68-01

ANNUAL AND FOURTH QUARTER STOCK CATALOGUE 1967

GROUNDFISH AND SEA SCALLOPS FISHED BY NEW ENGLAND FLEETS

by

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Laboratory Reference No. 68-1
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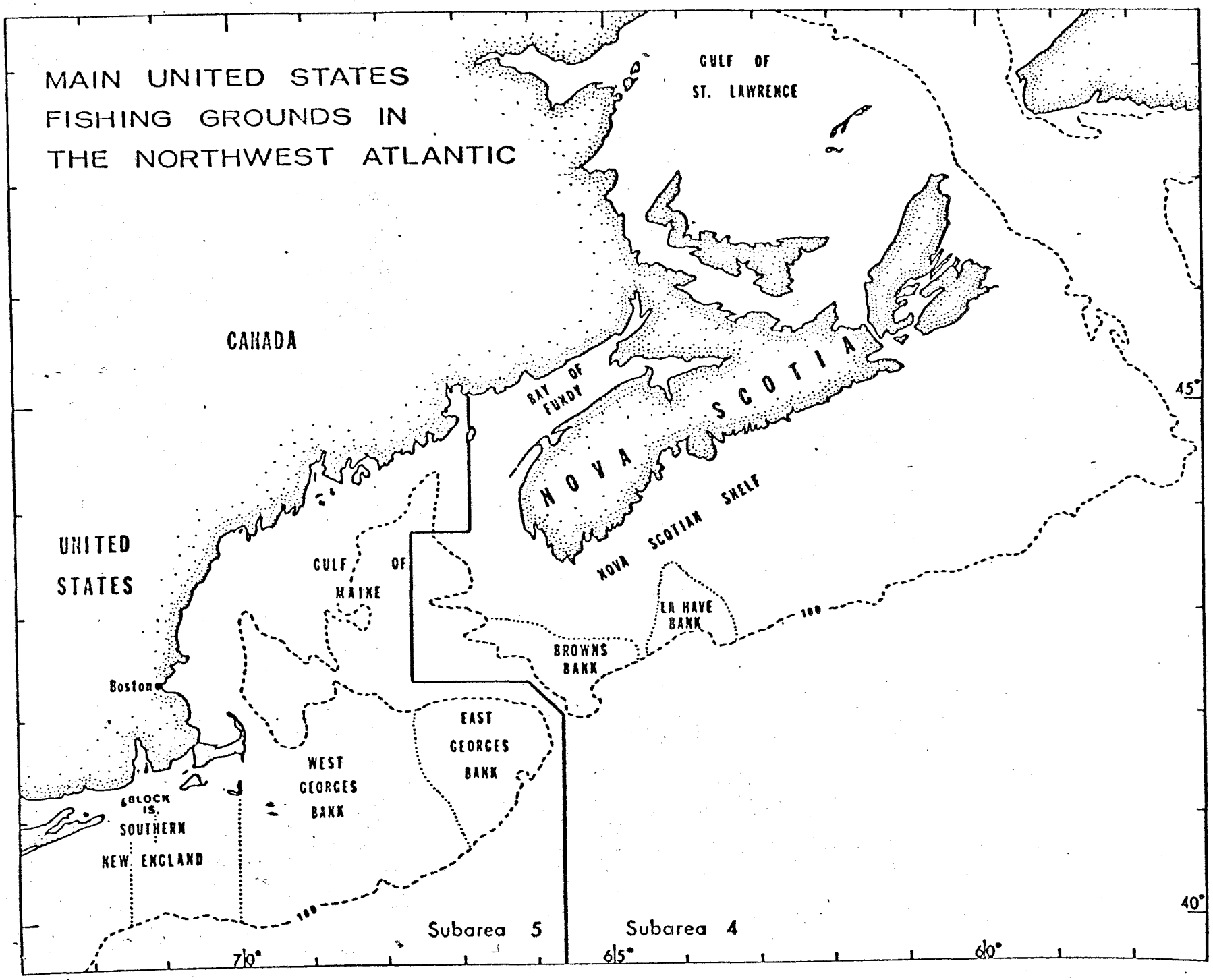

MAIN UNITED STATES
FISHING GROUNDS IN
THE NORTHWEST ATLANTIC
GULF OF
ST. LAWRENCE
CANADA
BAY OF
FUNDY
NOVA SCOTIA
NOVA SCOTIAN SHELF
UNITED
STATES
GULF OF
MAINE
LA HAVE
BANK
BROWNS
BANK
Boston
EAST
GEORGES
BANK
WEST
GEORGES
BANK
BLOCK
IS.
SOUTHERN
NEW ENGLAND
100
Subarea 5
Subarea 4
45°
40°
70°
65°
60°

HADDOCK

United States haddock landings from Georges Bank in 1967 (Figure 1) were 76 million pounds (Round Weight) or roughly 34 per cent below the 116 million (Round Weight) landed in 1966. Haddock abundance (Table 1) also declined; 8,600 pounds were landed per day fished in 1966 compared to 7,100 pounds per day in 1967. Lower scrod abundance accounted for this, decreasing from 6,600 pounds per day in 1966 to 4,200 pounds per day in 1967. Large haddock abundance increased from 2,100 pounds per day in 1966 to 2,900 pounds per day in 1967. Annual landings by all countries were not available at this writing but it is expected that they will also drop in 1967.

Age composition of Georges Bank haddock landings (Figure 2) shows the shift of age group dominance during the period 1964 through 1967. Most noticeable in 1967 was the near absence of two and three year old fish (1964 and 1965 year classes), relative to other years. This was predicted from the groundfish surveys in 1964 and 1965 (Figure 3). Subsequent surveys have found that the 1966 and 1967 year classes were also very poor. With four successive small year classes on Georges Bank, below average abundance and landings are expected to continue, at least through 1970. The year class failures had a more marked effect on seasonal fluctuations; large haddock (Figure 4) were more abundant in the fourth quarter, but scrod (Figure 5) were very low in abundance.

Noticeable in fourth quarter age compositions is the significant numbers of one year olds (Figure 6). They were roughly six times more abundant than the ten year average. This somewhat contradicts the research survey prediction of a poor 1966 year class, but faster growth may be responsible. The average length of one year olds in the fourth quarter (ten year average) is 36 centimeters. The 1966 year class averaged 39 centimeters in the fourth quarter. This increase in average size is apparently enough to put them into the selection range earlier than normally would occur. However, with the low abundance of scrod, the market demand would be higher, creating a tendency to land smaller fish, making it more difficult to determine if a real change in growth has taken place.

United States haddock landings from Browns Bank (Table 1 and Figure 7) were 3.9 million pounds in 1967 compared to 1.8 million pounds in 1966. This increase in landings was a result of increased scrod abundance. A trend of increasing abundance on Browns should continue until the 1962 and 1963 year classes are fully recruited. No samples were available for age compositions in 1967.

The Fourth quarter results (Figure 8) do not indicate any change in abundance from 1966. These figures are based on less than 100,000 pounds and may not be indicative.

TABLE 1

HADDOCK FOURTH QUARTER STATISTICS
(Landings in thousands of pounds)
(As Landed)

Area		Fourth Quarter				Accumulative			
		Landings		Landings/Day		Landings		Landings/Day	
		1967	1966	1967	1966	1967	1966	1967	1966
Georges Bank	Scrod	4,001	12,793	1,800	6,970	42,057	71,218	4,199	6,640
	Large	4,959	4,432	3,166	1,303	24,990	30,764	2,902	2,055
	Total	8,960	17,225	4,966	8,273	67,047	101,982	7,101	8,695
Browns Bank	Scrod	71	35	4,417	4,700	2,671	968	6,956	4,840
	Large	14	6	1,750	2,250	1,310	841	3,411	4,205
	Total	85	41	6,167	6,950	3,981	1,819	10,367	9,045
Gulf of Maine	Scrod	1,624	1,462	--	--	6,303	5,004	--	--
	Large	628	611	--	--	3,078	3,445	--	--
	Total	2,252	2,073	--	--	9,381	8,449	--	--
Bay of Fundy	Scrod	1,804	312	3,803	3,510	4,622	2,167	5,419	5,309
	Large	539	135	1,259	1,613	1,092	799	1,280	1,885
	Total	2,343	447	5,062	5,123	5,714	2,966	6,699	7,194
Total	Scrod	7,500	14,602	2,576	6,047	55,653	79,357	4,621	6,019
	Large	6,140	5,184	2,417	2,104	30,470	35,856	2,565	2,624
	Total	13,640	19,786	4,993	8,151	86,123	115,213	7,186	8,643

