INTERNATIONAL PACIFIC HALIBUT COMMISSION

ESTABLISHED BY A CONVENTION BETWEEN
CANADA AND THE UNITED STATES OF AMERICA

ANNUAL REPORT
1970

COMMISSIONERS:

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SEATTLE, WASHINGTON
1971

Foreword

The International Pacific Halibut Commission was established in 1923 by the Convention between Canada and the United States for the preservation of the halibut fishery of the North Pacific. The Convention was the first international agreement providing for joint management of a marine fishery. The Conventions of 1930, 1937, and 1953 extended the Commission's authority and specified that the halibut stocks be developed and maintained at levels consistent with the maximum sustained yield.

Three Commissioners are appointed by the Governor General of Canada and three by the President of the United States. The Commissioners appoint the Director of Investigations who supervises the scientific and administrative staff. The scientific staff collects and analyzes statistical and biological data to manage the halibut fishery. The headquarters and laboratory are located at the University of Washington in Seattle, Washington. Each country provides one-half of the Commission's annual appropriation.

The Commissioners meet annually to review the regulatory proposals made by the scientific staff and consider advice from the Conference Board that represents vessel owners and fishermen. The regulatory measures are submitted to the two governments for adoption, and the citizens of both nations are required to observe these regulations.

This report is the 24th Annual Report published by the Commission. Two other series, Scientific Reports and Technical Reports, are published periodically to present the results of scientific studies, to describe field investigations, and to summarize statistical records of the fishery.

INTERNATIONAL PACIFIC HALIBUT COMMISSION
P.O. Box 9, University Station
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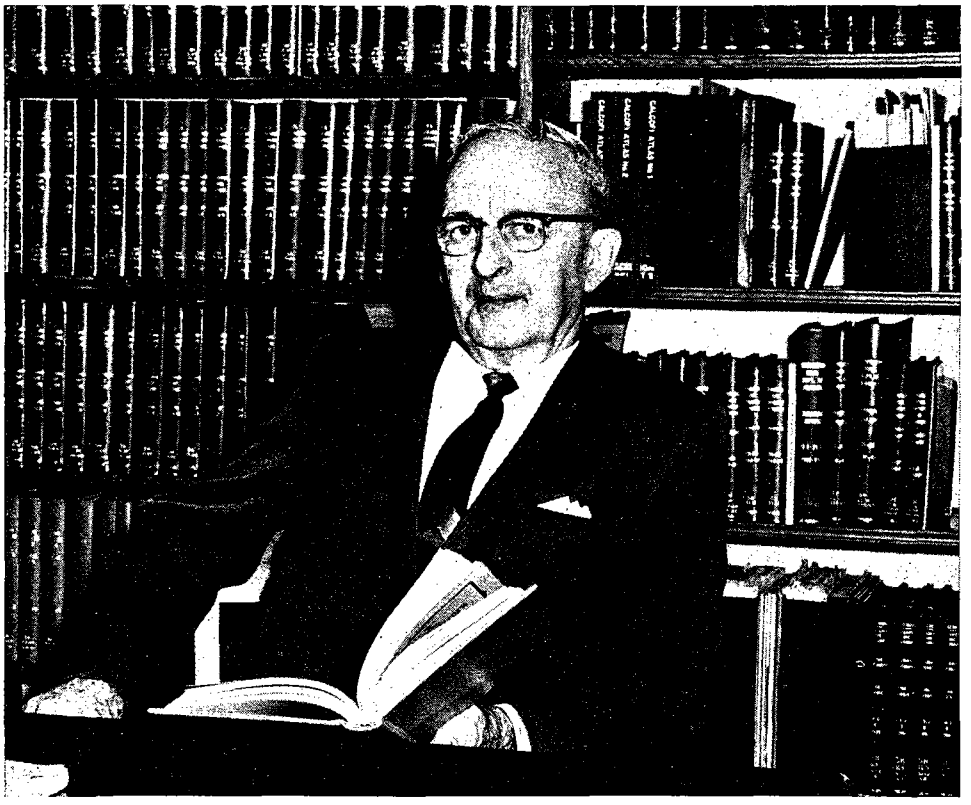
Contents

Dedication

This Annual Report is dedicated to F. Heward Bell who served the Commission for 45 years. Mr. Bell joined the scientific staff as a biologist in 1925 and was Assistant Director from 1951 to 1963. He was appointed Director of Investigations in 1963 and remained in that capacity until his retirement on July 4, 1970.



F. Heward Bell
Director of Investigations
1963-1970

Activities of the Commission

The Commission held its 46th annual meeting in Prince Rupert, British Columbia, January 27-29, 1970. The results of scientific investigations, the effects of the 1969 halibut regulations, and the condition of the halibut stocks were reviewed by the staff at a public session which was attended by representatives of the Pacific Coast halibut industry and invited guests. The industry's Conference Board also met with the Commission. Proposals for the 1970 halibut season were adopted and submitted to the Canadian and United States Governments for approval. The Commission also reviewed administrative and fiscal matters, and approved the research plans for 1970 and the budget for fiscal year 1972.

