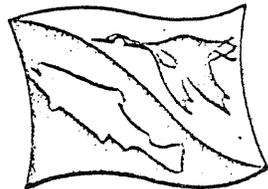
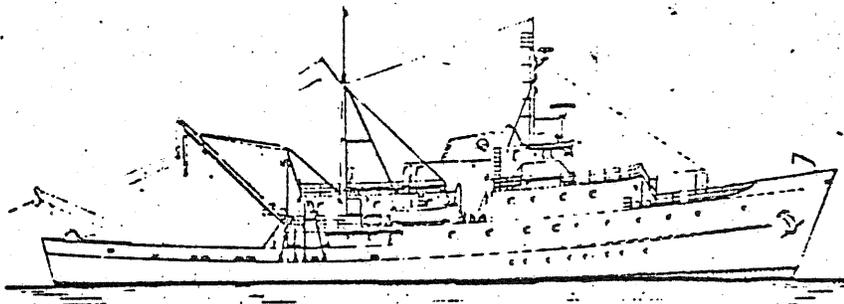


FOURTH QUARTER
STOCK CATALOGUE 1968

GROUND FISH AND SEA SCALLOPS FISHED BY NEW ENGLAND FLEETS

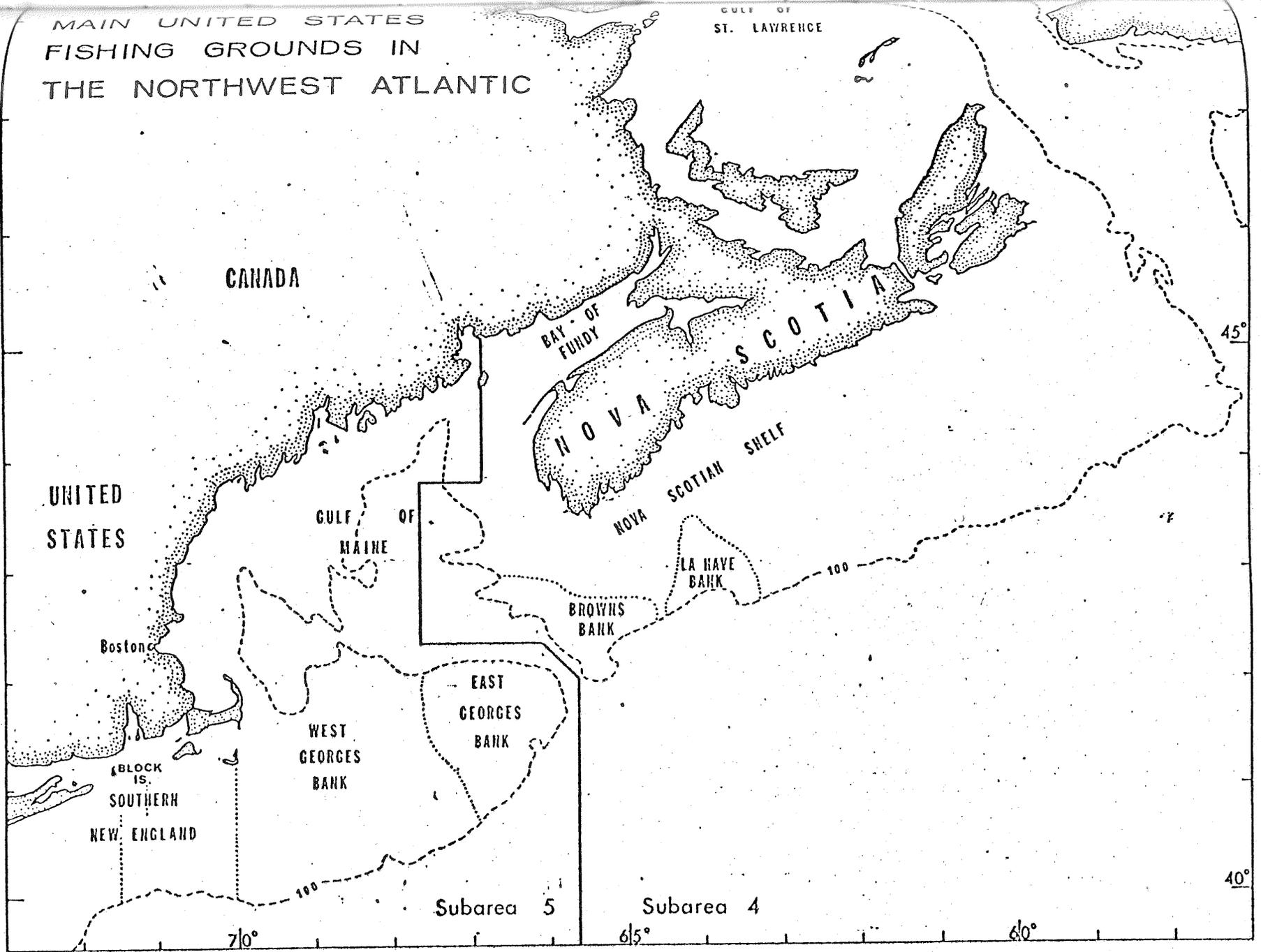
by

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MAIN UNITED STATES
FISHING GROUNDS IN
THE NORTHWEST ATLANTIC



HADDOCK

In 1968, haddock landings by the United States from Georges Bank were 22 percent lower than in 1967 (Table 1). The decrease is a result of declining abundance due to heavy fishing (Figure 1) from 1965 to 1966 and poor recruitment since 1965.

In 1968 landings per day of large haddock increased by 15 percent but a 53 percent drop in scrod abundance caused an overall 37 percent drop in landings per day (Figures 2 and 3) compared to 1967.

Age compositions for the past several years (Figure 4) shows the shift in age dominance that has resulted from poor recruitment. Two-, three-, and four-year olds, normally the bulk of the landings, were very scarce in 1968. Five- and six-year olds (1963 and 1962 year classes) supported the fishery in 1968 as large haddock.

The present scarcity of scrod was predicted on the basis of data gathered aboard the Albatross IV when it found that the 1964, 1965, 1966, and 1967 year classes were very small relative to other years (Figure 5). The groundfish survey last fall found that the 1968 year class was also poor. Because of this, the present trend in declining haddock abundance will continue at least through 1971.

The population is so low, that BCF scientists have recommended a complete cessation of fishing in order to provide for the most rapid rebuilding of the fishable stock. Possible management measures are now being discussed by the industry and BCF personnel.

Landings from Browns Bank were 9.9 million pounds in 1968, an increase of about 10 percent from 1967. Landings per day decreased by 17 percent to almost 10 thousand pounds.

Because Browns Bank haddock grow at a slower rate than they do on Georges, the strong 1962 and 1963 year classes would normally just be coming into the fishery on Browns this year. We had hoped this would provide for larger catches. It so happened however, that in 1964, effort by other countries increased on Browns Bank and landings began climbing from about 40 million pounds (Figure 6) to almost 95 million by 1966. In 1967 and 1968 total haddock landings from Browns held at about 80 million pounds, still exceeding the long-term average of 30 to 40 million pounds.

Age compositions for the last few years (Figure 7) show a marked reduction in the older fish. The fishery has thus become more dependent on newly recruited fish, of a younger age than ever before. The 1962 and 1963 year classes have been rather heavily fished before the expected recruitment age of 5-6 years. Since all the year classes subsequent to 1963 are also poor on Browns Bank, we can expect a drastic reduction in recruitment over the next few years.

Assessing the fishery in this manner we find it difficult to be optimistic. Browns Bank cannot support any additional fishing pressure. Furthermore, it is quite possible that the haddock stock on Browns Bank will be in the same perilous position as it is on Georges Bank, should effort continue at the present level.

TABLE 1
HADDOCK FOURTH QUARTER STATISTICS
(Live Weight)

	Fourth Quarter				Annual				
	Landings in thou- sands of pounds		Landing/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds		
	1968	1967	1968	1967	1968	1967	1968	1967	
arges	Scrod	2,795	4,561	1,870	2,052	22,872	47,945	2,280	4,787
	Large	6,138	5,653	4,265	3,609	33,221	28,489	3,893	3,308
	Total	8,933	10,214	6,137	5,661	56,093	76,434	6,173	8,095
owns	Scrod	39	81	-----	5,035	3,342	3,045	6,622	7,930
	Large	22	16	-----	1,995	1,685	1,493	3,326	3,888
	Total	61	97	-----	7,030	5,027	4,538	9,948	11,818
lf of	Scrod	627	1,851	-----	-----	3,925	7,185	-----	-----
line	Large	682	716	-----	-----	3,611	3,509	-----	-----
	Total	1,309	2,567	-----	-----	7,536	10,694	-----	-----
y of	Scrod	244	2,056	1,938	4,335	1,213	5,269	2,754	6,178
andy	Large	246	614	2,171	1,435	720	1,245	1,697	1,459
	Total	490	2,670	4,109	5,770	1,933	6,514	4,451	7,637
tal	Scrod	3,705	8,549	1,877	2,937	31,352	63,444	2,830	5,268
	Large	7,088	6,999	4,184	2,755	39,237	34,736	3,822	2,924
	Total	10,793	15,548	6,061	5,692	70,589	98,180	6,652	8,192

Figure 1.