FIGURE 1

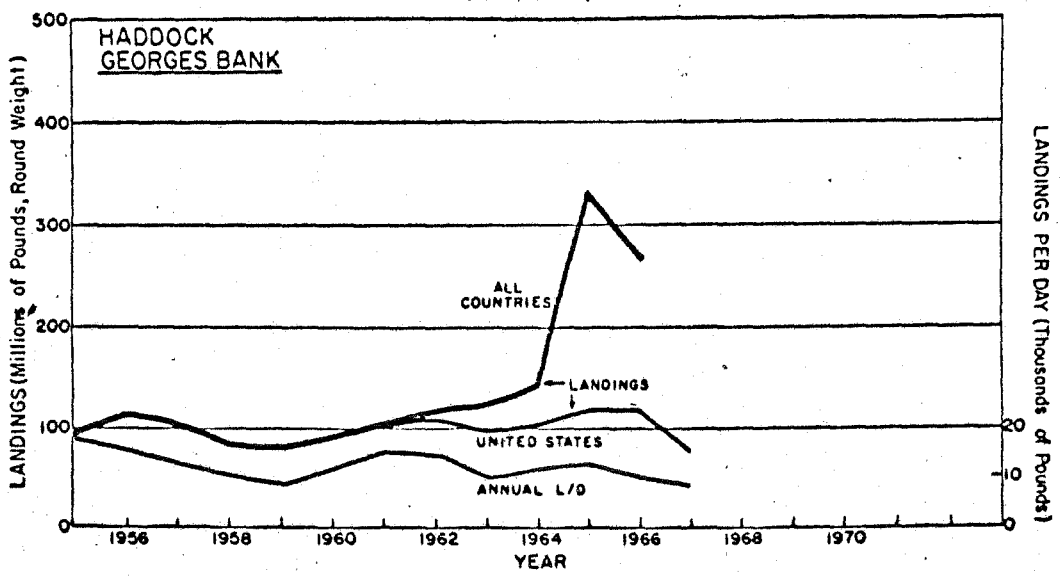


FIGURE 2

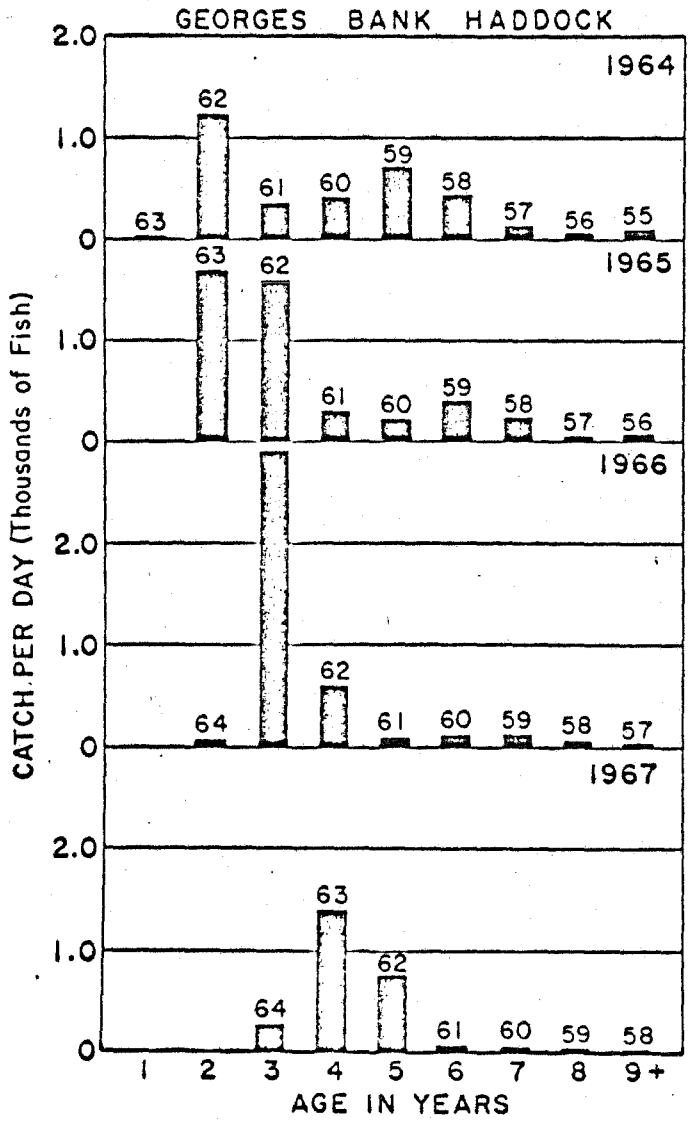


FIGURE 3

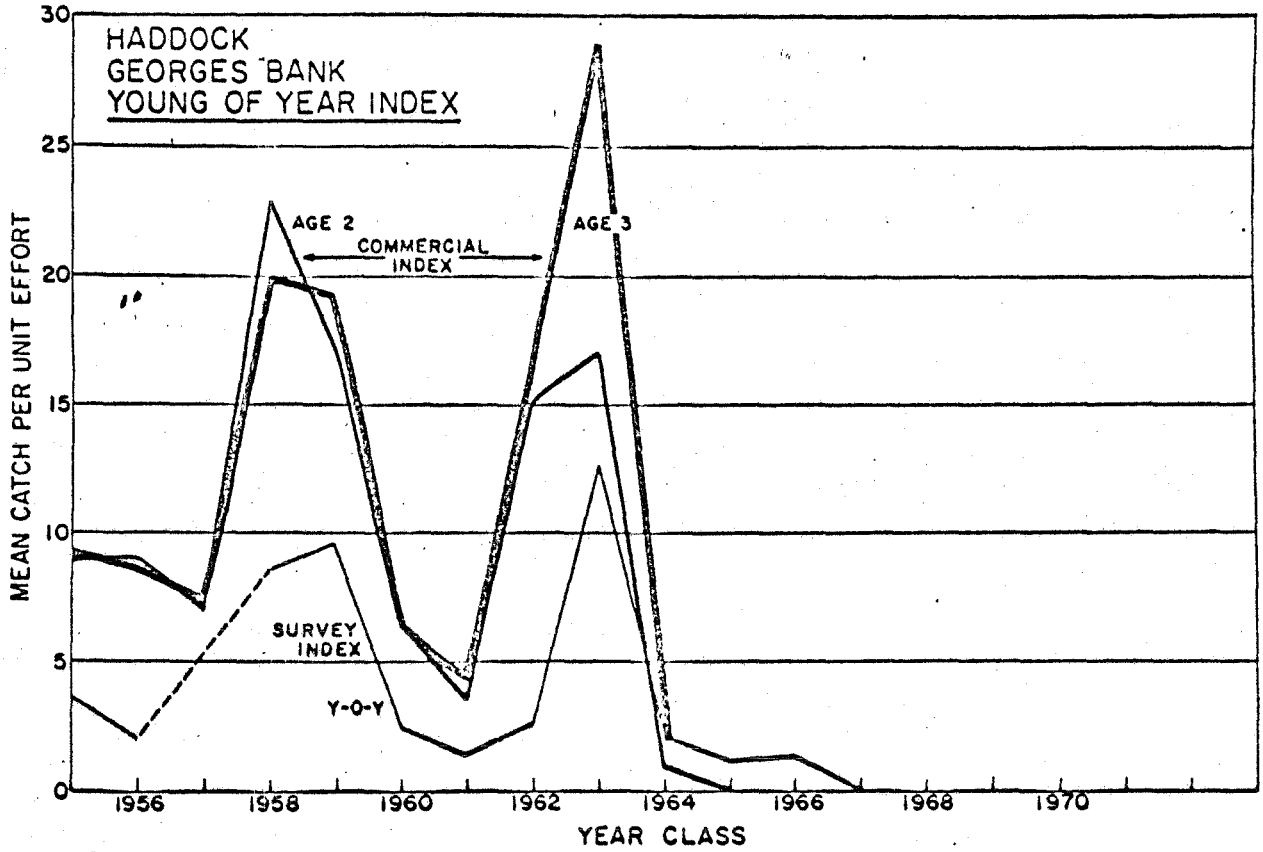


FIGURE 4

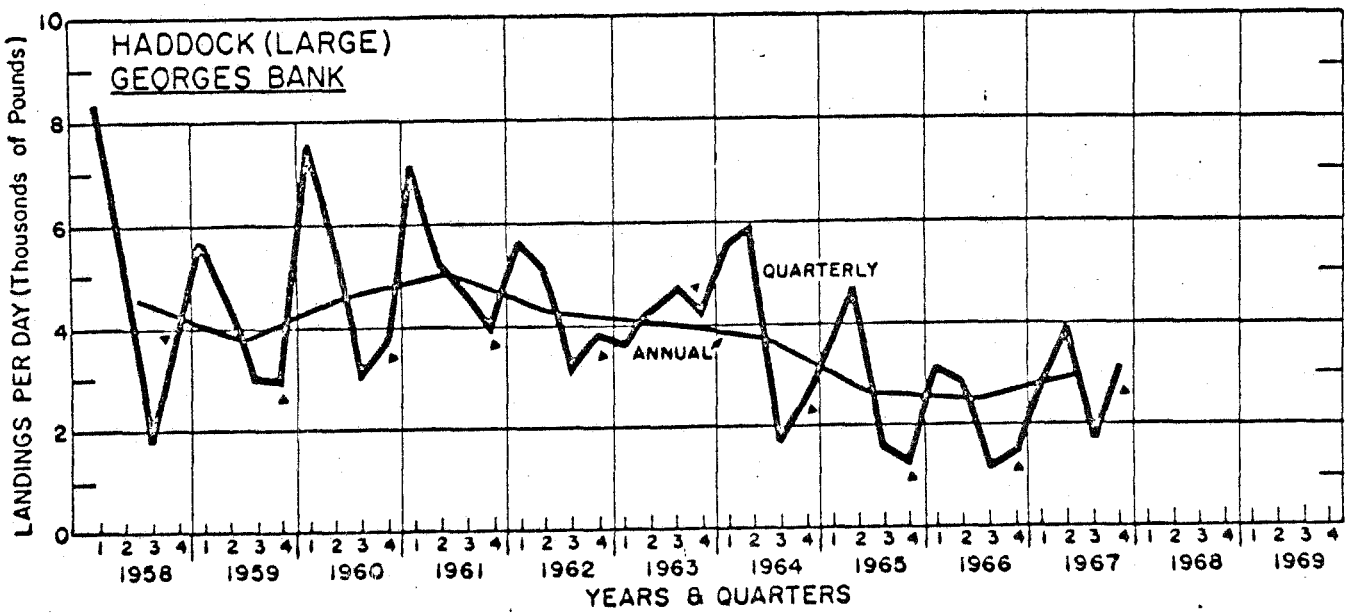


FIGURE 5

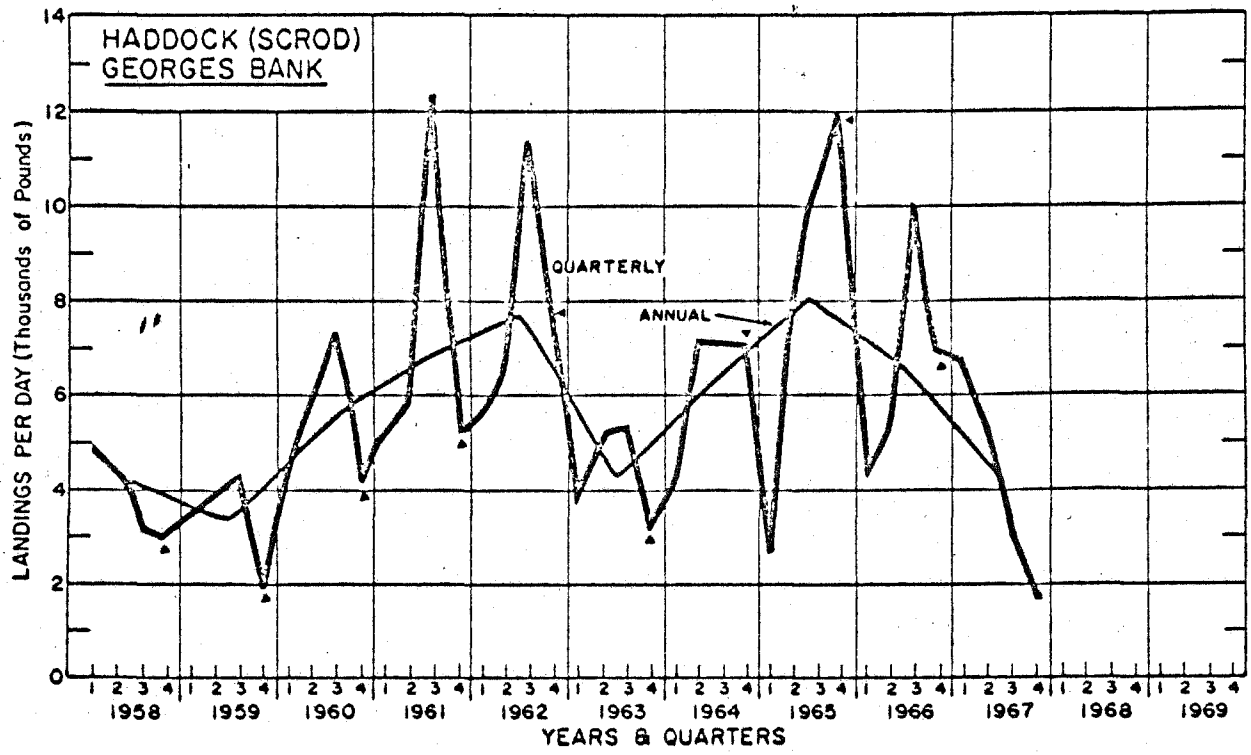


FIGURE 6

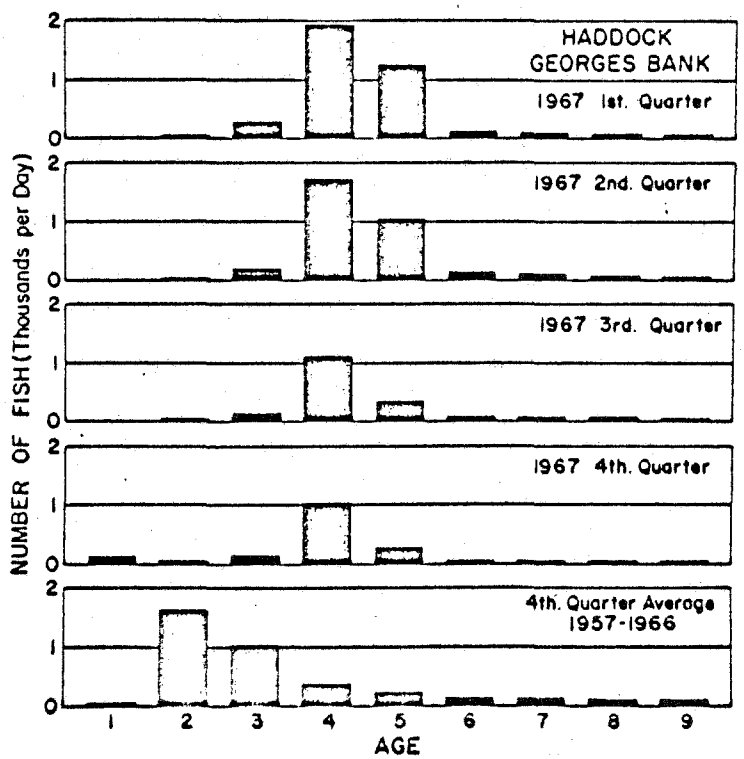


FIGURE 7

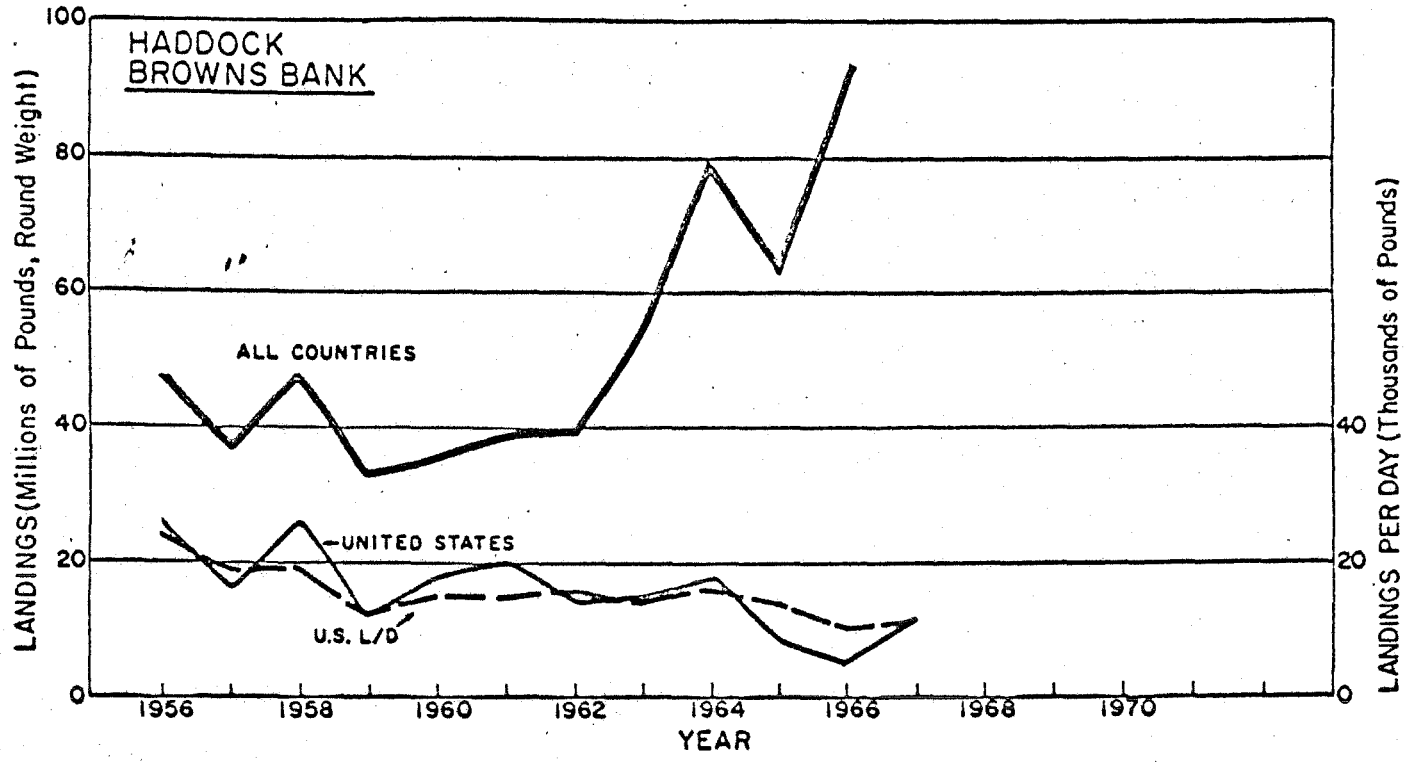
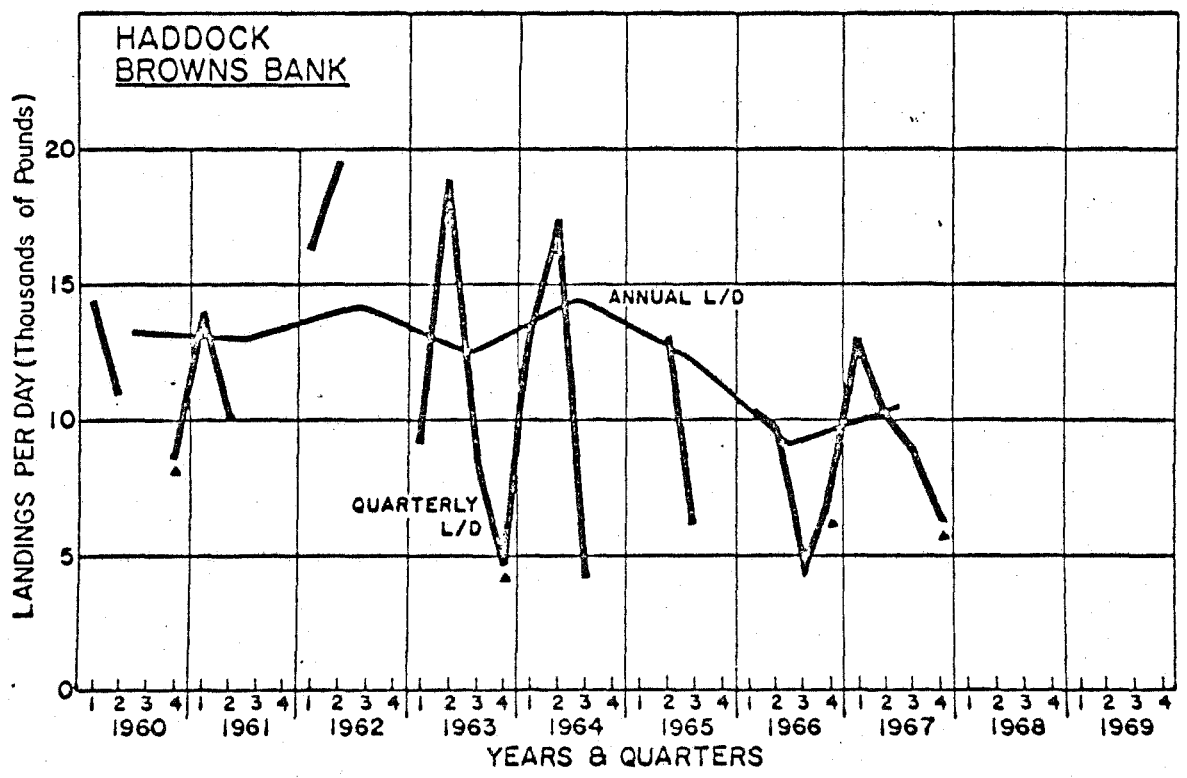


FIGURE 8



YELLOWTAIL

Yellowtail landings (Table 5 and Figure 9) in 1967 were 52 million pounds, almost 18 per cent below the 63 million pounds landed in 1966. Yellowtail abundance increased from 4,400 pounds per day in 1966 (Georges Bank) to 5,000 pounds per day in 1967, and 4,500 pounds per day on Southern New England Grounds (SNE) in 1966 to 5,100 pounds per day in 1967.

Age compositions (Figure 10) in 1967 (All Grounds) show the two and three year olds in good abundance, accounting for the increase in overall abundance in 1967. These two year classes appear somewhat large relative to other years and should contribute to increasing abundance and landings in 1968.

In the fourth quarter, two year olds were more numerous than usual in the landings from Georges Bank (Figure 11) but less so for Southern New England (Figure 12). This is largely the cause of the quarterly changes in landings per day estimates (Figure 13 and 14), as fishing effort in 1967 dropped below the levels of 1965 and 1966.