During the 1970 fishing season, the cumulative catches from each regulatory area were reported periodically and the closing dates for each area were announced when landings approached the established catch limit.

Bernard E. Skud was appointed Director of Investigations to replace F. Heward Bell who retired on July 4, 1970 after serving as Director since 1963. Mr. Skud was employed by the U. S. Bureau of Commercial Fisheries for 20 years and for the past 10 years was Director of the Bureau's Laboratory at Boothbay Harbor, Maine. Richard J. Myhre, Senior Biologist with the Commission since 1964, was appointed Assistant Director of Investigations.

The Commission held a special meeting in Seattle, Washington in September to review the 1970 halibut fishery in the Bering Sea and to consider staff and industry regulatory proposals for that area in 1971. The regulatory changes proposed by the Commission were adopted by the International North Pacific Fisheries Commission and approved by the governments.

In addition to the Annual Report for 1969, the Commission published three Technical Reports in 1970. Several technical papers were prepared at the request of the Canadian and United States national sections of the International North Pacific Fisheries Commission. The titles of these papers are given at the end of this report.

The Canadian appropriation for the 1969/1970 fiscal year (April-March) was $252,000 and expenditures were $229,000 including costs for monetary exchange and expenses of Canadian Commissioners. The United States appropriation for the fiscal year (July-June) was $213,000 and expenditures were $210,000. In compliance with the Convention, expenses during the calendar year were shared equally by both governments.

The Fishery

REGULATIONS

The Pacific Halibut Fishery Regulations for 1970 were approved by the Secretary of State of the United States of America on March 11 and by the Governor General of Canada on March 17. The regulations also implemented the conservation measures adopted by the International North Pacific Fisheries Commission for eastern Bering Sea.

Regulatory Areas

The regulatory areas in 1970 were (see Figure 1):

AREA 2 – California to Cape Spencer, Alaska.

AREA 3A – Cape Spencer to Kupreanof Point near the Shumagin Islands.

AREA 3B – South of the Alaska Peninsula and the Aleutian Islands between Kupreanof Point and the meridian of 175° W.

AREA 3C – South of the Aleutian Islands and west of 175° W.

AREA 4A – The Bering Sea from the 100-fathom edge lying east of 170° W. and south of a line between Cape Sarichef and Cape Navarin.

AREA 4B – The Bering Sea side of the Aleutian Islands between Cape Sarichef and the meridian of 170° W.

AREA 4C – The Bering Sea south of a line between Cape Sarichef and Cape Navarin between 170° W. and 175° W.

AREA 4D – All waters north of the Aleutian Islands and west of 175° W. and east of 175° W. and north of Area 4C and north of a line between the Pribilof Islands and Cape Newenham.

Catch Limits

The catch limits in 1970 were: 20 million pounds in Area 2; 30 million pounds in Area 3A; and 3 million pounds in Area 3B. Catch limits were reduced from 1969 by 1 million pounds each in Areas 2 and 3A and by 500,000 pounds in Area 3B. Removals from Area 3C and Area 4 (Bering Sea) were controlled by limiting the fishing season in each area.

Length of Seasons

The opening and closing times of 1500 and 0600 hours (Pacific Standard Time) in Areas 2, 3A, and 3B were unchanged from 1969. In Areas 3C and 4, the season opened at 1800 hours but closing was changed from 2100 to 0600 hours to increase the number of daylight hours for surveillance of the fishing grounds after closure of the season. The opening and closing dates and the number of fishing days in 1969 and 1970 are compared in Table 1.

Table 1. Length of seasons and opening and closing dates, 1969-1970.

Area	1969			1970		
	Opening	Closing	Fishing days	Opening	Closing	Fishing days
2	May 7	Sept. 21	137	April 25	Sept. 21	149
3A	May 7	Sept. 22	138	April 25	Sept. 21	149
3B	April 12	April 18	6	April 1	April 7	6
	May 7	Oct. 25	171	April 25	Sept. 20	158
3C	March 29	Nov. 15	231	March 17	Nov. 15	242
4A	April 3	April 15	12	March 22	April 4	12
4B	April 3	April 15	12	March 22	April 4	12
	Sept. 1	Sept. 13	12	Sept. 1	Sept. 14	12
4C	March 29	April 22	24	March 17	April 11	24
4D	March 29	Nov. 15	231	March 17	Nov. 15	242