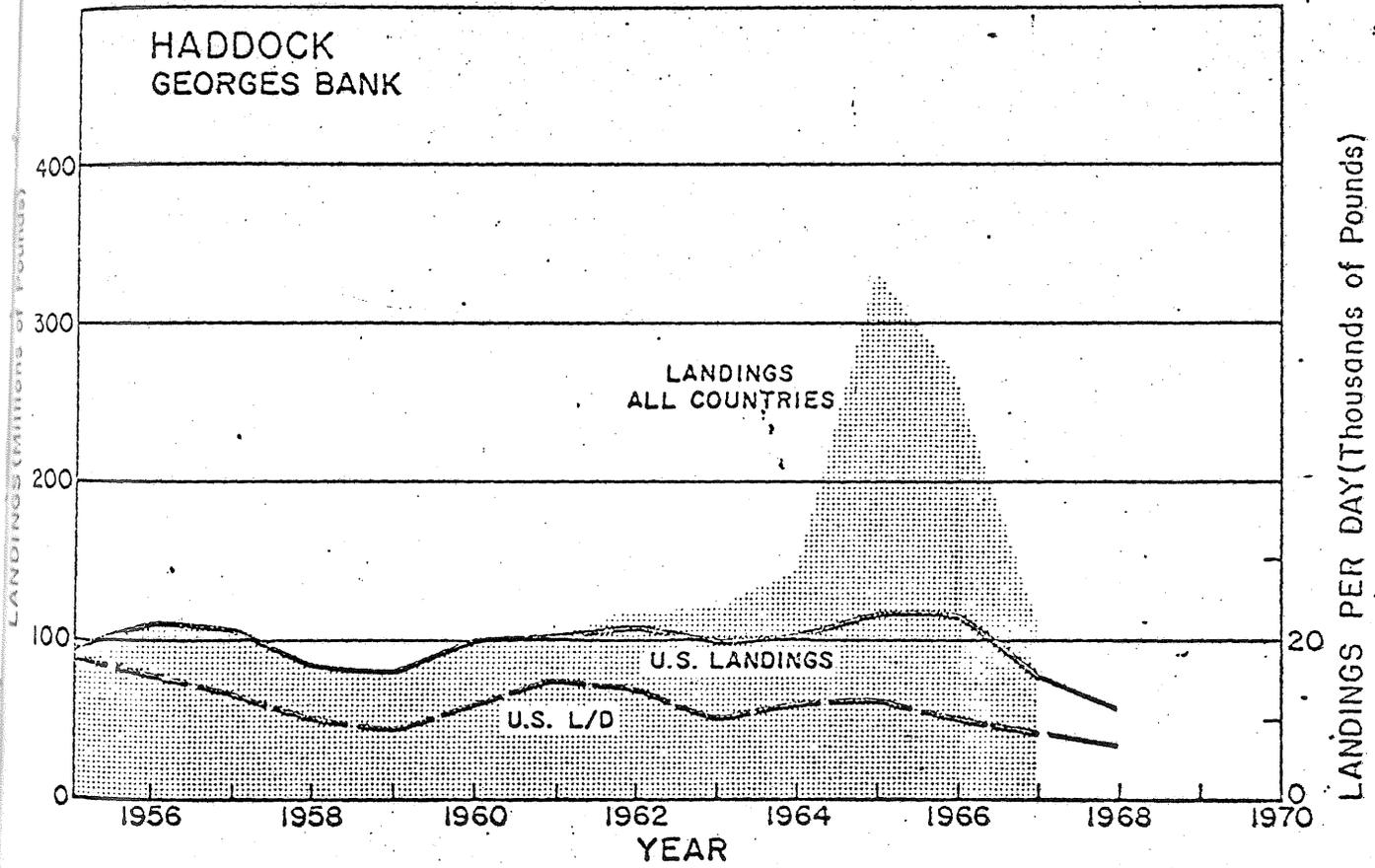


Figure 6.

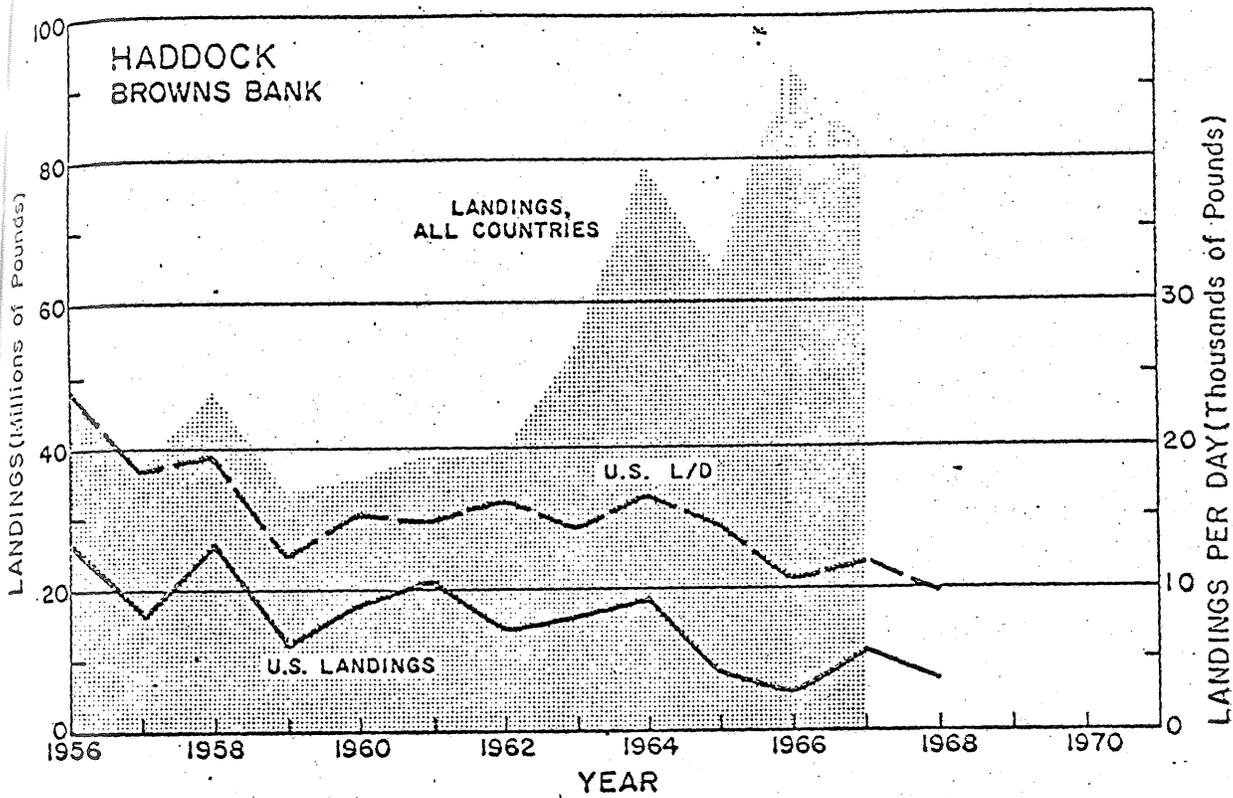


Figure 7.

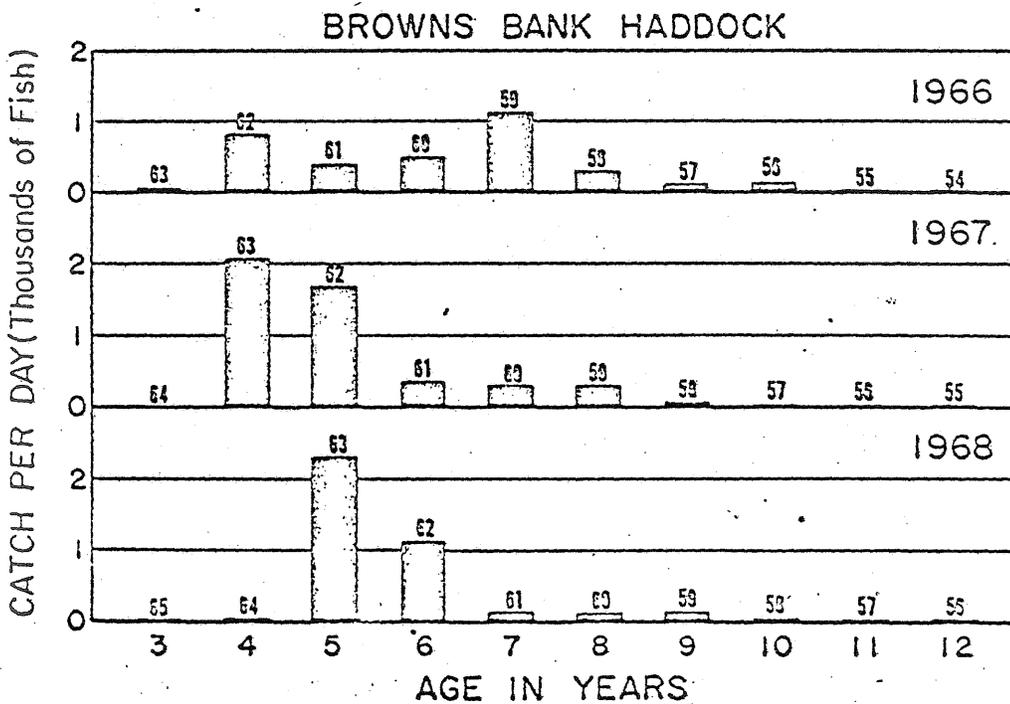


Figure 2.

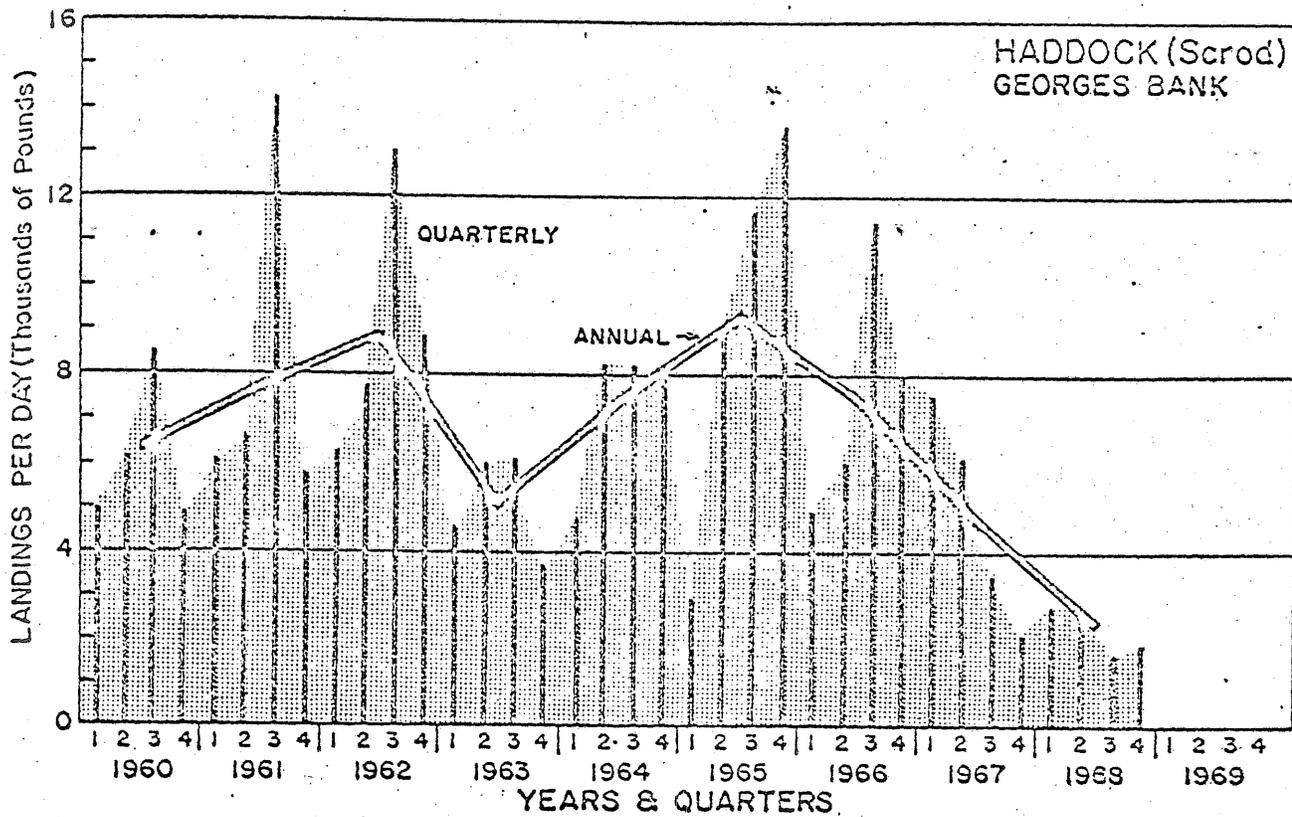


Figure 3.

