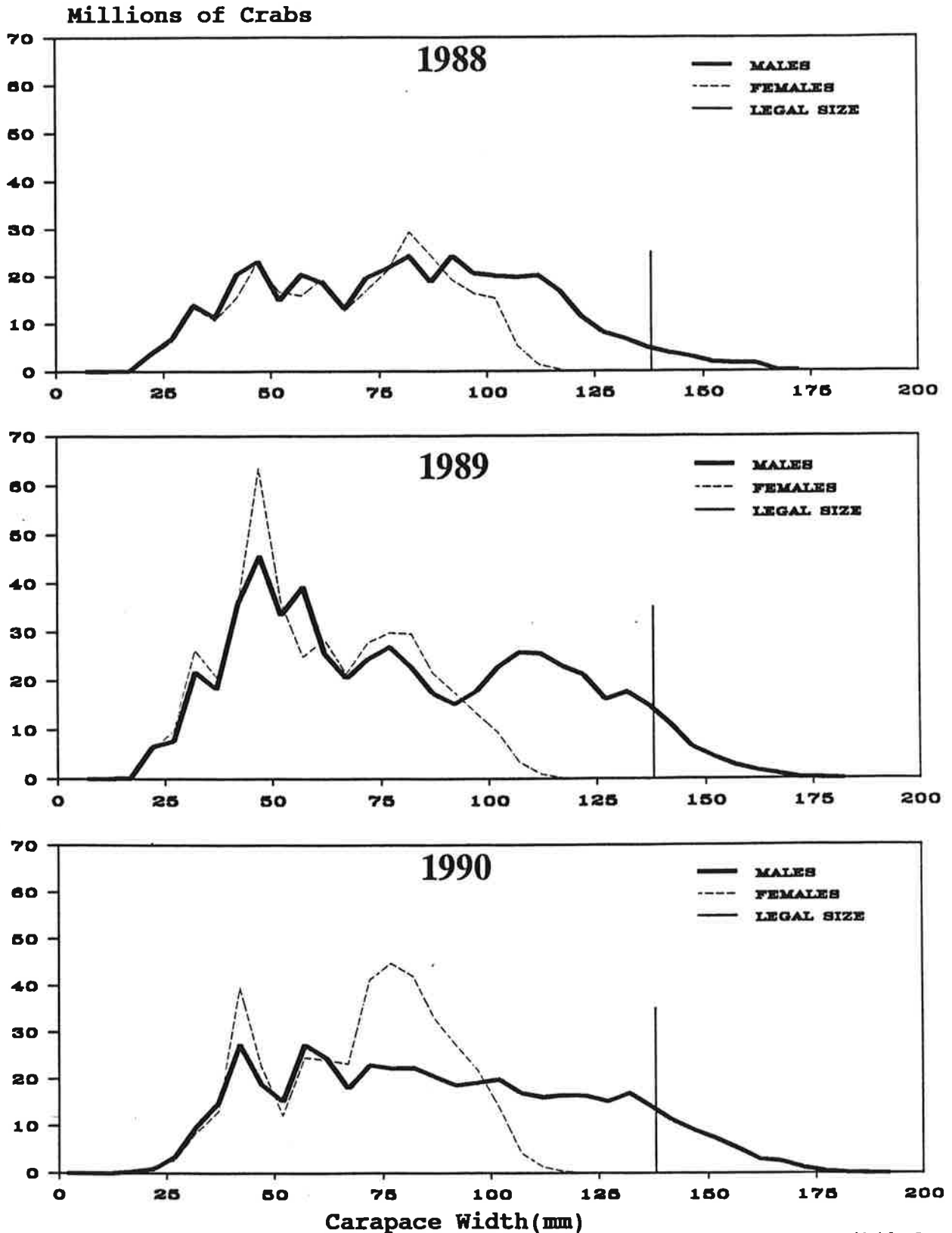


FIGURE 8. Estimates of abundance of *C. bairdi* in Bristol Bay and the Pribilof District by 5 mm width classes, 1988-1990. Vertical line indicates lower limit of legal size.

C. bairdi, Bristol Bay and Pribilofs

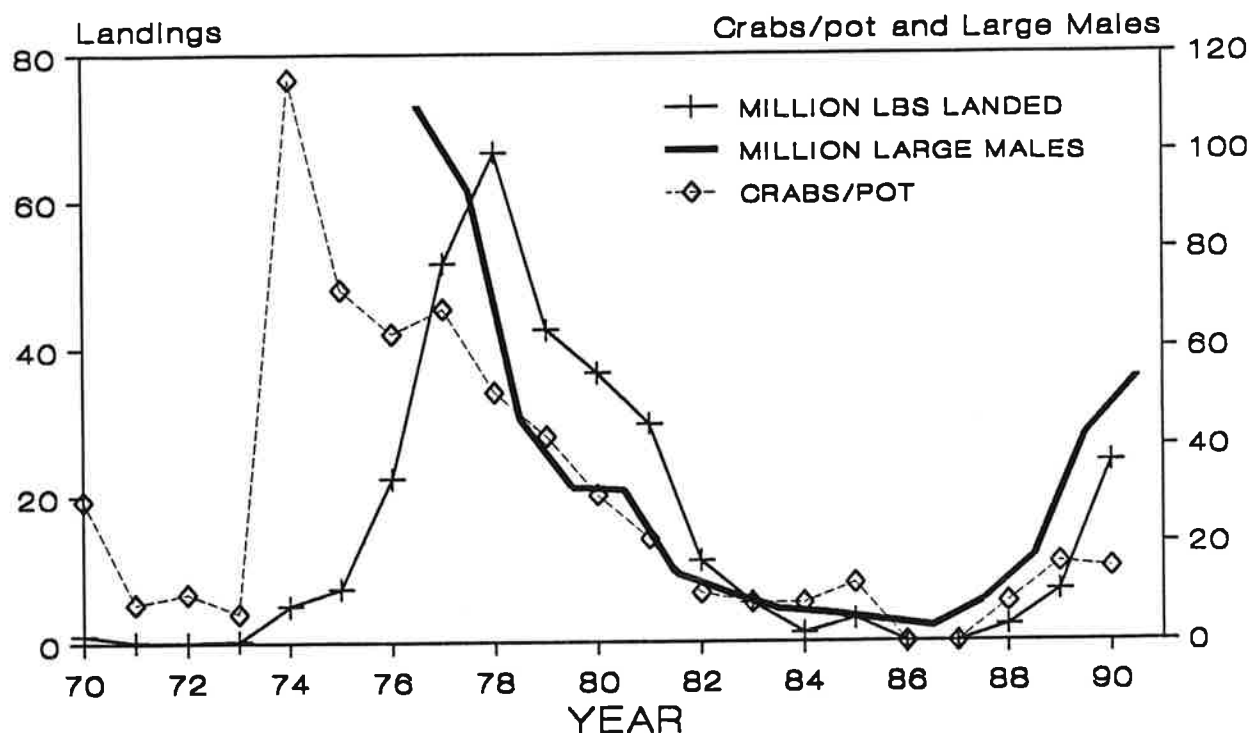


FIGURE 9. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male C. bairdi in millions in the Bristol Bay and Pribilof Districts (prior to 1989), or the Eastern District (after 1988), estimated from the NMFS trawl surveys.

In 1990 about 24.5 million pounds were harvested by 79 vessels, with average CPUE of 15 crabs/pot-lift (Fig. 9) (Ken Griffin, ADF&G, P. O. Box 308, Dutch Harbor, AK 99692, pers. commun., September 1990). Current estimates show that the population of legal males is increasing and is currently estimated at 107.3 ± 38.2 million lbs, 99.7% of which is located in the Eastern District. The harvest guideline for 1990-91 has been set at 42.8 million lbs, for an exploitation rate of 40%.

C. opilio

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

in cw (78-101 mm); large, ≥ 4.0 in cw (≥ 102 mm); and very large ≥ 4.3 in cw (≥ 110 mm).

The distribution of large males showed an area of high concentration north and east of the Pribilof Islands (Charts 7&8, Table 10). There were also areas of high abundance in the extreme northwestern portion of the survey area south and west of St. Matthew Island. Crab larger than 4.0 inches were taken at depths from 20 to 88 fm (average 48.0 fm), and temperatures from -0.5 to 4.7°C (average 1.7°C). Percentages of exploitable crab (Chart 8) are difficult to interpret because of the close association between the distributions of large and small size groups.

Although this species has been surveyed since 1978, the area surveyed prior to 1982 was much smaller than the currently surveyed area so earlier population estimates are not compa-

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

Size ¹ (mm) Width(in)	Males				Females			Grand Total
	<102 <3.7	≥102 ≥4.0	≥110 ≥4.3	Total	<50 <2.0	≥50 ≥2.0	Total	
1982	*	*	21.7	2073.2	402.6	2255.8	2658.4	4731.7
1983	*	*	22.1	1858.1	673.1	1228.4	1912.6	3759.7
1984	1237.4	153.2	73.9	1390.7	610.5	581.7	1192.2	2582.9
1985	547.8	74.9	40.7	622.6	258.2	123.5	381.7	1004.3
1986	1179.0	83.1	45.9	1262.0	790.6	422.0	1212.5	2474.5
1987	4438.9	150.8	70.0	4589.8	2919.3	2929.3	5848.6	10438.4
1988	3467.2	171.0	90.1	3638.2	1235.3	2322.7	3556.0	7194.2
1989	3646.1	187.1	81.2	3833.1	1922.8	3790.7	5713.4	9546.5
1990	2860.4	420.3	188.7	3280.7	1463.3	2798.1	4261.4	7542.1
East(%) ²	67.1	78.3	78.5	68.5	59.8	60.4	60.2	63.8
Limits ³								
Lower	2202.5	340.4	152.9	2591.7	702.4	1762.8	2684.7	5276.4
Upper	3518.3	500.1	224.6	3969.6	2224.2	3833.4	5838.1	9807.7
±	23	19	19	21	52	37	37	30

1 Carapace width in mm.

2 Proportion of size group in Eastern District.

3 Mean ± 2 standard errors for most recent year.

* Estimates not available at present time.

rable and are not shown in Table 5. However, prior to 1985, there was little U.S. fishing north of 58°N lat., and estimates of abundance (Table 5) probably included that portion of the stock which was subject to fishing. During the early 1980's the high density regions of *C. opilio* distribution have moved in a northwestern direction and split into two centers of abundance. For this reason, new district boundaries were devised in 1987 creating an Eastern and Western District for *C. opilio*, with the dividing line at 173°W long. Because of this change in District definitions and because this species appears to be a single stock, values in Table 5 reflect the entire surveyed population of *C.*

opilio. Furthermore, the 4-inch (102 mm) size preference was not in use prior to 1984. For these reasons estimates of abundance of large males are not shown for years prior to 1984 (Table 5; Fig. 11).

The estimated number of large (≥102 mm cw) males (Eastern and Western Districts combined) is 420.3 million crabs, a significant increase of 125% from last year. Small males (78-101 mm cw) showed a non-significant increase of 25%, and very large males (≥110 mm cw) showed a significant increase of 132%. Sublegal males (<3.1 in cw) showed a significant decrease of 35%. Overall, total males showed no significant change from the previous

C. opilio Width Frequency

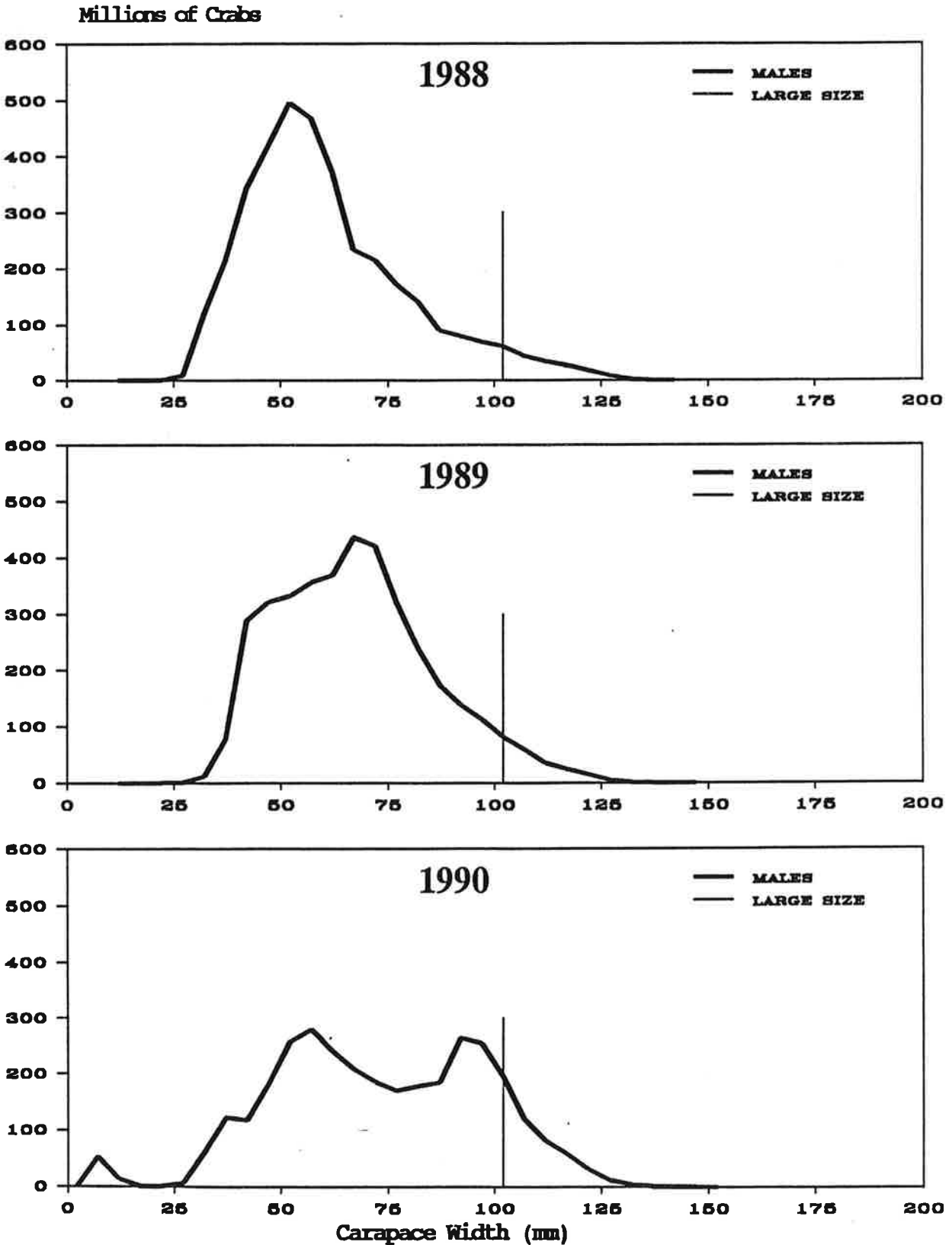


FIGURE 10. Estimates of abundance for male *C. opilio*, all Districts combined by 5 mm width classes, 1988-1990. Vertical line indicates minimum size preferred by industry.

C. opilio, All Districts

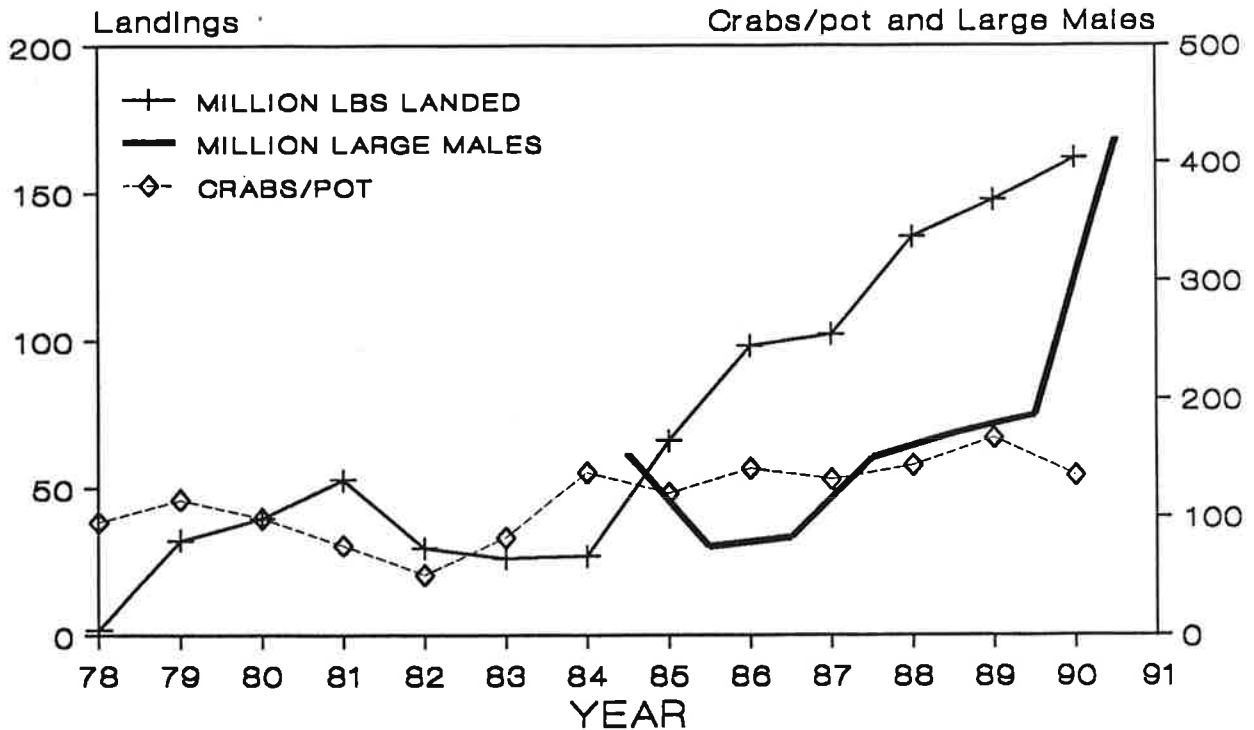


FIGURE 11. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male (≥ 102 mm cw) *C. opilio* in millions (all Districts combined), estimated from the NMFS trawl surveys.

level; increases in larger size groups are primarily due to growth of pre-recruit crab (Fig. 10). The estimated abundance of large female (≥ 50 mm cw) crabs showed a non-significant decrease of 27%, and small females showed a non-significant decrease of 24%. Major recruitment of postlarval crab occurred in the mid-1980's, and recruitment to the fishery has improved as juveniles matured. From 1989 to 1990 a large number of males grew about 20 mm, a larger than expected increment. Recruitment patterns in this stock are not entirely clear since recruitment evidently occurs both through localized production and by immigration from unsurveyed areas, perhaps including Soviet waters. Among male crabs ≥ 100 mm cw, i.e. the exploited stock, in the Eastern District 9.2% were in molting or softshell condition, 88% were newshells indicating a recent molt, and 3% were oldshells (these may have some scratch marks and be slightly duller

than newshells, but still fairly clean). Less than 0.1% were very oldshells (dark colored, often with wound marks and/or overgrown with barnacles and other organisms). In the Western District, 17.1% were molting or softshells, 67% were newshells, 12.8% were oldshells, and 2.8% were very oldshells.

Almost no females were molting or softshell, indicating that the female molting period was completed. Oldshells comprised 56% of large females in the Eastern District, and 80% in the Western District indicating that this population may be cresting also. Considering only large female crabs, about 77% carried new uneyed embryos (vs 84% last year) indicating that hatching and extrusion were close to completion by the time of the survey.

Preliminary 1990 ADF&G statistics indicate that about 161.7 million lbs were landed (Fig. 11) by 178 vessels, with average catches of 135 crabs/pot (Ken Griffin, ADF&G, P.O. Box

308, Dutch Harbor, AK 99692, pers. commun., September 1990). Currently there are an estimated 543 (± 103) million pounds of large males (≥ 4.0 in cw) within the survey area of which about 78% by weight exist east of 173°W long. The harvest guideline for 1991 has been set at 315 million lbs for large crab, of which 167.3 million lbs are very large (≥ 4.3 in cw).

Distribution and Abundance of Hair Crab

Hair crab are widely scattered across the EBS (Charts 9&10, Table 11). Areas of concentration exist immediately north of the Alaska Peninsula and near the Pribilof Islands. Large hair crab (≥ 3.5 in or ≥ 90 mm cl) were taken in

20 to 45 fm (average 37.1 fm) and at temperatures of 2.0 to 4.3°C (average 2.8°C). Large males were 100% of the catch in many areas (Chart 10). We have never found many female or small male crab during the survey and hence have little understanding of their distribution or abundance.