TABLE 2

YELLOWTAIL FOURTH QUARTER STATISTICS
(Landings in thousands of pounds)

Area	Fourth Quarter				Accumulative			
	Landings		Landings/Day		Landings		Landings/Day	
	1967	1966	1967	1966	1967	1966	1967	1966
So. New England	6,728	6,787	5,631	3,993	23,898	32,914	5,118	4,542
Georges Bank	7,101	5,846	6,126	4,544	18,534	25,002	4,970	4,415
Mid-Atlantic	28	474	--	--	6,308	1,330	7,102	6,701
Cape Cod Bay	806	640	4,459	2,480	3,399	3,986	3,052	3,607
Total	14,663	13,747	5,861	4,090	52,139	63,232	5,497	4,449

FIGURE 9

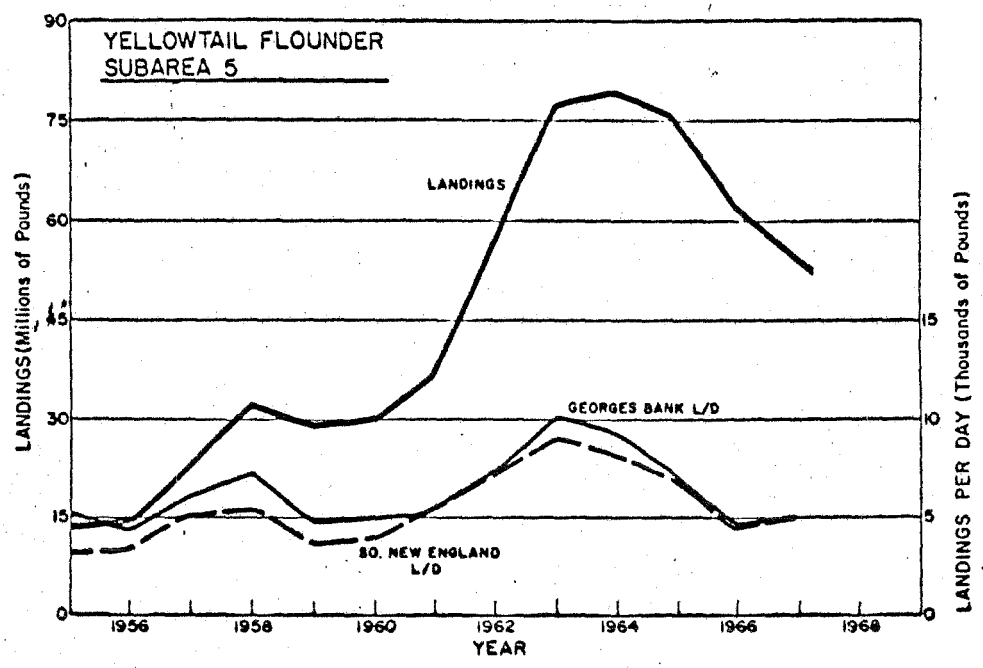


FIGURE 10

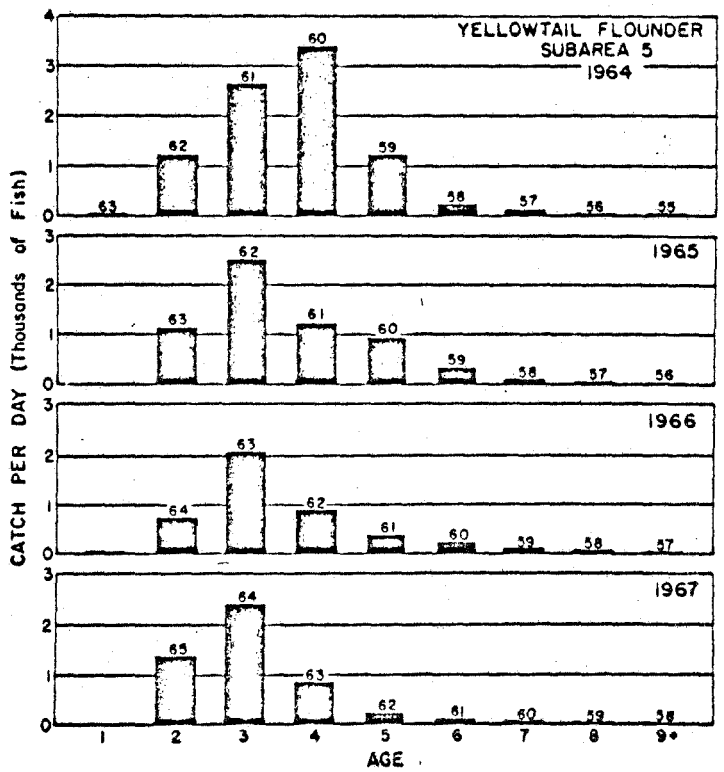


FIGURE 11

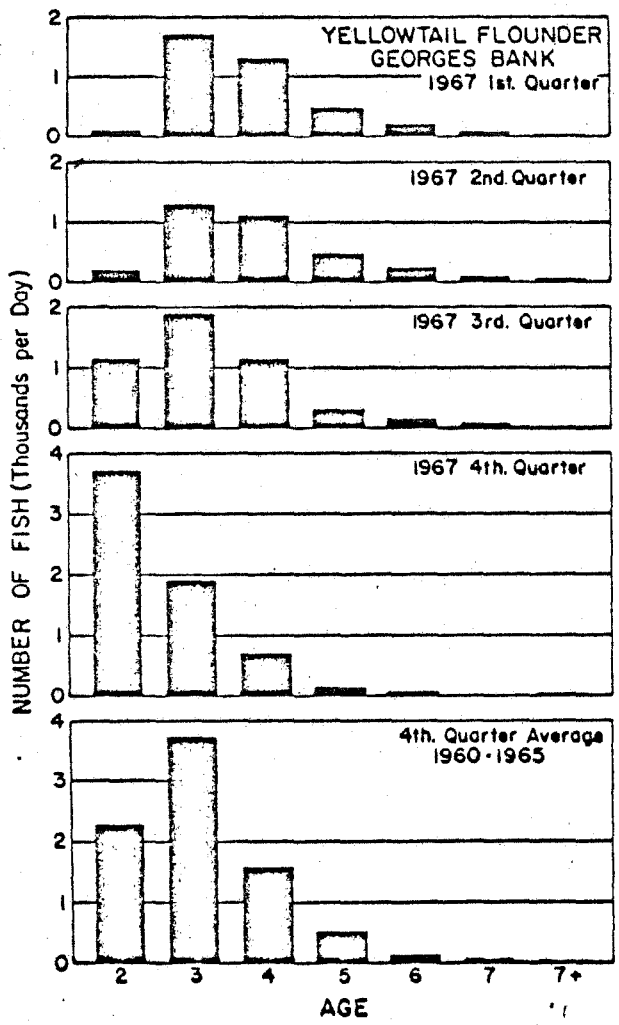


FIGURE 12

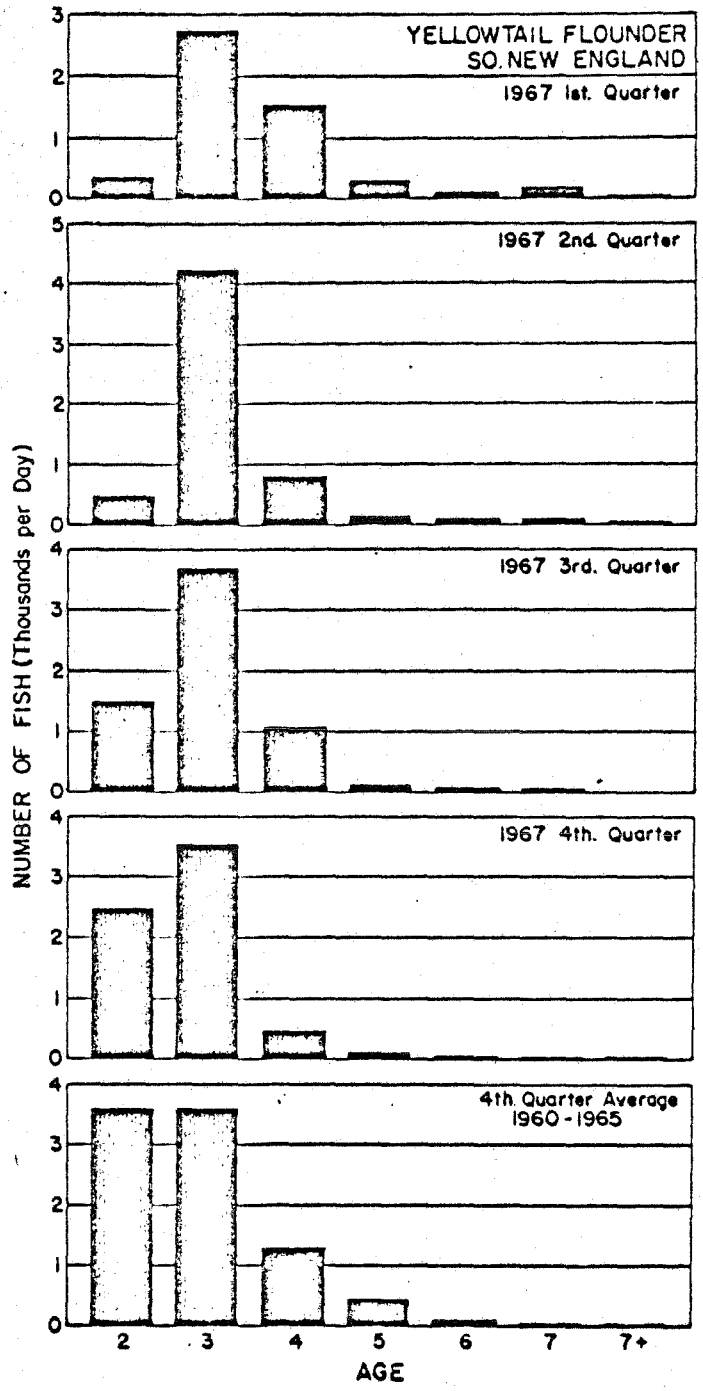


FIGURE 13

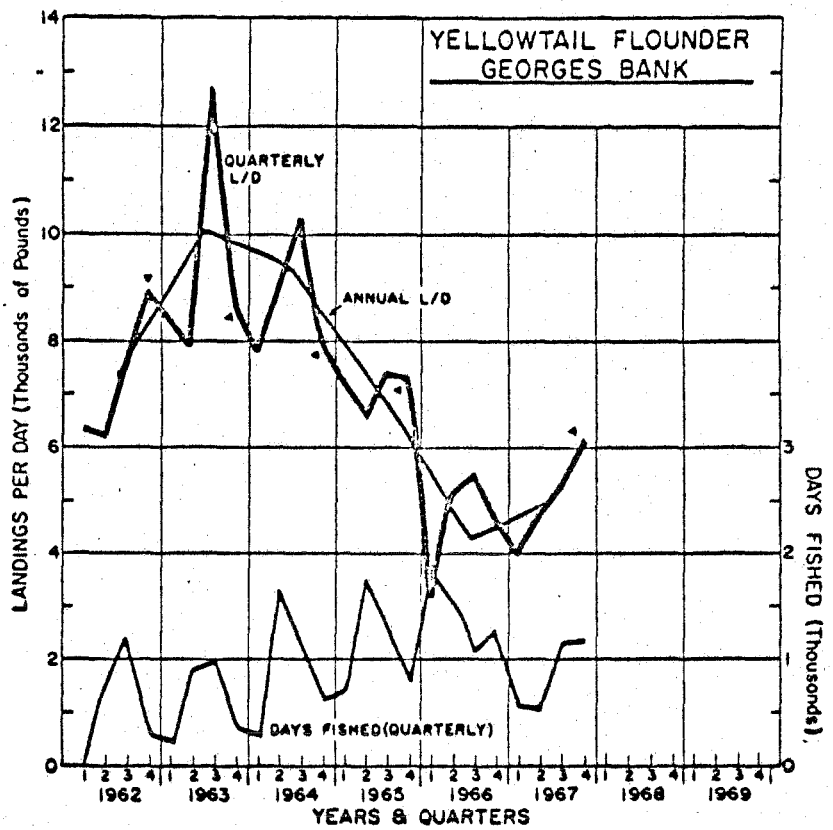
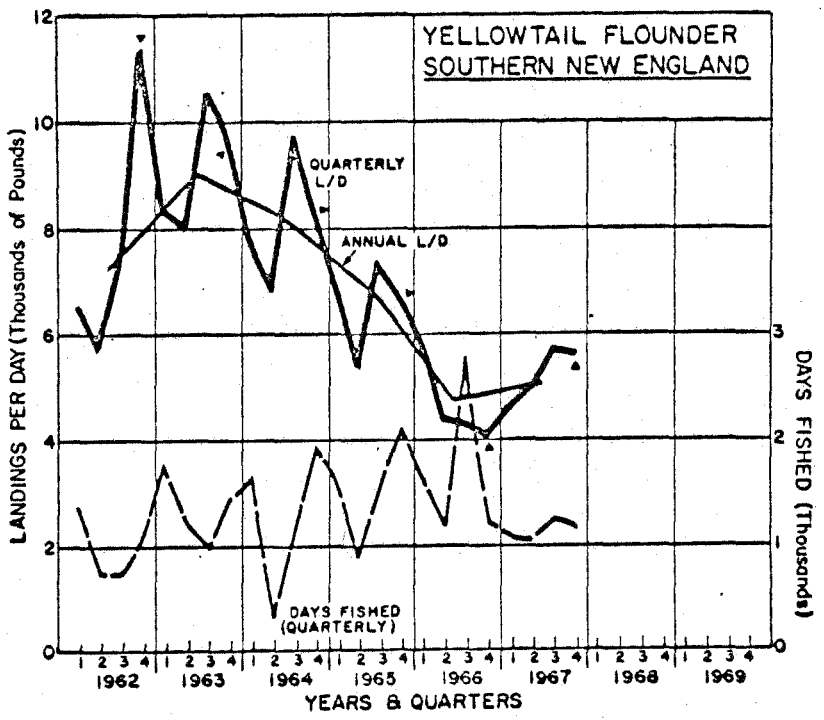


FIGURE 14