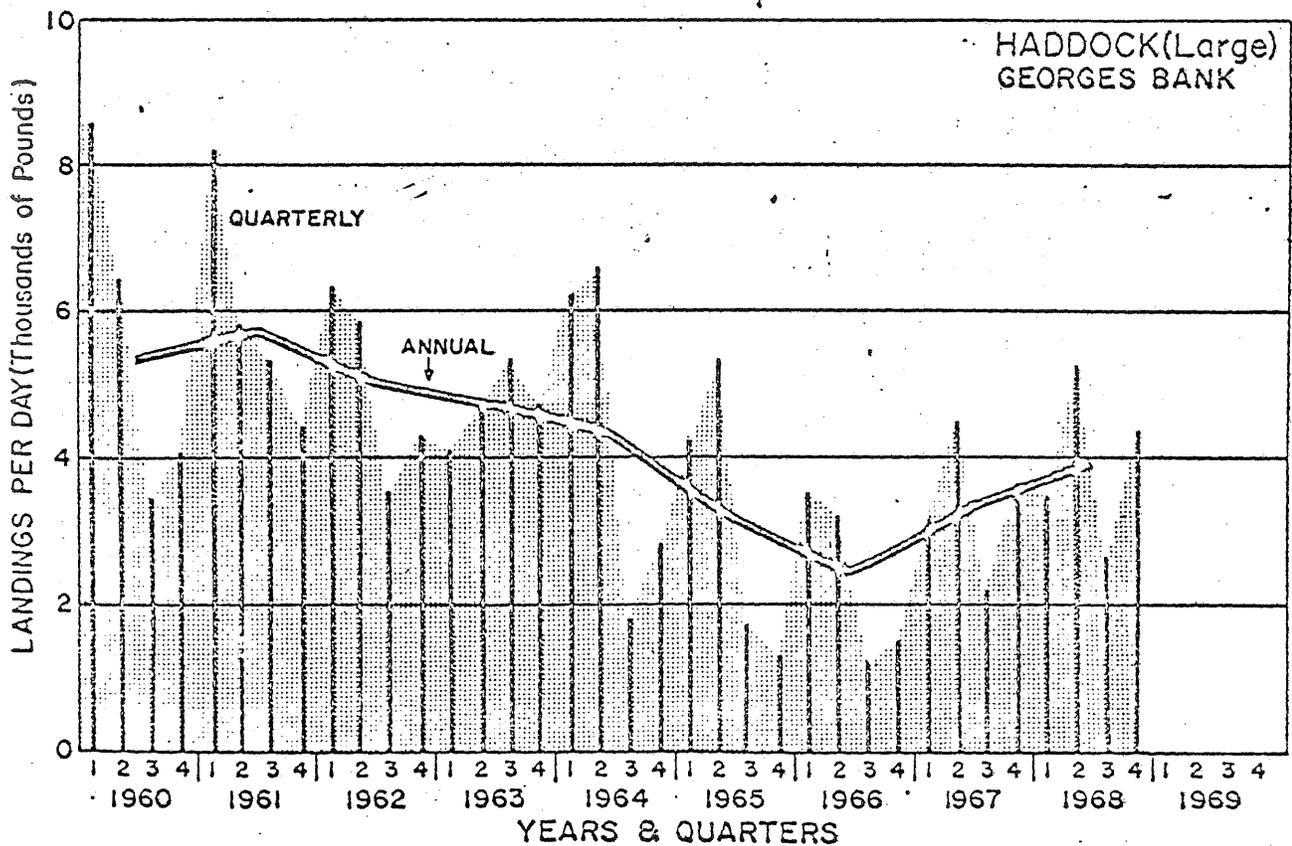


Figure 4.

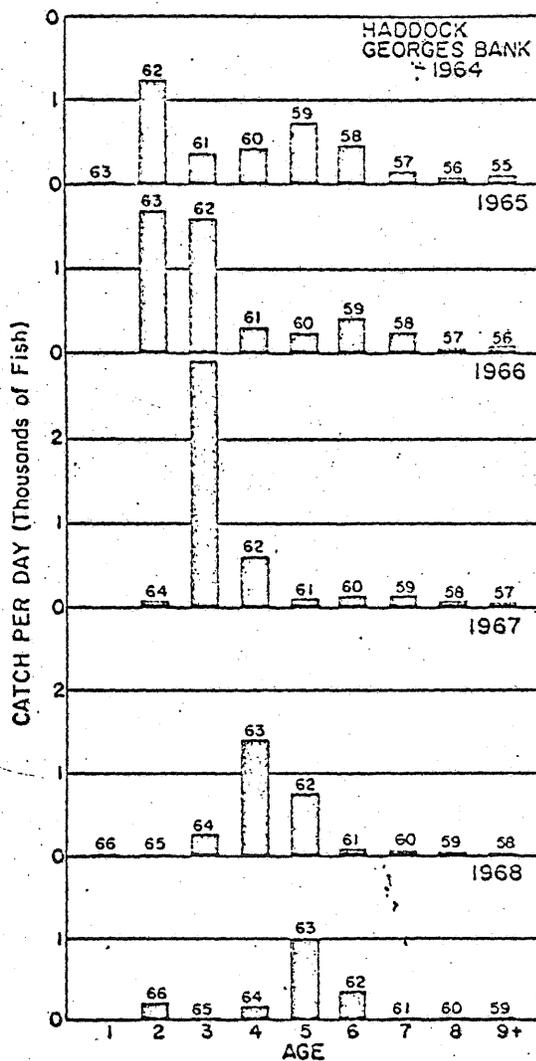
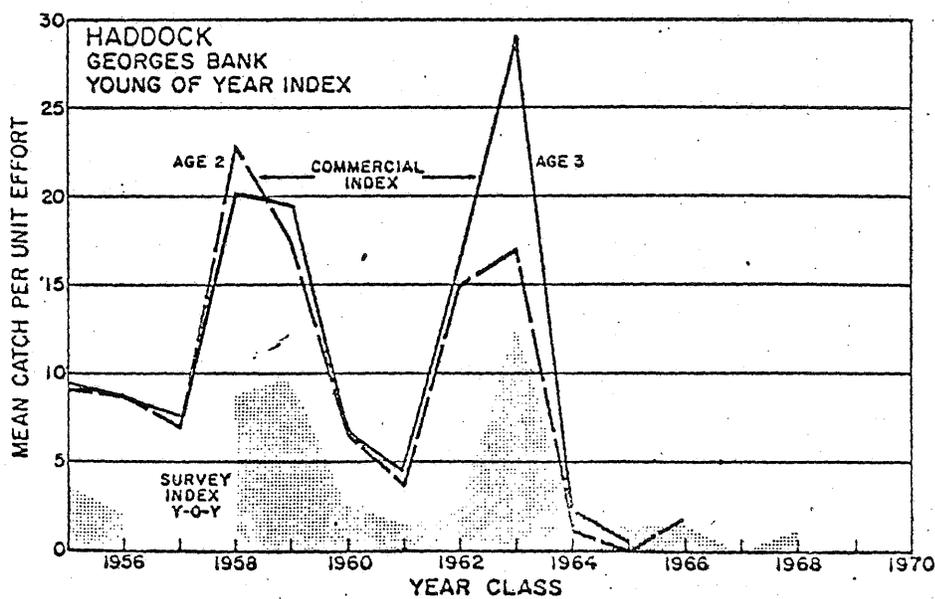


Figure 5.



YELLOWTAIL

Total yellowtail landings by this country reached 64 million pounds in 1968 (Table 2), up about 12 million from 1967 (Figure 8). Landings per day for the year showed a considerable increase on both major grounds.

This increase in yellowtail abundance was a result of the strong 1964 and 1965 year classes (Figure 9). The 1966 year class appeared as two-year olds to be about average in strength.

Landings per day at age for Georges Bank and Southern New England (SNE) for 1968 (Figures 10 and 11) show that the 1964 and 1965 year classes were stronger on SNE grounds than on Georges. The 1966 year class, however, is greater on Georges by a considerable amount.

Quarterly landings per day estimates for both grounds (Figures 12 and 13) continued the trend upwards. Southern New England yellowtail abundance seemed to be leveling off, however. Although effort decreased on Georges Bank in the fourth quarter the increase in landings per day caused by the incoming 1966 year class was significant. From all indications it looks like 1969 should be another good year for yellowtail. Landings should stay between 60 and 65 million pounds providing effort stays about the same.

There were two factors that caused yellowtail landings to fall off so sharply in 1966. Increased effort had reduced the numbers of older fish on the grounds to a very low level and the 1962 and 1963 year classes were not as strong as the 1961 and 1962 year classes. Compared to earlier years, the size composition of the landings had changed considerably. Instead of threes, fours, and fives dominating the catch, twos, threes, and fours were the only age groups of importance left in the fishery. Because the older fish had been cropped off, the fishery was more dependent on newly recruited fish.

It was fortunate for the fishery at this time that the 1965 year class was a good one and abundance began to climb in 1967. The 1964 year class was also good and abundance continued to increase. Age composition of the landings for 1968 however, show the fishery is still primarily dependent on newly recruited fish.

Bureau scientists believe that this fishery should be managed to maintain fishing intensity at optimal levels. Present intensity is probably too great.