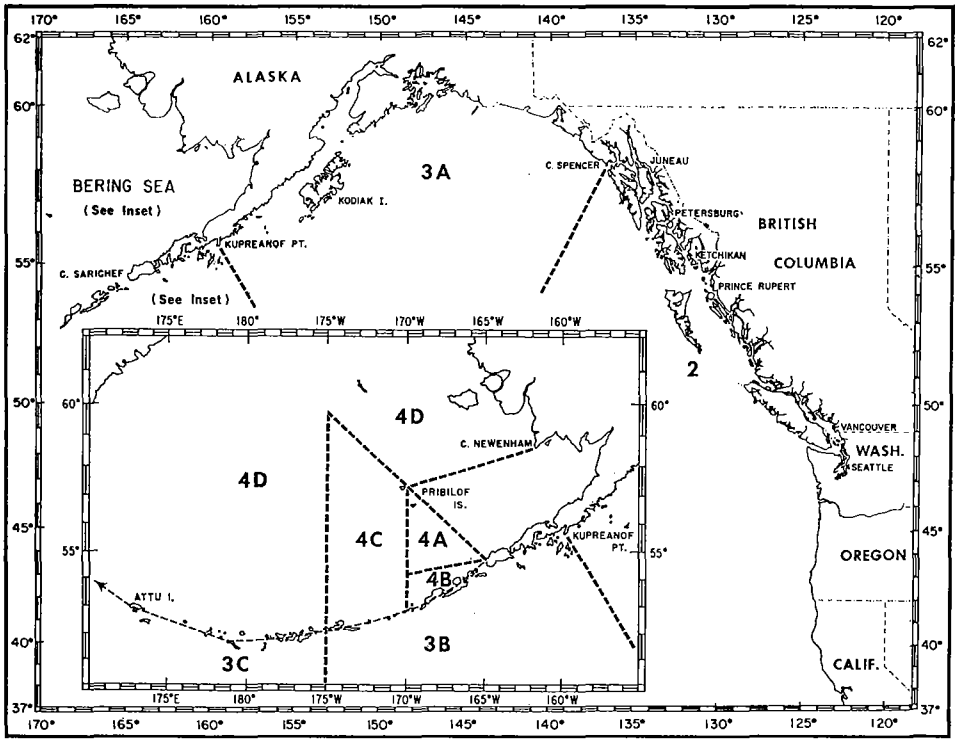


Figure 1. Regulatory areas for the halibut fishery, 1970.

STATISTICS OF THE CATCH

Catches by Regulatory Areas

The catch declined from 58.6 million pounds in 1969 to 54.9 million pounds in 1970 with the reduced catch limits in Areas 2, 3A and 3B. Landings from 1966 to 1970 are compared in Table 2. Catches by foreign vessels and losses from the incidental capture of halibut by foreign and domestic trawl fisheries are not included.

Table 2. Catch of halibut in thousands of pounds (eviscerated, heads-off) by regulatory areas, 1966-1970.*

Regulatory Area	1966	1967	1968	1969	1970
AREA 2					
Canada	11,522	9,877	10,666	13,346	11,146
United States	12,054	10,142	5,971	9,362	8,738
Total	23,576	20,019	16,637	22,708	19,884
AREA 3					
Canada	19,812	14,588	18,135	19,583	17,108
United States	17,748	18,519	12,747	15,081	16,800
Total	37,560	33,107	30,882	34,664	33,908
AREA 4					
Canada	638	1,108	668	668	900
United States	557	1,287	653	565	245
Total	1,195	2,395	1,321	1,233	1,145
ALL AREAS					
Canada	31,972	25,573	29,469	33,597	29,154
United States	30,359	29,948	19,371	25,008	25,783
Total	62,331	55,521	48,840	58,605	54,937

* The statistics for 1970 do not include estimates of non-reported landings. These estimates were included as part of the total landings in previcus years but have averaged less than 250,000 pounds since 1961 and are no longer considered significant.

The 1970 catch in Area 2 was 19.8 million pounds, down 2.9 million from 1969. The catches in Southeastern Alaska and northern British Columbia were over 9 million pounds each and 1 million pounds were taken off Vancouver Island.

The catch in Area 3A was 30.3 million pounds. A moderate reduction in removals from the eastern part of the area was compensated by an increase in catch in the central part of the Gulf of Alaska.

In Area 3B the catch during the first fishing season was 155,000 pounds compared to 423,000 pounds in 1969. This decrease was caused by a 33 percent decline in the number of vessels fishing and to reduced effort by those that did enter the fishery. The total removal from Area 3B for both seasons in 1970 was 3.5 million pounds. The 0.5 million excess over the catch limit resulted from an unexpected re-entry into the halibut fishery of vessels that had been fishing for salmon. The catch in Area 3C was 81,000 pounds.

