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COMMERCIAL TANNER AND KING CRAB
FISHERIES OF THE COOK INLET MANAGEMENT AREA
1995

REPORT TO THE ALASKA BOARD OF FISHERIES

COMMERCIAL FISHERIES MANAGEMENT
AND DEVELOPMENT DIVISION



by

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circulating crab tanks. The Homer and Seldovia boat harbors, home ports to most of the fleet, are no more than a 3 hour run from the geographic extremes of the district. Fishing depths range from 5 to 95 fathoms, but generally are between 30 and 65. Annual harvests have ranged from 270,000 to 2.9 million lb. The fishery was closed in both 1989, 1990 and 1995 due to depressed stock conditions. Recent vessel effort has been high with 136 boats fishing during the 1993 season and 110 boats in both the 1992 and 1994 seasons (Table 1).

The Kamishak Bay and Barren Islands Districts are often considered one management unit, because survey, fishery, and tag recovery information show that these two districts contain a single stock of Tanner crabs. The fishery in the Kamishak and Barren Islands Districts occurs in open waters subject to severe weather and icing conditions, as well as extreme tides and seasonal ice flows from upper Cook Inlet and Kamishak Bay itself. All participating vessels have circulating sea water systems. The smallest vessels are generally 50 ft in keel length. These smaller vessels are often extremely limited in fishing time due to the weather conditions. Many fishermen generally fish around the clock; the boats jog while the gear soaks. Safe anchorage from storms is located behind Augustine Island or in Iniskin Bay. Fishing occurs in a 15 to 90 fathom depth range. Historical catch since full development of the fishery and implementation of the legal minimum size has ranged from 0.4 to 3.3 million lb. The fishery was closed in 1989, and 1992 through 1995 due to depressed stock conditions. Vessel effort has ranged from 7 to 28 boats (Table 1).

The Outer and Eastern Districts are located in the Gulf of Alaska bordering the Prince William Sound Management Area (Statistical Area E) on the east at Cape Fairfield. Recently this fishery has occurred in or near the mouths of the many fjord like bays along the outer coast of the Kenai Peninsula; however, the exposed open waters in the Gulf of Alaska portion of these districts once

indicated the Kamishak Bay and Barren Islands Districts' Tanner crabs are one stock. Furthermore the legal males tagged in these two districts have been captured in Kodiak's North Mainland Section, but only on a regular basis as far south as Douglas Reef, which is approximately 5 mi south of Cape Douglas (Figure 1).

Regulations distinctive to the Cook Inlet commercial Tanner crab fishery are:

- 1) Superexclusive registration.
- 2) Registration prior to the season opening.
- 3) Gear storage in the Kamishak and Southern Districts in 15 fathoms or less, except in the eastern portion of the Southern District where it is 10 fathoms or less.
- 4) A 40 pot limit in the Southern District if the guideline harvest level is less than 800,000 lb. A 75 pot limit if it is more.
- 5) Buoy identification tags are required in the Southern District to assist with the pot limit enforcement.
- 6) A requirement for two 4 3/4 in escape rings on all gear.

1996 Season Management Outlook and Stock Status

The Department conducted the annual trawl survey for Tanner crabs during 1995 in the Southern, Kamishak Bay, and Barren Islands Districts. The results of this survey indicate that the stock is rebuilding; however, the magnitude of recovery does not justify a commercial season for 1996 in any district within the Cook Inlet Management Area.

result of the aforementioned skipmolting, the 900,000 crab estimate of 1994 prerecruit ones fell far short of translating into 900,000 million recruits in 1995. Therefore the 1995 estimate of 734,000 true prerecruit ones may fall far short of 734,000 recruit crabs in 1996 leaving the probability of a 1997 season in doubt. Over time, survey data will allow estimates of skipmolting in the sublegal size classes.

Outer and Eastern Districts

Although the Department does not survey in the Outer, Eastern, and Central Districts, stocks here have been depressed similar to those in the adjacent Gulf waters of the Prince William Sound Management Area and Kodiak District. Some commercial pot cod and recreational pot fishermen have reported a recent increase of small Tanner crabs in their gear in 1994 and 1995. This may be an indicator of a recovery similar to the one identified by the department's trawl survey in the Kamishak District. Although the aforementioned qualitative data are of value, surveys in the remainder of Cook Inlet, as well as adjacent management areas, Prince Williams Sound and Kodiak, were utilized to estimate the conditions of the stocks in the Outer, Eastern, and Central Districts. Data from these respective surveys did not indicate sufficient recruitment in any management area to justify a commercial fishery, therefore the Outer and Eastern Districts will remain closed for the 1996 season.