TABLE 2

YELLOWTAIL FOURTH QUARTER STATISTICS
(Live Weights)

	Fourth Quarter				Annual			
	Landings in thou- sands of Pounds		Landings/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds	
	1968	1967	1968	1967	1968	1967	1968	1967
New and	9,136	6,728	6,671	5,631	31,456	23,898	6,408	5,118
ges Bank	7,598	7,101	7,691	6,126	28,223	18,534	6,782	4,970
Atlantic	167	28	12,011	-----	1,056	6,308	7,920	7,102
Cod Bay	760	806	9,230	4,459	3,454	3,399	6,414	3,052
	17,661	14,663	7,270	5,861	64,189	52,139	6,609	5,497

Figure 8.

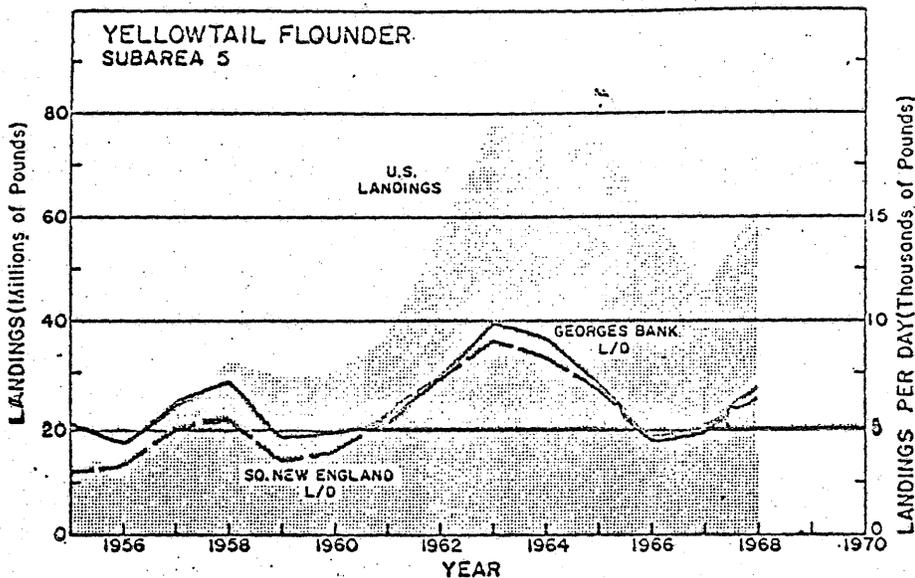
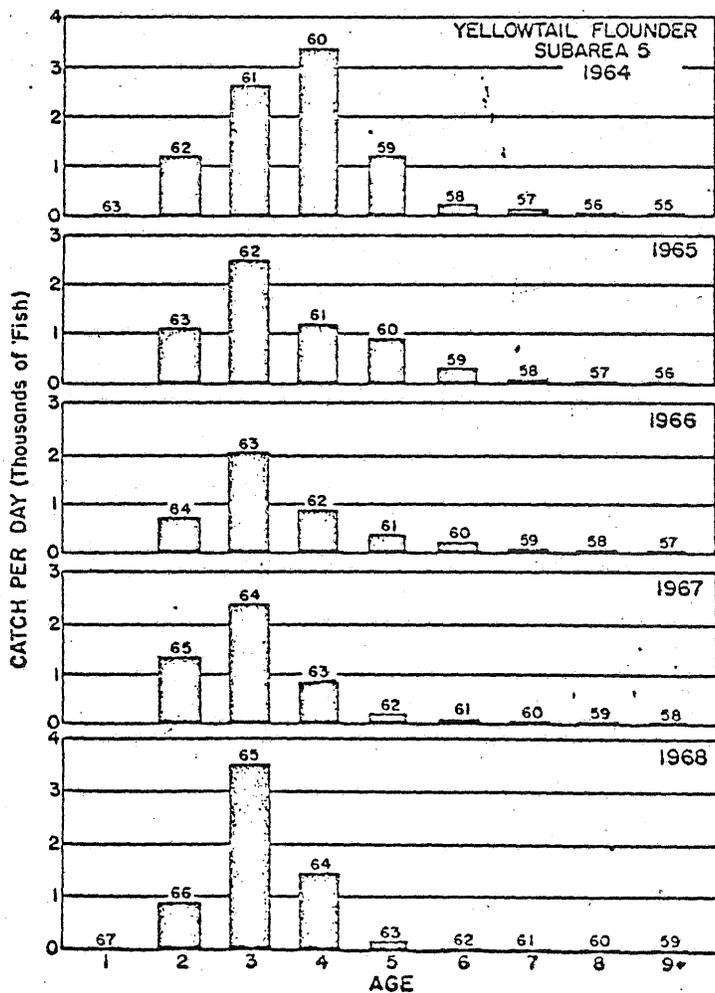


Figure 9.



COD

United States cod landings (Figure 14) increased again in 1968. Landings per day (Table 3) also increased. Cod landings by all countries dropped sharply in 1967 and it will be interesting to see what happened in 1968 when data are available for our next edition. It is doubtful that total cod landings can be maintained at the 1966, 1967 level.

Quarterly abundance indices (Figure 15) for cod held fairly steady in 1968, suggesting a possible leveling off, or perhaps a decrease in 1969. This is difficult to predict however, due to the change in the Georges Bank haddock fishery, causing a diversion of effort to cod.

TABLE 3
 COD FOURTH QUARTER STATISTICS
 (Live Weight)

	Fourth Quarter				Annual			
	Landings in thou- sands of pounds		Landings/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds	
	1968	1967	1968	1967	1968	1967	1968	1967
arges Bank	6,766	5,801	2,758	2,468	32,008	27,607	3,106	2,238

Figure 14.

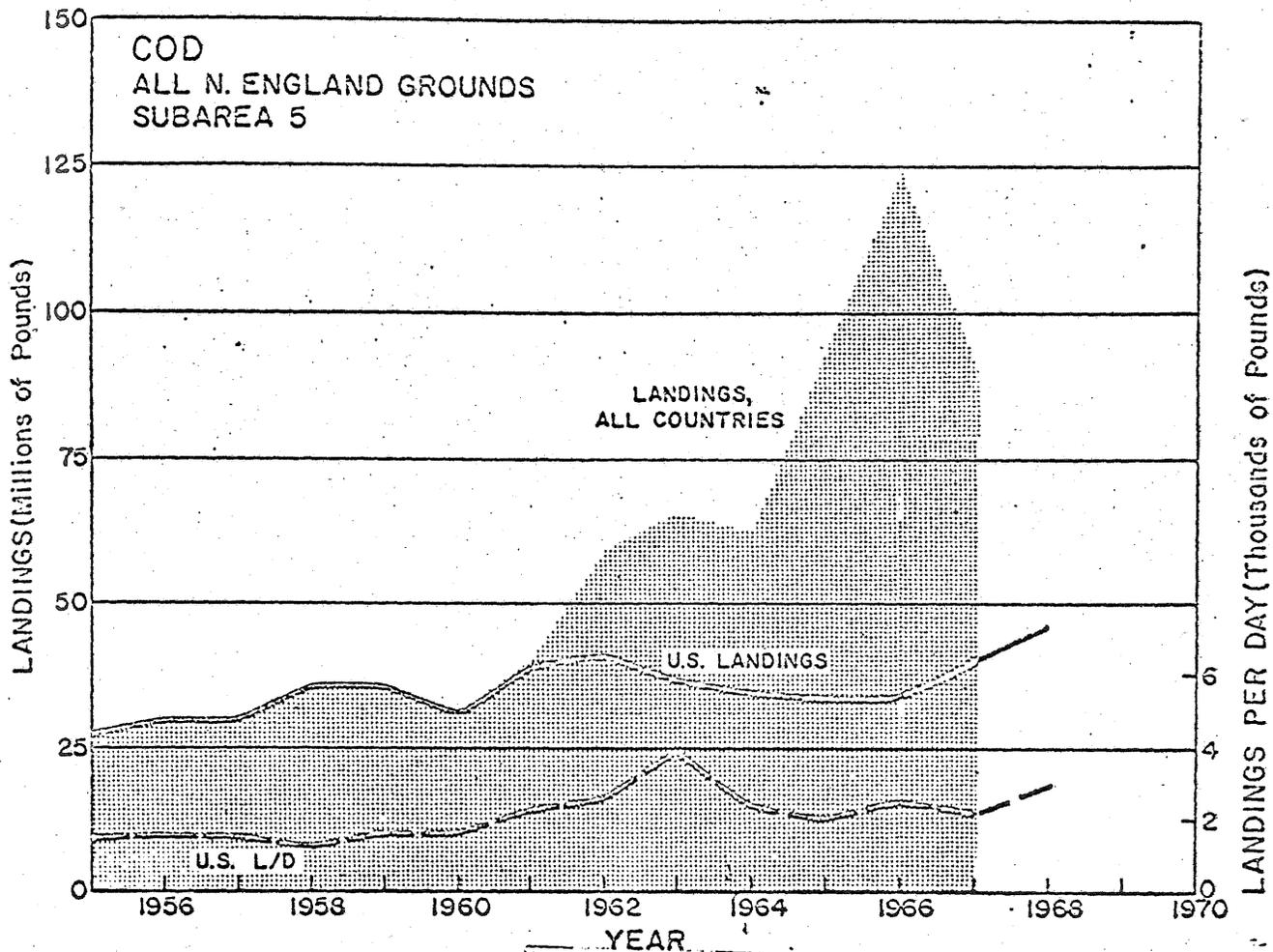
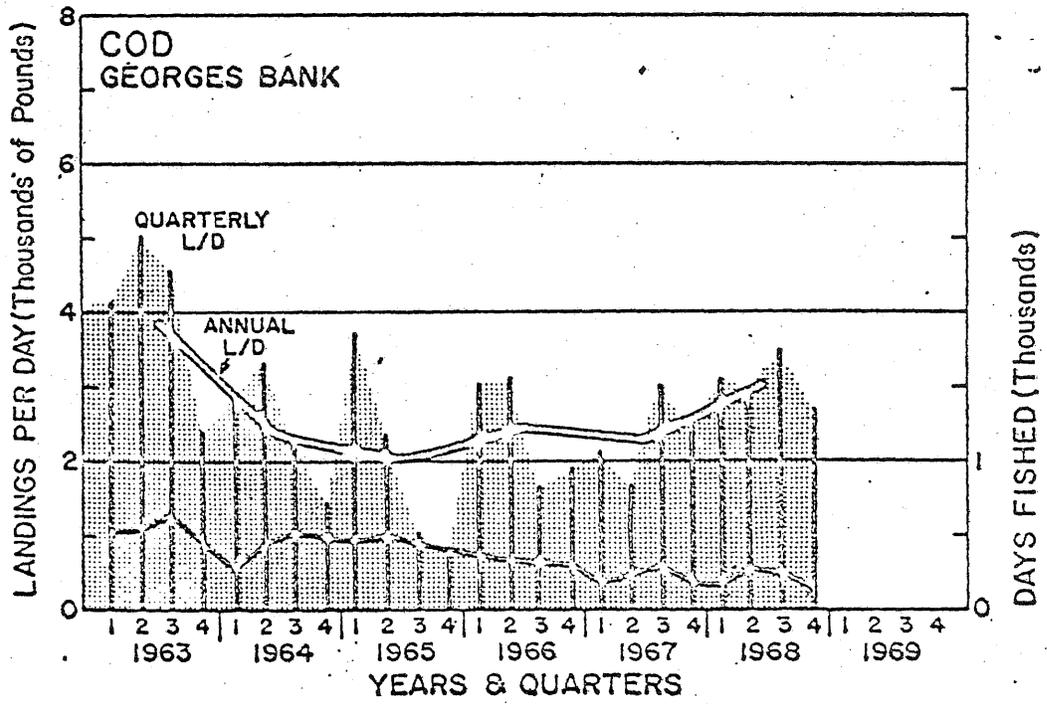


Figure 15.