COD

Cod landings (Table 3) by the United States from Georges Bank rose from 21.9 million pounds to 23.6 million pounds in 1967. Total US landings increased about one fifth (Figure 15) while landings per day dropped slightly.

Quarterly landings per day (Figure 16) indicates some degree of increased rate of catch in the second half of 1967.

TABLE 3

COD FOURTH QUARTER STATISTICS
(Landings in thousands of pounds)
(As Landed)

	Fourth Quarter				Accumulative			
	Landings		Landings/Day		Landings		Landings/Day	
Area	1967	1966	1967	1966	1967	1966	1967	1966
Georges Bank	4,958	47,418	2,110	1,930	23,597	21,944	1,913	2,088

FIGURE 15

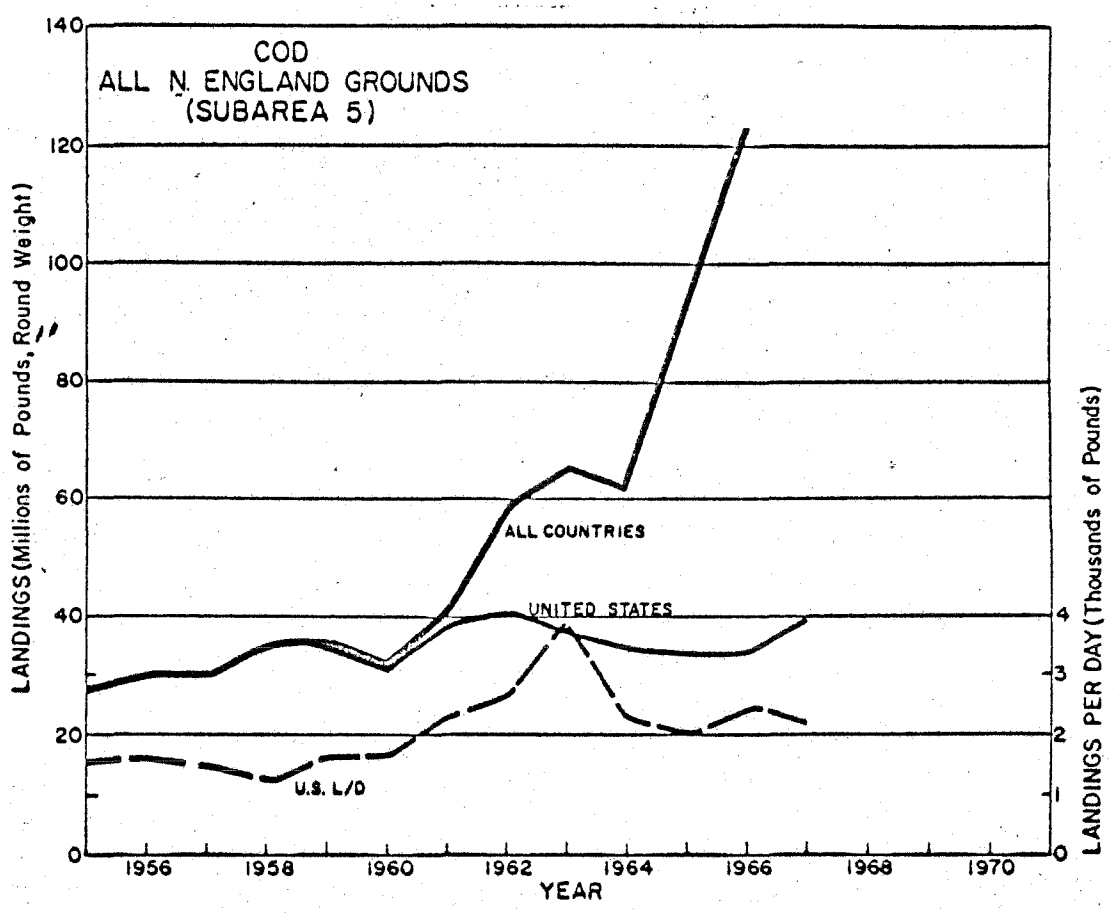


FIGURE 16

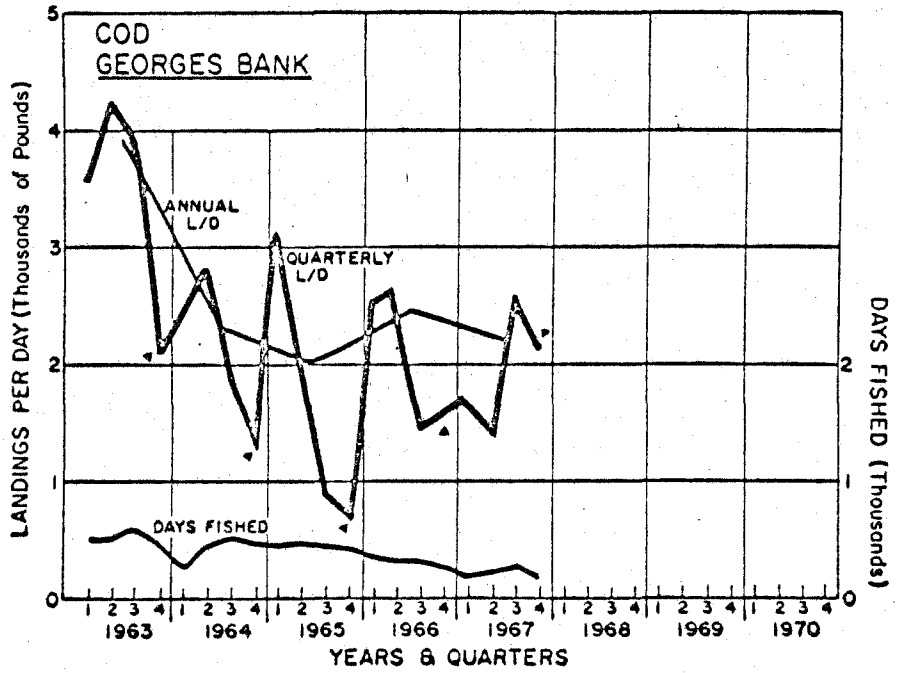


FIGURE 19

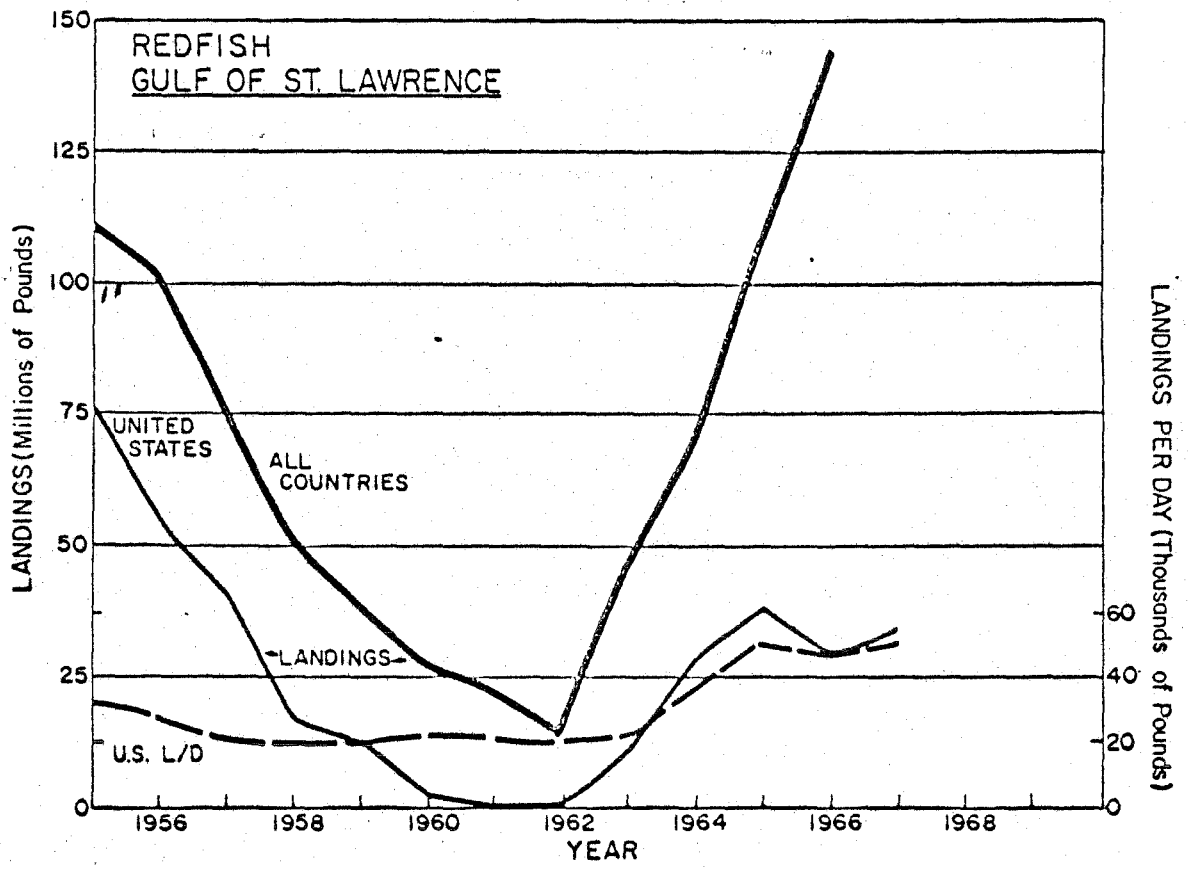
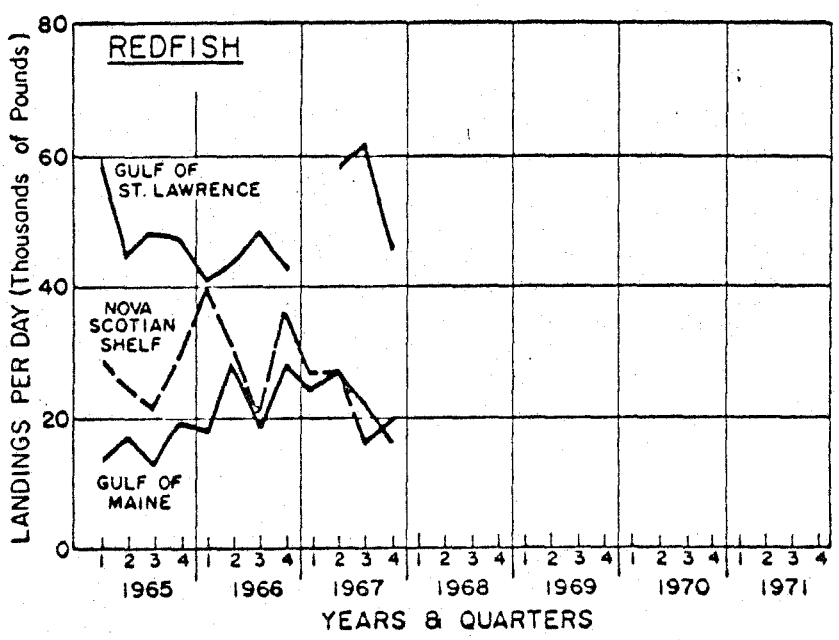