In summation, surveys in the Southern, Kamishak, and Barren Islands Districts indicate improved stock conditions. Continued improvement must be identified by the 1996 trawl surveys to provide justification for future commercial harvest. All 1996 department surveys from Cook Inlet and adjacent management areas will be reviewed prior to final determination of the 1997 season.

The minimum legal size for all species of king crabs is 7.0 in carapace width with a provision for an 8.0 in season. The 8.0 in season, which may be opened and closed by emergency order, has been in effect since 1976. It was used during the 1976-77 season in all districts and during the 1977-78 season in the Kamishak/Barren Islands Districts only. The 7.0 in minimum legal size has been in effect since 1963.

Cook Inlet is a superexclusive registration area for king crab. The current pot limit is 75 if the management area guideline harvest level is greater than 1.5 million lb. If the guideline is less than 1.5 million, then the pot limit is 40. Similar to the Tanner crab fishery, there is a buoy tag requirement accompanying the pot limit.

1996 Season Management Outlook and Stock Status

Southern District

No king crab harvest has been allowed in the Southern District since the 1981-82 season. Extreme low abundance as well as heavy infestation of egg predators in the female clutches necessitated maximum protection of the stock. Although the incidence of egg parasitism seems to have abated; the overall measurable abundance of king crabs remains very low.

Kamishak Bay and Barren Islands Districts

The Kamishak/Barren Islands Districts were first closed to commercial fishing due to low abundance prior to the 1984-85 season. The commercial fishery has remained closed through 1996. The 1995 trawl survey catch of king crabs indicated a continued

examination of the gonads, which can only be achieved by killing the crab.

Table 2. King crab catch (pounds) by season, Cook Inlet Management Area, 1960–1996.

Season	District			Total Catch	Number of Vessels
	Southern	Kamishak/ Barren Is.	Outer/ Eastern		
1960–61	2,699,680	986,551	118,067	3,804,298	
1961–62	1,619,642	3,642,500	368,909	5,631,051	
1962–63	2,769,343	5,509,708	343,505	8,616,556	
1963–64	1,960,426	4,915,303	59,352	6,935,081	
1964–65	1,892,479	1,850,572	963	3,744,014	
1965–66	1,948,012	1,684,346	14,491	3,646,849	
1966–67	1,347,904	1,386,008	89,510	2,823,422	
1967–68	1,117,394	1,883,605	239,518	3,240,520	
1968–69	750,906	1,711,296	87,302	2,549,504	
1969–70	1,464,721	1,688,803	73,644	3,227,168	
1970–71	1,540,018	2,115,991	9,468	3,665,477	
1971–72	1,992,224	2,868,315	12,657	4,873,197	
1972–73	1,391,024	2,756,023	1,966	4,149,013	
1973–74	1,971,841	2,236,131	5,613	4,213,585	
1974–75	1,816,512	2,965,310	2,035	4,783,857	
1975–76	1,674,872	1,832,484	45,293	3,552,649	
1976–77	1,035,316	3,103,895	16,384	4,155,595	
1977–78	584,090	1,099,279	1,350	1,684,719	74
1978–79	664,388	480,261	1,753	1,146,402	89
1979–80	853,584	489,365	4,871	1,347,820	82
1980–81	508,670	1,635,922	8,022	2,152,617	50
1981–82	183,899	1,371,821	4,142	1,559,863	53
1982–83	CLOSED	807,079	15,280	822,359	27
1983–84	CLOSED	188,027	4,504	192,531	17
1984–85	CLOSED	CLOSED	CLOSED	0	--
1985–86	CLOSED	CLOSED	CLOSED	0	--
1986–87	CLOSED	CLOSED	CLOSED	0	--
1987–88	CLOSED	CLOSED	CLOSED	0	--
1988–89	CLOSED	CLOSED	CLOSED	0	--
1989–90	CLOSED	CLOSED	CLOSED	0	--
1990–91	CLOSED	CLOSED	CLOSED	0	--
1991–92	CLOSED	CLOSED	CLOSED	0	--
1992–93	CLOSED	CLOSED	CLOSED	0	--
1993–94	CLOSED	CLOSED	CLOSED	0	--
1994–95	CLOSED	CLOSED	CLOSED	0	--
1995–96	CLOSED	CLOSED	CLOSED	0	--

Note: Average pre 1984–85 closure catch = 3.44 million pounds per year.