The catch from all areas of the Bering Sea in 1970 was 1.1 million pounds. The catch in Area 4A was 221,000 pounds, comparable to the amount taken in 1969. Most of the catch was taken from the northern third of the area, which has a less intensive fishery by the Russian and Japanese trawl fleets than the Polaris Ground to the south. The catch in Area 4B was 172,000 pounds of which 107,000 pounds were taken during the first fishing period and 65,000 pounds in the second period. The catch in Area 4C was 479,000 pounds. The catch in Area 4D was 271,000 pounds, the lowest in several years, due primarily to the near absence of a fishery on the northeastern flats.

Landings by Ports

The most significant changes in 1970 were the increased landings at Kodiak and other central Alaskan ports and the corresponding decline at other ports (Table 3). Landings at Seattle were the lowest since the early 1900's. The change in the distribution of landings was influenced by the price structure, increased demand for frozen products, running time for the delivery of catches, new cold storage facilities in central Alaska, and the establishment of a United States Customs office in Seward which facilitated landings in that port.

Table 3. Canadian and United States landings in thousands of pounds, by port, 1969-1970.

Region or Port	1969			1970		
	Canada	U.S.	Total	Canada	U.S.	Total
CALIFORNIA AND OREGON	—	150	150	—	76	76
WASHINGTON						
Seattle	238	6,881	7,119	256	3,686	3,942
Bellingham	1,919	645	2,564	2,618	637	3,255
Other	—	182	182	—	92	92
BRITISH COLUMBIA						
Vancouver	5,718	—	5,718	4,573	—	4,573
Vancouver Island	1,105	—	1,105	883	—	883
Prince Rupert	18,912	511	19,423	13,398	1,769	15,167
Other	1,143	—	1,143	861	—	861
SOUTHEASTERN ALASKA						
Ketchikan	140	3,126	3,266	32	2,843	2,875
Other	688	8,839	9,527	433	8,231	8,664
CENTRAL ALASKA						
Kodiak	2,873	3,465	6,338	3,591	5,106	8,697
Other	861	1,209	2,070	2,509	3,343	5,852
TOTAL	33,597	25,008	58,605	29,154	25,783	54,937

Value of Catch

The 1970 halibut catch by Canadian fishermen was worth $11 million; the catch by United States fishermen was worth $9 million. The $20 million (U.S. dollars) total was one million less than in 1969. Halibut prices were strong early in the 1970 fishing season primarily because cold storage holdings were low. These high prices encouraged vessels to sell their fares at northerly ports which placed more fish than usual in storage and less on the fresh fish market. By late summer, inventories of frozen halibut surpassed the levels of previous years and prices declined.

Number of Vessels and Fishermen

Table 4 shows the number of vessels and fishermen engaged in the fishery during 1970.

Table 4. Number of regular setline vessels and men in each area.

Regulatory Area	Canada		United States		TOTAL	
	Vessels	Men	Vessels	Men	Vessels	Men
2	102	353	127	413	229	766
2 & 3	12	77	13	53	25	130
3 & 4	53	406	71	361	124	767
TOTAL	167	836	211	827	378	1,663

CONDITION OF RESOURCE

Catch Per Unit of Fishing Effort

Removals from Area 2 have been reduced substantially during the past seven years in an effort to improve the stock condition. This reduction of the catch stopped the decline in the catch per unit of effort (CPUE) which started during the early 1960's, but the increasing percentage of younger fish in the catch and the high exploitation rate in certain sub-areas are matters of concern.

The CPUE in Area 3A as a whole improved slightly but declined on grounds east of Cape St. Elias and increased significantly on grounds west of Kodiak Island. The CPUE in the central section remained unchanged. As in Area 2, removals in Area 3A have been reduced to improve the stock condition. The CPUE in Area 3B increased substantially over 1969 in response to reduced fishing pressure.

The halibut catch by setline vessels in Bering Sea continues at a low level. In Area 4A, which includes the Polaris Ground, the abundance of halibut remains much below that of earlier years in spite of sharp reductions in the catch by setline vessels. Data from research cruises indicate a long-term reduction in recruitment. The incidental catch of juvenile halibut by the intensive foreign trawl fishery in the area contributes to the low abundance of halibut. The CPUE on the Misty Moon Ground in Area 4A was down slightly from 1969.

In Area 4B, the CPUE was lower during the first fishing season but was higher in the second season than in 1969.

The CPUE in Area 4C was substantially higher than in 1969 and a moderate increase in removals is possible from this region.

The catch per unit effort on the "edge" grounds in Area 4D has been maintained by the few vessels exploring this remote area. There was no fishery of consequence on the northeastern flats in 1970.

Age Composition of the Catches

Sampling of the landed catches was continued at the five major ports: Seattle, Vancouver, Prince Rupert, Ketchikan, and Petersburg. Sampling was also instituted at Kodiak, which was surpassed only by Prince Rupert in total landings.

