

**INCIDENTAL CATCH OF SALMON  
BY U.S. GROUND FISH FISHERIES  
IN THE BERING SEA/ALEUTIAN ISLANDS REGION,  
GULF OF ALASKA, AND THE PACIFIC COAST, 1990-1993**

by

**Loh-Lee Low and Jerald D. Berger**

**Submitted to the  
NORTH PACIFIC ANADROMOUS FISH COMMISSION  
by the  
UNITED STATES PARTY**

**October 1993**

**THIS PAPER MAY BE CITED IN THE FOLLOWING MANNER:**

**Low, L.L. and J.D. Berger. 1994. Incidental catch of salmon in U.S. groundfish fisheries in the Bering Sea/Aleutian Islands region, Gulf of Alaska and the Pacific Coast, 1990-1993. U.S. Dep. Commerce, Natl. Mar. Fish Serv., Alaska Fish. Sci. Cent., 7600 Sand Point Way NE, Seattle, Wa 98115-0070. 3p.**

## ABSTRACT

Pacific salmon are caught incidentally in U.S. groundfish trawl fisheries of the Northeast Pacific Ocean. Estimated numbers of salmon taken in the Bering Sea/Aleutians groundfish fisheries were 30,500 in 1990, 67,000 in 1991, and 76,300 in 1992. In the Gulf of Alaska, incidental catches were 21,100 in 1990, 50,900 in 1991, and 26,100 in 1992. The Pacific Coast groundfish fisheries off Washington, Oregon and California caught 620 salmon in 1990, 6,360 salmon in 1991, and 5,100 salmon in 1992. Thought September 4, 1993, the incidental catch were 120,000 salmon in the Bering Sea/Aleutians region, 74,900 salmon in the Gulf of Alaska, and 8,400 salmon off the Pacific Coast.

### INCIDENTAL CATCH OF SALMON BY U.S. GROUND FISH FISHERIES IN THE BERING SEA/ALEUTIAN ISLANDS REGION, GULF OF ALASKA, AND THE PACIFIC COAST, 1990-1993

by

Loh-Lee Low and Jerald D. Berger

Groundfish fisheries are conducted mainly by trawl gear. The gear occasionally encounter and catch Pacific salmon. Other gear used to harvest groundfish - longline and pots - generally do not catch many salmon. U.S. fishing regulations consider salmon a prohibited species for the groundfish fisheries. When taken, they must be returned to the sea. The incidental catch of salmon are monitored by the U.S. National Marine Fisheries Service and estimated by its scientific observer program. At present there is no specific catch limits set for salmon bycatch off Alaska nor the Pacific Coast. Incidental catch rates of individual vessels and the fleet average are, however, monitored closely and made known to the fleet so individual vessels can control their bycatch to a minimum.

The observer program has been used to estimate incidental catches of salmon. There is 100% observer coverage for the large vessel fleet (greater than 125 ft length overall) and 30% coverage for the medium vessel fleet (60-125 ft length overall) off Alaska. The small vessel fleet (less than 60 ft length overall) is not monitored. Instead, some of their catches are sampled when they deliver to shorebased plants. Shore-based processing plants are monitored 30-100% by observers, depending upon the volume of fish processing. For the Pacific Coast, only the catcher/processor vessels, which catch the bulk of the groundfish catch, are monitored by observers. Observers count salmon, make length-weight measurements of salmon samples, and estimate total groundfish catch weight. The information reported in the following tables are estimates from these observer sampling and extrapolation of the data to the entire groundfish fisheries.

Table 1. Total groundfish catch and estimated bycatch of chinook and other Pacific salmon in U.S. groundfish fisheries, 1990-1993

Year	Region	Groundfish Catch (mt)	Chinook	Chum	Coho	Sockeye	Pink	Total
			-----numbers of fish-----					
1990	BSAI	1,769,995	14,085	16,202	153	31	31	30,501
1991	BSAI	1,883,485	34,958	31,417	444	89	89	66,996
1992	BSAI	1,995,174	37,732	37,737	1,095	16	71	76,291
1993*	BSAI	1,237,442**	29,536	-----90,438-----				119,974
1990	GOA	219,571	16,913	2,541	1,482	85	64	21,085
1991	GOA	220,360	37,582	12,195	1,000	40	57	50,873
1992	GOA	254,166	15,964	10,058	50	18	0	26,090
1993*	GOA		18,825	-----56,028-----				74,853
1990	WOC	273,724	617	0	0	0	0	617
1991	WOC	299,513	6,193	-----165-----				6,358
1992	WOC	285,535	4,862	-----237-----				5,099
1993**	WOC	189,309	4,843	-----3,530-----				8,373

\* Data through September 4, 1993

\*\* Data through September 7, 1994

Regions: BSAI = Bering Sea/Aleutian Islands  
GOA = Gulf of Alaska  
WOC = Washington-Oregon-California

Table 2. Average weight of chinook salmon caught as bycatch in groundfish fisheries, 1990-1992

Year	Region	Male Average weight (kg)	Female Average weight (kg)
1990	BSAI	3.74	3.87
1991	BSAI	3.26	3.32
1992	BSAI	3.26	3.32
1990	GOA	3.57	3.88
1991	GOA	3.11	2.89
1992	GOA	3.46	3.32
1990	WOC	-----N/A-----	
1991	WOC	-----3.59-----	
1992	WOC	-----3.17-----	

Regions: BSAI = Bering Sea/Aleutian Islands  
 GOA = Gulf of Alaska  
 WOC = Washington-Oregon-California

Table 3. Average weight of chum salmon caught as bycatch in groundfish fisheries, 1990-1992

Year	Region	Male Average Weight (kg)	Female Average Weight (kg)
1990	BSAI	2.28	2.18
1991	BSAI	2.53	2.51
1992	BSAI	2.53	2.51
1990	GOA	3.36	3.11
1991	GOA	3.32	3.06
1992	GOA	3.32	3.06
1990	WOC	N/A	N/A
1991	WOC	N/A	N/A
1992	WOC	N/A	N/A

Regions: BSAI = Bering Sea/Aleutian Islands  
 GOA = Gulf of Alaska  
 WOC = Washington-Oregon-California

Table 4. Estimated incidental catches of Pacific salmon previously reported to the International North Pacific Fisheries Commission, 1977-1989

Year	Bering Sea/ Aleutian*	Gulf of Alaska**	Washington- Oregon-California*
1977	47,840	5,222	14,627
1978	44,548	45,603	5,924
1979	107,706	21,460	8,666
1980	122,002	36,069	8,433
1981	43,191	30,860	11,474
1982	23,623	6,967	11,798
1983	42,666	13,874	5,143
1984	84,138	75,846	10,255
1985	20,423	14,102	2,288
1986	20,983	20,820	43,790
1987	14,234	1,221	13,285
1988	9,380	147	16,168
1989	14,153	0	9,199

\* Reported in INPFC Doc. 3588, October 1990

\*\* Reported in INPFC Doc. 3417, September 1989