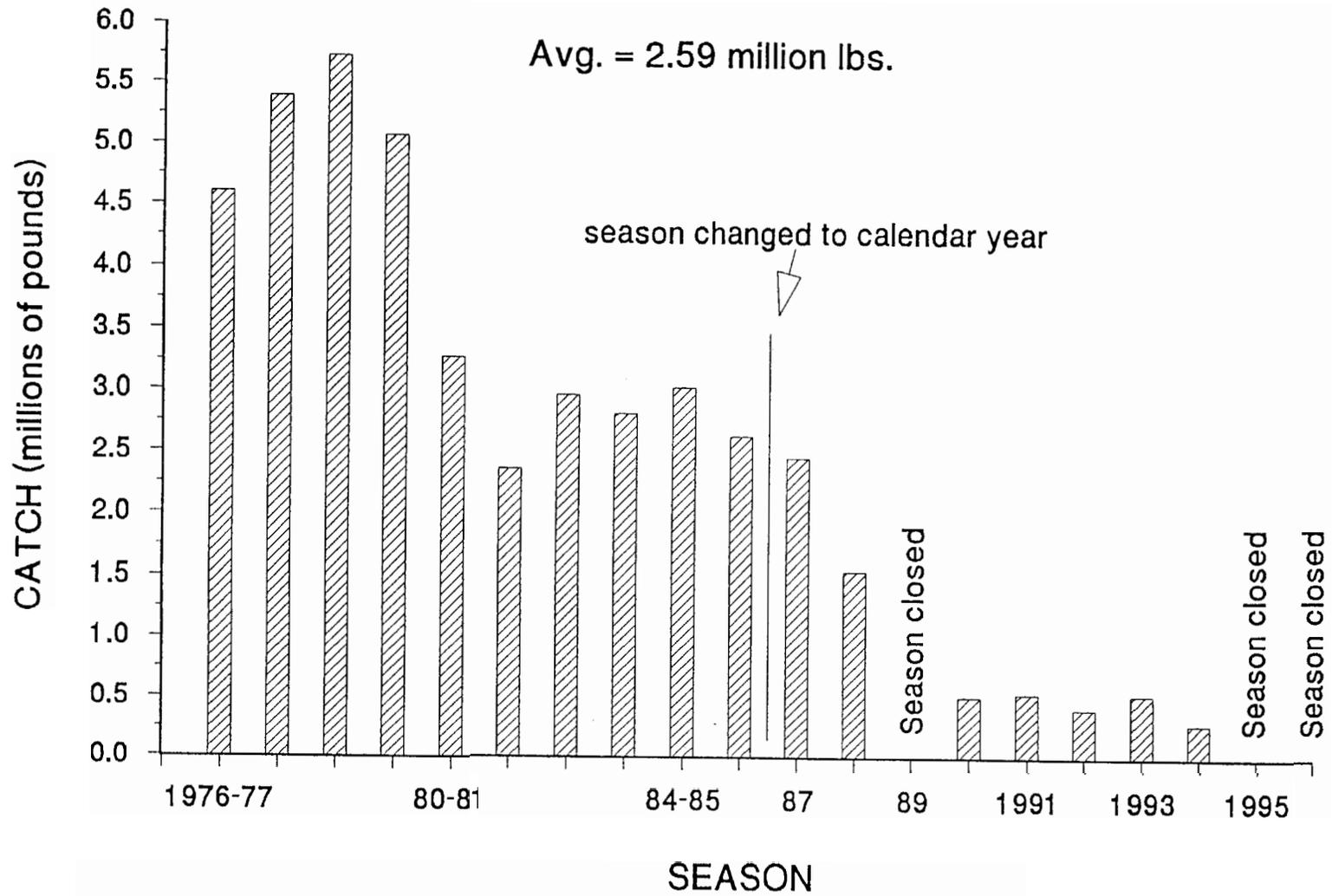


Figure 2. Tanner crab catch by season, Cook Inlet Mgt. Area, 1976 - 1996.