Lengths were measured for 55,000 fish from 261 fishing trips, 4,300 fish of the total were collected at sea from 20 trawl trips and one longline trip (Table 5). Otoliths for age determination and growth studies were obtained from all fish except those released alive from trawlers. Age and size composition data also were obtained from catches of vessels chartered for recruitment studies.

Table 5. Number of samples and number of fish measured in 1970.

Source	Number of Samples			Number of Fish Measured
	Port Sampling	Sea Sampling	Total	
COMMERCIAL VESSELS				
Area 2	97	20	117	22,423
Area 3	127	0	127	28,563
Area 4	16	1	17	4,248
RESEARCH VESSELS	—	—	—	11,430
TOTAL 1970	240	21	261	66,664
TOTAL 1969	254	42	296	82,442

The age composition of the stock in Area 2, notably in Hecate Strait has not improved. Halibut less than 6 years old were abundant on most grounds and dominated the catches in Hecate Strait, accounting for 35 percent of the number landed. Although several of the year classes were abundant at younger ages, their strength was not sustained. For example, the 1961 year class was very abundant as 1- and 2-year-olds in recruitment surveys and entered the setline fishery in above-average strength as 5- and 6-year-olds in 1966 and 1967, but the abundance as 9-year-olds in 1970 was below average. The decline of initially strong year classes suggests that losses occurred before the fish were fully recruited to the setline fishery. Young halibut are vulnerable to the foreign and domestic trawl fisheries and losses to trawling could account for this decline. Fishing grounds off the west coast of Vancouver Island, the Queen Charlotte Islands, and in Southeastern Alaska continue to produce older fish than other grounds in Area 2. Recruitment in Southeastern Alaska is consistently later than on other grounds in Area 2.

In Areas 3A and 3B, the CPUE of fish, 11 years of age or older which had increased since 1965, declined somewhat in 1969 and 1970. Younger fish fluctuated randomly during this same period but increased sharply in 1970 with the entry of the 1961 year class.

In the Bering Sea, halibut over 11 years old continued to decline on the Polaris Ground but younger fish were more abundant than in the previous two years. Stock conditions on the Polaris Ground remained poor, however, and no immediate improvement in the fishery is anticipated. Farther west along the edge, notably the Misty Moon Ground in Area 4A and grounds in Area 4C, older age groups have increased.

The Fox Islands Grounds (Area 4B) produced small catches during the short spring and autumn seasons in 1969 and 1970. The age composition of the samples from the autumn fishery showed a greater proportion of older fish (Figure 2). This difference was expected because of the usual seasonal movements of halibut in the region.

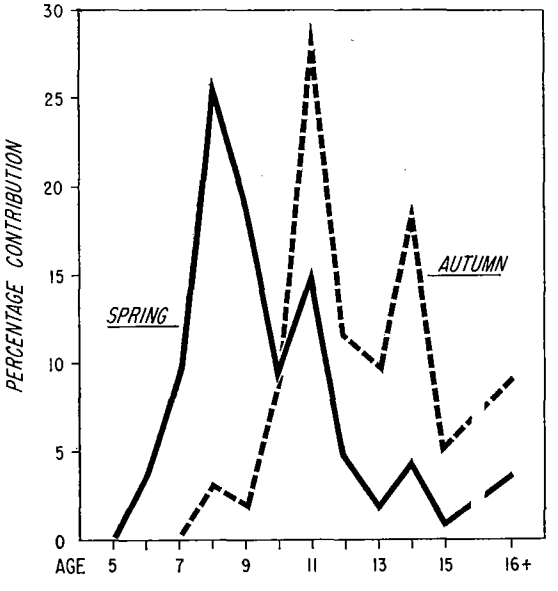


Figure 2. Age composition of halibut in the spring and autumn fishery, Fox Islands, 1969.

Scientific Investigations

TAGGING EXPERIMENTS

Two otter trawlers were chartered for studies in the Bering Sea. The *St. Michael* monitored the incidental catch of halibut by foreign trawlers and the *Don Edwards* sampled pre-recruit halibut. Halibut were tagged and released to study the source of recruits to the commercial fishery (Table 6). Halibut were also tagged on seven commercial trawlers (19 trips) to estimate the mortality of trawl-caught halibut.

Table 6. Number of halibut tagged and area of release in 1970.

Vessel	Region of Tagging	Number Tagged
ST. MICHAEL	Bering Sea	88
DON EDWARDS	Bering Sea Flats	2,608
DON EDWARDS	Gulf of Alaska	1,707
Other trawlers*	Washington Coast to Dixon Entrance	3,024
TOTAL		7,427

* ARTHUR H, CANADIAN No. 1, SEAFREEZE PACIFIC, SONNY BOY, TORDENSKJOLD, VICTOR F. and WHITE SWAN.