FIGURE 20



SILVER HAKE
(Food Fishery)

The United States silver hake food fishery, located principally in the Gulf of Maine and on the cultivator shoals of Georges Bank, showed a 28 per cent decline in landings (Table 5, Figure 21) in 1967. Labor disputes and large freezer holdings left over from 1966 were influential. Landings per day in 1967 for Georges Bank showed a slight increase (Table ~~4~~ 5) however, abundance in the Gulf of Maine was down about half for the year and about 80 per cent in the fourth Quarter. Figure 22 shows the quarterly abundance trends for both areas from 1962 through 1967.

TABLE 5

SILVER HAKE FOURTH QUARTER STATISTICS
(Landings in thousands of pounds)

	Fourth Quarter				Accumulative			
	Landings		Landings/Day		Landings		Landings/Day	
Area	1967	1966	1967	1966	1967	1966	1967	1966
Gulf of Maine	4,762	4,593	6,821	30,217	31,723	47,008	12,759	25,432
Georges Bank	1,712	2,349	10,000	36,941	27,982	35,763	35,679	32,111
Total	6,474	6,942	6,835	32,139	59,705	82,771	20,421	27,944

FIGURE 21

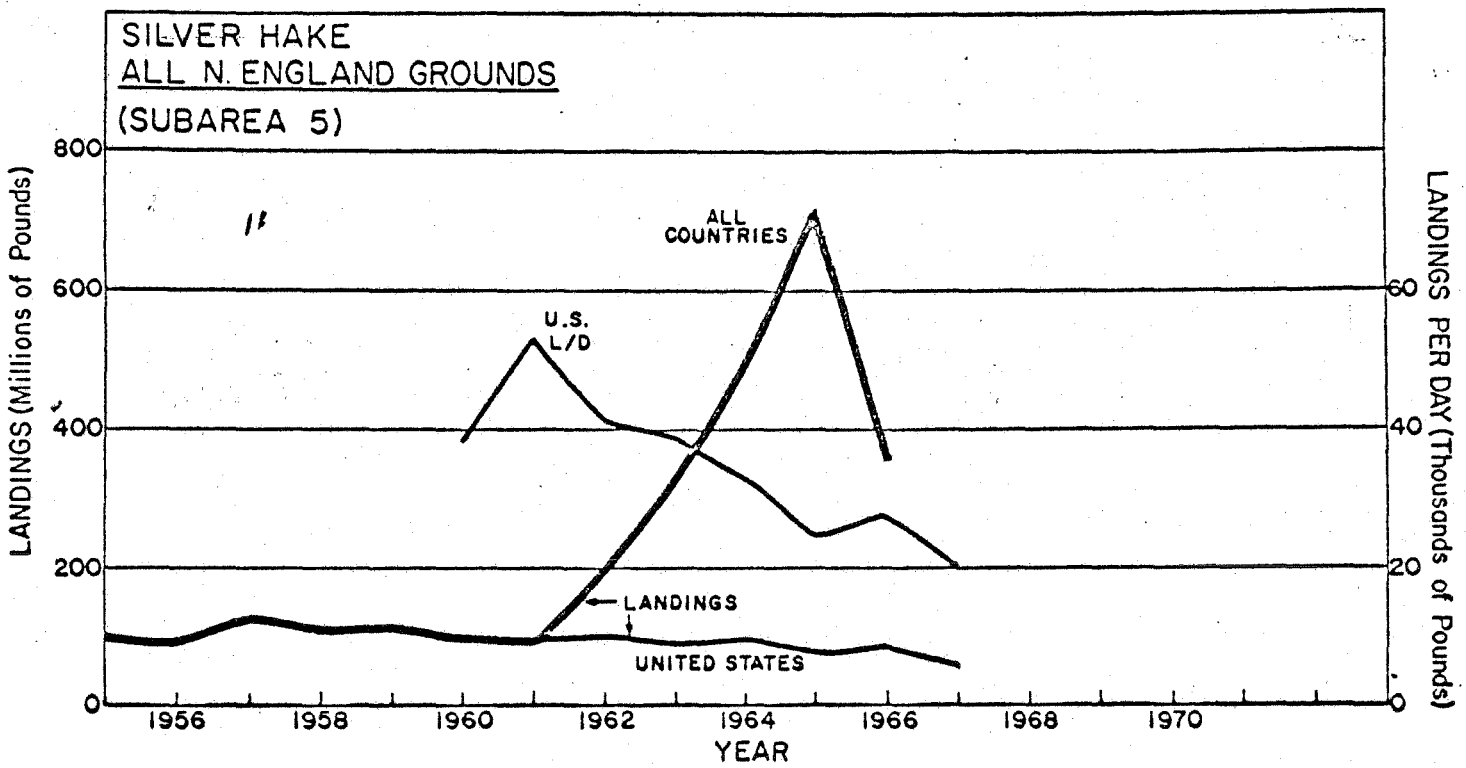
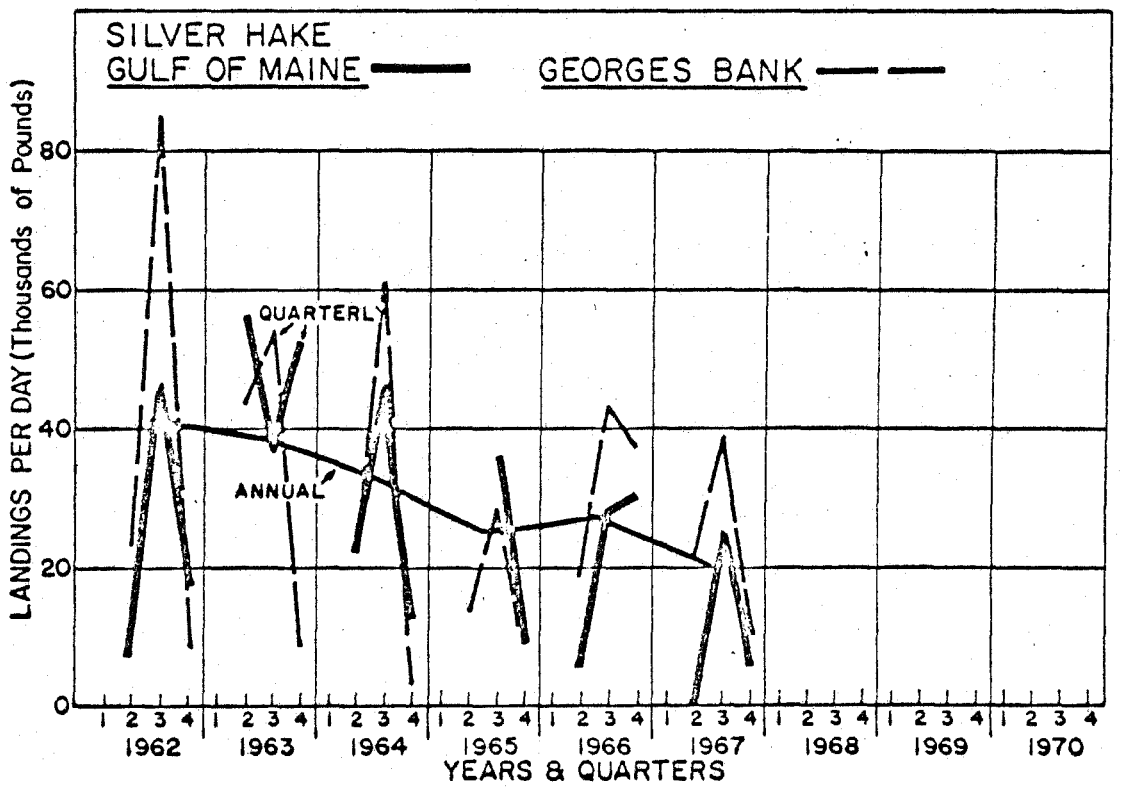


FIGURE 22



INDUSTRIAL FISHERY

United States industrial landings from New England and Middle Atlantic waters in 1967 (Figure 23) were 85 million pounds or about 16 per cent below the 102 million landed in 1966. This decline was principally among other species as red and silver hake landings remained about the same in 1966 and 1967 (Table 6).

Species compositions (Table 7) indicate red and silver hake percentage in the catch was slightly higher in 1967 than in 1966.

The landings per day estimate for industrial silver hake (SNE grounds) (Figure 24) was 17,000 pounds in the fourth quarter of 1967 compared to 8,400 pounds in 1966. This increase in abundance was accompanied by a million pound increase in landings in the fourth quarter of 1967 compared to 1966. Red hake abundance (Figure 25) increased from 7,600 pounds per day in 1966 to 21,000 pounds per day in the fourth quarter of 1967. Fourth quarter landings of red hake increased 3 million pounds in 1967 over the same period in 1966. Middle Atlantic landings have declined in importance since the closing of the Ammagansett plant on Long Island.