REDFISH

Redfish landings by the United States from the Gulf of Maine were down about 40 percent from 1967 (Figure 16) despite the increase in apparent abundance. The same thing happened in the Nova Scotian fishery this year (Figure 17). Landings for the Gulf of St. Lawrence (Figure 18) were up slightly while abundance stayed about the same.

Quarterly abundance indices for the three grounds in 1968 (Figure 19 and Table 4) reflect a rather unsettled fishery. More can probably be determined from curves represented by all countries landings than from U. S. statistics.

It seems quite apparent that the redfish could withstand more fishing than it presently receives. This is true at least for the Gulf of Maine stock if not the others. It has been a marketing and processing problem but now that haddock are in short supply, redfish demands may stimulate an interest.

TABLE 4

REDFISH FOURTH QUARTER STATISTICS
(Live Weight)

	Fourth Quarter				Annual			
	Landings in thou- sands of pounds		Landings/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds	
	1968	1967	1968	1967	1968	1967	1968	1967
of Maine	809	2,610	17,886	28,932	8,959	14,676	30,607	22,938
of Scotia	815	959	34,074	36,017	10,108	14,124	34,892	23,896
of Lawrence	9,644	11,682	40,831	43,840	36,238	34,131	49,024	54,753
al	11,268	15,251	38,695	37,806	55,305	62,931	43,457	34,288

Figure 16.

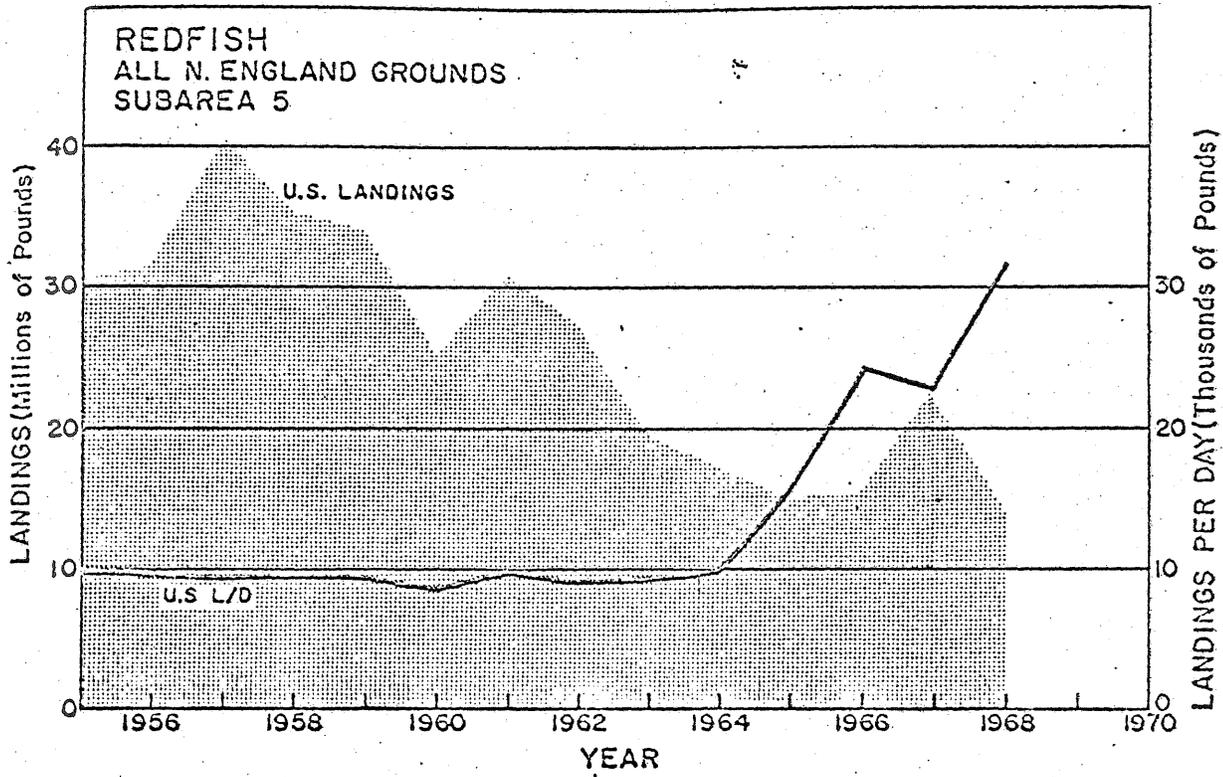


Figure 17.

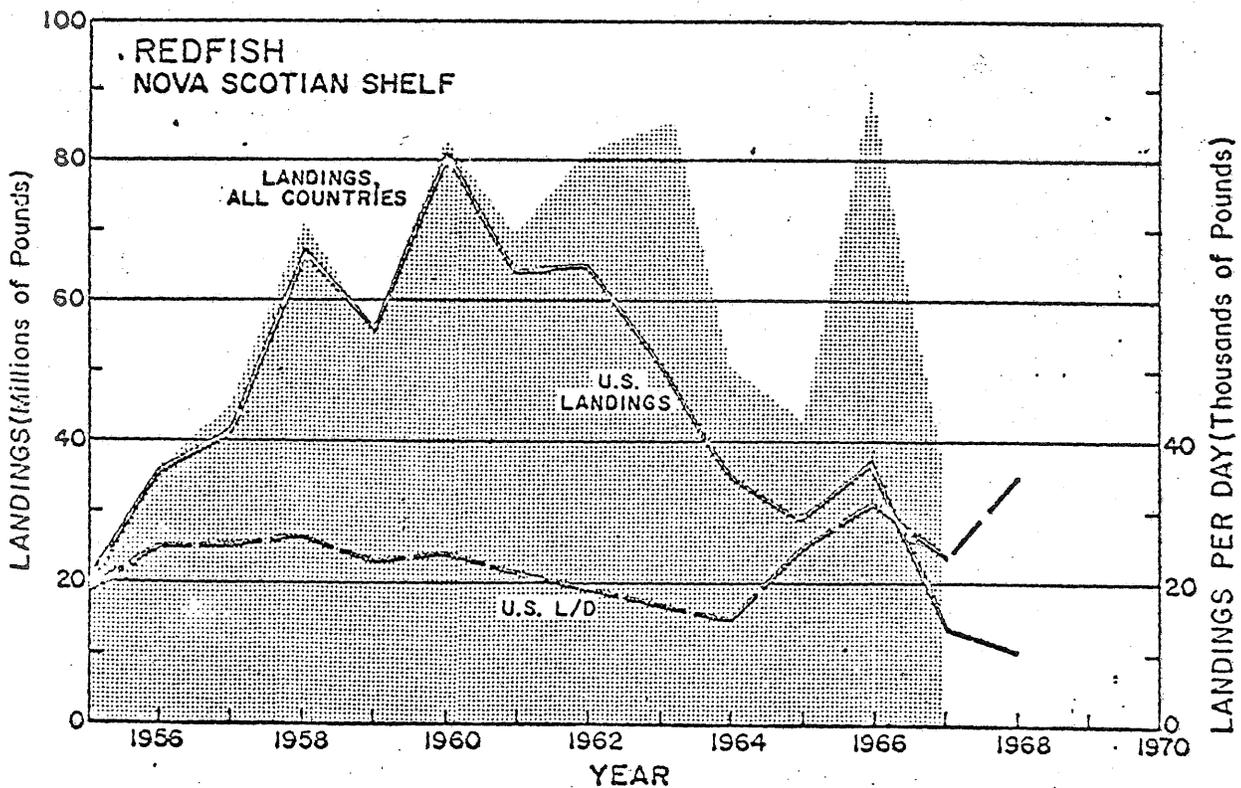


Figure 18.