Because of their patchy distribution and low densities, estimates of abundance of hair crab are often imprecise. The estimated abundance of large male hair crabs has been declining since 1981 and has been very low since 1988. The current estimate of 553,000 shows a non-significant increase of 40% over the past year. The estimated abundance of small (< 3.5 in cl) males shows a non-significant increase of 26% from last year, continuing a trend begun in

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

Size ¹ (mm) Length (in)	Males		Total	Females	Grand Total
	<90 <3.5	≥ 90 ≥ 3.5		Total	
1979	6.4	16.1	22.5	1.6	24.1
1980	6.0	13.7	19.7	3.1	22.8
1981	6.1	15.9	22.0	0.8	22.8
1982	1.4	7.7	9.1	0.4	9.5
1983	0.9	4.8	5.7	0.9	6.6
1984	1.1	2.9	4.0	0.4	4.4
1985	0.53	2.22	2.75	0.22	2.97
1986	0.71	1.46	2.17	0.37	2.54
1987	1.95	1.19	3.14	0.91	4.05
1988	3.98	0.55	4.52	0.85	5.37
1989	12.30	0.40	12.72	0.30	13.02
1990	15.58	0.55	16.14	0.87	17.00
Limits ²					
Lower	0.00	0.23	0.00	0.35	0.35
Upper	33.3	0.87	33.89	1.38	35.27
\pm %	113	58	110	59	107

1 Carapace length (mm).

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

Hair Crab, *Erimacrus isenbeckii*

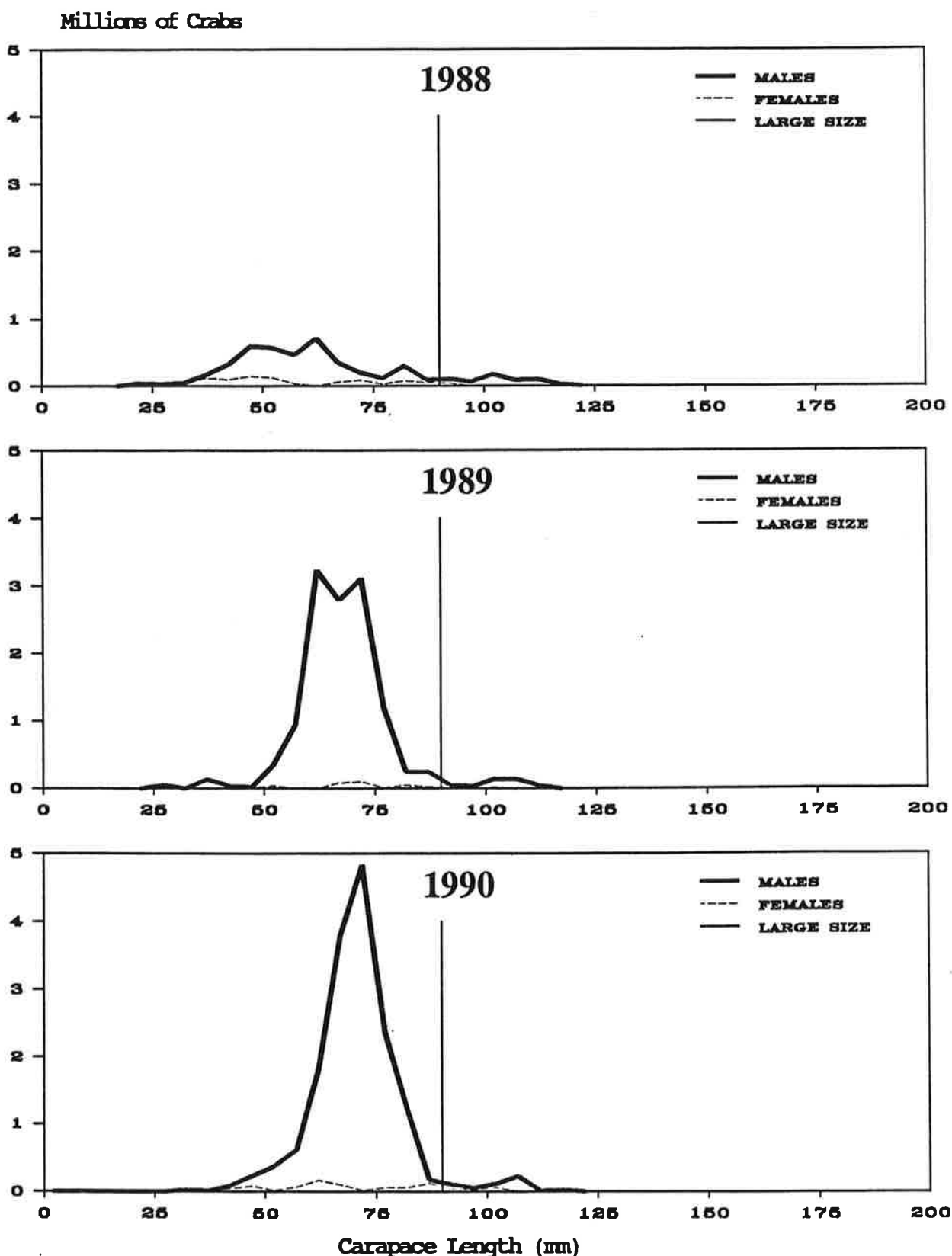


FIGURE 12. Estimates of abundance for hair crab (*E. isenbeckii*) by 5 mm length classes, 1988-1990. Vertical line indicates lower limit of large size group.

Hair Crab, *Erimacrus isenbeckii*

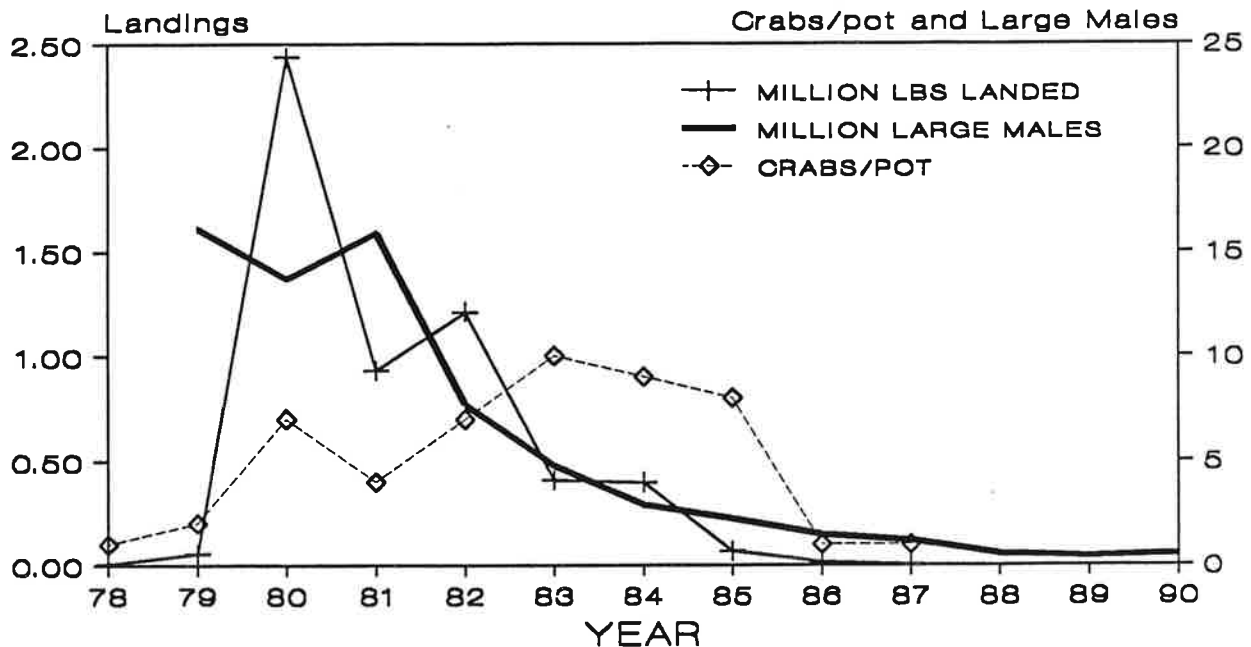


FIGURE 13. U.S. landings in millions of lbs, catch-per-unit-effort (CPUE) as crabs/pot, and the abundance of large male (≥ 90 mm cl) hair crab (*E. isenbeckii*) in millions (all Districts combined), estimated from the NMFS trawl surveys.

1987. The estimated abundance of total females shows a significant increase of 191% from last year, but this estimate is unreliable as indicated above. Size-frequency data (Fig. 12) show improved recruitment of small male crabs in the past 3 years, and may indicate future improvement in the fishable stocks. Shell conditions for hair crab are difficult to determine, and may not be very precise. The majority of males (92%) and females (88%) were new hardshell crabs.

Landings have been largely incidental to Tanner crabbing although there is occasionally some directed effort. No hair crab were landed in the last year (Ken Griffin, ADF&G, P. O. Box 308, Dutch Harbor, AK 99692, pers. commun., September 1990). Currently there are an estimated 1.1 million pounds ($\pm 58\%$) of large male crabs within the survey area. The fishery and markets have both been intermittent and probably will remain so in the near future. There are no guideline harvest levels, closed

seasons or size limits for hair crab. CPUE has not been predictable due to low effort in recent years (Fig. 13).

Bottom Temperatures

The average bottom water temperature in 1990 was 2.2°C as compared to 3.0°C in 1989 and 2.2°C in 1988. The coldest waters were encountered around St. Matthew Island (Chart 11). The warmest waters were found in Kuskokwim Bay and inner Bristol Bay. Most year-to-year variation in temperature is associated with relatively shallow areas of the continental shelf and near shore. There is little year-to-year change in the Pribilof Islands and other shelf edge areas where temperatures are moderated by incursions of deep ocean water. The effect of water temperature on changes in the distribution and abundance of crabs in the eastern Bering Sea is poorly known.

As an index of mean temperature in the

Coastal Bottom Temperature Index

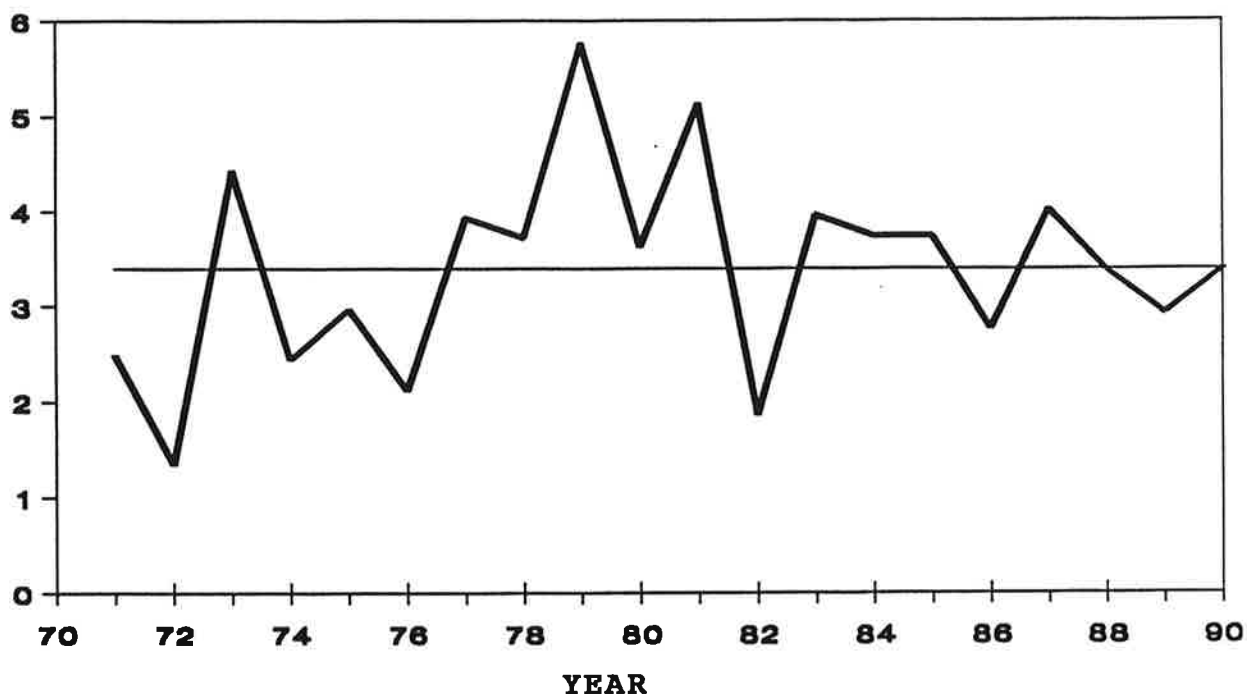


FIGURE 14. Coastal bottom temperature index (mean of 37 survey stations along the Alaska Peninsula) in degrees C for 1971-present. Horizontal line is average value over the entire period.

area most important to larval and juvenile red king crab growth, the average temperature has been determined from the June survey data for 37 stations along the Alaska Peninsula since 1971. This coastal temperature index for 1990 was 3.40°C (Fig. 14), which is equivalent to the 1971-1990 average.

Conclusions

In the early or mid-1980's, a major recruitment event occurred for both species of Tanner crab. In 1990 these crab have continued to recruit to both the survey gear and the exploitable population. Pribilof Island blue king crabs, as well as hair crab, have also shown improved signs of recruitment of small crab; however, lack of knowledge concerning growth rates of those two species leads to uncertainty about the timing of the event. In contrast, Bristol Bay red king crab and St. Matthew Island blue kings show little sign of recruitment, but the survey

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

A Note on Tagging and Tag Returns

Since 1982, NMFS has tagged a number of crabs each year. These include red, blue and golden (brown) king crabs. In Bristol Bay, we tagged about 10,000 red king crabs in 1985, and several hundred in each successive year, including 1990. The purpose of our tagging program is to gather information on growth, migrations, and the frequency of molting. For this reason, we need fairly complete information with returned tags. Tag returns are not

used to monitor or close fisheries. All tagged crabs, regardless of size or sex, may be retained for the purpose of tag data recovery. The following information is requested:

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

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

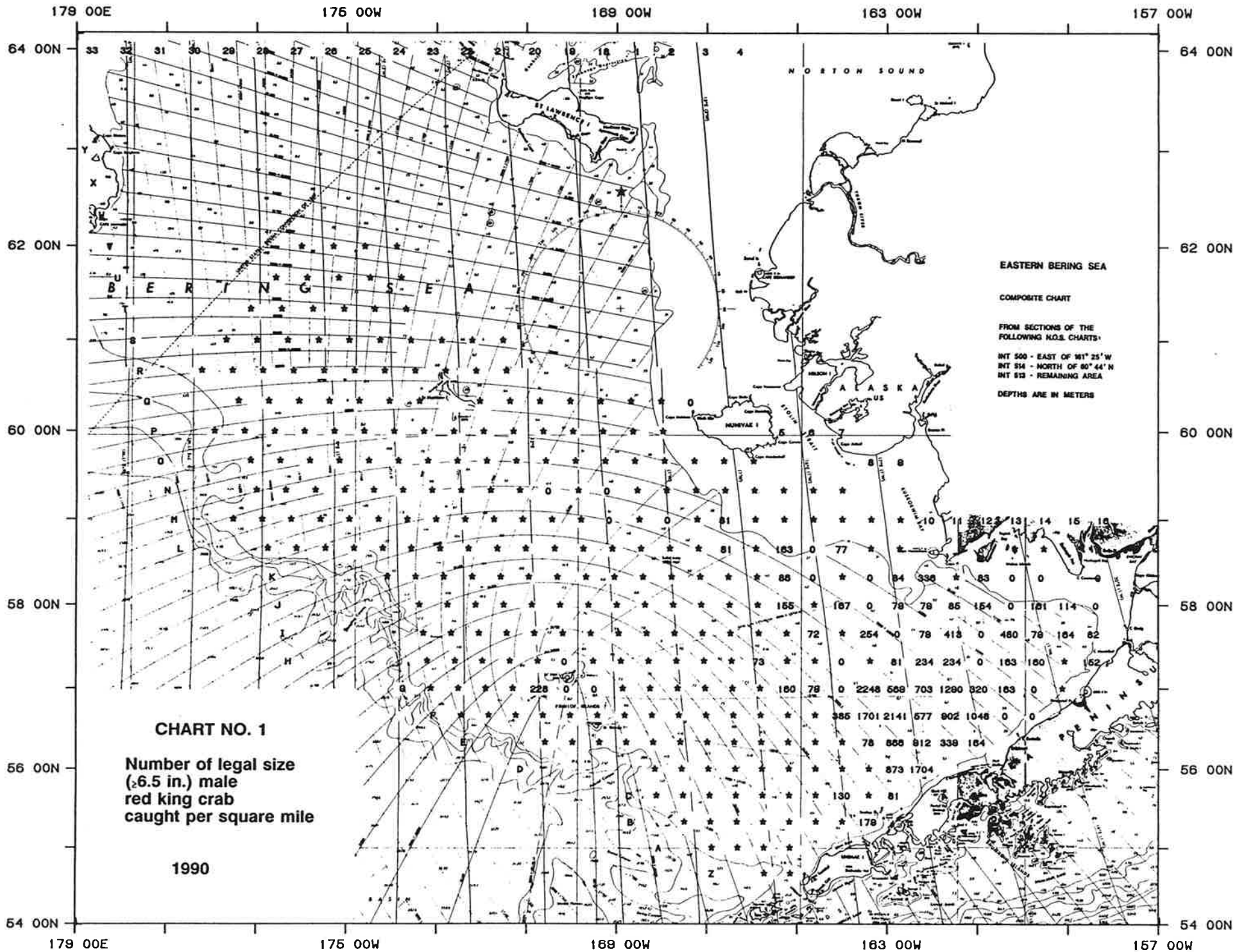
A reward of \$10.00 will be paid for all tags returned with complete information with the exception of 70 predetermined numbers. Of

these 70 tags, 40 will have a reward value of \$25.00, 20 a reward value of \$50.00 and 10 a reward value of \$100.00. Tags returned without the above information will have a reward value of \$1.00.