TABLE 6

INDUSTRIAL RED AND SILVER HAKE FOURTH QUARTER STATISTICS
(Landings in thousands of pounds)

Area and Species	Fourth Quarter Landings 1967	Fourth Quarter Landings 1966	Fourth Quarter Landings/Day 1967	Fourth Quarter Landings/Day 1966	Accumulative Landings 1967	Accumulative Landings 1966	Accumulative Landings/Day 1967	Accumulative Landings/Day 1966
So. New England								
Red Hake	3,665	1,363	20,715	7,615	12,657	9,885	13,035	4,619
Silver Hake	2,963	1,945	16,746	8,493	7,347	6,527	7,566	3,108
Total	6,628	3,308	37,461	16,108	20,004	16,412	20,601	7,727
Mid-Atlantic								
Red Hake	45	621	19,709	5,903	1,071	4,252	17,557	3,730
Silver Hake	37	753	9,578	4,799	747	1,924	12,246	3,802
Total	82	1,374	29,287	10,702	1,818	6,176	29,803	7,532
Total Red Hake	3,710	1,984	20,703	7,117	13,728	14,137	13,302	4,337
Total Silver Hake	3,000	2,698	16,741	7,442	8,094	8,451	7,843	3,341
Total Industrial	17,438	20,666	96,793	48,930	85,289	101,803	84,619	47,620

TABLE 7

PERCENT RED HAKE AND SILVER HAKE IN LANDINGS OF INDUSTRIAL FISH
(SO. NEW ENGLAND)

Quarter	1963 Red Hake	1963 Silver Hake	1964 Red Hake	1964 Silver Hake	1965 Red Hake	1965 Silver Hake	1966 Red Hake	1966 Silver Hake	1967 Red Hake	1967 Silver Hake
1	--	2.1	64.9	26.3	39.2	14.4	0.6	1.0	0.7	0.6
2	52.8	21.1	64.9	26.2	55.9	14.1	20.3	5.6	17.5	4.8
3	42.2	23.7	10.7	38.2	29.3	31.4	17.7	20.3	30.5	21.7
4	25.5	5.5	2.4	29.5	35.2	23.2	9.9	14.2	21.4	17.3

FIGURE 23

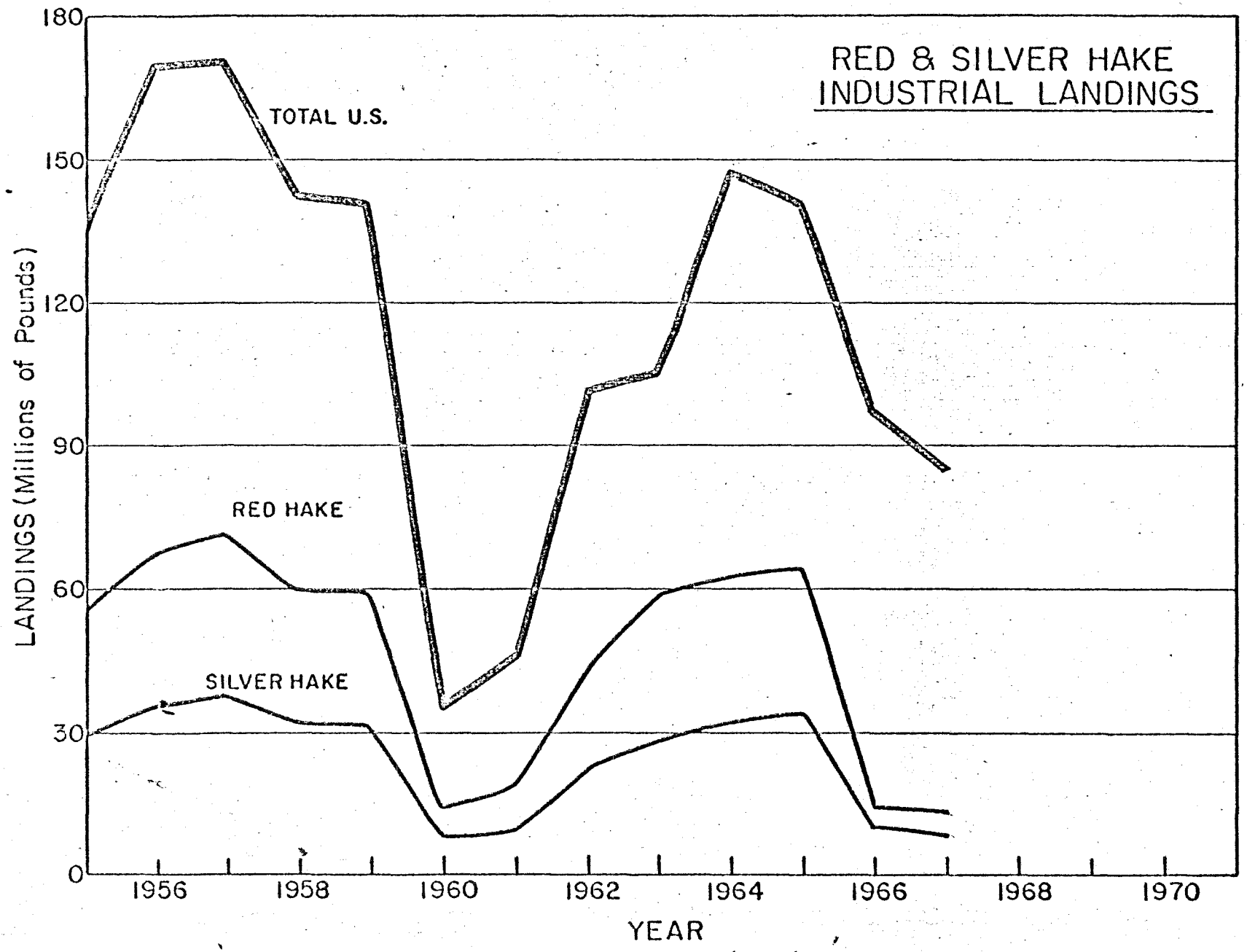

RED & SILVER HAKE
INDUSTRIAL LANDINGS
TOTAL U.S.
RED HAKE
SILVER HAKE
LANDINGS (Millions of Pounds)
180
150
120
90
60
30
0
1956
1958
1960
1962
1964
1966
1968
1970
YEAR

FIGURE 24

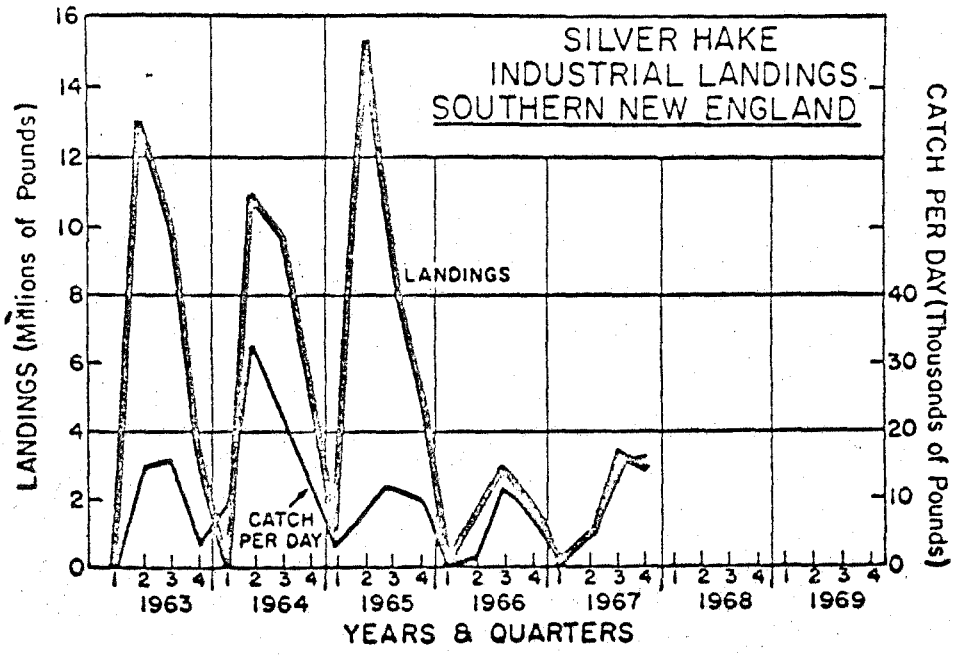
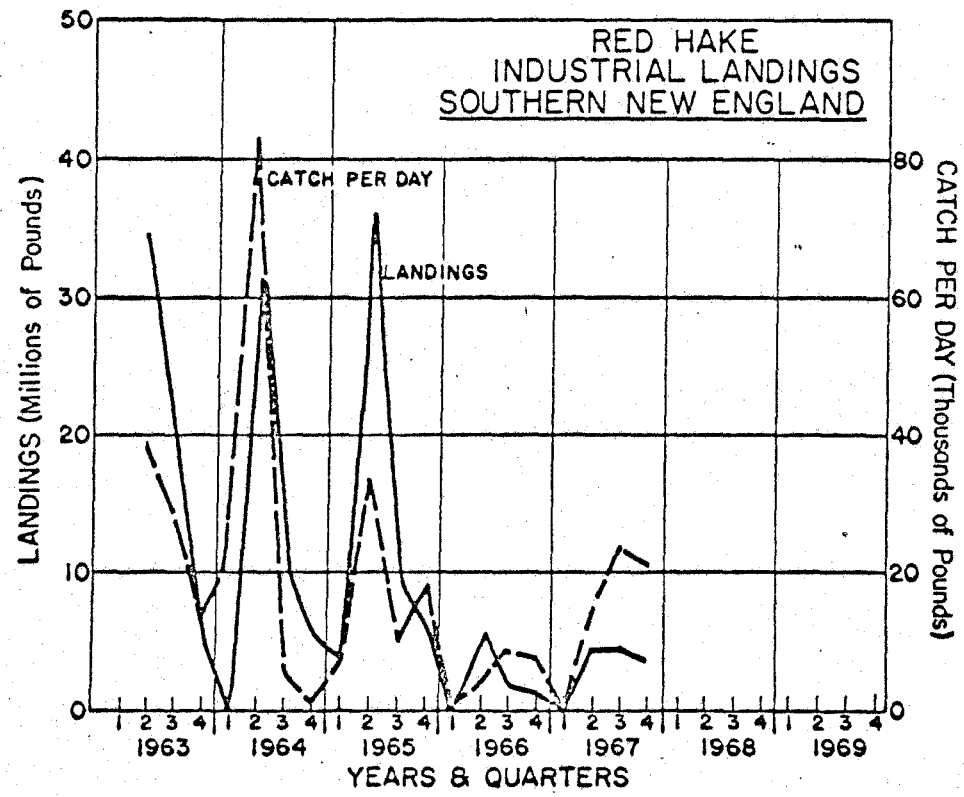


FIGURE 25



SEA SCALLOPS

United States sea scallop landings (Table 8 and Figure 26) for Georges Bank increased 750 thousand pounds in 1967 but Middle Atlantic declined in 1967 by about 50 per cent, lowering total landings by about 5 million pounds. Landings per day on Georges Bank (Figure 27) declined slightly for the year in contrast to the research vessel index which indicates an increase in abundance on Georges Bank. Landings per day on the middle Atlantic grounds continue the declining trend evident since 1965 (Figure 28).