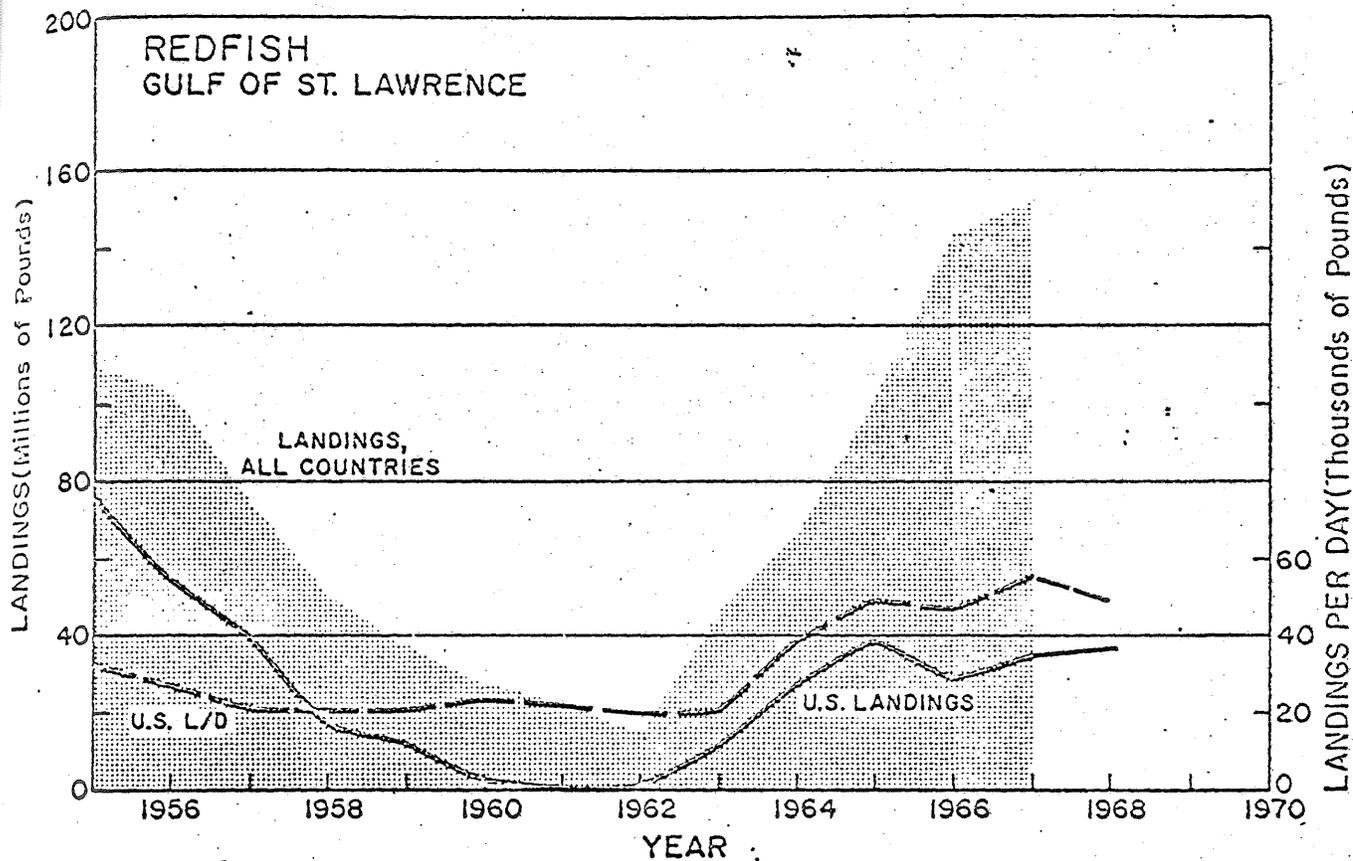
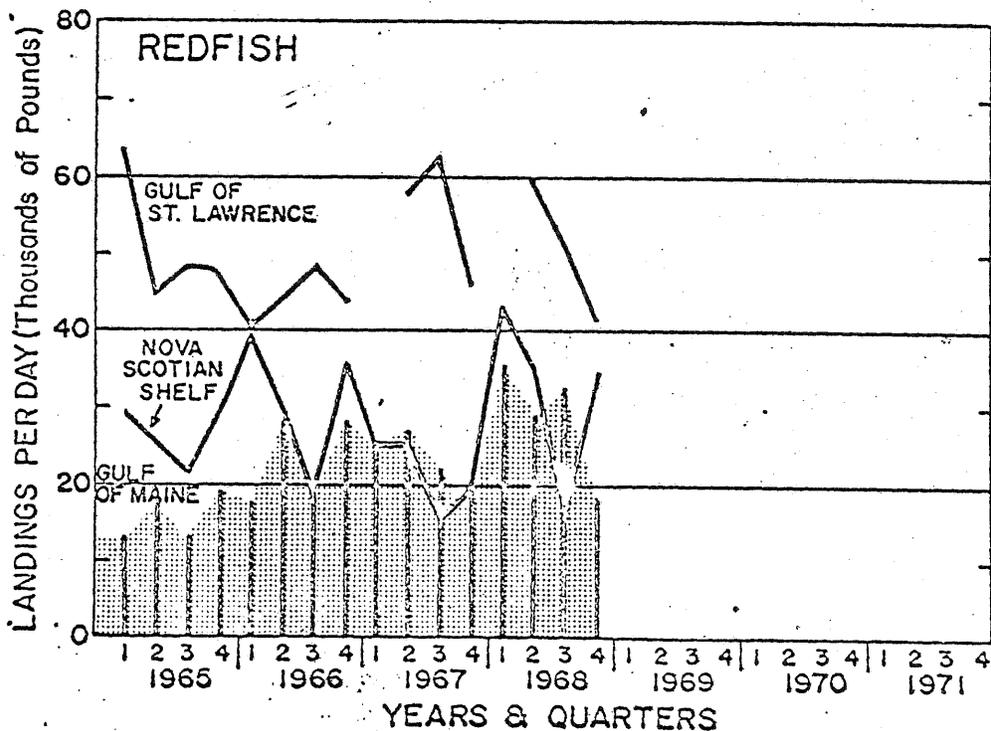


Figure 19.



SILVER HAKE

(Food Fish)

The U. S. silver hake fishery in 1968 showed a nice increase in landings (20 percent) from the Gulf of Maine (Table 5) compared to 1967. Georges Bank silver hake landings on the other hand dropped off about 30 percent in 1968. Silver hake landings for all of ICNAF area 5 by all countries dropped off considerably in 1967 (Figure 20) compared to 1966. Considering the increase in U. S. landings for 1968 it will be interesting to see the 1968 figures for all countries when they become available in June 1969, especially with the apparent increase in abundance.

Quarterly abundance indices for the Gulf of Maine and Georges Bank (Figure 21) show that the big increase in abundance in the Gulf of Maine in 1968, but a decrease on Georges Bank.

Figure 20.

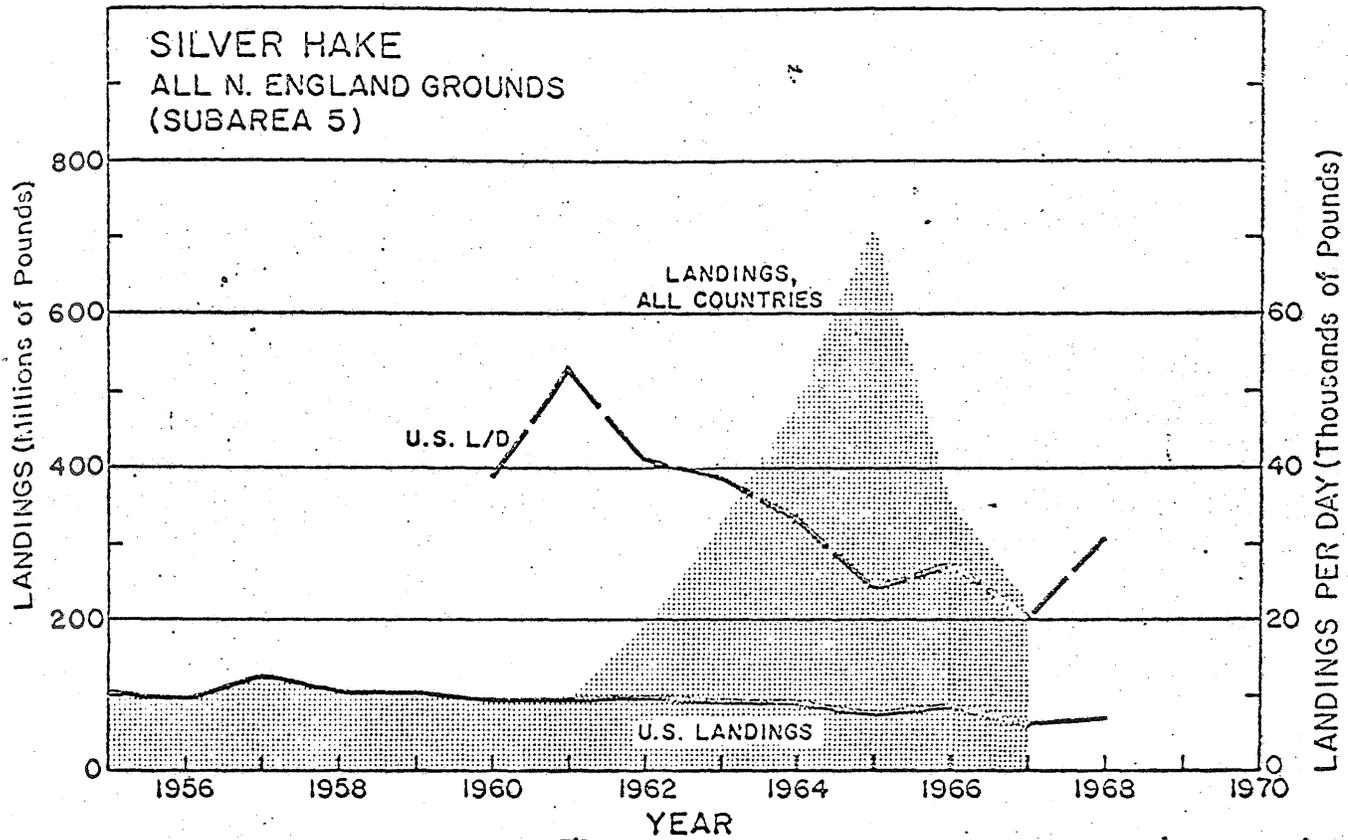
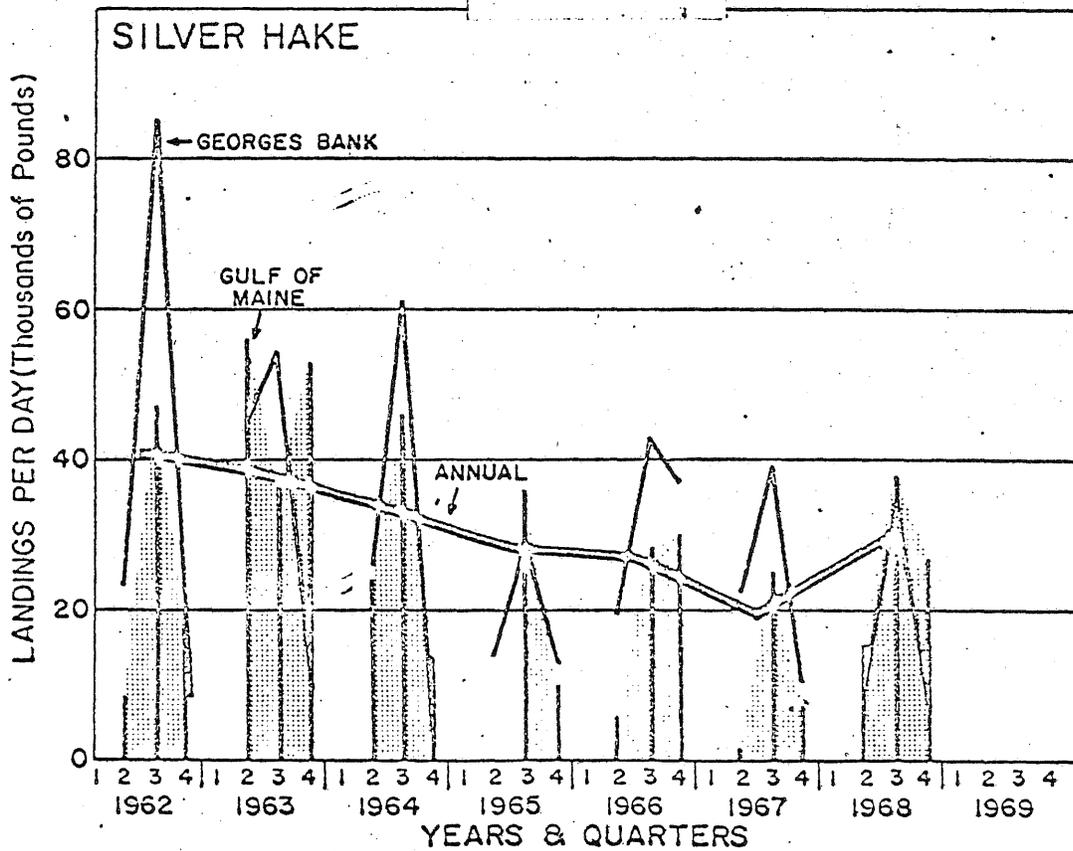