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

Acknowledgements

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



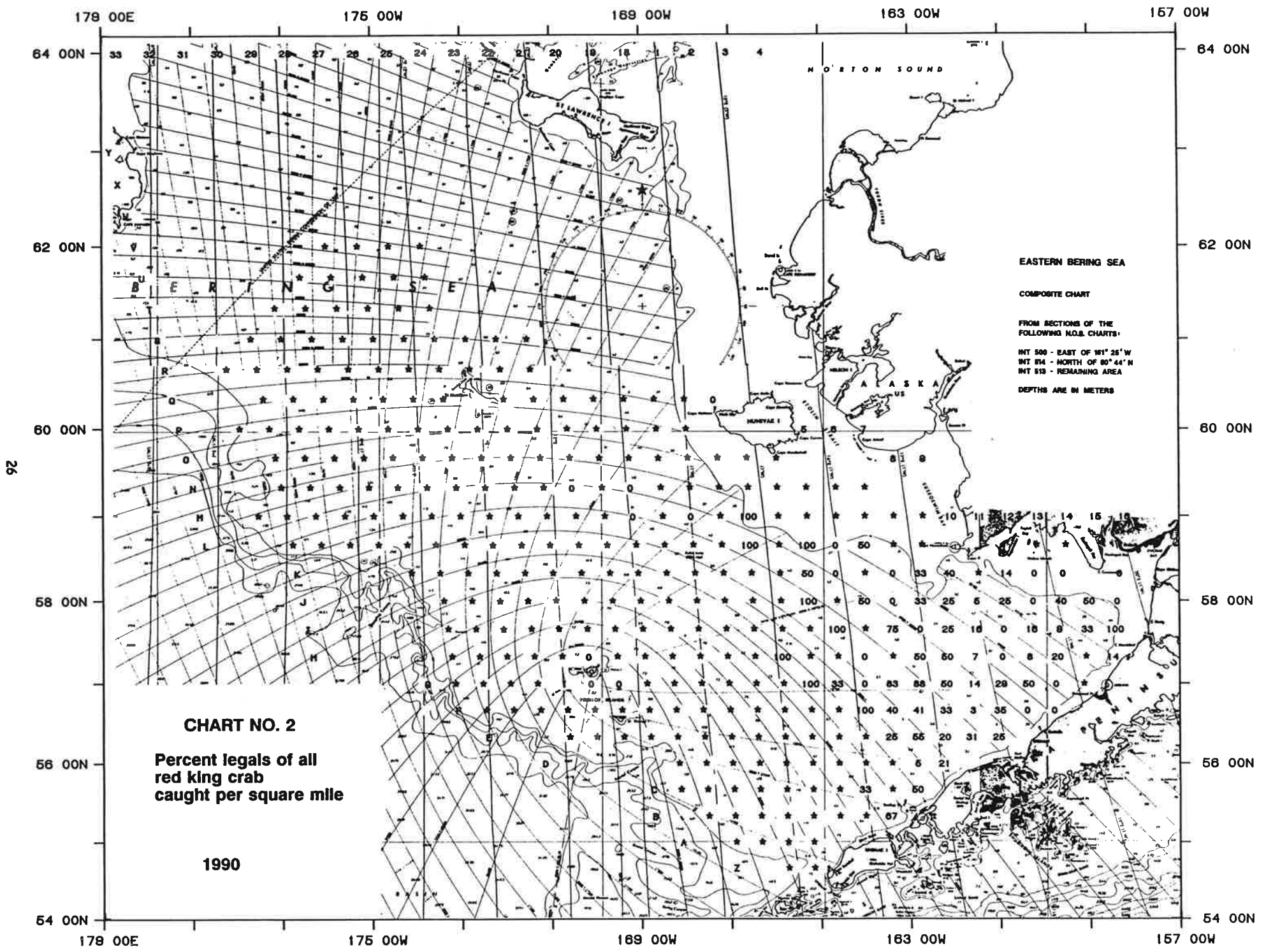


CHART NO. 2

**Percent legals of all
red king crab
caught per square mile**

1990

EASTERN BERING SEA

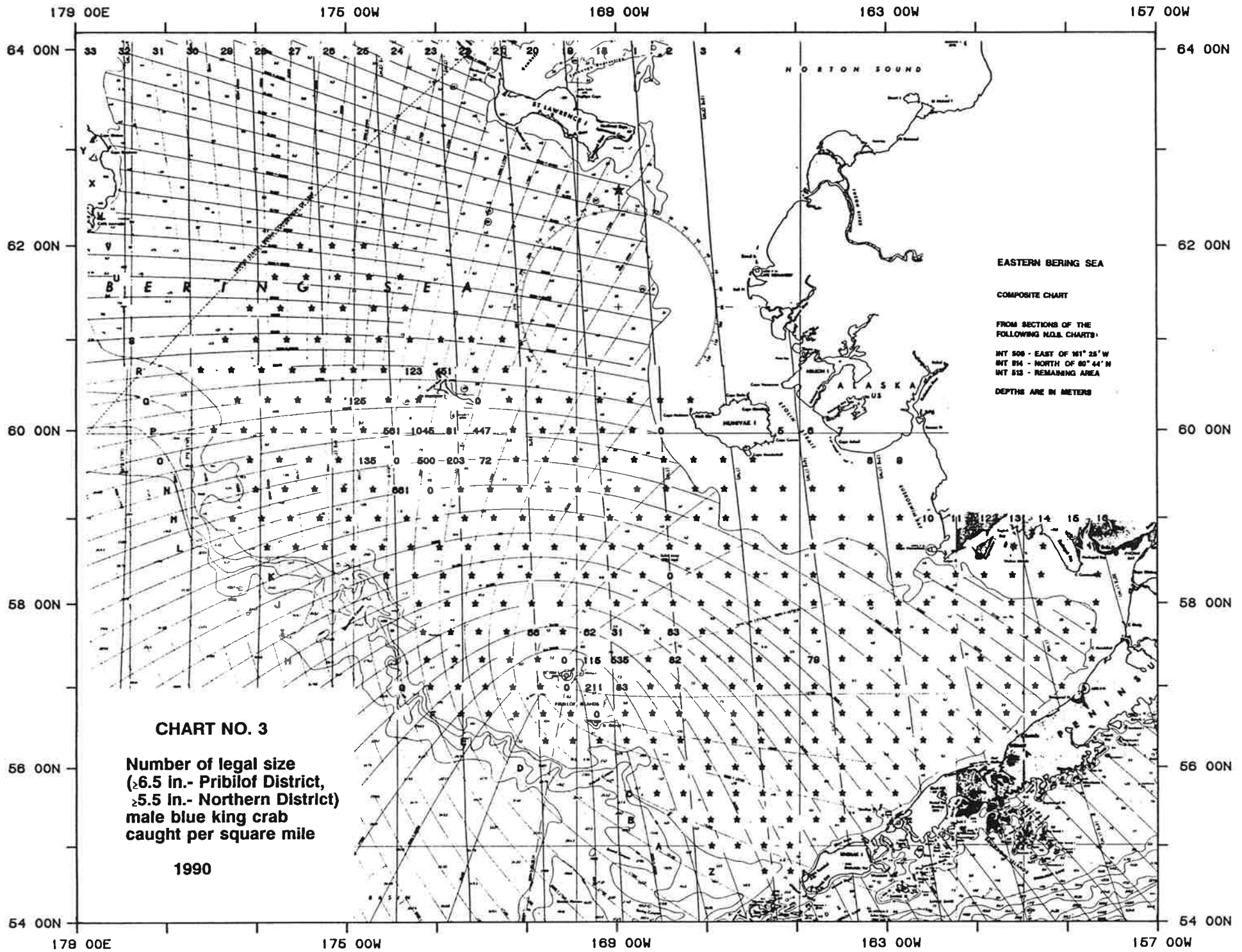
COMPOSITE CHART

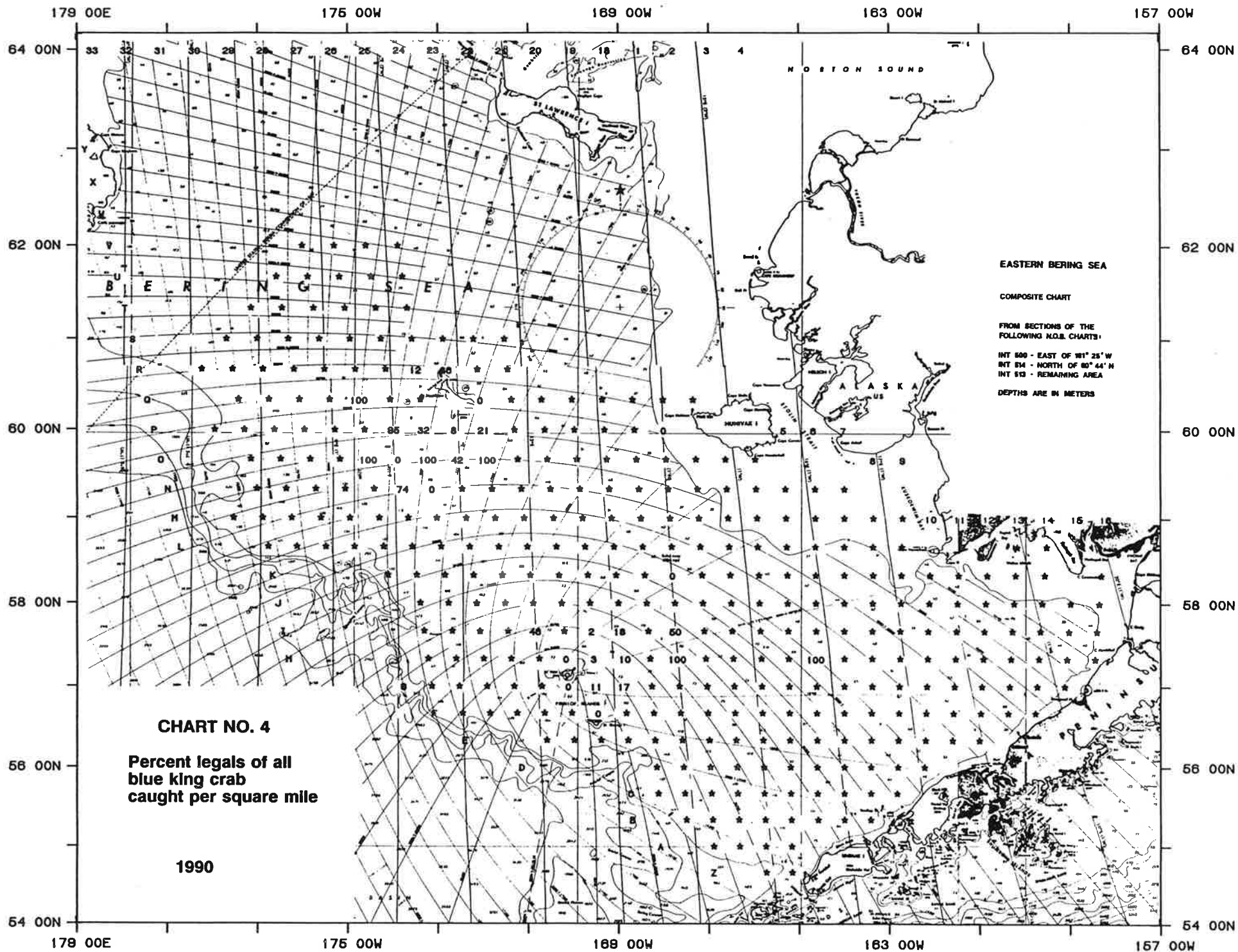
**FROM SECTIONS OF THE
FOLLOWING N.O.S. CHARTS:**

- INT 500 - EAST OF 161° 25' W
- INT 814 - NORTH OF 60° 44' N
- INT 818 - REMAINING AREA

DEPTHS ARE IN METERS

26





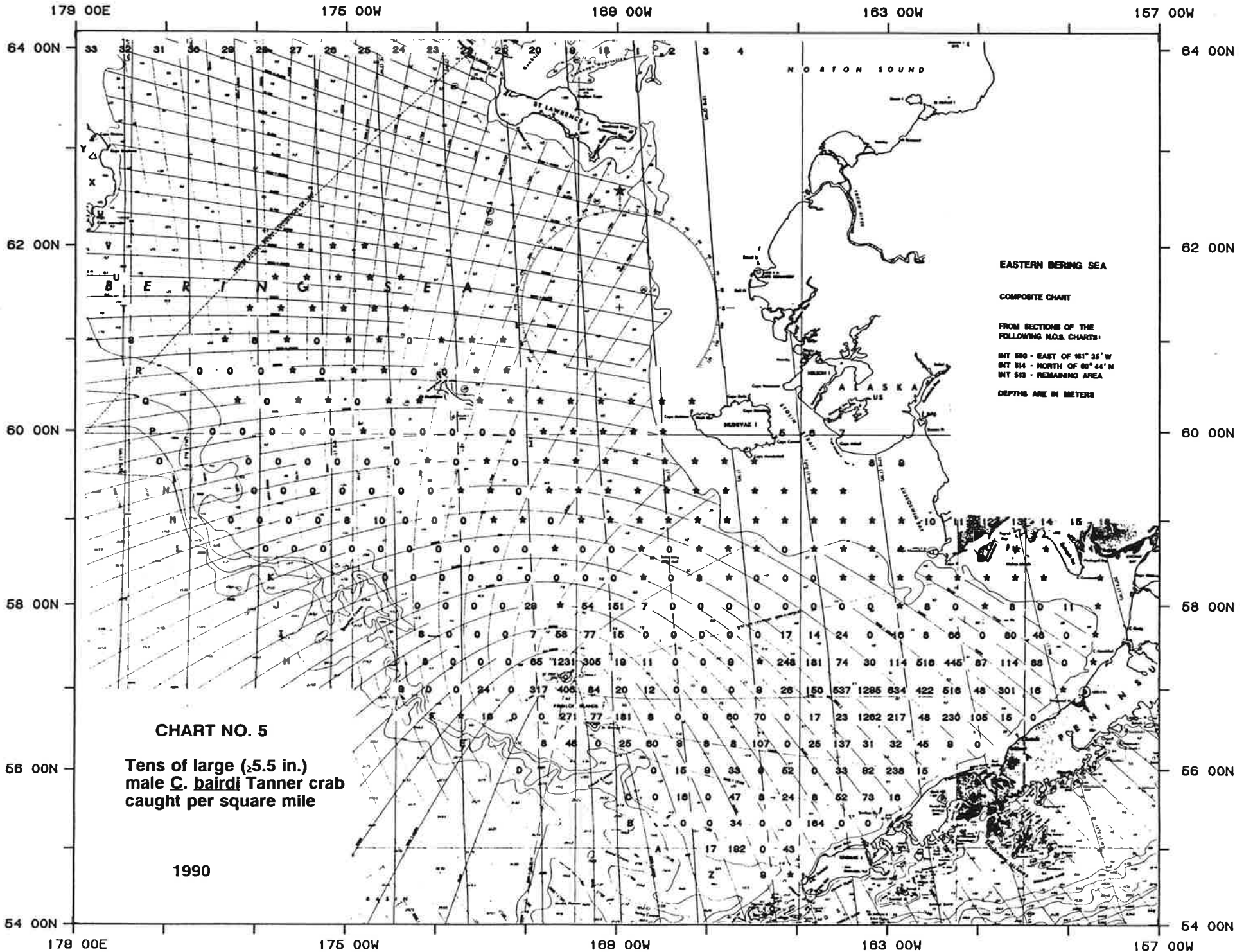


CHART NO. 5
Tens of large (>5.5 in.)
male *C. bairdi* Tanner crab
caught per square mile
1990

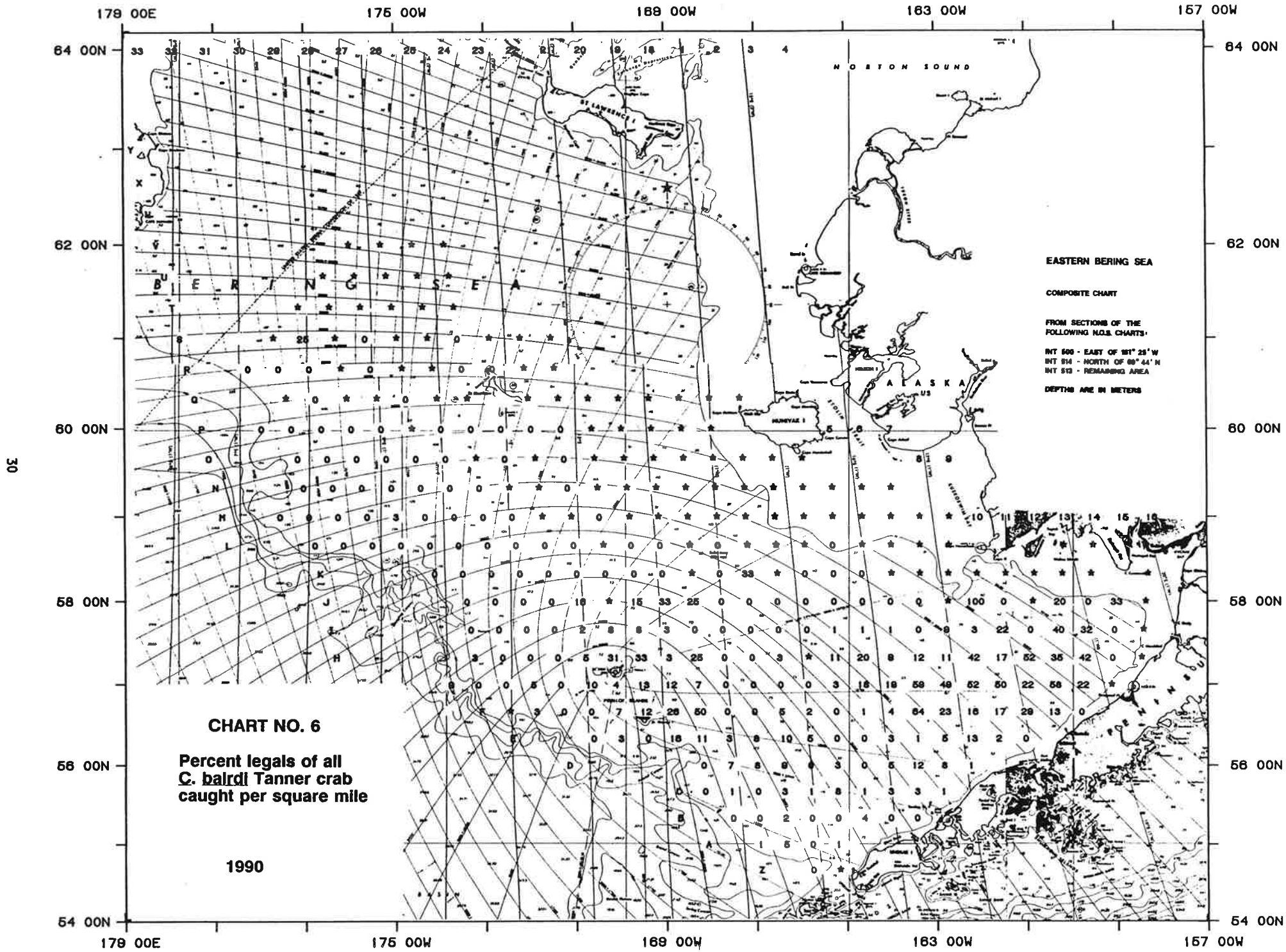
EASTERN BERING SEA

COMPOSITE CHART

FROM SECTIONS OF THE
FOLLOWING N.O.S. CHARTS:

INT 606 - EAST OF 161° 25' W
INT 614 - NORTH OF 60° 44' N
INT 512 - REMAINING AREA

DEPTHS ARE IN METERS



30

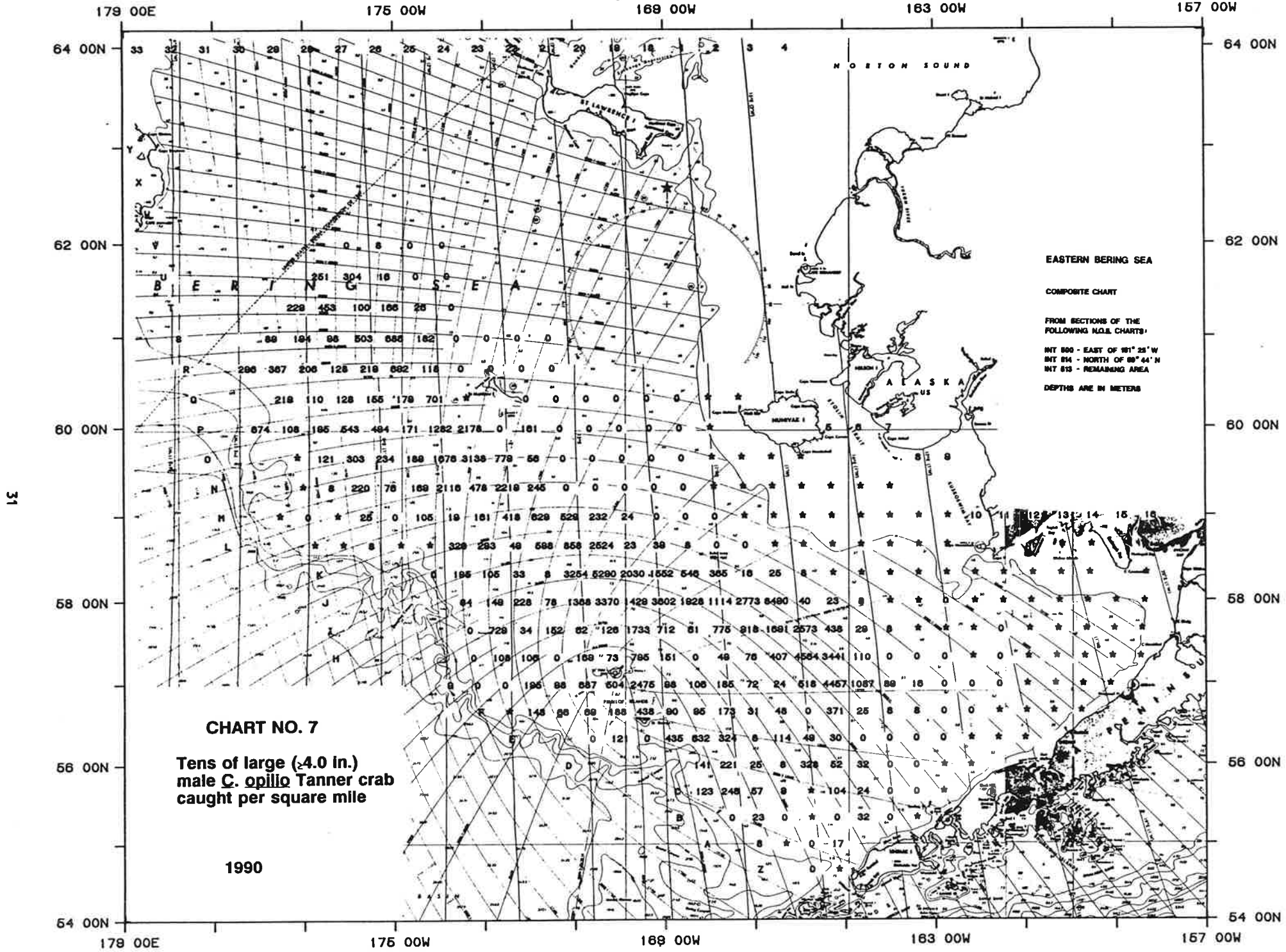


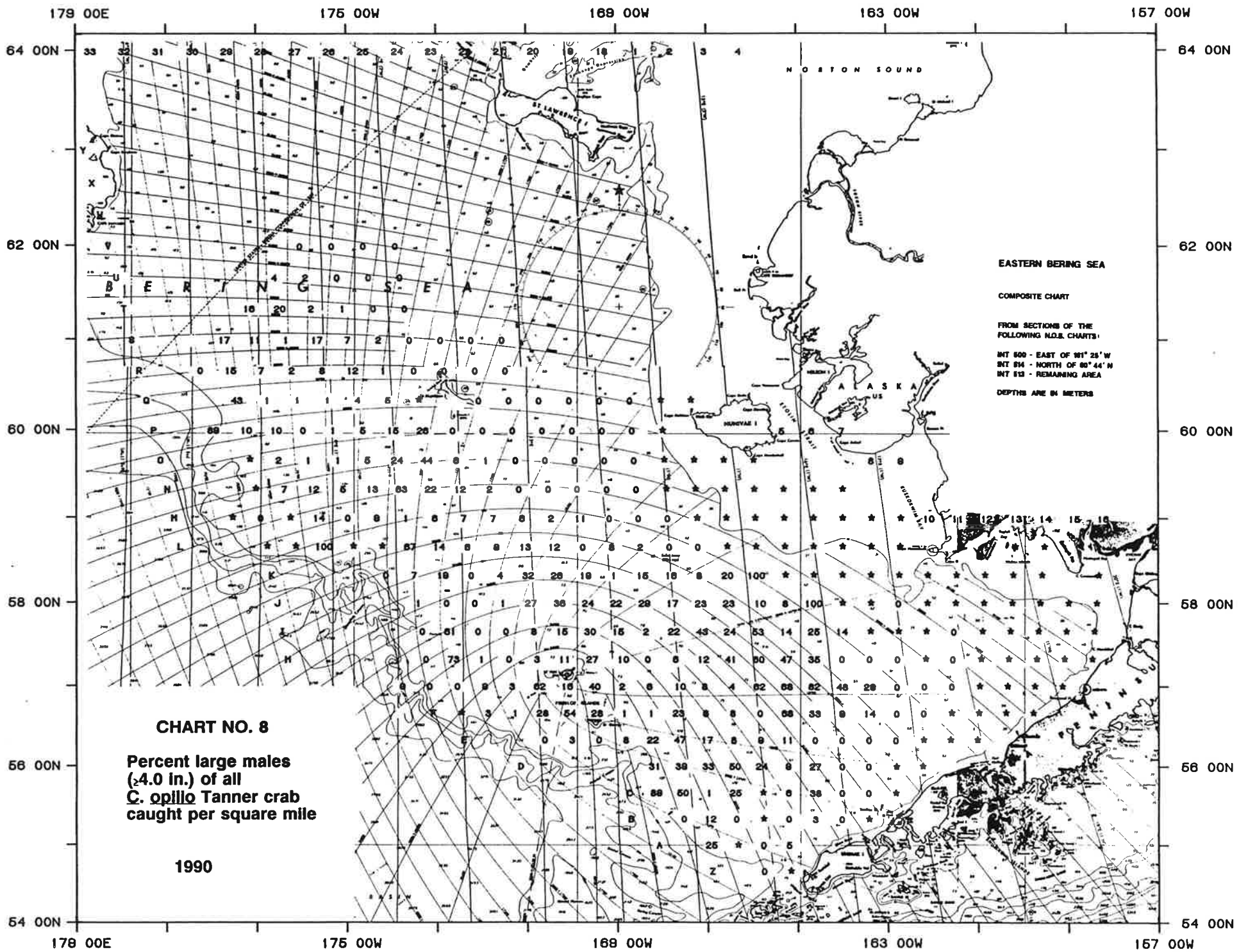
CHART NO. 7

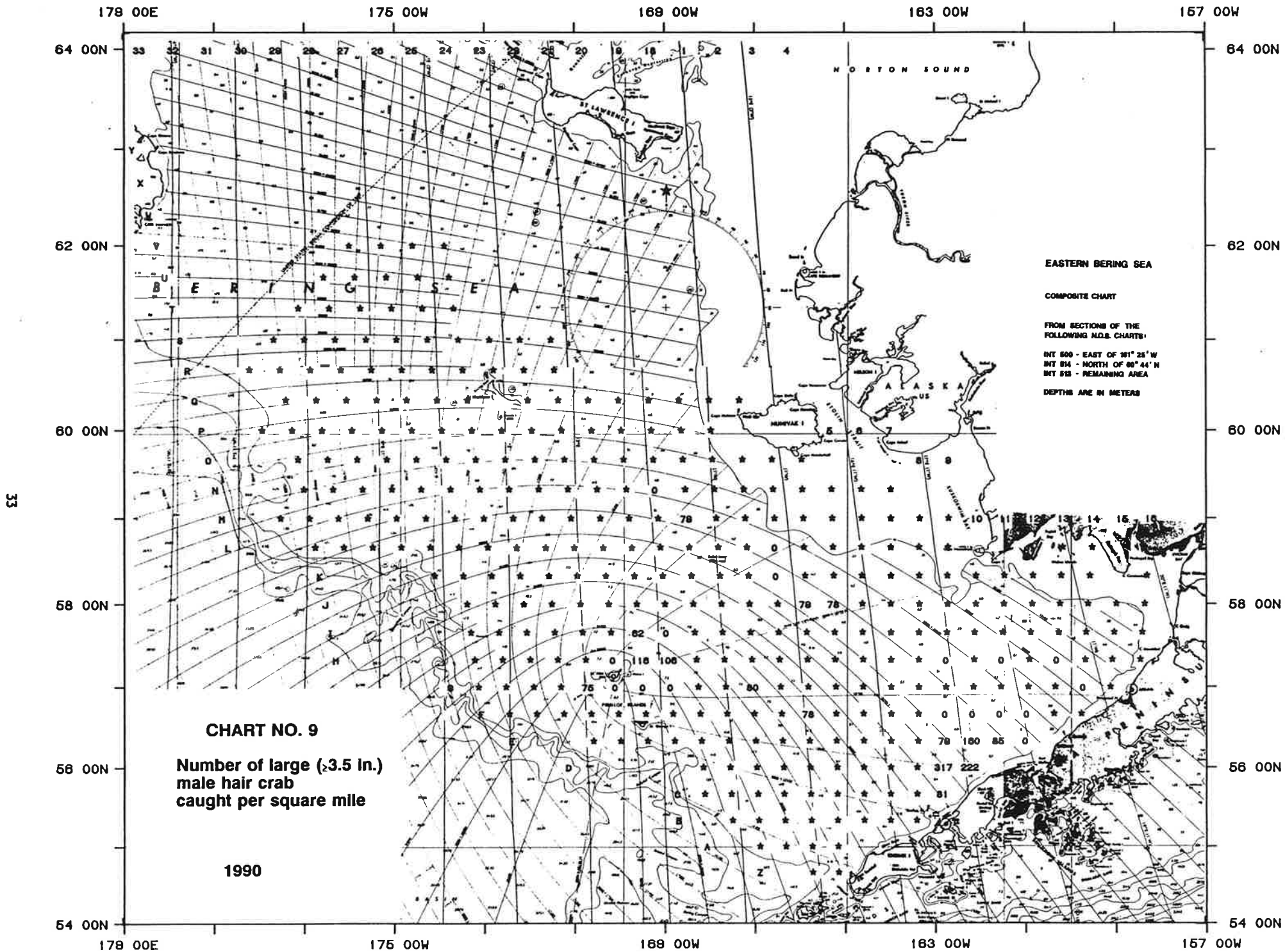
**Tens of large (≥ 4.0 in.)
male *C. opilio* Tanner crab
caught per square mile**