TABLE 8

U.S. SEA SCALLOP FOURTH QUARTER STATISTICS[1/]
(Landings in thousands of pounds)

	Fourth Quarter				Accumulative			
	Landings		Landings/Day		Landings		Landings/Day	
Area	1967	1966	1967	1966	1967	1966	1967	1966
Georges Bank	1,045	1,079	1,337	1,775	2,759	2,012	1,471	1,881
Middle Atlantic	730	1,332	1,099	1,657	5,383	10,881	1,523	1,999
Total	1,775	2,411	1,228	1,708	8,142	12,893	1,505	1,979

1/ Interview data includes N.Y.C. fleet

FIGURE 26

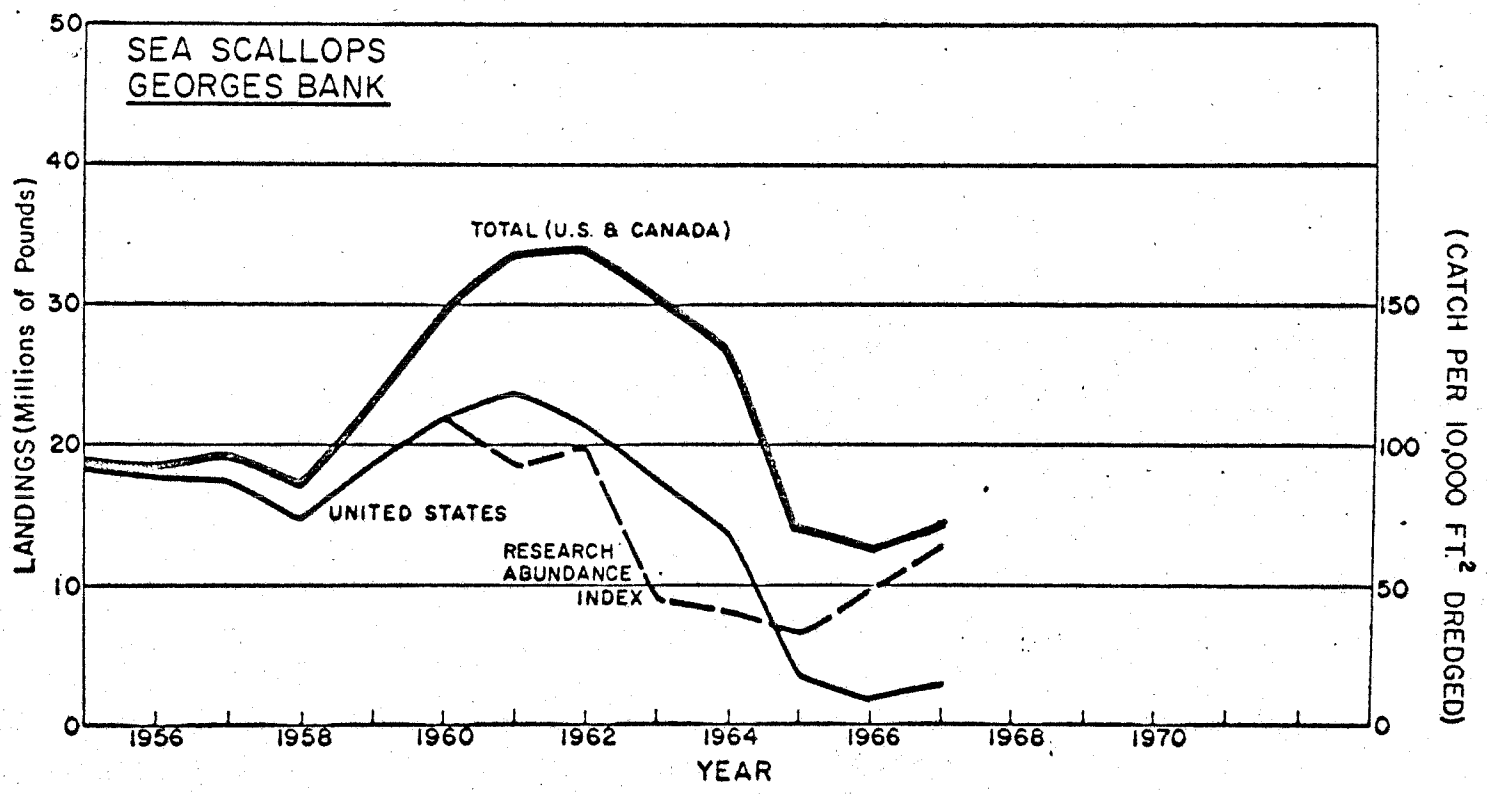

SEA SCALLOPS
GEORGES BANK
TOTAL (U.S. & CANADA)
UNITED STATES
RESEARCH ABUNDANCE INDEX
LANDINGS (Millions of Pounds)
(CATCH PER 10,000 FT.² DREDGED)
YEAR
0
10
20
30
40
50
0
50
100
150
1956
1958
1960
1962
1964
1966
1968
1970

FIGURE 27

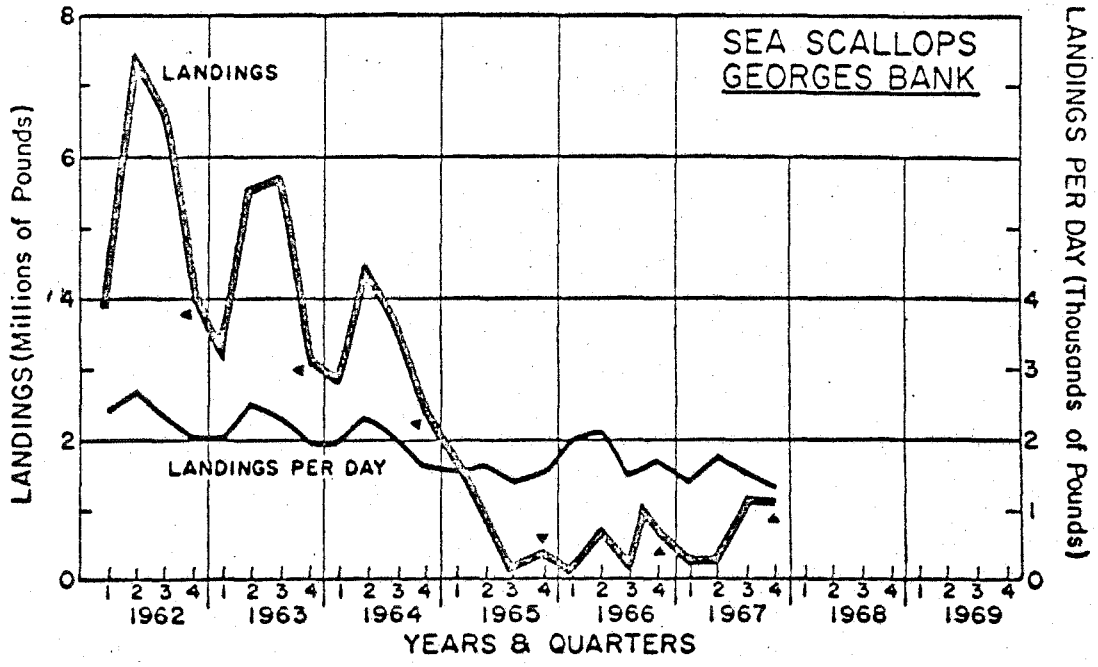
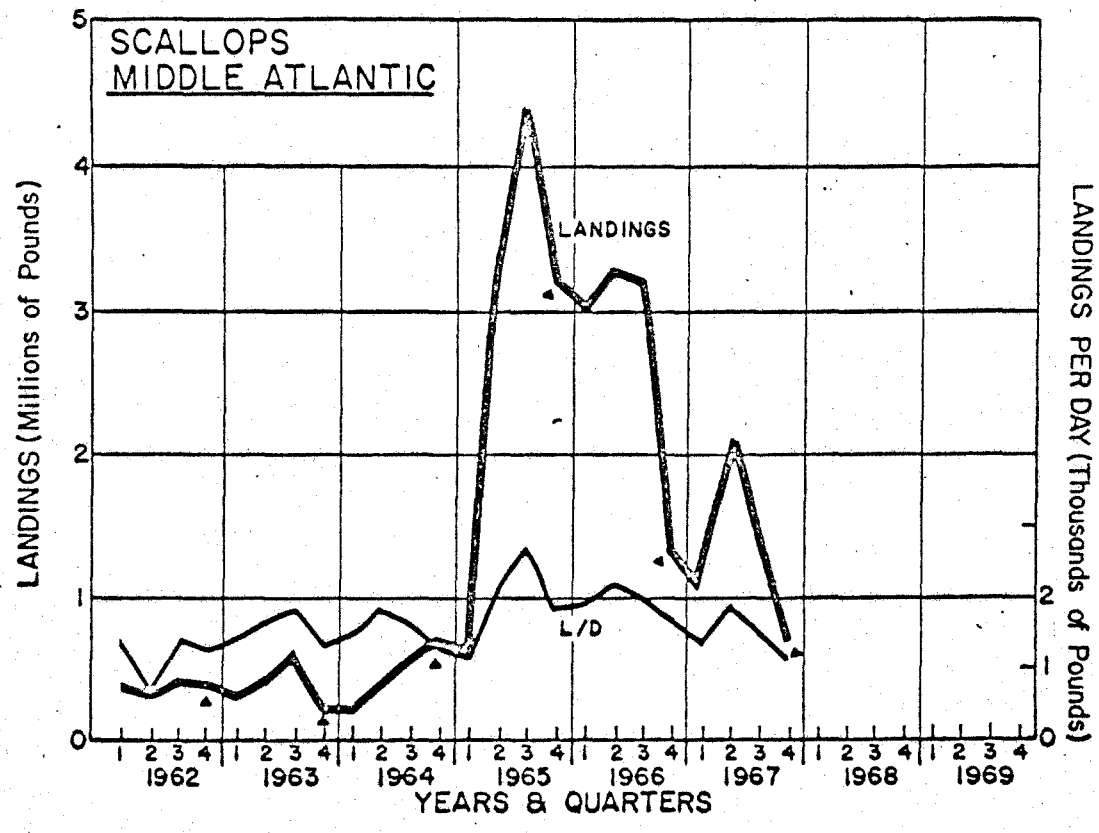



FIGURE 28