Figure 21



INDUSTRIAL SPECIES

Industrial landings of red and silver hake by the U. S. were about the same in 1967 and 1968 (Figure 22). Landings of other species decreased causing the slight decrease in total industrial landings in 1968 (Table 6).

Species composition (Table 7) for the past three years show a gradual percentage increase of red hake in the industrial landings. Silver hake have also been increasing but they seemed to level off in 1968.

Landings per day for red hake (Figure 23) in 1968, were slightly higher than in 1967. Silver hake abundance (Figure 24) stayed about the same.

TABLE 6

INDUSTRIAL RED AND SILVER HAKE
FOURTH QUARTER STATISTICS
(Live Weight)

Area and species	Fourth Quarter				Annual			
	Landings in thou- sands of pounds		Landings/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds	
	1968	1967	1968	1967	1968	1967	1968	1967
<u>New England</u>								
Red hake	2,450	3,665	12,264	20,715	13,278	12,822	15,394	13,035
Silver hake	1,890	2,964	10,267	16,746	7,664	7,330	8,861	7,566
Total	4,340	6,629	22,531	37,461	20,942	20,152	24,255	20,601
<u>Mid-Atlantic</u>								
Red hake	19	45	4,196	19,709	91	1,071	2,419	17,557
Silver hake	32	37	5,861	9,578	278	747	2,755	12,246
Total	51	82	10,057	29,287	369	1,818	5,174	29,803
<u>Total</u>								
Red hake	2,469	3,710	12,202	20,703	13,369	13,893	15,306	13,302
Silver hake	1,922	3,001	10,193	16,741	7,942	8,077	8,647	7,843
Total Indus- trial	13,598	17,438	70,957	96,793	79,667	85,289	89,012	84,619

TABLE 7

INDUSTRIAL SPECIES COMPOSITION FOR SO. NEW ENGLAND

RED AND SILVER HAKE IN PERCENT

Year	1964		1965		1966		1967		1968	
	Red	Silver								
1	64.9	26.3	39.2	14.4	0.6	1.0	0.7	0.6	--	0.3
2	64.9	20.0	55.9	14.1	20.3	5.6	17.5	4.8	16.9	6.9
3	10.7	34.2	29.3	31.4	17.7	20.3	30.5	21.7	30.1	24.4
4	2.4	29.5	35.2	23.2	9.9	14.2	21.4	17.3	17.2	14.4
total	42.6	20.0	38.0	20.4	10.2	9.6	14.7	10.2	17.2	9.9

Figure 22.

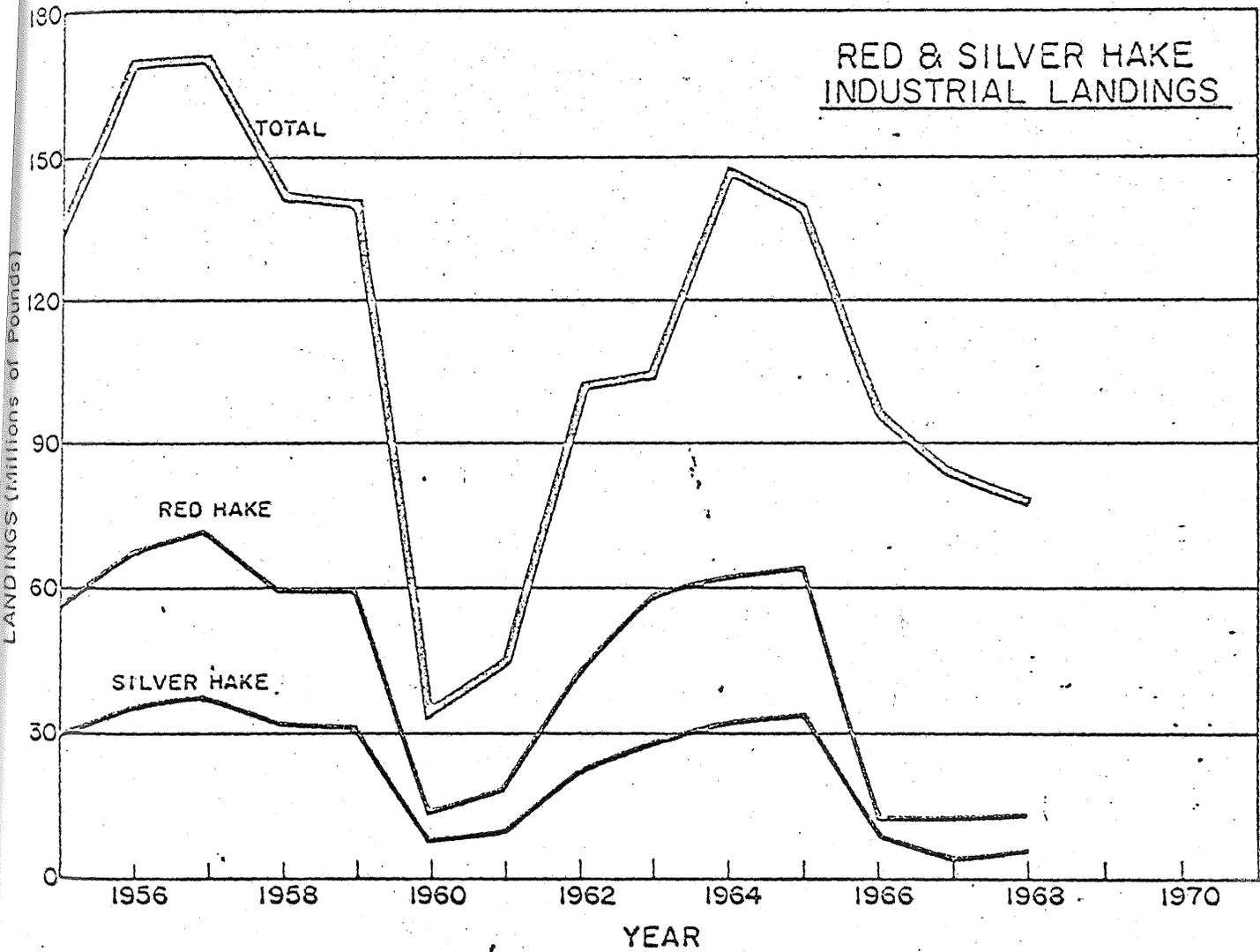


Figure 24.