1990

EASTERN BERING SEA
COMPOSITE CHART
FROM SECTIONS OF THE
FOLLOWING N.O.E. CHARTS:
INT 800 - EAST OF 161° 25' W
INT 814 - NORTH OF 60° 44' N
INT 815 - REMAINING AREA
DEPTHS ARE IN METERS

31





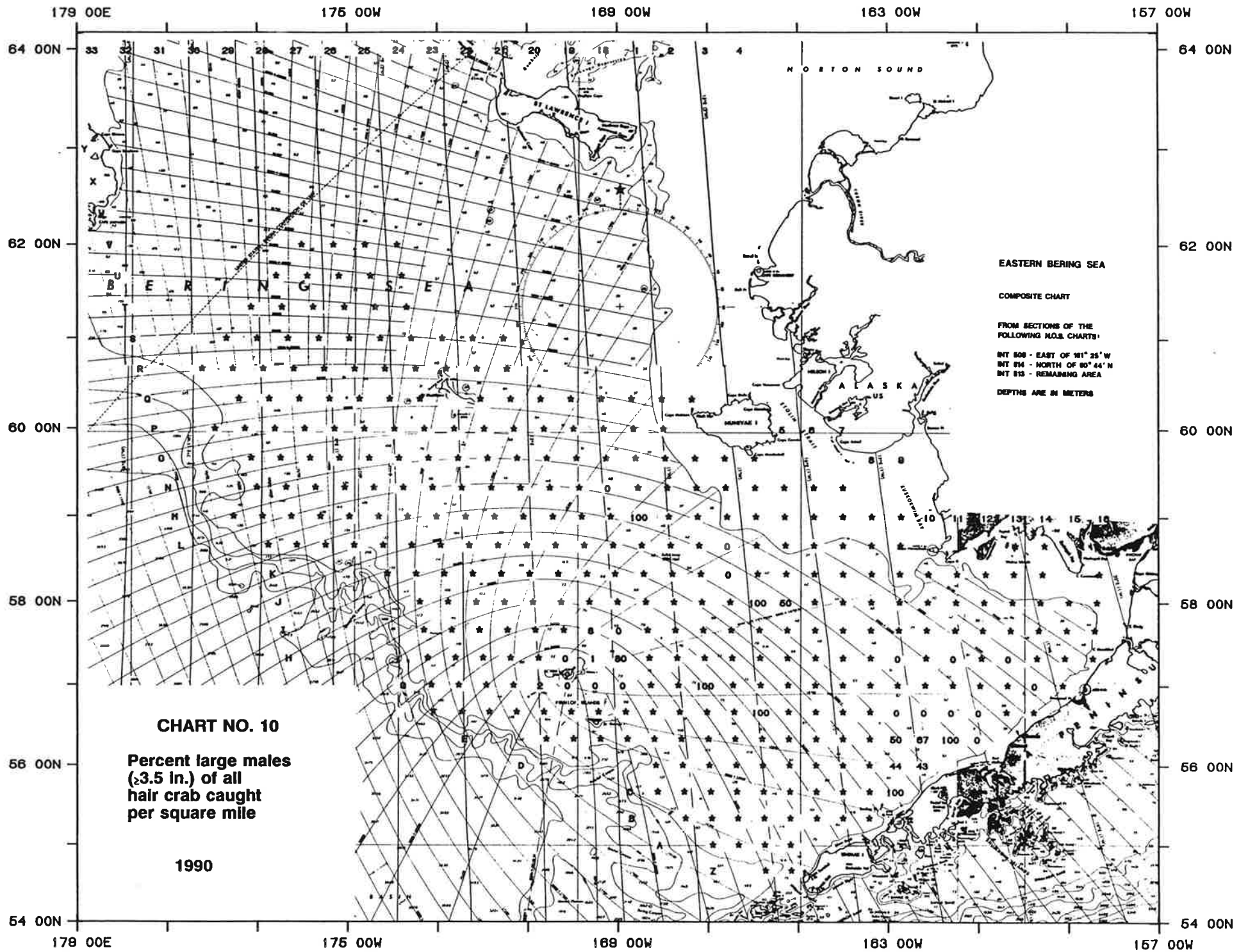


TABLE 7 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE RED KING CRAB WERE TAKEN

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	FEMALES	NUMBER PER SQUARE MILE					% LEGAL
								MALES (SEE NOTE)					
								SMALL	PRE- RECRUIT	LEGAL	TOTAL		
B08	6/11	55-24	163-28	Y34238 247455	35	3.9	0.0	0.0	0.0	268.0	268.0	100.0	
C07	6/17	55-40	164-00	Y34269 247664	51	3.1	0.0	0.0	0.0	390.0	390.0	100.0	
C09	6/10	55-40	162-47	Y34073 247192	25	4.3	81.0	0.0	0.0	81.0	162.0	50.0	
D09	6/10	56-00	162-48	Y33999 247204	42	2.7	16190.0	0.0	79.0	1429.0	17698.0	8.1	
D10	6/10	56-00	162-16	Y33915 246991	40		5704.0	74.0	148.0	2444.0	8371.0	29.2	
E08	6/14	56-20	163-24	Y34012 247440	46	2.6	156.0	0.0	78.0	78.0	312.0	25.0	
E09	6/10	56-19	162-48	Y33915 247199	43	2.1	0.0	79.0	236.0	1260.0	1575.0	80.0	
E10	6/10	56-20	162-13	Y33820 246969	45		2480.0	640.0	720.0	2400.0	6240.0	38.5	
E10	6/10	56-29	162-22	Y33799 247027	42		1633.0	68.0	272.0	1156.0	3130.0	36.9	
E11	6/07	56-20	161-30	Y33710 246685	36		424.0	85.0	254.0	339.0	1102.0	30.8	
E12	6/07	56-21	161-00	Y33631 246480	31		164.0	246.0	82.0	164.0	656.0	25.0	
F07	6/17	56-43	163-49	Y33968 247603	41	2.2	0.0	0.0	0.0	385.0	385.0	100.0	
F08	6/15	56-48	163-06	Y33823 247319	38		0.0	455.0	1364.0	4015.0	5833.0	68.8	
F08	6/15	56-40	163-24	Y33914 247436	41	2.0	83.0	167.0	667.0	1833.0	2750.0	66.7	
F09	6/10	56-30	162-58	Y33893 247270	43		413.0	0.0	0.0	248.0	661.0	37.5	
F09	6/10	56-40	162-45	Y33811 247181	39	2.3	1429.0	1008.0	1261.0	6134.0	9832.0	62.4	
F10	6/10	56-41	162-13	Y33719 246964	39		673.0	192.0	96.0	769.0	1731.0	44.4	
F11	6/07	56-40	161-30	Y33617 246678	47	2.7	19836.0	5000.0	328.0	1639.0	26803.0	6.1	
F12	6/07	56-40	160-59	Y33538 246471	37		806.0	887.0	81.0	1210.0	2983.0	40.6	
F13	6/06	56-40	160-22	Y33450 246218	32		77.0	0.0	77.0	154.0	308.0	50.0	
F14	6/06	56-41	159-48	Y33365 245995	20		160.0	0.0	0.0	80.0	240.0	33.3	
G05	6/20	57-00	165-12	Y34123 248155	38	2.0	0.0	0.0	0.0	160.0	160.0	100.0	
G06	6/20	56-58	164-35	Y34027 247913	39	4.0	0.0	0.0	0.0	236.0	236.0	100.0	
G07	6/17	57-03	163-59	Y33889 247666	37	2.2	0.0	0.0	0.0	81.0	81.0	100.0	
G08	6/17	56-59	163-33	Y33838 247493	37	2.5	0.0	0.0	155.0	2558.0	2713.0	94.3	
G09	6/10	57-00	162-46	Y33709 247180	32	3.0	81.0	0.0	0.0	569.0	650.0	87.5	
G10	6/09	56-59	162-09	Y33614 246933	33		313.0	0.0	78.0	1016.0	1407.0	72.2	
G11	6/07	56-59	161-32	Y33520 246686	36	2.6	4435.0	2339.0	323.0	1855.0	8951.0	20.7	
G12	6/08	57-00	160-56	Y33426 246443	35		640.0	80.0	0.0	400.0	1120.0	35.7	
G13	6/07	56-56	160-17	Y33355 246183	36	3.4	0.0	163.0	0.0	163.0	325.0	50.2	
G14	6/06	56-57	159-43	Y33275 245952	30		80.0	240.0	0.0	80.0	400.0	20.0	
G16	6/04	57-08	158-47	Y33093 245571	15	4.3	180.0	180.0	0.0	0.0	360.0	0.0	
G20	7/08	57-01	169-31	Y35010 249889	34	2.5	169.0	0.0	0.0	0.0	169.0	0.0	
G20	8/06	57-00	169-30	Y35009 249883	33	3.4	424.0	254.0	85.0	0.0	763.0	0.0	
G21	7/08	56-50	169-49	Y35095 249971	40		85.0	0.0	0.0	0.0	85.0	0.0	
G21	7/08	57-09	169-53	Y35049 250033	30		1016.0	1172.0	234.0	156.0	2579.0	6.0	
G22	7/07	57-08	170-29	X18654 Y35103	26	4.2	7594.0	5916.0	17520.0	2730.0	33760.0	8.1	
H04	6/26	57-20	165-49	Y34119 248393	37		0.0	0.0	0.0	73.0	73.0	100.0	
H07	6/17	57-21	163-55	Y33772 247633	33	2.8	74.0	0.0	0.0	0.0	74.0	0.0	
H09	6/09	57-20	162-46	Y33589 247167	25	3.1	81.0	0.0	0.0	81.0	162.0	50.0	
H10	6/09	57-20	162-09	Y33497 246922	28		156.0	0.0	0.0	313.0	469.0	66.7	
H11	6/08	57-20	161-31	Y33401 246669	30	2.9	2344.0	703.0	0.0	469.0	3516.0	13.3	
H12	6/08	57-23	160-55	Y33298 246429	34		472.0	394.0	79.0	79.0	1023.0	7.7	
H13	6/07	57-20	160-15	Y33221 246160	32	2.9	732.0	813.0	81.0	407.0	2033.0	20.0	
H14	6/06	57-20	159-40	Y33146 245923	31		320.0	240.0	80.0	160.0	800.0	20.0	
H16	6/04	57-21	158-24	Y32981 245414	18		455.0	227.0	76.0	303.0	1061.0	28.6	
H21	7/07	57-22	170-12	Y34968 250075	32	4.9	3077.0	1538.0	1077.0	77.0	5769.0	1.3	
I06	6/20	57-39	164-37	Y33774 247896	29	2.8	0.0	0.0	0.0	72.0	72.0	100.0	
I08	6/18	57-40	163-21	Y33557 247390	26	3.0	85.0	0.0	0.0	254.0	339.0	74.9	
I09	6/09	57-40	162-45	Y33464 247149	23	2.3	0.0	0.0	0.0	0.0	0.0	0.0	
I10	6/09	57-40	162-08	Y33372 246906	26		0.0	0.0	159.0	159.0	317.0	50.2	
I11	6/08	57-40	161-29	Y33278 246649	28	2.4	992.0	992.0	165.0	496.0	2645.0	18.8	
I12	6/08	57-42	160-52	Y33176 246399	31		80.0	0.0	0.0	0.0	80.0	0.0	
I13	6/06	57-40	160-15	Y33107 246157	27	2.6	1040.0	1120.0	160.0	720.0	3040.0	23.7	
I14	6/06	57-40	159-37	Y33023 245906	27		238.0	238.0	79.0	317.0	873.0	36.3	
I15	6/05	57-39	159-01	Y32954 245666	26	2.6	0.0	0.0	82.0	410.0	492.0	83.3	
I16	6/04	57-39	158-21	Y32874 245396	19		0.0	0.0	0.0	82.0	82.0	100.0	
J05	6/20	58-00	165-13	Y33722 248102	20	2.2	0.0	0.0	0.0	155.0	155.0	100.0	

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH

TABLE 7 DATA FROM THE 1990 BERING SEA TRAWL SURVEY WHERE RED KING CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE						
							FEMALES	SMALL	MALES (SEE NOTE)			TOTAL	% LEGAL
									PRE- RECRUIT	LEGAL			
J07	6/18	57-59	164-00	Y33529 Z47627	24	2.6	167.0	0.0	0.0	167.0	334.0	50.0	
J08	6/18	57-57	163-22	Y33439 Z47379	24	3.0	0.0	71.0	0.0	0.0	71.0	0.0	
J09	6/09	58-00	162-45	Y33325 Z47133	22	1.9	0.0	0.0	0.0	236.0	236.0	100.0	
J10	6/09	58-00	162-06	Y33233 Z46880	21		159.0	79.0	0.0	79.0	318.0	24.8	
J11	6/08	57-59	161-28	Y33151 Z46631	29	3.1	940.0	427.0	85.0	427.0	1880.0	22.7	
J12	6/08	58-02	160-51	Y33048 Z46388	24		0.0	231.0	154.0	231.0	615.0	37.6	
J13	6/06	57-59	160-11	Y32978 Z46126	26	2.4	902.0	410.0	0.0	82.0	1394.0	5.9	
J14	6/05	58-00	159-38	Y32909 Z45914	23		81.0	161.0	0.0	161.0	404.0	39.9	
J15	6/05	57-57	158-58	Y32843 Z45647	20	3.3	0.0	0.0	114.0	114.0	227.0	50.2	
J16	6/04	57-59	158-19	Y32761 Z45392	19		2149.0	1570.0	0.0	83.0	3802.0	2.2	
K05	6/20	58-19	165-15	Y33573 Z48078	24	2.9	86.0	0.0	0.0	86.0	172.0	50.0	
K06	6/20	58-18	164-37	Y33480 Z47839	25		0.0	79.0	0.0	0.0	79.0	0.0	
K08	6/18	58-20	163-22	Y33277 Z47356	20	4.0	0.0	0.0	75.0	75.0	150.0	50.0	
K09	6/09	58-20	162-42	Y33178 Z47099	17	3.2	168.0	0.0	0.0	84.0	252.0	33.3	
K10	6/09	58-15	162-03	Y33123 Z46851	26		0.0	168.0	84.0	588.0	840.0	70.0	
K12	6/08	58-16	160-51	Y32954 Z46384	17		331.0	0.0	0.0	248.0	579.0	42.8	
K13	6/06	58-14	160-10	Y32882 Z46120	16	4.3	135.0	135.0	0.0	270.0	540.0	50.0	
K14	6/05	58-15	159-27	Y32792 Z45843	16		0.0	0.0	0.0	0.0	0.0	0.0	
K16	6/05	58-19	158-16	Y32635 Z45388	12		110.0	220.0	0.0	0.0	330.0	0.0	
L03	6/27	58-39	166-33	Y33604 Z48501	22	3.6	0.0	0.0	0.0	81.0	81.0	100.0	
L05	6/19	58-40	165-16	Y33390 Z48032	20	3.7	0.0	0.0	0.0	163.0	163.0	100.0	
L06	6/19	58-40	164-38	Y33296 Z47803	20		0.0	0.0	0.0	74.0	74.0	100.0	
L07	6/18	58-39	164-00	Y33214 Z47569	17	3.9	0.0	0.0	0.0	154.0	154.0	100.0	
M01	6/29	59-00	167-53	Y33566 Z48852	21	3.6	81.0	81.0	0.0	81.0	244.0	33.2	
M03	6/27	58-59	166-34	Y33401 Z48434	17	10.8	0.0	0.0	0.0	81.0	81.0	100.0	
M19	7/04	59-00	169-10	Y33707 Z49210	28	1.3	81.0	0.0	81.0	0.0	162.0	0.0	
N19	7/04	59-19	169-13	Y33481 Z49117	20		81.0	0.0	0.0	0.0	81.0	0.0	
N21	7/05	59-20	170-32	Y33534 Z49378	36	-1.1	81.0	0.0	0.0	0.0	81.0	0.0	
Q02	6/28	60-18	167-21	Y32602 Z48358	16	5.5	132.0	0.0	0.0	0.0	132.0	0.0	
Q18	7/04	60-19	168-42	Y32714 Z48688	20	5.5	0.0	0.0	0.0	143.0	143.0	100.0	

NOTE: PRE-RECRUIT = 5.2-6.5 IN. WIDTH; LEGAL = 6.5 IN. OR GREATER IN WIDTH

TABLE 8 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BLUE KING CRAB WERE TAKEN