Returns of 1,184 tags in 1970 included 60 recovered in earlier years but not reported until 1970. Five tags released by Japanese research vessels were recovered by North American vessels. Eleven tags released by the Halibut Commission were recovered by Japanese vessels and returned through the International North Pacific Fisheries Commission. One tag was returned in person by scientists from a Soviet research vessel.

Tagging experiments consistently show that Bering Sea halibut contribute to catches in the Gulf of Alaska. For example, in 1964 the Commission released 220 tagged halibut on Petrel Bank in the Aleutian Islands (180°). Three of these have been recovered in Area 2: the first in 1967 off the west coast of Queen Charlotte Islands; the second in 1968 from Caamano Sound in Hecate Strait; and the third in 1970 off Cape Flattery, Washington, a distance of 2,400 miles (measured along the continental shelf), equal to the longest migration known for Pacific halibut.

A program of premium rewards was initiated in 1966 to stimulate interest in return of recovered tags. Four of the selected tags were recovered in 1970 and $100.00 rewards were paid to the finders, three from Canada and one from the United States. Since the start of this program, rewards have been paid for 35 premium tags.

OBSERVATIONS OF FOREIGN TRAWLERS

Because little is known of the incidental halibut catch by foreign trawlers in the Bering Sea, the Commission chartered the trawler *St. Michael* to obtain estimates of their catches. Fishing was conducted from March 11 to 31 on the same grounds

where foreign vessels were operating. Nets were towed alongside foreign trawlers to obtain comparable catches. Walleye pollock *(Theragra chalcogrammus)* accounted for 60 percent and halibut for 2 percent of the total catch from 14 hauls. Of the 214 halibut caught, only 3 were larger than the minimum size of 66 centimeters. Nearly 60 percent of the halibut were 5-year-olds (1965 year class). The catch averaged 12.9 fish or 24.9 pounds per hour of fishing. Eighty-eight fish were tagged. From May 20 to 28 the trawler *Don Edwards* made eight additional comparability hauls. The catch indicated that smaller and younger halibut had migrated onto the fishing grounds. Only 67 halibut were caught; all were below the legal size (66 cm.) and 75 percent were 3-year-olds. The age composition of the sublegal halibut taken by both trawlers is given in Table 7.

Table 7. Number and age of sublegal halibut taken in comparative fishing hauls.

Vessel	Age and Year Class						Total
	2 1968	3 1967	4 1966	5 1965	6 1964	7 1963	
ST. MICHAEL	0	15	55	124	15	2	211
DON EDWARDS	44	21	2	0	0	0	67
Total	44	36	57	124	15	2	278

RECRUITMENT STUDIES

The annual surveys to assess the abundance of young halibut in southeastern Bering Sea and in the Gulf of Alaska were continued in 1970. A commercial trawler was chartered for 110 days and sampling was conducted both inshore and offshore.

Inshore Areas

Selected inshore sampling areas were fished with a small-fish trawl with a 1¼-inch mesh codend. Fifty-eight hauls of 15-minutes duration were made at depths of 8 to 33 fathoms; 3,954 halibut smaller than 65 cm. and 51 larger fish were caught. The Cape St. Elias and Kodiak Island grounds produced above-average catches of the 1968 year class (2-year-olds). Catches for all age groups in Shelikof Bay in the eastern Gulf of Alaska were far below the average of previous years. Catches from Unimak Island and the Bering Sea were slightly below average.

Offshore Areas

In the Gulf of Alaska, 119 hauls were made at depths of 12 to 130 fathoms on selected offshore grounds. Of 4,358 halibut caught, 4,048 were below the minimum size limit for halibut. The number of 2-year-old halibut was above average at Chirikof Island stations.

In southeastern Bering Sea, 50 stations were sampled during the first half of June. The abundance of young halibut was low at these stations except for the above average appearance of the 1967 year class (3-year-olds).

Table 8 summarizes the age composition of sublegal halibut taken on the inshore and offshore grounds in 1970.

TRAWL INVESTIGATIONS

The retention of trawl-caught halibut has been prohibited by the Commission since 1944 because many of the halibut caught with bottom trawls are under the optimum harvesting size. Parallel fishing with trawl and setline gear on the Goose Islands Grounds in 1966 showed a higher percentage of small halibut in the trawl

Table 8. Number and age of sublegal halibut taken during recruitment surveys.