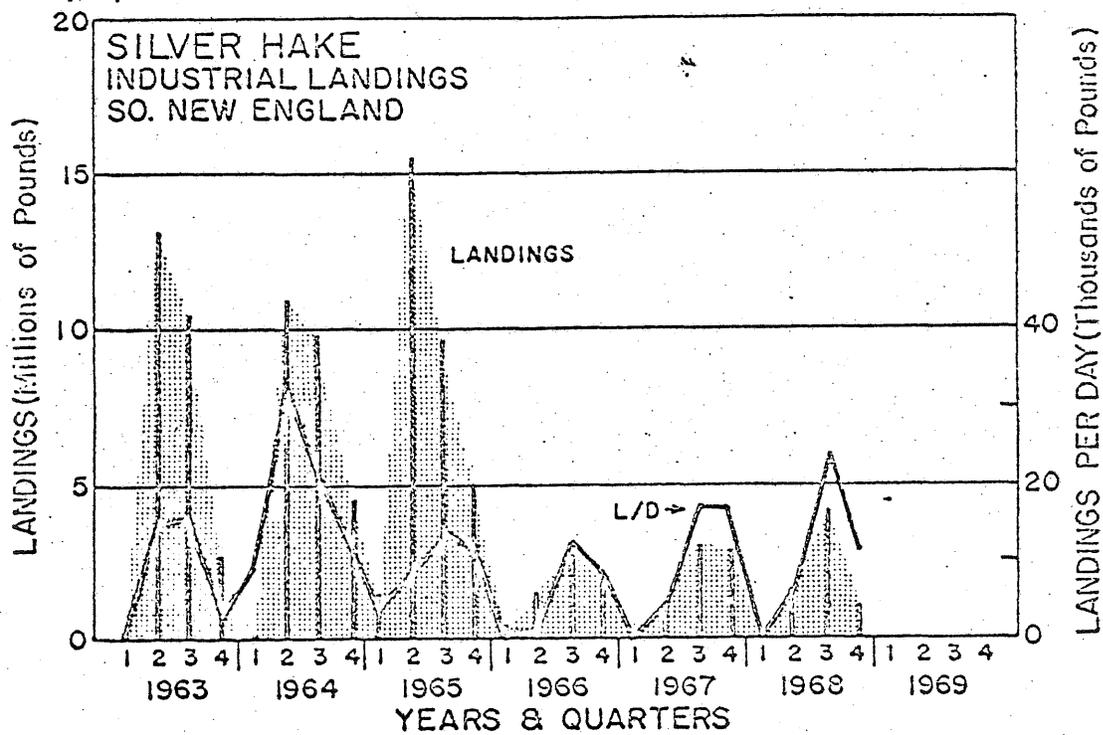
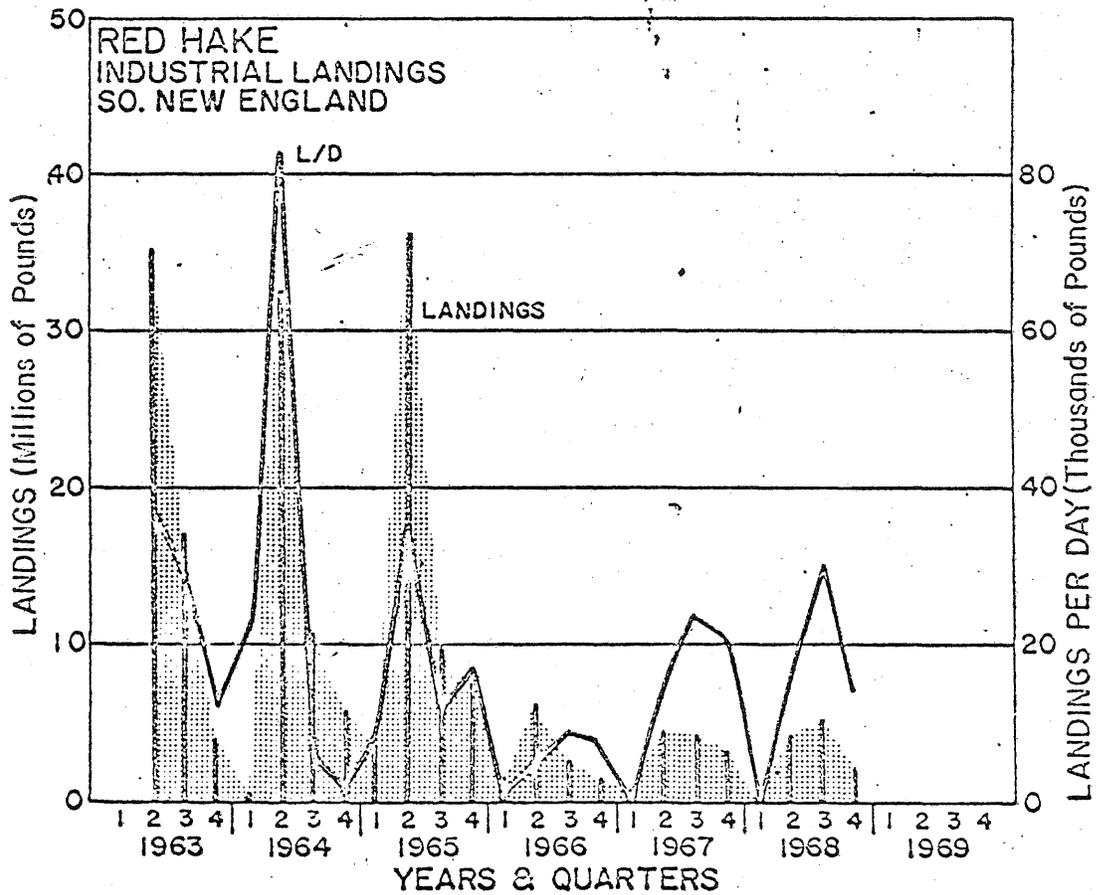


Figure 23.



SEA SCALLOPS

United States sea scallop landings (Figure 25) from Georges Bank decreased slightly in 1968. This decrease was accompanied by a decline in landings per day. The abundance index as determined from research cruises each year, showed a drop of about 30 percent in 1968 compared to 1967.

Sea scallop landings in New England from Middle Atlantic grounds (Table 8) increased somewhat in 1968 but landings per day stayed about the same. This increase in scallop landings may be a result of boats from Middle Atlantic ports landing their catches in New England rather than an improved fishery.

Landings (Figure 26) from Georges Bank in 1968 averaged less than a million pounds of meats a quarter. Middle Atlantic scallop landings (Figure 27) seemed to hold up throughout the year except for the fourth quarter.

TABLE 8

SEA SCALLOP FOURTH QUARTER STATISTICS
(Meat Weight)

	Fourth Quarter				Annual			
	Landings in thou- sands of pounds		Landings/Day in pounds		Landings in thou- sands of pounds		Landings/Day in pounds	
	1968	1967	1968	1967	1968	1967	1968	1967
orges Bank	791	1,045	1,126	1,337	2,348	2,759	1,237	1,471
iddle Atlantic	864	730	1,002	1,099	6,802	5,383	1,414	1,523
al	1,655	1,775	1,057	1,228	9,150	8,142	1,367	1,505

Figure 25.

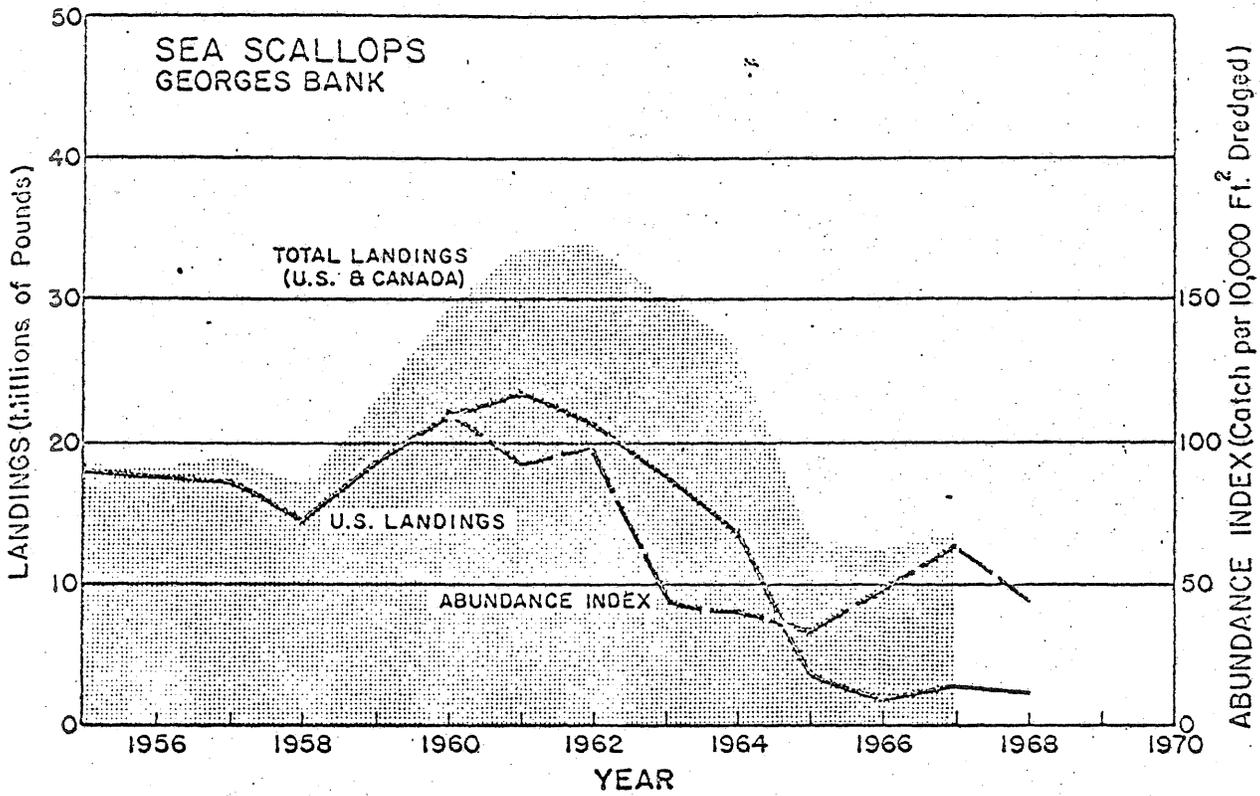


Figure 26.

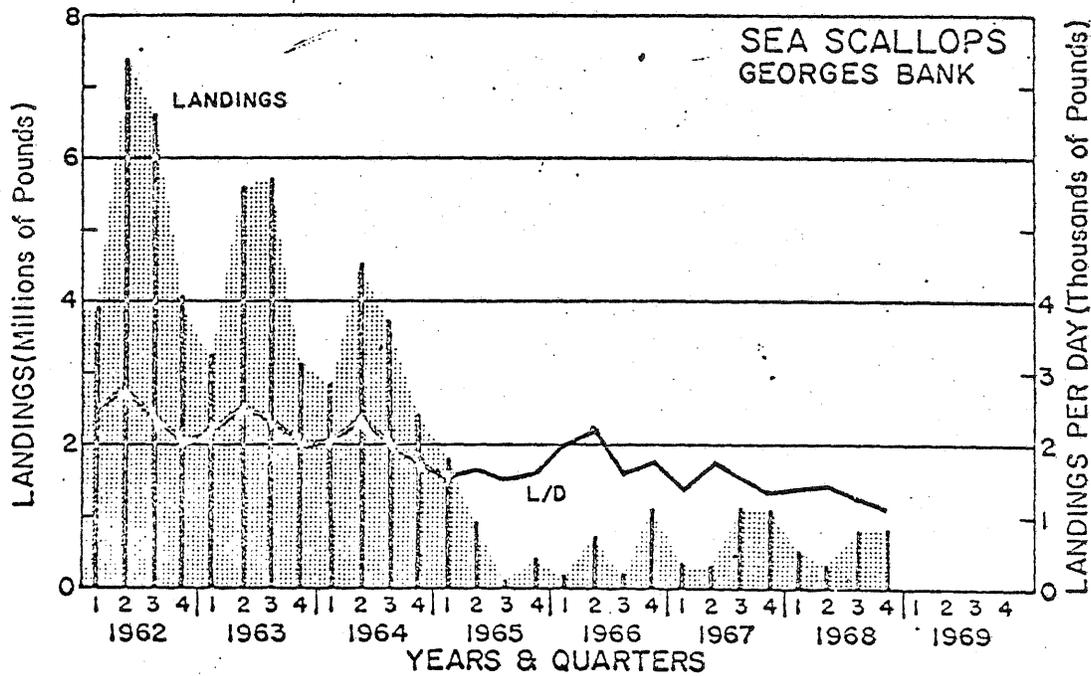


Figure 27.