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					
							FEMALES	MALES (SEE NOTE)				% LEGAL
								SMALL	PRE- RECRUIT	LEGAL	TOTAL	
F20	7/02	56-49	169-15	Y34996 249770	44	2.7	0.0	0.0	85.0	0.0	85.0	0.0
G19	8/06	57-00	168-52	Y34867 249630	43	3.0	0.0	0.0	417.0	83.0	500.0	16.6
G20	7/02	57-09	169-17	Y34914 249796	39		1484.0	0.0	625.0	547.0	2656.0	20.6
G20	7/08	57-01	169-31	Y35010 249889	34	2.5	847.0	254.0	0.0	85.0	1186.0	7.2
G20	8/06	57-00	169-30	Y35009 249883	33	3.4	1610.0	0.0	85.0	0.0	1695.0	0.0
G21	7/08	57-09	169-53	Y35049 250033	30		1328.0	781.0	0.0	0.0	2109.0	0.0
G21	7/08	56-50	169-49	Y35095 249971	40		169.0	0.0	169.0	0.0	338.0	0.0
G21	7/08	56-56	170-09	X18669 250094	42	3.6	0.0	0.0	83.0	0.0	83.0	0.0
H01	6/30	57-20	167-43	Y34502 249154	39	2.3	0.0	0.0	0.0	82.0	82.0	100.0
H06	6/20	57-17	164-37	Y33920 247911	36	2.1	0.0	0.0	0.0	79.0	79.0	100.0
H19	7/02	57-20	169-00	Y34768 249659	38	2.2	4634.0	2439.0	5122.0	1220.0	13414.0	9.1
H19	8/06	57-11	168-41	Y34768 249555	42	3.3	0.0	0.0	313.0	313.0	625.0	50.1
H19	8/06	57-20	168-59	X18750 Y34769	40	3.3	222.0	148.0	963.0	74.0	1407.0	5.3
H20	7/07	57-19	169-37	Y34915 249904	34	2.6	303.0	0.0	0.0	0.0	303.0	0.0
H20	8/06	57-11	169-19	Y34908 249803	39	2.9	5398.0	1593.0	1239.0	177.0	8407.0	2.1
H20	8/06	57-20	169-34	X18748 Y34893	33	2.0	2119.0	1525.0	0.0	169.0	3814.0	4.4
H21	7/07	57-22	170-12	Y34968 250075	32	4.9	308.0	0.0	0.0	0.0	308.0	0.0
I01	6/29	57-40	167-45	Y34353 249123	37	2.0	83.0	0.0	0.0	83.0	166.0	50.0
I19	7/03	57-40	169-01	Y34603 249603	37	1.7	0.0	156.0	0.0	0.0	156.0	0.0
I19	8/06	57-30	168-47	X18748 Y34642	39	3.2	0.0	171.0	0.0	0.0	171.0	0.0
I19	8/06	57-39	169-02	X18732 Y34615	37	3.1	0.0	0.0	93.0	93.0	187.0	49.7
I20	7/02	57-30	169-19	Y34754 249752	37		8519.0	3580.0	741.0	247.0	13087.0	1.9
I20	8/06	57-30	169-22	X18738 Y34765	38	2.5	1714.0	667.0	95.0	0.0	2476.0	0.0
I20	8/06	57-39	169-40	X18699 Y34716	38	1.9	0.0	0.0	90.0	0.0	90.0	0.0
I20	7/06	57-40	169-40	Y34703 249817	39	1.5	81.0	0.0	0.0	0.0	81.0	0.0
I22	7/09	57-40	170-54	X18454 Y34733	47	2.5	0.0	152.0	0.0	0.0	152.0	0.0
I22	7/06	57-31	170-33	Y34865 250071	39	1.9	0.0	0.0	0.0	132.0	132.0	100.0
K01	6/29	58-20	167-49	Y33987 249008	32	1.2	0.0	0.0	87.0	0.0	87.0	0.0
N25	7/13	59-20	173-10	X17598 Y33526	57	0.3	0.0	0.0	125.0	0.0	125.0	0.0
N26	7/13	59-29	173-29	X17499 Y33414	56		0.0	83.0	248.0	1322.0	1653.0	80.0
N26	7/24	59-21	173-48	X17423 Y33491	62	1.5	0.0	0.0	145.0	0.0	145.0	0.0
O23	7/10	59-39	171-54	X17872 Y33337	42	-1.5	0.0	0.0	0.0	72.0	72.0	100.0
O24	7/13	59-47	172-51	X17631 249535	45	-0.9	80.0	240.0	240.0	320.0	880.0	36.4
O24	7/13	59-30	172-47	X17679 249620	52	-0.3	0.0	0.0	0.0	86.0	86.0	100.0
O25	7/12	59-40	173-15	X17546 Y33303	51	0.9	0.0	0.0	0.0	500.0	500.0	100.0
O26	7/24	59-41	173-53	X17379 Y33275	58	0.7	0.0	0.0	0.0	0.0	115.0	0.0
O27	7/24	59-39	174-26	X17232 Y33282	63	1.5	0.0	0.0	0.0	135.0	135.0	100.0
P01	6/28	60-00	167-58	Y32873 248597	12		0.0	91.0	0.0	0.0	91.0	0.0
P23	7/11	59-50	172-13	X17772 Y33208	41	-1.5	92.0	92.0	0.0	0.0	184.0	0.0
P23	7/11	60-10	172-19	X17706 Y32977	31		1341.0	3049.0	488.0	1341.0	6219.0	21.6
P23	7/11	59-58	171-58	X17807 Y33107	36	-1.4	0.0	123.0	0.0	0.0	123.0	0.0
P24	7/12	59-59	172-40	X17653 249455	37	-0.6	244.0	650.0	0.0	81.0	976.0	8.3
P25	7/12	60-10	173-03	X17545 249442	33	0.4	870.0	1739.0	1130.0	696.0	4435.0	15.7
P25	7/12	59-50	173-34	X17451 Y33194	51		0.0	0.0	738.0	1393.0	2131.0	65.4
P26	7/24	60-09	174-20	X17235 Y32979	55	-0.3	0.0	0.0	0.0	462.0	462.0	100.0
P26	7/24	59-50	174-10	X17297 Y33180	59	0.7	0.0	0.0	0.0	328.0	328.0	100.0
P26	7/24	60-01	173-57	X17342 Y33068	54	-0.5	0.0	0.0	81.0	894.0	976.0	91.6
Q23	7/11	60-19	172-03	X17745 Y32870	32	-1.1	122.0	366.0	0.0	0.0	488.0	0.0
Q27	7/25	60-21	174-42	X17137 Y32850	56	-0.1	0.0	0.0	0.0	125.0	125.0	100.0
R24	7/12	60-41	172-47	X17549 249262	26	2.5	0.0	0.0	75.0	451.0	526.0	85.7
R25	7/12	60-39	173-26	X17411 Y32664	35	-1.0	247.0	247.0	370.0	123.0	988.0	12.4
T26	7/28	61-20	174-16	X17182 Y32236	43	-1.5	83.0	0.0	0.0	0.0	83.0	0.0

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

TABLE 9 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	FEMALES	NUMBER PER SQUARE MILE				% LEGAL
								SMALL	MALES (SEE NOTE)			
									PRE- RECRUIT	LEGAL	TOTAL	
A02	7/01	55-00	166-56	Y34824 Z48682	87	3.5	8099.0	13719.0	331.0	165.0	22314.0	0.7
A03	6/25	55-00	166-19	Y34737 Z48471	78	3.4	26878.0	11716.0	1704.0	1917.0	42215.0	4.5
A04	6/25	55-01	165-43	Y34646 Z48262	71		15186.0	6452.0	161.0	0.0	21799.0	0.0
A05	6/22	55-00	165-06	Y34558 Z48041	69	4.4	18376.0	25043.0	1111.0	427.0	44957.0	0.9
B01	7/01	55-20	167-32	Y34878 Z48930	83	3.5	10488.0	8618.0	325.0	0.0	19431.0	0.0
B02	7/01	55-17	166-58	Y34800 Z48730	79	3.5	1742.0	3182.0	455.0	0.0	5378.0	0.0
B03	6/25	55-20	166-20	Y34701 Z48516	72	3.5	9076.0	9412.0	1092.0	336.0	19916.0	1.7
B04	6/25	55-20	165-46	Y34614 Z48312	67		8537.0	7317.0	325.0	0.0	16179.0	0.0
B05	6/22	55-20	165-09	Y34517 Z48087	60	3.9	3467.0	2533.0	133.0	0.0	6134.0	0.0
B06	6/22	55-20	164-37	Y34433 Z47888	57	3.6	33280.0	4045.0	5182.0	1643.0	44151.0	3.7
B07	6/17	55-19	164-00	Y34335 Z47651	41	4.9	7033.0	21313.0	2238.0	0.0	30584.0	0.0
B08	6/11	55-24	163-28	Y34238 Z47455	35	3.9	37240.0	36213.0	1869.0	0.0	75322.0	0.0
C01	7/10	55-40	167-34	Y34854 Z48996	74	3.7	8480.0	5040.0	560.0	160.0	14240.0	1.1
C02	6/30	55-40	166-58	Y34758 Z48785	75	3.6	0.0	407.0	163.0	0.0	569.0	0.0
C03	6/25	55-39	166-23	Y34666 Z48570	68	3.8	4811.0	7830.0	849.0	472.0	13962.0	3.4
C04	6/25	55-39	165-48	Y34569 Z48353	65		3252.0	4715.0	163.0	81.0	8211.0	1.0
C05	6/22	55-40	165-09	Y34458 Z48110	58	3.9	1280.0	400.0	1040.0	240.0	2960.0	8.1
C06	6/22	55-39	164-35	Y34366 Z47889	53	3.4	4480.0	1840.0	80.0	80.0	6560.0	1.2
C07	6/17	55-40	164-00	Y34269 Z47664	51	3.1	13247.0	3896.0	1039.0	519.0	18702.0	2.8
C08	6/14	55-40	163-24	Y34170 Z47431	47	3.0	10367.0	6972.0	4495.0	734.0	22569.0	3.3
C09	6/10	55-40	162-47	Y34073 Z47192	25	4.3	9512.0	18511.0	1057.0	163.0	29243.0	0.6
C18	7/01	55-39	168-09	Y34938 Z49187	76	3.8	308.0	385.0	77.0	0.0	770.0	0.0
D01	6/30	56-00	167-36	Y34817 Z49053	72	3.6	840.0	763.0	458.0	153.0	2214.0	6.9
D02	6/30	56-01	167-00	Y34712 Z48831	75	3.7	169.0	678.0	85.0	85.0	1016.0	8.4
D03	6/25	55-59	166-24	Y34614 Z48606	67		1167.0	1167.0	917.0	333.0	3584.0	9.3
D04	6/25	55-59	165-46	Y34504 Z48364	60		4688.0	781.0	1250.0	0.0	6719.0	0.0
D05	6/22	56-00	165-12	Y34401 Z48143	51	3.2	16750.0	1810.0	1034.0	517.0	20112.0	2.6
D06	6/22	55-58	164-35	Y34300 Z47906	52	2.6	8065.0	5806.0	242.0	0.0	14113.0	0.0
D07	6/17	56-00	164-00	Y34196 Z47672	49	2.9	3415.0	1220.0	1301.0	325.0	6261.0	5.2
D08	6/14	56-00	163-24	Y34094 Z47437	49	3.0	2857.0	2941.0	1261.0	924.0	7983.0	11.6
D09	6/10	56-00	162-48	Y33999 Z47204	42	2.7	6905.0	10862.0	11202.0	2376.0	31345.0	7.6
D10	6/10	56-00	162-16	Y33915 Z46991	40		5259.0	11185.0	4667.0	148.0	21259.0	0.7
D18	7/01	56-00	168-12	Y34915 Z49263	82	3.6	2813.0	1641.0	234.0	0.0	4688.0	0.0
E01	6/30	56-19	167-36	Y34767 Z49093	71	3.5	1081.0	1802.0	360.0	90.0	3333.0	2.7
E02	6/30	56-20	167-01	Y34658 Z48871	63	3.6	551.0	394.0	0.0	79.0	1023.0	7.7
E03	6/26	56-19	166-24	Y34543 Z48625	56	3.3	81.0	244.0	407.0	81.0	813.0	10.0
E04	6/26	56-21	165-46	Y34421 Z48382	51		14450.0	3279.0	2623.0	1066.0	21417.0	5.0
E05	6/22	56-20	165-12	Y34320 Z48155	47	2.4	10301.0	7881.0	827.0	0.0	19009.0	0.0
E06	6/22	56-19	164-35	Y34216 Z47913	49	2.7	44381.0	35458.0	1250.0	250.0	81339.0	0.3
E07	6/17	56-19	164-00	Y34114 Z47677	47	2.9	45117.0	1624.0	3333.0	1368.0	51442.0	2.7
E08	6/14	56-20	163-24	Y34012 Z47440	46	2.6	11450.0	10156.0	703.0	313.0	22622.0	1.4
E09	6/10	56-19	162-48	Y33915 Z47199	43	2.1	3701.0	1811.0	709.0	315.0	6536.0	4.8
E10	6/10	56-20	162-13	Y33820 Z46969	45		1600.0	2320.0	1040.0	560.0	5520.0	10.1
E10	6/10	56-29	162-22	Y33799 Z47027	42		68.0	408.0	544.0	340.0	1361.0	25.0
E11	6/07	56-20	161-30	Y33710 Z46685	36		847.0	1695.0	1525.0	85.0	4152.0	2.0
E12	6/07	56-21	161-00	Y33631 Z46480	31		246.0	574.0	574.0	0.0	1394.0	0.0
E18	7/01	56-19	168-15	Y34886 Z49331	85	3.6	1624.0	1624.0	1368.0	598.0	5214.0	11.5
E19	7/01	56-20	168-51	Y34985 Z49546	20	3.7	248.0	165.0	909.0	248.0	1570.0	15.8
E20	7/08	56-25	169-31	Y35075 Z49778	61		3188.0	3188.0	435.0	0.0	6811.0	0.0
E21	7/08	56-21	170-04	X18411 Z49904	58	3.6	6145.0	6506.0	1807.0	482.0	14940.0	3.2
E22	7/08	56-20	170-40	X18270 Z50009	65	4.0	11546.0	17802.0	238.0	79.0	29665.0	0.3
F01	6/30	56-40	167-39	Y34702 Z49138	55	3.2	0.0	0.0	123.0	0.0	123.0	0.0
F02	6/30	56-41	167-04	Y34585 Z48907	53	2.9	1240.0	930.0	465.0	0.0	2635.0	0.0
F03	6/26	56-39	166-26	Y34467 Z48652	46	1.9	6145.0	2530.0	2771.0	602.0	12049.0	5.0
F04	6/26	56-39	165-49	Y34349 Z48406	43		23613.0	3438.0	3125.0	703.0	30879.0	2.3
F05	6/22	56-40	165-13	Y34233 Z48172	41	2.1	5431.0	5690.0	1724.0	0.0	12845.0	0.0
F06	6/22	56-38	164-35	Y34131 Z47917	42	2.2	13593.0	17965.0	1261.0	168.0	32987.0	0.5
F07	6/17	56-43	163-49	Y33968 Z47603	41	2.2	1846.0	2000.0	1692.0	231.0	5769.0	4.0

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

TABLE 9 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					% LEGAL	
							FEMALES	SMALL	MALES (SEE NOTE)				TOTAL
									PRE- RECRUIT	LEGAL	TOTAL		
F08	6/15	56-48	163-06	Y33823 247319	38		1818.0	818.0	6055.0	23236.0	31927.0	72.8	
F08	6/15	56-40	163-24	Y33914 247436	41	2.0	1833.0	2500.0	1333.0	2000.0	7666.0	26.1	
F09	6/10	56-30	162-58	Y33893 247270	43		9917.0	331.0	1653.0	2397.0	14297.0	16.8	
F09	6/10	56-40	162-45	Y33811 247181	39	2.3	1008.0	1176.0	756.0	1933.0	4874.0	39.7	
F10	6/10	56-41	162-13	Y33719 246964	39		288.0	1154.0	1154.0	481.0	3076.0	15.6	
F11	6/07	56-40	161-30	Y33617 246678	47	2.7	9836.0	410.0	656.0	2295.0	13197.0	17.4	
F12	6/07	56-40	160-59	Y33538 246471	37		484.0	1048.0	1048.0	1048.0	3629.0	28.9	
F13	6/06	56-40	160-22	Y33450 246218	32		154.0	538.0	308.0	154.0	1154.0	13.3	
F14	6/06	56-41	159-48	Y33365 245995	20		0.0	80.0	0.0	0.0	80.0	0.0	
F18	7/02	56-39	168-17	Y34834 249381	59	3.4	0.0	79.0	0.0	79.0	159.0	49.7	
F19	7/02	56-39	168-53	Y34952 249611	55	3.0	0.0	1129.0	4063.0	1806.0	6997.0	25.8	
F20	7/02	56-49	169-15	Y34996 249770	44	2.7	2288.0	424.0	508.0	1271.0	4491.0	28.3	
F20	7/08	56-42	169-30	Y35055 249838	42	4.5	779.0	3896.0	3117.0	260.0	8052.0	3.2	
F21	7/08	56-40	170-10	X18539 250019	53	3.5	18734.0	17410.0	2035.0	2713.0	40892.0	6.6	
F22	7/09	56-40	170-43	X18404 250106	63	4.0	3611.0	2639.0	139.0	0.0	6389.0	0.0	
F23	7/09	56-40	171-19	X18208 250071	69	4.7	3471.0	3140.0	248.0	0.0	6859.0	0.0	
F24	7/22	56-42	171-49	X18031 250004	66	3.8	3525.0	2377.0	410.0	164.0	6476.0	2.5	
G01	6/30	57-00	167-41	Y34615 249159	41	2.1	2203.0	678.0	0.0	0.0	2881.0	0.0	
G02	6/30	56-58	167-05	Y34502 248916	41	2.5	3520.0	2160.0	80.0	0.0	5760.0	0.0	
G03	6/26	56-59	166-26	Y34364 248653	40	2.1	161.0	1048.0	81.0	0.0	1290.0	0.0	
G04	6/26	56-59	165-48	Y34242 248399	40		60128.0	50010.0	268.0	89.0	110495.0	0.1	
G05	6/20	57-00	165-12	Y34123 248155	38	2.0	3056.0	2038.0	2802.0	255.0	8150.0	3.1	
G06	6/20	56-58	164-35	Y34027 247913	39	4.0	1890.0	3622.0	1260.0	1496.0	8268.0	18.1	
G07	6/17	57-03	163-59	Y33889 247666	37	2.2	4228.0	13171.0	4797.0	5366.0	27561.0	19.5	
G08	6/17	56-59	163-33	Y33838 247493	37	2.5	2248.0	1008.0	5659.0	12946.0	21938.0	59.0	
G09	6/10	57-00	162-46	Y33709 247180	32	3.0	1789.0	2033.0	2683.0	6341.0	12846.0	49.4	
G10	6/09	56-59	162-09	Y33614 246933	33		1563.0	625.0	1719.0	4219.0	8126.0	51.9	
G11	6/07	56-59	161-32	Y33520 246686	36	2.6	2258.0	1048.0	1774.0	5161.0	10242.0	50.4	
G12	6/08	57-00	160-56	Y33426 246443	35		800.0	400.0	480.0	480.0	2160.0	22.2	
G13	6/07	56-56	160-17	Y33355 246183	36	3.4	569.0	976.0	650.0	3008.0	5203.0	57.8	
G14	6/06	56-57	159-43	Y33275 245952	30		240.0	160.0	160.0	160.0	720.0	22.2	
G18	7/02	56-59	168-22	Y34765 249430	45	2.5	588.0	588.0	471.0	118.0	1764.0	6.7	
G19	7/02	57-09	168-36	Y34760 249521	42	2.6	111.0	333.0	0.0	0.0	444.0	0.0	
G19	7/02	56-50	168-37	Y34860 249522	53	2.7	0.0	1039.0	1948.0	649.0	3636.0	17.8	
G19	8/06	57-00	168-52	Y34867 249630	43	3.0	333.0	1000.0	500.0	167.0	2000.0	8.4	
G19	7/02	56-59	168-59	Y34898 249676	43		268.0	446.0	179.0	0.0	893.0	0.0	
G20	7/02	57-09	169-17	Y34914 249796	39		1719.0	1250.0	547.0	547.0	4063.0	13.5	
G20	8/06	57-00	169-30	Y35009 249883	33	3.4	3898.0	5254.0	2458.0	1610.0	13220.0	12.2	
G20	7/08	57-01	169-31	Y35010 249889	34	2.5	381.0	1459.0	365.0	365.0	2570.0	14.2	
G21	7/08	57-09	169-53	Y35049 250033	30		20522.0	20495.0	1230.0	205.0	42451.0	0.5	
G21	7/08	56-50	169-49	Y35095 249971	40		7717.0	5339.0	3305.0	4068.0	20429.0	19.9	
G21	7/08	56-56	170-09	X18669 250094	42	3.6	206597.0	23683.0	21216.0	7894.0	259391.0	3.0	
G22	7/08	56-50	170-28	X18548 250118	55		48946.0	25287.0	5881.0	7645.0	87758.0	8.7	
G22	7/07	57-08	170-29	X18654 250103	26	4.2	602.0	1955.0	752.0	301.0	3610.0	8.3	
G22	7/09	56-59	170-46	X18511 250173	54	4.3	1953.0	2969.0	1016.0	1563.0	7500.0	20.8	
G23	7/09	56-59	171-23	X18272 250003	60	3.2	976.0	366.0	122.0	0.0	1464.0	0.0	
G24	7/22	56-59	172-00	X18029 250010	64	3.7	2561.0	1220.0	488.0	244.0	4512.0	5.4	
G25	7/14	56-57	172-34	X17808 250036	67	3.3	625.0	1719.0	0.0	0.0	2344.0	0.0	
G26	7/23	57-00	173-14	X17551 250027	79	3.6	2840.0	2346.0	0.0	0.0	5186.0	0.0	
H01	6/30	57-20	167-43	Y34502 249154	39	2.3	4016.0	1885.0	0.0	0.0	5901.0	0.0	
H02	6/29	57-20	167-08	Y34377 248918	39	2.5	840.0	1069.0	153.0	0.0	2061.0	0.0	
H03	6/26	57-19	166-29	Y34257 248662	37	2.6	763.0	2034.0	424.0	85.0	3305.0	2.6	
H05	6/20	57-19	165-14	Y34014 248157	35	1.9	990.0	12130.0	7426.0	2475.0	23021.0	10.8	
H06	6/20	57-17	164-37	Y33920 247911	36	2.1	787.0	3780.0	2520.0	1811.0	8897.0	20.4	
H07	6/17	57-21	163-55	Y33772 247633	33	2.8	735.0	3456.0	3235.0	735.0	8161.0	9.0	
H08	6/17	57-24	163-24	Y33669 247424	29	2.8	296.0	1333.0	519.0	296.0	2444.0	12.1	
H09	6/09	57-20	162-46	Y33589 247167	25	3.1	3902.0	4878.0	488.0	1138.0	10406.0	10.9	