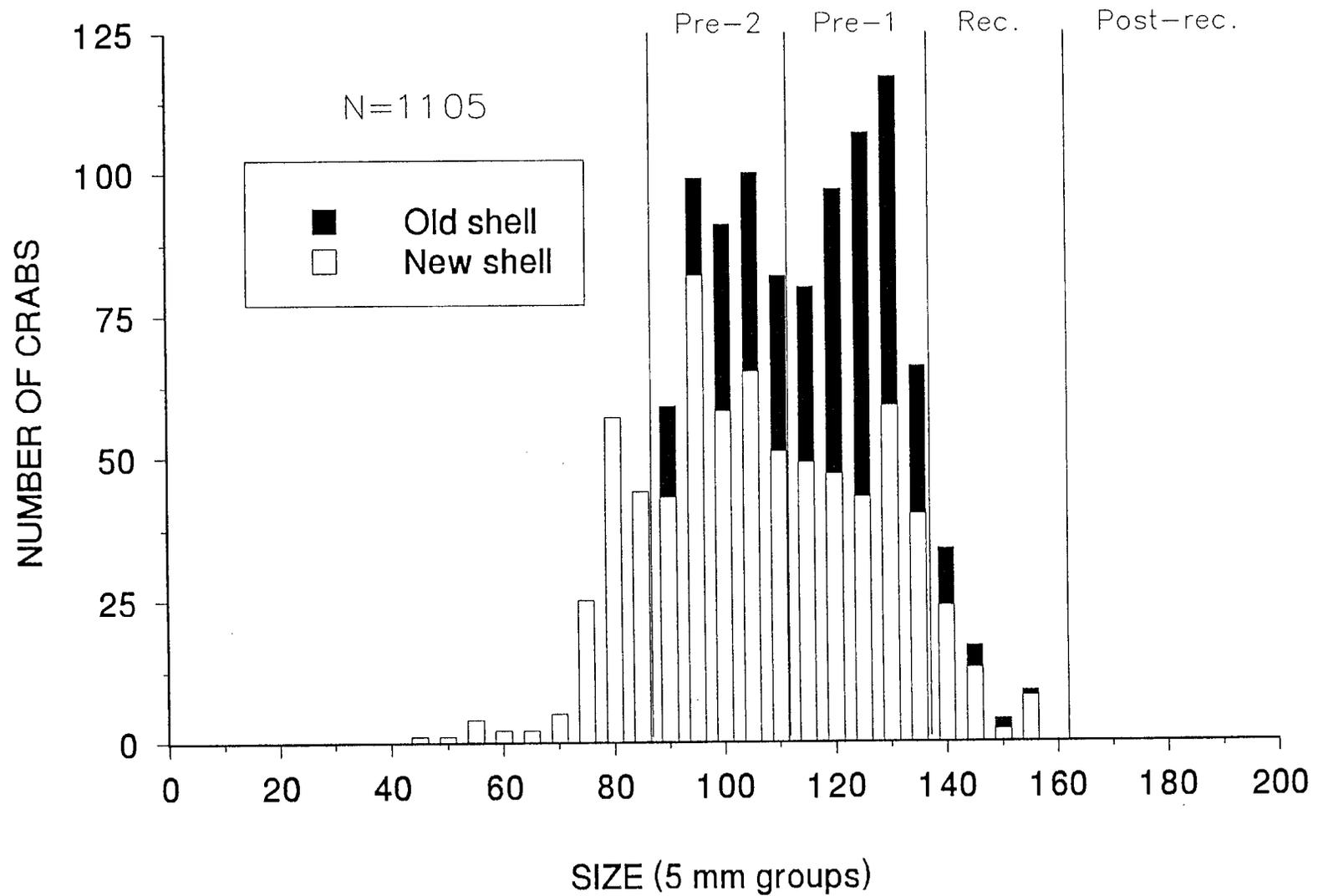


Figure 4. Male Tanner crab catch, Kamishak District, 1995 Cook Inlet trawl survey.

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