Area	Age and Year Class								Total
	0 1970	1 1969	2 1968	3 1967	4 1966	5 1965	6 1964	7-9 '63-'61	
INSHORE									
Shelikof Bay	8	17	6	8	11	2	1	1	54
Cape St. Elias	231	92	124	94	27	22	4	3	597
Kodiak Island	0	976	981	132	20	2	2	0	2,113
Unimak Island	0	350	226	154	28	11	4	1	774
Bering Sea	0	169	99	134	13	1	0	0	416
TOTAL	239	1,604	1,436	522	99	38	11	5	3,954
OFFSHORE									
Cape St. Elias	0	0	10	21	77	35	104	79	326
Cape Chiniak	0	0	50	170	163	63	46	14	506
Chirikof Island	0	9	1,534	393	305	105	66	9	2,421
Unimak Island	0	0	35	62	32	20	5	4	158
Bering Sea	0	0	22	482	92	31	9	1	637
TOTAL	0	9	1,651	1,128	669	254	230	107	4,048

catch (Figure 3). Although North American trawlers are not permitted to retain halibut, the species is taken incidentally while fishing for other groundfish. The incidental catch of halibut was relatively small during the 1940's when the trawl fleet was small and fishing was concentrated on more southerly grounds off California, Oregon and Washington where the abundance of halibut was low. In recent years the trawl fleet has grown and catch and effort have increased markedly on the productive halibut grounds in Queen Charlotte Sound and Hecate Strait.

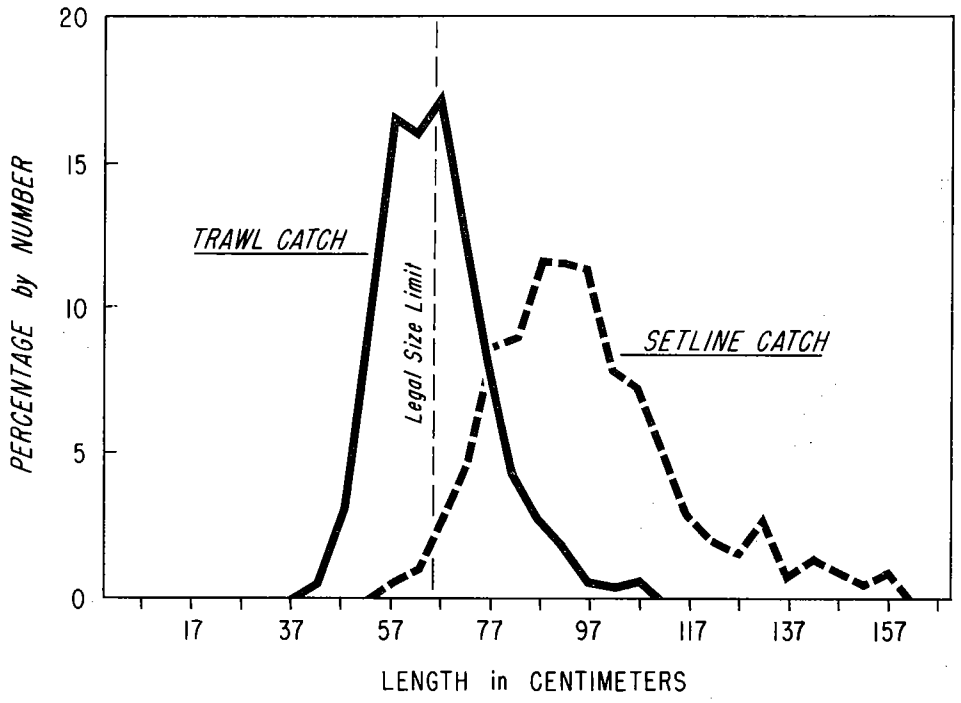


Figure 3. Size composition of halibut taken by trawl and setline gear, Goose Islands, 1966.

Because of the changes in the trawl fishery, the Commission initiated a study to estimate the magnitude of the incidental trawl catch of halibut off British Columbia. With the cooperation of the trawl fleet, observers were placed on Canadian and United States commercial trawlers. From 1962 through 1969, over 3,000 hauls were observed on 120 commercial trips by 32 trawlers. Data on halibut included the pounds per hour trawled, the percentage in the trawl catch and the size composition. Few halibut were caught when trawlers were fishing for Pacific ocean perch and most were taken when lingcod, Pacific cod and sole were the target species. Catches of halibut were large from May through August and relatively few were caught during the winter.

The observed catch and effort data were multiplied by the total trawl catch and effort from British Columbia waters in each year, 1962-1969, to estimate the total amount of halibut taken incidentally by trawls. This method indicated an average incidental catch of 3.2 million pounds annually. Most of the catch (2.5 million pounds) was taken between May and August and was divided equally among the three sub-areas (west coast of Vancouver Island, Queen Charlotte Sound and Hecate Strait).

Approximately 30 percent by number of the halibut taken incidentally were below the legal size. The percentage of undersized fish varied from less than 20 percent off the west coast of Vancouver Island to over 45 percent in Hecate Strait. Most of the legal-sized halibut were between 65 and 95 cm. (5-20 lbs.).