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

TABLE 9 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					% LEGAL
							FEMALES	MALES (SEE NOTE)				
								SMALL	PRE- RECRUIT	LEGAL	TOTAL	
H10	6/09	57-20	162-09	Y33497 246922	28		2656.0	3203.0	1172.0	5156.0	12187.0	42.3
H11	6/08	57-20	161-31	Y33401 246669	30	2.9	10313.0	9609.0	2344.0	4453.0	26719.0	16.7
H12	6/08	57-23	160-55	Y33298 246429	34		157.0	0.0	630.0	866.0	1653.0	52.4
H13	6/07	57-20	160-15	Y33221 246160	32	2.9	488.0	650.0	976.0	1138.0	3252.0	35.0
H14	6/06	57-20	159-40	Y33146 245923	31		320.0	480.0	400.0	880.0	2080.0	42.3
H15	6/05	57-20	159-03	Y33069 245681	26	3.3	0.0	0.0	81.0	0.0	81.0	0.0
H18	7/02	57-20	168-24	Y34643 249424	41	3.7	0.0	337.0	0.0	112.0	449.0	24.9
H19	8/06	57-11	168-41	Y34768 249555	42	3.3	781.0	2578.0	1172.0	0.0	4531.0	0.0
H19	8/06	57-20	168-59	X18750 Y34769	40	3.3	3185.0	4444.0	1852.0	444.0	9926.0	4.5
H19	7/02	57-20	169-00	Y34768 249659	38	2.2	1585.0	1951.0	610.0	122.0	4268.0	2.9
H20	8/06	57-11	169-19	Y34908 249803	39	2.9	619.0	2051.0	6341.0	7833.0	16844.0	46.5
H20	8/06	57-20	169-34	X18748 Y34893	33	2.0	1864.0	2373.0	1780.0	1017.0	7033.0	14.5
H20	7/07	57-19	169-37	Y34915 249904	34	2.6	455.0	2121.0	985.0	303.0	3864.0	7.8
H21	7/07	57-29	169-57	Y34861 249964	38		229.0	840.0	1908.0	534.0	3511.0	15.2
H21	7/07	57-22	170-12	Y34968 250075	32	4.9	0.0	12905.0	38716.0	24090.0	75710.0	31.8
H22	7/09	57-21	170-49	X18526 Y34950	45	3.4	10434.0	909.0	2338.0	649.0	14330.0	4.5
H23	7/09	57-19	171-28	X18285 Y34872	55	2.4	1086.0	0.0	0.0	0.0	1086.0	0.0
H24	7/14	57-19	172-05	X18047 Z50159	60	3.0	638.0	0.0	0.0	0.0	1276.0	0.0
H25	7/14	57-20	172-42	X17809 Y34680	64	2.7	2297.0	1081.0	0.0	0.0	3378.0	0.0
H26	7/23	57-23	173-20	X17574 Y34581	68	3.2	1074.0	1653.0	83.0	83.0	2892.0	2.9
I01	6/29	57-40	167-45	Y34353 249123	37	2.0	2645.0	2314.0	248.0	0.0	5207.0	0.0
I02	6/29	57-41	167-07	Y34222 248875	37	1.9	1066.0	1148.0	164.0	0.0	2377.0	0.0
I03	6/26	57-38	166-30	Y34124 248642	35	2.0	480.0	3840.0	400.0	0.0	4720.0	0.0
I04	6/26	57-39	165-50	Y33995 248374	35		152.0	682.0	227.0	0.0	1061.0	0.0
I05	6/20	57-40	165-15	Y33879 248140	32	2.1	6281.0	7355.0	909.0	165.0	14711.0	1.1
I06	6/20	57-39	164-37	Y33774 247896	29	2.8	7482.0	6475.0	1079.0	144.0	15180.0	0.9
I07	6/18	57-40	163-59	Y33663 247639	-9	2.4	8730.0	8810.0	397.0	238.0	18174.0	1.3
I08	6/18	57-40	163-21	Y33557 247390	26	3.0	2966.0	3475.0	0.0	0.0	6441.0	0.0
I09	6/09	57-40	162-45	Y33464 247149	23	2.3	859.0	625.0	156.0	156.0	1797.0	8.7
I10	6/09	57-40	162-08	Y33372 246906	26		873.0	1190.0	159.0	79.0	2302.0	3.4
I11	6/08	57-40	161-29	Y33278 246649	28	2.4	909.0	992.0	496.0	661.0	3058.0	21.6
I12	6/08	57-42	160-52	Y33176 246399	31		240.0	240.0	320.0	0.0	800.0	0.0
I13	6/06	57-40	160-15	Y33107 246157	27	2.6	160.0	240.0	800.0	800.0	2000.0	40.0
I14	6/06	57-40	159-37	Y33023 245906	27		317.0	397.0	317.0	476.0	1507.0	31.6
I15	6/05	57-39	159-01	Y32954 245666	26	2.6	574.0	164.0	82.0	0.0	820.0	0.0
I18	7/03	57-41	168-24	Y34471 249368	39	2.4	229.0	153.0	76.0	0.0	458.0	0.0
I19	7/02	57-31	168-40	Y34610 249500	40	2.5	150.0	150.0	0.0	0.0	300.0	0.0
I19	8/06	57-30	168-47	X18748 Y34642	39	3.2	855.0	2137.0	3248.0	256.0	6496.0	3.9
I19	8/06	57-39	169-02	X18732 Y34615	37	3.1	3458.0	3925.0	1589.0	187.0	9159.0	2.0
I19	7/03	57-40	169-01	Y34603 249603	37	1.7	469.0	1094.0	469.0	156.0	2188.0	7.1
I20	7/03	57-49	169-20	Y34557 249660	35		1736.0	1157.0	6939.0	0.0	9832.0	0.0
I20	7/02	57-30	169-19	Y34754 249752	37		1605.0	1235.0	247.0	0.0	3086.0	0.0
I20	8/06	57-30	169-22	X18738 Y34765	38	2.5	1429.0	4857.0	5238.0	2476.0	14000.0	17.7
I20	8/06	57-39	169-40	X18699 Y34716	38	1.9	2973.0	3604.0	4775.0	631.0	11982.0	5.3
I20	7/06	57-40	169-40	Y34703 249817	39	1.5	1057.0	2439.0	2114.0	732.0	6342.0	11.5
I21	7/06	57-49	169-57	Y34623 249832	40	1.0	6479.0	2932.0	1579.0	827.0	11817.0	7.0
I21	7/06	57-40	170-16	Y34749 249962	39	-0.5	763.0	1356.0	424.0	339.0	2882.0	11.8
I22	7/06	57-31	170-33	Y34865 250071	39	1.9	132.0	789.0	921.0	132.0	1974.0	6.7
I22	7/09	57-40	170-54	X18454 Y34733	47	2.5	1364.0	1212.0	1515.0	0.0	4091.0	0.0
I23	7/09	57-39	171-31	X18255 Y34686	54	2.2	233.0	116.0	0.0	0.0	349.0	0.0
I24	7/14	57-39	172-09	X18028 Z50104	60	2.7	1864.0	3390.0	169.0	0.0	5423.0	0.0
I25	7/14	57-40	172-46	X17806 Y34531	64	2.5	4746.0	2373.0	169.0	0.0	7288.0	0.0
I26	7/23	57-41	173-23	X17576 Y34442	81	3.6	26614.0	24323.0	0.0	81.0	51018.0	0.2
J01	6/29	58-00	167-47	Y34180 249072	36	1.5	163.0	407.0	244.0	0.0	813.0	0.0
J02	6/29	58-00	167-09	Y34067 248837	35	1.4	375.0	2550.0	729.0	0.0	3654.0	0.0
J03	6/27	57-59	166-31	Y33963 248604	32	1.9	0.0	3613.0	1806.0	0.0	5419.0	0.0
J04	6/27	58-01	165-54	Y33835 248360	30		476.0	714.0	0.0	0.0	1190.0	0.0

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

TABLE 9 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					
							FEMALES	SMALL	MALES (SEE NOTE)			% LEGAL
									PRE- RECRUIT	LEGAL	TOTAL	
J05	6/20	58-00	165-13	Y33722 248102	20	2.2	4729.0	6202.0	78.0	0.0	11008.0	0.0
J06	6/20	58-00	164-37	Y33623 247866	25	3.5	236.0	1024.0	157.0	0.0	1417.0	0.0
J07	6/18	57-59	164-00	Y33529 247627	24	2.6	333.0	167.0	0.0	0.0	500.0	0.0
J08	6/18	57-57	163-22	Y33439 247379	24	3.0	357.0	143.0	0.0	0.0	500.0	0.0
J10	6/09	58-00	162-06	Y33233 246880	21		0.0	0.0	0.0	79.0	79.0	100.0
J11	6/08	57-59	161-28	Y33151 246631	29	3.1	0.0	342.0	0.0	0.0	342.0	0.0
J13	6/06	57-59	160-11	Y32978 246126	26	2.4	0.0	164.0	164.0	82.0	410.0	20.0
J14	6/05	58-00	159-38	Y32909 245914	23		0.0	81.0	0.0	0.0	81.0	0.0
J15	6/05	57-57	158-58	Y32843 245647	20	3.3	0.0	227.0	0.0	114.0	341.0	33.4
J18	7/03	58-00	168-27	Y34292 249309	38		0.0	72.0	144.0	72.0	288.0	25.0
J19	7/03	57-50	168-42	Y34436 249440	39		76.0	303.0	1288.0	758.0	2424.0	31.3
J19	7/03	57-59	169-05	Y34402 249523	37	1.4	0.0	0.0	4540.0	2270.0	6811.0	33.3
J20	7/06	57-59	169-42	Y34480 249704	39	1.1	769.0	1308.0	923.0	538.0	3538.0	15.2
J22	7/09	58-00	170-58	X18375 Y34510	48	1.5	333.0	500.0	333.0	0.0	1166.0	0.0
J22	7/06	57-50	170-37	Y34634 249954	42	0.2	413.0	826.0	579.0	579.0	2396.0	24.2
J23	7/09	57-59	171-36	X18197 Y34478	53	1.6	889.0	1000.0	444.0	0.0	2333.0	0.0
J24	7/14	57-59	172-15	X17981 Z50028	58	2.4	877.0	175.0	175.0	0.0	1228.0	0.0
J25	7/13	57-57	172-53	X17767 Y34366	60		14960.0	15665.0	0.0	0.0	30625.0	0.0
J26	7/23	58-01	173-29	X17558 Y34273	64	3.9	3016.0	2381.0	0.0	0.0	5397.0	0.0
K01	6/29	58-20	167-49	Y33987 249008	32	1.2	0.0	0.0	87.0	0.0	87.0	0.0
K02	6/29	58-20	167-10	Y33885 248782	28	3.2	0.0	81.0	81.0	81.0	244.0	33.2
K04	6/27	58-19	165-56	Y33685 248330	24	3.8	75.0	0.0	0.0	0.0	75.0	0.0
K05	6/20	58-19	165-15	Y33573 248078	24	2.9	0.0	86.0	0.0	0.0	86.0	0.0
K06	6/20	58-18	164-37	Y33480 247839	25		79.0	0.0	0.0	0.0	79.0	0.0
K19	7/03	58-19	169-07	Y34186 249427	36	0.7	8869.0	17739.0	0.0	0.0	26608.0	0.0
K20	7/06	58-19	169-43	Y34242 249587	38	0.7	2070.0	4791.0	958.0	0.0	7819.0	0.0
K21	7/06	58-20	170-22	Y34263 249717	40	2.5	0.0	983.0	0.0	0.0	983.0	0.0
K22	7/10	58-21	171-10	X18260 Y34259	49	0.2	696.0	522.0	87.0	0.0	1305.0	0.0
K23	7/10	58-19	171-38	X18138 Y34254	52	0.6	3413.0	794.0	238.0	0.0	4445.0	0.0
K24	7/14	58-18	172-16	X17949 249942	57	-1.5	0.0	328.0	0.0	0.0	328.0	0.0
K25	7/13	58-19	172-56	X17738 Y34160	59	1.8	2982.0	2632.0	0.0	0.0	5614.0	0.0
K26	7/23	58-19	173-32	X17542 Y34110	63	2.9	4156.0	4026.0	0.0	0.0	8182.0	0.0
K27	7/23	58-20	174-11	X17322 Y34038	76	3.4	2211.0	1684.0	0.0	0.0	3895.0	0.0
L01	6/29	58-40	167-50	Y33778 248928	24	2.8	0.0	85.0	0.0	0.0	85.0	0.0
L05	6/19	58-40	165-16	Y33390 248032	20	3.7	0.0	0.0	81.0	0.0	81.0	0.0
L19	7/03	58-39	169-12	Y33949 249330	34	0.8	0.0	78.0	0.0	0.0	78.0	0.0
L20	7/06	58-38	169-46	Y34013 249479	37	0.5	385.0	154.0	0.0	0.0	539.0	0.0
L22	7/10	58-39	171-04	X18226 Y34047	47	-1.2	127.0	0.0	0.0	0.0	127.0	0.0
L23	7/10	58-39	171-42	X18069 Y34029	51	-0.4	952.0	317.0	159.0	0.0	1428.0	0.0
L24	7/14	58-39	172-22	X17887 249845	57		246.0	574.0	0.0	0.0	820.0	0.0
L25	7/13	58-40	172-59	X17704 Y33952	61	1.9	2931.0	1379.0	690.0	0.0	5000.0	0.0
L26	7/23	58-41	173-36	X17510 Y33897	69	2.6	1977.0	3837.0	233.0	0.0	6047.0	0.0
L27	7/23	58-41	174-13	X17315 Y33847	79	2.7	1300.0	3600.0	0.0	0.0	4900.0	0.0
L28	7/30	58-46	175-02	X17058 Y33741	95	3.2	1452.0	2500.0	81.0	0.0	4033.0	0.0
L29	7/30	58-44	175-36	X16873 Y33711	72	3.0	1984.0	1587.0	159.0	0.0	3730.0	0.0
L30	7/31	58-44	176-12	X16674 Y33665	73	2.3	3008.0	1707.0	81.0	0.0	4797.0	0.0
L31	7/31	58-41	176-52	X16454 Y33631	72	2.4	1154.0	1000.0	77.0	0.0	2231.0	0.0
M21	7/05	59-00	170-29	Y33774 249485	38	-1.3	539.0	539.0	0.0	0.0	1078.0	0.0
M24	7/13	59-00	172-27	X17824 249742	55	0.3	127.0	0.0	0.0	0.0	127.0	0.0
M25	7/13	59-00	173-04	X17653 Y33739	58	1.1	247.0	617.0	617.0	0.0	1482.0	0.0
M26	7/24	59-01	173-43	X17464 Y33693	65	2.4	8889.0	1852.0	185.0	0.0	10926.0	0.0
M27	7/24	59-01	174-21	X17272 Y33654	69	2.4	11048.0	8095.0	381.0	95.0	19619.0	0.5
M28	7/30	58-56	175-08	X17027 Y33648	74	2.6	611.0	1221.0	382.0	76.0	2290.0	3.3
M29	7/30	59-00	175-44	X16846 Y33570	73	1.8	2593.0	2222.0	0.0	0.0	4815.0	0.0
M30	7/31	59-01	176-20	X16659 Y33516	76	2.0	3731.0	3881.0	0.0	0.0	7612.0	0.0
M31	7/31	59-00	177-00	X16449 Y33474	75	2.1	813.0	1545.0	81.0	0.0	2439.0	0.0
M32	7/31	58-58	177-31	X16285 Y33454	73	2.5	588.0	1008.0	0.0	0.0	1596.0	0.0

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

TABLE 9 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE BAIRDI TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					
							MALES (SEE NOTE)					% LEGAL
							FEMALES	SMALL	PRE- RECRUIT	LEGAL	TOTAL	
N22	7/10	59-20	171-11	Y33556 Z49485	42	-1.1	0.0	87.0	0.0	0.0	87.0	0.0
N25	7/13	59-20	173-10	X17598 Y33526	57	0.3	125.0	125.0	500.0	0.0	750.0	0.0
N26	7/13	59-29	173-29	X17499 Y33414	56		574.0	0.0	862.0	0.0	1436.0	0.0
N26	7/24	59-21	173-48	X17423 Y33491	62	1.5	3043.0	4058.0	580.0	0.0	7681.0	0.0
N27	7/24	59-19	174-26	X17243 Y33477	66	2.2	5846.0	11385.0	462.0	0.0	17692.0	0.0
N28	7/30	59-17	175-07	X17038 Y33460	75	2.3	189.0	2642.0	0.0	0.0	2831.0	0.0
N29	7/30	59-20	175-45	X16852 Y33390	75	1.7	1098.0	366.0	366.0	0.0	1830.0	0.0
N30	7/31	59-19	176-22	X16668 Y33360	76	1.7	2891.0	2969.0	78.0	0.0	5938.0	0.0
N31	7/31	59-19	177-03	X16463 Y33326	82	1.7	1692.0	1154.0	0.0	0.0	2846.0	0.0
O22	7/10	59-40	171-15	Y33316 Z49382	40	-1.1	0.0	78.0	0.0	0.0	78.0	0.0
O24	7/13	59-30	172-47	X17679 Z49620	52	-0.3	431.0	172.0	86.0	0.0	690.0	0.0
O24	7/13	59-40	172-36	X17705 Z49551	47	-1.0	3220.0	2797.0	169.0	0.0	6186.0	0.0
O24	7/13	59-47	172-51	X17631 Z49535	45	-0.9	480.0	1680.0	80.0	0.0	2240.0	0.0
O26	7/24	59-41	173-53	X17379 Y33275	58	0.7	920.0	1149.0	0.0	0.0	2069.0	0.0
O27	7/24	59-39	174-26	X17232 Y33282	63	1.5	405.0	270.0	135.0	0.0	810.0	0.0
O28	7/30	59-39	175-09	X17032 Y33253	71	2.2	649.0	779.0	0.0	0.0	1428.0	0.0
O29	7/30	59-39	175-51	X16834 Y33213	74	1.7	0.0	672.0	0.0	0.0	672.0	0.0
O30	7/31	59-40	176-32	X16641 Y33178	76	1.4	2643.0	1286.0	71.0	0.0	4000.0	0.0
O31	7/31	59-39	177-08	X16470 Y33153	93	2.4	0.0	163.0	0.0	0.0	163.0	0.0
P22	7/11	60-01	171-18	Y33060 Z49272	39	-1.0	0.0	83.0	0.0	0.0	83.0	0.0
P23	7/11	60-10	172-19	X17706 Y32977	31		0.0	366.0	0.0	0.0	366.0	0.0
P23	7/11	59-58	171-58	X17807 Y33107	36	-1.4	441.0	0.0	0.0	0.0	441.0	0.0
P23	7/11	59-50	172-13	X17772 Y33208	41	-1.5	5089.0	12765.0	0.0	0.0	17854.0	0.0
P24	7/12	59-59	172-40	X17653 Z49455	37	-0.6	81.0	407.0	0.0	0.0	488.0	0.0
P25	7/12	59-50	173-34	X17451 Y33194	51		0.0	1087.0	0.0	0.0	1087.0	0.0
P26	7/24	59-50	174-10	X17297 Y33180	59	0.7	0.0	82.0	0.0	0.0	82.0	0.0
P26	7/24	60-01	173-57	X17342 Y33068	54	-0.5	244.0	81.0	0.0	0.0	325.0	0.0
P28	7/30	59-56	175-15	X17003 Y33085	67	1.9	238.0	238.0	0.0	0.0	476.0	0.0
P29	7/30	59-58	175-55	X16821 Y33039	71	1.7	542.0	542.0	0.0	0.0	1084.0	0.0
P30	7/31	60-01	176-43	X16607 Y32988	79	1.3	81.0	81.0	0.0	0.0	162.0	0.0
P31	8/01	59-59	177-16	X16455 Y32980	74	1.1	964.0	1084.0	0.0	0.0	2048.0	0.0
P32	8/01	59-59	177-49	X16306 Y32959	77	1.1	930.0	465.0	0.0	0.0	1395.0	0.0
Q27	7/25	60-21	174-42	X17137 Y32850	56	-0.1	0.0	125.0	0.0	0.0	125.0	0.0
Q30	8/31	60-22	176-42	X16628 Y32799	75	1.7	0.0	85.0	0.0	0.0	85.0	0.0
R24	7/12	60-41	172-47	X17549 Z49262	26	2.5	75.0	75.0	0.0	0.0	150.0	0.0
R25	7/12	60-39	173-26	X17411 Y32664	35	-1.0	0.0	1222.0	0.0	0.0	1222.0	0.0
R28	7/29	60-39	175-27	X16945 Y32664	60	0.4	0.0	219.0	0.0	0.0	219.0	0.0
R30	8/01	60-41	176-48	X16613 Y32630	70	1.4	0.0	229.0	0.0	0.0	229.0	0.0
R31	8/01	60-39	177-30	X16436 Y32632	80	0.7	133.0	200.0	0.0	0.0	333.0	0.0
R32	8/01	60-40	178-05	X16289 Y32619	88	1.6	269.0	0.0	269.0	0.0	538.0	0.0
S25	7/28	61-01	173-30	X17367 Y32425	42	-0.2	90.0	90.0	0.0	0.0	180.0	0.0
S28	7/29	60-59	175-29	X16930 Y32471	57	-0.1	81.0	0.0	0.0	0.0	81.0	0.0
S30	8/01	61-01	177-12	X16527 Y32444	70	1.2	81.0	81.0	81.0	81.0	323.0	25.1
Z04	6/23	54-47	165-32	Y34648 Z48173	115	4.0	68749.0	46002.0	85.0	85.0	115005.0	0.1
Z05	6/23	54-40	165-06	Y34600 Z48015	44	5.3	3793.0	3534.0	0.0	0.0	7327.0	0.0

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	FEMALES	NUMBER PER SQUARE MILE				% LARGE
								MALES (SEE NOTE)				
								SMALL	PRE- RECRUIT	LARGE	TOTAL	
A02	7/01	55-00	166-56	Y34824 248682	87	3.5	83.0	83.0	83.0	83.0	331.0	25.1
A04	6/25	55-01	165-43	Y34646 248262	71		0.0	81.0	0.0	0.0	81.0	0.0
A05	6/22	55-00	165-06	Y34558 248041	69	4.4	85.0	2051.0	1111.0	171.0	3418.0	5.0
B01	7/01	55-20	167-32	Y34878 248930	83	3.5	0.0	163.0	163.0	0.0	325.0	0.0
B02	7/01	55-17	166-58	Y34800 248730	79	3.5	1364.0	0.0	227.0	227.0	1819.0	12.5
B03	6/25	55-20	166-20	Y34701 248516	72	3.5	0.0	168.0	0.0	0.0	168.0	0.0
B05	6/22	55-20	165-09	Y34517 248087	60	3.9	533.0	267.0	133.0	0.0	933.0	0.0
B06	6/22	55-20	164-37	Y34433 247888	57	3.6	7276.0	2047.0	1496.0	315.0	11134.0	2.8
B07	6/17	55-19	164-00	Y34335 247651	41	4.9	0.0	0.0	91.0	0.0	91.0	0.0
C01	7/10	55-40	167-34	Y34854 248996	74	3.7	320.0	240.0	1920.0	2480.0	4960.0	50.0
C02	6/30	55-40	166-58	Y34758 248785	75	3.6	38501.0	244.0	163.0	569.0	39477.0	1.4
C03	6/25	55-39	166-23	Y34666 248570	68	3.8	0.0	94.0	189.0	94.0	377.0	24.9
C05	6/22	55-40	165-09	Y34458 248110	58	3.9	10230.0	2000.0	2880.0	1040.0	16150.0	6.4
C06	6/22	55-39	164-35	Y34366 247889	53	3.4	0.0	160.0	240.0	240.0	640.0	37.5
C07	6/17	55-40	164-00	Y34269 247664	51	3.1	0.0	1039.0	260.0	0.0	1299.0	0.0
C08	6/14	55-40	163-24	Y34170 247431	47	3.0	0.0	183.0	92.0	0.0	275.0	0.0
C18	7/01	55-39	168-09	Y34938 249187	76	3.8	0.0	0.0	154.0	1231.0	1385.0	88.9
D01	6/30	56-00	167-36	Y34817 249053	72	3.6	0.0	382.0	3130.0	2214.0	5725.0	38.7
D02	6/30	56-01	167-00	Y34712 248831	75	3.7	85.0	85.0	339.0	254.0	763.0	33.3
D03	6/25	55-59	166-24	Y34614 248606	67		0.0	0.0	83.0	83.0	167.0	49.7
D04	6/25	55-59	165-46	Y34504 248364	60		313.0	1094.0	8750.0	3281.0	13438.0	24.4
D05	6/22	56-00	165-12	Y34401 248143	51	3.2	1638.0	2241.0	1638.0	517.0	6035.0	8.6
D06	6/22	55-58	164-35	Y34300 247906	52	2.6	0.0	484.0	403.0	323.0	1210.0	26.7
D07	6/17	56-00	164-00	Y34196 247672	49	2.9	0.0	244.0	81.0	0.0	325.0	0.0
D08	6/14	56-00	163-24	Y34094 247437	49	3.0	0.0	168.0	84.0	0.0	252.0	0.0
D18	7/01	56-00	168-12	Y34915 249263	82	3.6	0.0	156.0	3047.0	1406.0	4609.0	30.5
E01	6/30	56-19	167-36	Y34767 249093	71	3.5	90.0	270.0	3333.0	3243.0	6937.0	46.7
E02	6/30	56-20	167-01	Y34658 248871	63	3.6	79.0	0.0	315.0	79.0	473.0	16.7
E03	6/26	56-19	166-24	Y34543 248625	56	3.3	9756.0	1057.0	2114.0	1138.0	14065.0	8.1
E04	6/26	56-21	165-46	Y34421 248382	51		984.0	2623.0	1393.0	492.0	5492.0	9.0
E05	6/22	56-20	165-12	Y34320 248155	47	2.4	75.0	1353.0	977.0	301.0	2707.0	11.1
E06	6/22	56-19	164-35	Y34216 247913	49	2.7	83.0	1667.0	667.0	0.0	2416.0	0.0
E07	6/17	56-19	164-00	Y34114 247677	47	2.9	0.0	598.0	342.0	0.0	940.0	0.0
E08	6/14	56-20	163-24	Y34012 247440	46	2.6	0.0	156.0	156.0	0.0	313.0	0.0
E09	6/10	56-19	162-48	Y33915 247199	43	2.1	0.0	157.0	0.0	0.0	157.0	0.0
E18	7/01	56-19	168-15	Y34886 249331	85	3.6	256.0	2874.0	19259.0	6324.0	28713.0	22.0
E19	7/01	56-20	168-51	Y34985 249546	20	3.7	31181.0	3480.0	15948.0	4349.0	54958.0	7.9
E20	7/08	56-25	169-31	Y35075 249778	61		0.0	145.0	0.0	0.0	145.0	0.0
E21	7/08	56-21	170-04	X18411 249904	58	3.6	38781.0	2169.0	4578.0	1205.0	46733.0	2.6
E22	7/08	56-20	170-40	X18270 250009	65	4.0	1032.0	79.0	476.0	0.0	1588.0	0.0
F01	6/30	56-40	167-39	Y34702 249138	55	3.2	123.0	1728.0	3827.0	1728.0	7407.0	23.3
F02	6/30	56-41	167-04	Y34585 248907	53	2.9	698.0	2713.0	1783.0	310.0	5504.0	5.6
F03	6/26	56-39	166-26	Y34467 248652	46	1.9	2169.0	1928.0	1205.0	482.0	5783.0	8.3
F04	6/26	56-39	165-49	Y34349 248406	43		78.0	1875.0	625.0	0.0	2578.0	0.0
F05	6/22	56-40	165-13	Y34233 248172	41	2.1	86.0	1034.0	603.0	3707.0	5431.0	68.3
F06	6/22	56-38	164-35	Y34131 247917	42	2.2	0.0	420.0	84.0	252.0	756.0	33.3
F07	6/17	56-43	163-49	Y33968 247603	41	2.2	0.0	538.0	231.0	77.0	846.0	9.1
F08	6/15	56-48	163-06	Y33823 247319	38		0.0	303.0	152.0	0.0	455.0	0.0
F08	6/15	56-40	163-24	Y33914 247436	41	2.0	0.0	417.0	167.0	167.0	750.0	22.3
F09	6/10	56-30	162-58	Y33893 247270	43		0.0	248.0	0.0	0.0	248.0	0.0
F09	6/10	56-40	162-45	Y33811 247181	39	2.3	0.0	84.0	0.0	0.0	84.0	0.0
F10	6/10	56-41	162-13	Y33719 246964	39		0.0	0.0	96.0	0.0	96.0	0.0
F18	7/02	56-39	168-17	Y34834 249381	59	3.4	111959.0	873.0	1429.0	952.0	115213.0	0.8
F19	7/02	56-39	168-53	Y34952 249611	55	3.0	174470.0	1806.0	2708.0	903.0	179887.0	0.5
F20	7/02	56-49	169-15	Y34996 249770	44	2.7	7316.0	1347.0	2469.0	4377.0	15509.0	28.2
F21	7/08	56-40	170-10	X18539 250019	53	3.5	125.0	1000.0	500.0	1875.0	3500.0	53.6
F22	7/09	56-40	170-43	X18404 250106	63	4.0	0.0	139.0	1667.0	694.0	2500.0	27.8
F23	7/09	56-40	171-19	X18208 Y35071	69	4.7	54254.0	1322.0	2645.0	661.0	58882.0	1.1

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					% LARGE
							MALES (SEE NOTE)				FEMALES	
							SMALL	PRE- RECRUIT	LARGE	TOTAL		
F24	7/22	56-42	171-49	X18031 Y35004	66	3.8	46182.0	1737.0	6475.0	1475.0	55870.0	2.6
G01	6/30	57-00	167-41	Y34615 Z49159	41	2.1	424.0	9750.0	7247.0	1845.0	19266.0	9.6
G02	6/30	56-58	167-05	Y34502 Z48916	41	2.5	400.0	4800.0	3040.0	720.0	8960.0	8.0
G03	6/26	56-59	166-26	Y34364 Z48653	40	2.1	81.0	2661.0	2419.0	242.0	5404.0	4.5
G04	6/26	56-59	165-48	Y34242 Z48399	40		0.0	1161.0	1964.0	5179.0	8304.0	62.4
G05	6/20	57-00	165-12	Y34123 Z48155	38	2.0	0.0	2038.0	18592.0	44570.0	65200.0	68.4
G06	6/20	56-58	164-35	Y34027 Z47913	39	4.0	0.0	472.0	1890.0	10866.0	13228.0	82.1
G07	6/17	57-03	163-59	Y33889 Z47666	37	2.2	0.0	813.0	163.0	894.0	1870.0	47.8
G08	6/17	56-59	163-33	Y33838 Z47493	37	2.5	0.0	388.0	0.0	155.0	543.0	28.5
G09	6/10	57-00	162-46	Y33709 Z47180	32	3.0	0.0	81.0	0.0	0.0	81.0	0.0
G10	6/09	56-59	162-09	Y33614 Z46933	33		0.0	0.0	78.0	0.0	78.0	0.0
G11	6/07	56-59	161-32	Y33520 Z46686	36	2.6	0.0	81.0	0.0	0.0	81.0	0.0
G18	7/02	56-59	168-22	Y34765 Z49430	45	2.5	7294.0	3529.0	5294.0	1059.0	17176.0	6.2
G19	7/02	57-09	168-36	Y34760 Z49521	42	2.6	444.0	1444.0	1889.0	333.0	4111.0	8.1
G19	7/02	56-50	168-37	Y34860 Z49522	53	2.7	134587.0	5065.0	4416.0	909.0	144977.0	0.6
G19	8/06	57-00	168-52	Y34867 Z49630	43	3.0	500.0	5512.0	9138.0	1595.0	16745.0	9.5
G19	7/02	56-59	168-59	Y34898 Z49676	43		714.0	3304.0	5446.0	1071.0	10535.0	10.2
G20	7/02	57-09	169-17	Y34914 Z49796	39		3750.0	6298.0	6639.0	3575.0	20262.0	17.6
G20	7/08	57-01	169-31	Y35010 Z49889	34	2.5	0.0	2769.0	66458.0	51689.0	120916.0	42.7
G20	8/06	57-00	169-30	Y35009 Z49883	33	3.4	85.0	5948.0	17615.0	18987.0	42635.0	44.5
G21	7/08	57-09	169-53	Y35049 Z50033	30		0.0	0.0	78.0	78.0	156.0	50.0
G21	7/08	56-50	169-49	Y35095 Z49971	40		42881.0	3729.0	4915.0	10000.0	61525.0	16.3
G22	7/09	56-59	170-46	X18511 Z50173	54	4.3	4922.0	313.0	2344.0	9063.0	16641.0	54.5
G22	7/08	56-50	170-28	X18548 Z50118	55		0.0	217.0	761.0	4674.0	5652.0	82.7
G23	7/09	56-59	171-23	X18272 Y35003	60	3.2	23465.0	2683.0	6341.0	976.0	33465.0	2.9
G24	7/22	56-59	172-00	X18029 Y34910	64	3.7	9146.0	2561.0	7561.0	1951.0	21219.0	9.2
G25	7/14	56-57	172-34	X17808 Y34836	67	3.3	0.0	312.0	156.0	0.0	469.0	0.0
G26	7/23	57-00	173-14	X17551 Y34727	79	3.6	0.0	0.0	123.0	0.0	123.0	0.0
H01	6/30	57-20	167-43	Y34502 Z49154	39	2.3	410.0	5902.0	1639.0	492.0	8443.0	5.8
H02	6/29	57-20	167-08	Y34377 Z48918	39	2.5	763.0	2748.0	2137.0	763.0	6412.0	11.9
H03	6/26	57-19	166-29	Y34257 Z48662	37	2.6	85.0	3729.0	2034.0	4068.0	9916.0	41.0
H04	6/26	57-20	165-49	Y34119 Z48393	37		1387.0	941.0	28228.0	45636.0	76192.0	59.9
H05	6/20	57-19	165-14	Y34014 Z48157	35	1.9	743.0	2475.0	34903.0	34408.0	72530.0	47.4
H06	6/20	57-17	164-37	Y33920 Z47911	36	2.1	394.0	1181.0	472.0	1102.0	3150.0	35.0
H07	6/17	57-21	163-55	Y33772 Z47633	33	2.8	0.0	294.0	74.0	0.0	368.0	0.0
H08	6/17	57-24	163-24	Y33669 Z47424	29	2.8	0.0	74.0	0.0	0.0	74.0	0.0
H09	6/09	57-20	162-46	Y33589 Z47167	25	3.1	0.0	81.0	0.0	0.0	81.0	0.0
H11	6/08	57-20	161-31	Y33401 Z46669	30	2.9	0.0	0.0	78.0	0.0	78.0	0.0
H18	7/02	57-20	168-24	Y34643 Z49424	41	3.7	0.0	1348.0	787.0	0.0	2135.0	0.0
H19	8/06	57-11	168-41	Y34768 Z49555	42	3.3	1641.0	4699.0	11025.0	3253.0	20618.0	15.8
H19	8/06	57-20	168-59	X18750 Y34769	40	3.3	963.0	6177.0	10883.0	1029.0	19052.0	5.4
H19	7/02	57-20	169-00	Y34768 Z49659	38	2.2	244.0	2439.0	1829.0	244.0	4756.0	5.1
H20	7/07	57-19	169-37	Y34915 Z49904	34	2.6	0.0	227.0	455.0	152.0	833.0	18.2
H20	8/06	57-11	169-19	Y34908 Z49803	39	2.9	973.0	4425.0	7345.0	6018.0	18761.0	32.1
H20	8/06	57-20	169-34	X18748 Y34893	33	2.0	14995.0	2818.0	34076.0	17679.0	69568.0	25.4
H21	7/07	57-22	170-12	Y34968 Z50075	32	4.9	1720.0	0.0	0.0	0.0	1720.0	0.0
H21	7/07	57-29	169-57	Y34861 Z49964	38		1298.0	763.0	7405.0	1450.0	10916.0	13.3
H22	7/09	57-21	170-49	X18526 Y34950	45	3.4	59637.0	1429.0	1558.0	1688.0	64312.0	2.6
H23	7/09	57-19	171-28	X18285 Y34872	55	2.4	395855.0	8741.0	6556.0	0.0	411151.0	0.0
H24	7/14	57-19	172-05	X18047 Z50159	60	3.0	95486.0	1277.0	2979.0	1064.0	100805.0	1.1
H25	7/14	57-20	172-42	X17809 Y34680	64	2.7	0.0	0.0	405.0	1081.0	1486.0	72.7
H26	7/23	57-23	173-20	X17574 Y34581	68	3.2	0.0	83.0	0.0	0.0	83.0	0.0
I01	6/29	57-40	167-45	Y34353 Z49123	37	2.0	909.0	6461.0	20677.0	7754.0	35801.0	21.7
I02	6/29	57-41	167-07	Y34222 Z48875	37	1.9	1311.0	4508.0	6230.0	9180.0	21229.0	43.2
I03	6/26	57-38	166-30	Y34124 Z48642	35	2.0	5455.0	9820.0	37096.0	16911.0	69282.0	24.4
I04	6/26	57-39	165-50	Y33995 Z48374	35		303.0	908.0	21186.0	25725.0	48122.0	53.5
I05	6/20	57-40	165-15	Y33879 Z48140	32	2.1	4463.0	10413.0	11736.0	4380.0	30992.0	14.1
I06	6/20	57-39	164-37	Y33774 Z47896	29	2.8	0.0	719.0	144.0	288.0	1151.0	25.0

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE						% LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL		
								SMALL	PRE- RECRUIT	LARGE			
I07	6/18	57-40	163-59	Y33663 Z47639	-9	2.4	0.0	476.0	0.0	79.0	556.0	14.2	
I11	6/08	57-40	161-29	Y33278 Z46649	28	2.4	0.0	83.0	0.0	0.0	83.0	0.0	
I18	7/03	57-41	168-24	Y34471 Z49368	39	2.4	24427.0	6947.0	1679.0	611.0	33664.0	1.8	
I19	7/02	57-31	168-40	Y34610 Z49500	40	2.5	301.0	752.0	301.0	0.0	1354.0	0.0	
I19	8/06	57-30	168-47	X18748 Y34642	39	3.2	19615.0	7096.0	23792.0	11270.0	61773.0	18.2	
I19	8/06	57-39	169-02	X18732 Y34615	37	3.1	42827.0	12679.0	31901.0	16360.0	103767.0	15.8	
I19	7/03	57-40	169-01	Y34603 Z49603	37	1.7	1953.0	10000.0	4922.0	859.0	17734.0	4.8	
I20	7/02	57-30	169-19	Y34754 Z49752	37		1605.0	5185.0	3210.0	123.0	10124.0	1.2	
I20	7/03	57-49	169-20	Y34557 Z49660	35		4035.0	8134.0	44155.0	42993.0	99316.0	43.3	
I20	7/06	57-40	169-40	Y34703 Z49817	39	1.5	569.0	5203.0	2033.0	976.0	8780.0	11.1	
I20	8/06	57-30	169-22	X18738 Y34765	38	2.5	95.0	5352.0	43711.0	17841.0	66999.0	26.6	
I20	8/06	57-39	169-40	X18699 Y34716	38	1.9	4324.0	5264.0	68430.0	24700.0	102717.0	24.0	
I21	7/06	57-49	169-57	Y34623 Z49832	40	1.0	1729.0	2857.0	2331.0	902.0	7819.0	11.5	
I21	7/06	57-40	170-16	Y34749 Z49962	39	-0.5	847.0	2119.0	4407.0	1610.0	8983.0	17.9	
I22	7/06	57-31	170-33	Y34865 Z50071	39	1.9	132.0	921.0	2500.0	789.0	4343.0	18.2	
I22	7/09	57-40	170-54	X18454 Y34733	47	2.5	6667.0	1818.0	2424.0	455.0	11364.0	4.0	
I23	7/09	57-39	171-31	X18255 Y34686	54	2.2	492141.0	7612.0	15224.0	1522.0	516500.0	0.3	
I24	7/14	57-39	172-09	X18028 Z50104	60	2.7	93813.0	1864.0	1525.0	339.0	97542.0	0.3	
I25	7/14	57-40	172-46	X17806 Y34531	64	2.5	2712.0	339.0	1695.0	7288.0	12034.0	60.6	
I26	7/23	57-41	173-23	X17576 Y34442	81	3.6	0.0	0.0	81.0	0.0	81.0	0.0	
J01	6/29	58-00	167-47	Y34180 Z49072	36	1.5	9714.0	20049.0	23762.0	11138.0	64663.0	17.2	
J02	6/29	58-00	167-09	Y34067 Z48837	35	1.4	1100.0	10948.0	82473.0	27734.0	122255.0	22.7	
J03	6/27	57-59	166-31	Y33963 Z48604	32	1.9	3613.0	37935.0	245672.0	84901.0	372121.0	22.8	
J04	6/27	58-01	165-54	Y33835 Z48360	30		556.0	2381.0	714.0	397.0	4048.0	9.8	
J05	6/20	58-00	165-13	Y33722 Z48102	20	2.2	310.0	1938.0	620.0	233.0	3101.0	7.5	
J06	6/20	58-00	164-37	Y33623 Z47866	25	3.5	0.0	0.0	0.0	79.0	79.0	100.0	
J09	6/09	58-00	162-45	Y33325 Z47133	22	1.9	0.0	0.0	79.0	0.0	79.0	0.0	
J18	7/03	58-00	168-27	Y34292 Z49309	38		6847.0	10209.0	29114.0	19283.0	65453.0	29.5	
J19	7/03	57-50	168-42	Y34436 Z49440	39		1970.0	3182.0	5530.0	5758.0	16440.0	35.0	
J19	7/03	57-59	169-05	Y34402 Z49523	37	1.4	69420.0	39769.0	129911.0	66281.0	305381.0	21.7	
J20	7/06	57-59	169-42	Y34480 Z49704	39	1.1	10622.0	7145.0	28579.0	14290.0	60636.0	23.6	
J21	7/06	58-00	170-20	Y34513 Z49843	40	-0.4	6551.0	7488.0	45864.0	33696.0	93600.0	36.0	
J22	7/06	57-50	170-37	Y34634 Z49954	42	0.2	413.0	879.0	12081.0	7908.0	21280.0	37.2	
J22	7/09	58-00	170-58	X18375 Y34510	48	1.5	3000.0	589.0	56583.0	19450.0	79623.0	24.4	
J23	7/09	57-59	171-36	X18197 Y34478	53	1.6	95018.0	5778.0	3444.0	778.0	105018.0	0.7	
J24	7/14	57-59	172-15	X17981 Z50028	58	2.4	512402.0	9649.0	13860.0	2281.0	538191.0	0.4	
J25	7/13	57-57	172-53	X17767 Y34366	60		284922.0	11198.0	14931.0	1493.0	312544.0	0.5	
J26	7/23	58-01	173-29	X17558 Y34273	64	3.9	113905.0	317.0	1270.0	635.0	116127.0	0.5	
K01	6/29	58-20	167-49	Y33987 Z49008	32	1.2	3043.0	8000.0	8261.0	3652.0	22956.0	15.9	
K02	6/29	58-20	167-10	Y33885 Z48782	28	3.2	163.0	1220.0	569.0	163.0	2114.0	7.7	
K03	6/27	58-20	166-34	Y33781 Z48563	24	3.2	0.0	593.0	424.0	254.0	1271.0	20.0	
K04	6/27	58-19	165-56	Y33685 Z48330	24	3.8	0.0	0.0	0.0	75.0	75.0	100.0	
K18	7/03	58-22	168-28	Y34067 Z49213	35		6270.0	14545.0	9545.0	5455.0	35815.0	15.2	
K19	7/03	58-19	169-07	Y34186 Z49427	36	0.7	807731.0	250574.0	35479.0	15522.0	1109306.0	1.4	
K20	7/06	58-19	169-43	Y34242 Z49587	38	0.7	20653.0	14588.0	50740.0	20296.0	106276.0	19.1	
K21	7/06	58-20	170-22	Y34263 Z49717	40	2.5	35908.0	20963.0	94520.0	52898.0	204288.0	25.9	
K22	7/10	58-21	171-10	X18260 Y34259	49	0.2	1565.0	3254.0	63125.0	32539.0	100483.0	32.4	
K23	7/10	58-19	171-38	X18138 Y34254	52	0.6	556.0	476.0	873.0	79.0	1985.0	4.0	
K24	7/14	58-18	172-16	X17949 Z49942	57	-1.5	167978.0	3934.0	5246.0	328.0	177486.0	0.2	
K25	7/13	58-19	172-56	X17738 Y34160	59	1.8	175.0	2105.0	2281.0	1053.0	5614.0	18.8	
K26	7/23	58-19	173-32	X17542 Y34110	63	2.9	519.0	10779.0	13247.0	1948.0	26493.0	7.4	
K27	7/23	58-20	174-11	X17322 Y34038	76	3.4	0.0	316.0	105.0	0.0	421.0	0.0	
L01	6/29	58-40	167-50	Y33778 Z48928	24	2.8	0.0	85.0	85.0	0.0	169.0	0.0	
L02	6/29	58-38	167-14	Y33715 Z48739	24	4.3	0.0	79.0	0.0	0.0	79.0	0.0	
L18	7/03	58-41	168-29	Y33850 Z49120	29		1797.0	2969.0	156.0	78.0	5000.0	1.6	
L19	7/03	58-39	169-12	Y33949 Z49330	34	0.8	2578.0	1641.0	469.0	391.0	5078.0	7.7	
L20	7/06	58-38	169-46	Y34013 Z49479	37	0.5	47639.0	17450.0	538.0	231.0	65859.0	0.4	
L21	7/06	58-40	170-28	Y34027 Z49611	40	-1.0	42720.0	43368.0	94504.0	25244.0	205836.0	12.3	