A special study was initiated during 1970 to determine the mortality of halibut after they are caught and released by trawlers. The physical condition of 3,000 trawl-caught halibut was examined. Most of the live fish were then tagged and released. Approximately 16 percent of the halibut were dead when examined and undoubtedly others died soon after release. The magnitude of this additional loss is not known but earlier experiments indicate that total mortality may be near 50 percent. Recovery of tags released during this study will improve the estimate of mortality and will allow an assessment of losses from the incidental capture of halibut by Canadian and United States trawlers.

THE SMALL-BOAT FISHERY

During 1970 the Halibut Commission made a study of the small-boat fishery in Area 2. Data were collected from six ports in British Columbia and from three ports in Southeastern Alaska.

The small-boat fleet consists of two groups of vessels which are less than 5 net tons and therefore not licensed by the Commission. The largest group consists of trollers which retain halibut taken incidentally while fishing for salmon. The second group is comprised of small vessels which fish for halibut with setline gear, jigs or handlines. Most of the vessels that use setline gear are gillnet-type vessels, 30 to 40 feet long, which carry their groundline on a drum or reel. The amount of groundline carried by individual vessels ranges from 1 to 16 skates. The troll vessels are from 20 to 50 feet long. Trollers in Southeastern Alaska fish 4 lines with as many as 8 hooks per line. Trollers in British Columbia use the same number of hooks per line but generally fish with 6 lines.

The catches of halibut in Area 2 by trollers, small setliners, and by regular setline vessels are shown in Figure 4. The catch by the small boats was fairly uniform over the past decade, but their percentage of the catch has increased as the catch by

regular setliners has declined. The number of regular setline vessels has fallen steadily over the past decade and the catch limit in Area 2 has been reduced from 28 million pounds in 1963 to the present level of 20 million pounds. The catch by small setliners has declined slightly in recent years, whereas troll catch has increased. The halibut catch by trollers generally increases when the price of halibut is high or when the abundance of salmon is low. Over 80 percent of the troll landings consisted of salmon, and only 15 to 17 percent was halibut. These values cannot be extrapolated to the total troll landings because our samples did not include data from troll landings without any halibut. Thus the percentage of halibut in the samples would be higher than in the total troll catch.

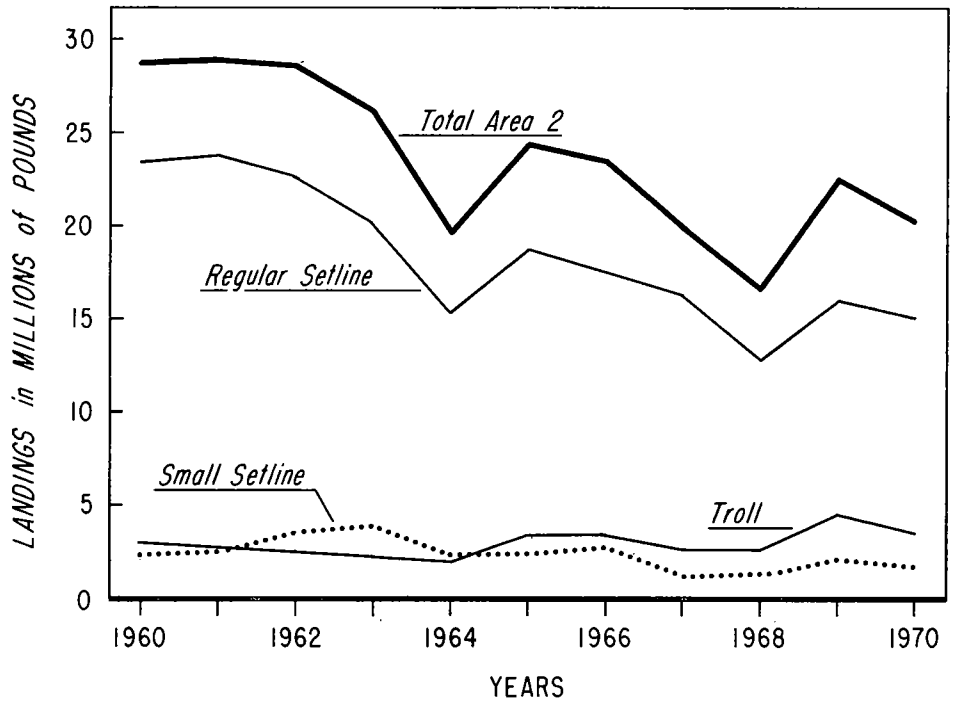


Figure 4. Landings by regular setliners, small setliners and trollers in Area 2, 1960-1970.

Data from 589 landings of 343 small boats included the numbers and weight of halibut by trade categories, and the numbers and weight of other species in the catch. All of the halibut from 436 landings were measured to determine the size composition of the catch. A significant observation made during the survey was that catches landed by the troll fleet had a higher proportion of chicken halibut and fewer medium and large halibut than either the regular or small setliners. These observations include only landed catches; no data are available on how many halibut below the legal size limit were released at sea.

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