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					
							FEMALES	MALES (SEE NOTE)			% LARGE	
								SMALL	PRE- RECRUIT	LARGE		TOTAL
L22	7/10	58-39	171-04	X18226 Y34047	47	-1.2	4684.0	4516.0	50579.0	8580.0	68359.0	12.6
L23	7/10	58-39	171-42	X18069 Y34029	51	-0.4	2460.0	5647.0	52154.0	5979.0	66241.0	9.0
L24	7/14	58-39	172-22	X17887 Z49845	57		3689.0	1557.0	2869.0	492.0	8607.0	5.7
L25	7/13	58-40	172-59	X17704 Y33952	61	1.9	13276.0	1552.0	3276.0	2931.0	21035.0	13.9
L26	7/23	58-41	173-36	X17510 Y33897	69	2.6	0.0	0.0	1628.0	3256.0	4884.0	66.7
L29	7/30	58-44	175-36	X16873 Y33711	72	3.0	0.0	0.0	0.0	79.0	79.0	100.0
M01	6/29	59-00	167-53	Y33566 Z48852	21	3.6	325.0	244.0	0.0	0.0	569.0	0.0
M18	7/04	59-01	168-32	Y33626 Z49033	25		79.0	238.0	0.0	0.0	317.0	0.0
M19	7/04	59-00	169-10	Y33707 Z49210	28	1.3	325.0	1789.0	0.0	0.0	2114.0	0.0
M20	7/05	59-00	169-48	Y33744 Z49354	35	0.6	236.0	1417.0	315.0	236.0	2205.0	10.7
M21	7/05	59-00	170-29	Y33774 Z49485	38	-1.3	75998.0	44137.0	17423.0	2323.0	139881.0	1.7
M22	7/10	58-59	171-07	Y33798 Z49596	43	-1.1	5840.0	21699.0	56099.0	5292.0	88929.0	6.0
M23	7/10	58-59	171-46	X18001 Y33795	47	-1.0	24193.0	10787.0	50791.0	6293.0	92064.0	6.8
M24	7/13	59-00	172-27	X17824 Z49742	55	0.3	39747.0	2532.0	10253.0	4177.0	56709.0	7.4
M25	7/13	59-00	173-04	X17653 Y33739	58	1.1	20399.0	1358.0	3210.0	1605.0	26572.0	6.0
M26	7/24	59-01	173-43	X17464 Y33693	65	2.4	34180.0	556.0	1852.0	185.0	36773.0	0.5
M27	7/24	59-01	174-21	X17272 Y33654	69	2.4	9714.0	571.0	762.0	1048.0	12095.0	8.7
M28	7/30	58-56	175-08	X17027 Y33648	74	2.6	76.0	0.0	0.0	0.0	76.0	0.0
M29	7/30	59-00	175-44	X16846 Y33570	73	1.8	864.0	617.0	0.0	247.0	1728.0	14.3
M31	7/31	59-00	177-00	X16449 Y33474	75	2.1	81.0	0.0	0.0	0.0	81.0	0.0
N18	7/04	59-19	168-33	Y33415 Z48945	22		76.0	76.0	0.0	0.0	152.0	0.0
N19	7/04	59-19	169-13	Y33481 Z49117	20		163.0	0.0	0.0	0.0	163.0	0.0
N20	7/05	59-20	169-51	Y33507 Z49250	33	1.1	606.0	1288.0	0.0	0.0	1894.0	0.0
N21	7/05	59-20	170-32	Y33534 Z49378	36	-1.1	152396.0	80886.0	6973.0	0.0	240255.0	0.0
N22	7/10	59-20	171-11	Y33556 Z49485	42	-1.1	32115.0	55750.0	9626.0	0.0	97491.0	0.0
N23	7/10	59-19	171-50	X17934 Y33570	43	-1.5	27620.0	52332.0	60509.0	2453.0	142914.0	1.7
N24	7/13	59-19	172-31	X17765 Z49649	50	-0.3	99371.0	8067.0	49916.0	22185.0	179539.0	12.4
N25	7/13	59-20	173-10	X17598 Y33526	57	0.3	0.0	2964.0	13995.0	4775.0	21734.0	22.0
N26	7/13	59-29	173-29	X17499 Y33414	56		858.0	520.0	16626.0	40006.0	58009.0	69.0
N26	7/24	59-21	173-48	X17423 Y33491	62	1.5	3478.0	1014.0	2029.0	2319.0	8840.0	26.2
N27	7/24	59-19	174-26	X17243 Y33477	66	2.2	6308.0	2308.0	2923.0	1692.0	13231.0	12.8
N28	7/30	59-17	175-07	X17038 Y33460	75	2.3	12453.0	943.0	189.0	755.0	14340.0	5.3
N29	7/30	59-20	175-45	X16852 Y33390	75	1.7	12317.0	1585.0	2561.0	2195.0	18658.0	11.8
N30	7/31	59-19	176-22	X16668 Y33360	76	1.7	625.0	313.0	156.0	78.0	1172.0	6.7
O18	7/04	59-39	168-35	Y33181 Z48855	21		0.0	0.0	0.0	0.0	0.0	0.0
O19	7/04	59-39	169-15	Y33235 Z49014	24	2.0	0.0	161.0	0.0	0.0	161.0	0.0
O20	7/05	59-40	169-56	Y33271 Z49155	31	1.1	14839.0	15534.0	0.0	0.0	30373.0	0.0
O21	7/05	59-40	170-35	Y33298 Z49276	36	-0.9	9165.0	19749.0	834.0	0.0	29748.0	0.0
O22	7/10	59-40	171-15	Y33316 Z49382	40	-1.1	51276.0	78640.0	7408.0	0.0	137324.0	0.0
O23	7/10	59-39	171-54	X17872 Y33337	42	-1.5	33786.0	49171.0	24445.0	562.0	107964.0	0.5
O24	7/13	59-30	172-47	X17679 Z49620	52	-0.3	7931.0	5148.0	55690.0	12168.0	80936.0	15.0
O24	7/13	59-40	172-36	X17705 Z49551	47	-1.0	116632.0	29492.0	21017.0	5763.0	172903.0	3.3
O24	7/13	59-47	172-51	X17631 Z49535	45	-0.9	83139.0	35270.0	8774.0	5440.0	132623.0	4.1
O25	7/12	59-40	173-15	X17546 Y33303	51	0.9	2267.0	966.0	37175.0	31381.0	71789.0	43.7
O26	7/24	59-41	173-53	X17379 Y33275	58	0.7	2874.0	289.0	49112.0	16756.0	69031.0	24.3
O27	7/24	59-39	174-26	X17232 Y33282	63	1.5	31757.0	2568.0	3108.0	1892.0	39325.0	4.8
O28	7/30	59-39	175-09	X17032 Y33253	71	2.2	318565.0	4545.0	4026.0	2338.0	329474.0	0.7
O29	7/30	59-39	175-51	X16834 Y33213	74	1.7	433261.0	5042.0	4706.0	3025.0	446035.0	0.7
O30	7/31	59-40	176-32	X16641 Y33178	76	1.4	58000.0	929.0	2357.0	1214.0	62500.0	1.9
P18	7/04	59-58	168-39	Y32956 Z48776	21	4.8	0.0	0.0	0.0	0.0	0.0	0.0
P19	7/04	59-58	169-19	Y33003 Z48925	24	2.7	160.0	80.0	0.0	0.0	240.0	0.0
P20	7/05	60-00	169-58	Y33022 Z49050	30	1.2	640.0	1440.0	0.0	0.0	2080.0	0.0
P21	7/05	60-00	170-37	Y33049 Z49168	34	-0.4	1840.0	14043.0	1363.0	0.0	17247.0	0.0
P22	7/11	60-01	171-18	Y33060 Z49272	39	-1.0	62868.0	75393.0	1012.0	0.0	139273.0	0.0
P23	7/11	60-10	172-19	X17706 Y32977	31		4390.0	5732.0	122.0	0.0	10244.0	0.0
P23	7/11	59-58	171-58	X17807 Y33107	36	-1.4	39833.0	51338.0	885.0	443.0	92499.0	0.5
P23	7/11	59-50	172-13	X17772 Y33208	41	-1.5	547973.0	354468.0	21881.0	4376.0	928698.0	0.5

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	FEMALES	NUMBER PER SQUARE MILE				% LARGE
								MALES (SEE NOTE)				
								SMALL	PRE- RECRUIT	LARGE	TOTAL	
P24	7/12	59-59	172-40	X17653 Z49455	37	-0.6	3089.0	3984.0	244.0	0.0	7317.0	0.0
P25	7/12	60-10	173-03	X17545 Z49442	33	0.4	609.0	1391.0	609.0	0.0	2609.0	0.0
P25	7/12	59-50	173-34	X17451 Y33194	51		19049.0	8498.0	95598.0	43550.0	166694.0	26.1
P26	7/24	60-09	174-20	X17235 Y32979	55	-0.3	923.0	15210.0	37540.0	12298.0	65971.0	18.6
P26	7/24	60-01	173-57	X17342 Y33068	54	-0.5	7073.0	10401.0	119915.0	22025.0	159414.0	13.8
P26	7/24	59-50	174-10	X17297 Y33180	59	0.7	410.0	1001.0	21730.0	4146.0	27286.0	15.2
P27	7/24	60-00	174-36	X17175 Y33060	58	0.4	3977.0	5455.0	23409.0	1705.0	34545.0	4.9
P28	7/30	59-56	175-15	X17003 Y33085	67	1.9	352115.0	13378.0	18904.0	4944.0	389341.0	1.3
P29	7/30	59-58	175-55	X16821 Y33039	71	1.7	1449806.0	21157.0	20614.0	5425.0	1497001.0	0.4
P30	7/31	60-01	176-43	X16607 Y32988	79	1.3	12398.0	1626.0	3659.0	1951.0	19634.0	9.9
P31	8/01	59-59	177-16	X16455 Y32980	74	1.1	6747.0	2048.0	482.0	1084.0	10361.0	10.5
P32	8/01	59-59	177-49	X16306 Y32959	77	1.1	0.0	0.0	814.0	6744.0	7558.0	89.2
Q18	7/04	60-19	168-42	Y32714 Z48688	20	5.5	0.0	71.0	0.0	0.0	71.0	0.0
Q19	7/04	60-18	169-19	Y32760 Z48826	23		0.0	78.0	0.0	0.0	78.0	0.0
Q20	7/05	60-19	170-01	Y32796 Z48963	29	1.3	444.0	815.0	74.0	0.0	1333.0	0.0
Q21	7/05	60-20	170-38	Y32819 Z49070	33	0.0	156.0	1016.0	156.0	0.0	1328.0	0.0
Q22	7/11	60-19	171-23	X17872 Z49191	35	-0.8	79892.0	70950.0	3250.0	0.0	154091.0	0.0
Q23	7/11	60-19	172-03	X17745 Y32870	32	-1.1	122.0	854.0	976.0	0.0	1951.0	0.0
Q26	7/25	60-22	174-03	X17291 Y32845	50	-0.7	74537.0	35781.0	32027.0	7006.0	149351.0	4.7
Q27	7/25	60-21	174-42	X17137 Y32850	56	-0.1	1250.0	16720.0	30752.0	1791.0	50513.0	3.5
Q28	7/29	60-19	175-22	X16970 Y32860	62	1.3	111071.0	5745.0	12578.0	1553.0	130947.0	1.2
Q29	7/29	60-20	176-01	X16803 Y32837	66	1.4	88064.0	5360.0	6160.0	1280.0	100864.0	1.3
Q30	8/31	60-22	176-42	X16628 Y32799	75	1.7	188782.0	6271.0	6356.0	1102.0	202511.0	0.5
Q31	8/01	60-19	177-23	X16448 Y32808	80	0.8	190.0	190.0	2476.0	2190.0	5047.0	43.4
R22	7/11	60-39	171-25	X17818 Z49094	35	-1.0	29126.0	42455.0	0.0	0.0	71579.0	0.0
R23	7/11	60-38	172-06	X17690 Y32646	33	-1.2	570503.0	316734.0	0.0	0.0	887237.0	0.0
R24	7/12	60-41	172-47	X17549 Z49262	26	2.5	6692.0	15474.0	226.0	0.0	22392.0	0.0
R25	7/12	60-39	173-26	X17411 Y32664	35	-1.0	47667.0	157576.0	4886.0	0.0	210129.0	0.0
R26	7/25	60-42	174-08	X17254 Y32639	49	-0.9	60000.0	48805.0	18634.0	1183.0	128622.0	0.9
R27	7/25	60-39	174-48	X17101 Y32664	53	-0.4	16977.0	10607.0	23290.0	6918.0	57792.0	12.0
R28	7/29	60-39	175-27	X16945 Y32664	60	0.4	726.0	4384.0	21045.0	2192.0	28347.0	7.7
R29	7/29	60-40	176-11	X16763 Y32643	64	0.9	54337.0	2137.0	7265.0	1282.0	65021.0	2.0
R30	8/01	60-41	176-48	X16613 Y32630	70	1.4	22901.0	992.0	2595.0	2061.0	28550.0	7.2
R31	8/01	60-39	177-30	X16436 Y32632	80	0.7	16871.0	933.0	3667.0	3667.0	25138.0	14.6
R32	8/01	60-40	178-05	X16289 Y32619	88	1.6	699540.0	12103.0	11565.0	2958.0	726166.0	0.4
S22	7/11	60-58	171-30	X17756 Z49011	34	0.6	47984.0	70845.0	616.0	0.0	119446.0	0.0
S23	7/11	61-00	172-08	X17639 Z49088	36	-0.5	186000.0	222812.0	1558.0	0.0	410371.0	0.0
S24	7/12	60-59	172-48	X17513 Z49177	37	-0.1	248625.0	322073.0	0.0	0.0	570698.0	0.0
S25	7/28	61-01	173-30	X17367 Y32425	42	-0.2	29324.0	107179.0	6077.0	0.0	142580.0	0.0
S26	7/25	60-59	174-09	X17229 Y32453	46	-1.2	20091.0	70197.0	18233.0	1823.0	110345.0	1.7
S27	7/25	60-59	174-52	X17072 Y32463	50	-0.9	17176.0	39774.0	28254.0	6858.0	92062.0	7.4
S28	7/29	60-59	175-29	X16930 Y32471	57	-0.1	2195.0	5343.0	16658.0	5029.0	29226.0	17.2
S29	7/29	61-00	176-17	X16743 Y32459	61	0.3	86942.0	4634.0	3496.0	976.0	96048.0	1.0
S30	8/01	61-01	177-12	X16527 Y32444	70	1.2	2016.0	1532.0	12016.0	1935.0	17500.0	11.1
S31	8/01	60-59	177-32	X16445 Y32460	72	1.4	685.0	616.0	3082.0	890.0	5274.0	16.9
T25	7/28	61-21	173-32	X17332 Y32210	41	-1.3	31903.0	57279.0	1499.0	0.0	90681.0	0.0
T26	7/28	61-20	174-16	X17182 Y32236	43	-1.5	35216.0	86557.0	5346.0	255.0	127373.0	0.2
T27	7/28	61-18	174-52	X17058 Y32268	47	-1.5	7217.0	99786.0	31183.0	1663.0	139849.0	1.2
T28	7/29	61-19	175-39	X16885 Y32271	54	-0.3	9500.0	23601.0	17618.0	997.0	51716.0	1.9
T29	7/29	61-20	176-18	X16743 Y32275	58	-0.1	2031.0	5547.0	11016.0	4531.0	23125.0	19.6
T30	8/01	61-18	177-05	X16563 Y32293	72	1.2	3130.0	763.0	8244.0	2290.0	14428.0	15.9
U25	7/28	61-41	173-34	X17296 Y31995	38	-1.1	47673.0	84631.0	0.0	0.0	132304.0	0.0
U26	7/28	61-39	174-26	X17131 Y32047	42	-1.5	45968.0	78946.0	2150.0	0.0	127064.0	0.0
U27	7/28	61-40	174-57	X17024 Y32057	45	-1.3	24344.0	27215.0	1921.0	160.0	53640.0	0.3
U28	7/29	61-38	175-46	X16855 Y32093	54	-0.4	30938.0	84037.0	18225.0	3037.0	136238.0	2.2
U29	7/29	61-39	176-23	X16725 Y32099	57	-0.2	6667.0	30687.0	16984.0	2509.0	56847.0	4.4
V25	7/28	62-01	173-40	X17253 Y31790	35	-0.7	47436.0	104510.0	0.0	0.0	151946.0	0.0
V26	7/28	61-59	174-30	X17098 Y31842	42	-1.3	45475.0	97200.0	600.0	0.0	143275.0	0.0

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

TABLE 10 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE OPILIO TANNER CRAB WERE TAKEN (CONTINUED)

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	FEMALES	NUMBER PER SQUARE MILE				% LARGE
								MALES (SEE NOTE)			TOTAL	
								SMALL	PRE- RECRUIT	LARGE		
V27	7/28	61-57	175-00	X17003 Y31880	43	-1.4	10640.0	22720.0	800.0	80.0	34240.0	0.2
V28	7/29	61-55	175-50	X16835 Y31935	53	-1.2	44235.0	213446.0	26270.0	0.0	283951.0	0.0
Z04	6/23	54-47	165-32	Y34648 Z48173	115	4.0	85.0	169.0	169.0	0.0	424.0	0.0
Z05	6/23	54-40	165-06	Y34600 Z48015	44	5.3	0.0	0.0	86.0	0.0	86.0	0.0

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

TABLE 11 DATA FROM THE 1990 EASTERN BERING SEA TRAWL SURVEY WHERE HAIR CRAB WERE TAKEN

STA	DATE	LAT.	LONG.	LORAN C	DEPTH FMS	BOT. TEMP	NUMBER PER SQUARE MILE					% LARGE
							FEMALES	MALES (SEE NOTE)			TOTAL	
								SMALL	PRE- RECRUIT	LARGE		
C09	6/10	55-40	162-47	Y34073 247192	25	4.3	0.0	0.0	0.0	81.0	81.0	100.0
D09	6/10	56-00	162-48	Y33999 247204	42	2.7	397.0	0.0	0.0	317.0	714.0	44.4
D10	6/10	56-00	162-16	Y33915 246991	40		0.0	74.0	222.0	222.0	519.0	42.8
E09	6/10	56-19	162-48	Y33915 247199	43	2.1	79.0	0.0	0.0	79.0	158.0	50.0
E10	6/10	56-20	162-13	Y33820 246969	45		80.0	0.0	0.0	160.0	240.0	66.7
E11	6/07	56-20	161-30	Y33710 246685	36		0.0	0.0	0.0	85.0	85.0	100.0
E12	6/07	56-21	161-00	Y33631 246480	31		0.0	0.0	246.0	0.0	246.0	0.0
F04	6/26	56-39	165-49	Y34349 248406	43		0.0	0.0	0.0	78.0	78.0	100.0
F09	6/10	56-40	162-45	Y33811 247181	39	2.3	84.0	0.0	0.0	0.0	84.0	0.0
F10	6/10	56-41	162-13	Y33719 246964	39		96.0	0.0	0.0	0.0	96.0	0.0
F11	6/07	56-40	161-30	Y33617 246678	47	2.7	82.0	0.0	0.0	0.0	82.0	0.0
F12	6/07	56-40	160-59	Y33538 246471	37		0.0	0.0	81.0	0.0	81.0	0.0
G02	6/30	56-58	167-05	Y34502 248916	41	2.5	0.0	0.0	0.0	80.0	80.0	100.0
G14	6/06	56-57	159-43	Y33275 245952	30		80.0	400.0	0.0	0.0	480.0	0.0
G19	7/02	57-09	168-36	Y34760 249521	42	2.6	111.0	0.0	0.0	0.0	111.0	0.0
G20	8/06	57-00	169-30	Y35009 249883	33	3.4	0.0	508.0	593.0	0.0	1102.0	0.0
G20	7/08	57-01	169-31	Y35010 249889	34	2.5	0.0	593.0	339.0	0.0	932.0	0.0
G21	7/08	56-50	169-49	Y35095 249971	40		85.0	508.0	254.0	0.0	848.0	0.0
G21	7/08	56-56	170-09	X18669 250094	42	3.6	0.0	83.0	0.0	0.0	83.0	0.0
G21	7/08	57-09	169-53	Y35049 250033	30		859.0	22688.0	7260.0	0.0	30808.0	0.0
G22	7/07	57-08	170-29	X18654 Y35103	26	4.2	75.0	3158.0	677.0	75.0	3985.0	1.9
H09	6/09	57-20	162-46	Y33589 247167	25	3.1	0.0	0.0	81.0	0.0	81.0	0.0
H11	6/08	57-20	161-31	Y33401 246669	30	2.9	78.0	234.0	78.0	0.0	391.0	0.0
H13	6/07	57-20	160-15	Y33221 246160	32	2.9	0.0	0.0	81.0	0.0	81.0	0.0
H19	8/06	57-11	168-41	Y34768 249555	42	3.3	0.0	78.0	0.0	0.0	78.0	0.0
H19	8/06	57-20	168-59	X18750 Y34769	40	3.3	0.0	0.0	0.0	74.0	74.0	100.0
H19	7/02	57-20	169-00	Y34768 249659	38	2.2	0.0	0.0	0.0	244.0	244.0	100.0
H20	8/06	57-20	169-34	X18748 Y34893	33	2.0	695.0	33717.0	9038.0	348.0	43798.0	0.8
H20	7/07	57-19	169-37	Y34915 249904	34	2.6	76.0	3333.0	985.0	0.0	4394.0	0.0
H20	8/06	57-11	169-19	Y34908 249803	39	2.9	0.0	442.0	265.0	0.0	708.0	0.0
H21	7/07	57-22	170-12	Y34968 250075	32	4.9	615.0	1154.0	385.0	0.0	2153.0	0.0
I19	7/03	57-40	169-01	Y34603 249603	37	1.7	0.0	78.0	0.0	0.0	78.0	0.0
I20	7/02	57-30	169-19	Y34754 249752	37		247.0	247.0	123.0	123.0	741.0	16.6
I20	8/06	57-30	169-22	X18738 Y34765	38	2.5	95.0	476.0	286.0	0.0	857.0	0.0
J04	6/27	58-01	165-54	Y33835 248360	30		0.0	0.0	0.0	79.0	79.0	100.0
J05	6/20	58-00	165-13	Y33722 248102	20	2.2	0.0	0.0	78.0	78.0	155.0	50.3
K03	6/27	58-20	166-34	Y33781 248563	24	3.2	0.0	85.0	0.0	0.0	85.0	0.0
L03	6/27	58-39	166-33	Y33604 248501	22	3.6	0.0	81.0	0.0	0.0	81.0	0.0
M18	7/04	59-01	168-32	Y33626 249033	25		0.0	0.0	0.0	79.0	79.0	100.0
N19	7/04	59-19	169-13	Y33481 249117	20		163.0	0.0	81.0	0.0	244.0	0.0
S23	7/11	61-00	172-08	X17639 249088	36	-0.5	172.0	0.0	0.0	0.0	172.0	0.0

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