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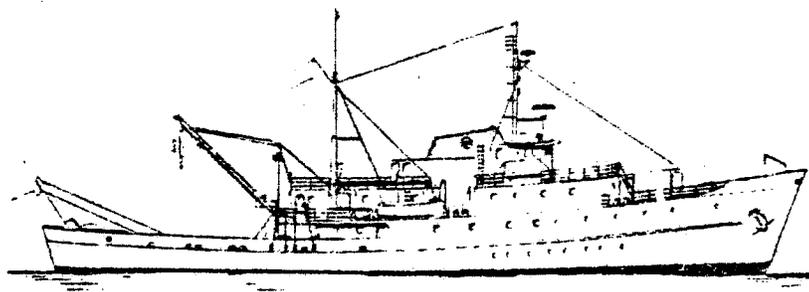
FOURTH QUARTER
STOCK CATALOGUE 1969

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GROUND FISH AND SEA SCALLOPS FISHED BY NEW ENGLAND FLEETS

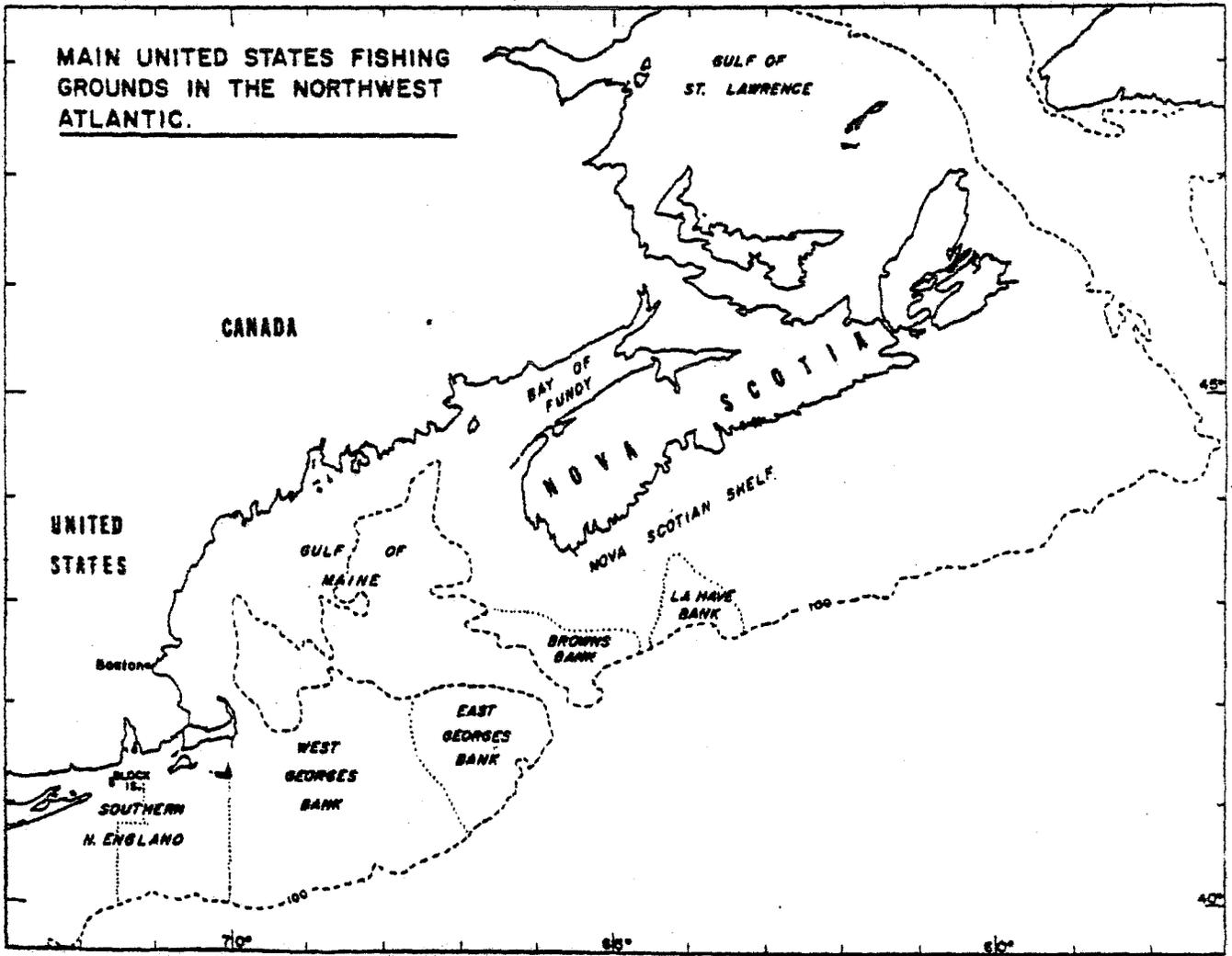
by

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Woods Hole, Massachusetts 02543
Lab. Ref. No. 70-2

**MAIN UNITED STATES FISHING
GROUNDS IN THE NORTHWEST
ATLANTIC.**



HADDOCK

Haddock landings for the fourth quarter were off 39 percent and total 1969 landings dropped about 25 million pounds from 1968 (Table 1). The decrease is due to a continued poor recruitment over the past six years and to heavy fishing pressure in 1965 and 1966 (Figure 1).

Total 1969 landings from Georges Bank declined 20 million pounds when compared to 1968 landings. Scrod landings were down 59 percent and large haddock were down 19 percent from 1968.

Abundance, expressed as landings per day fished, decreased in the fourth quarter by 37 percent for scrod and 16 percent for large haddock, when compared to the fourth quarter, 1968 (Table 1, Figures 2 and 3). All abundance estimates for 1969, however, are probably not indicative of the true stock levels because of changes in the characteristics of the fishing fleet. Another method of programming abundance indexes is being finalized and is to be in operational use for 1970.

Age compositions of haddock from Georges Bank (Figure 4) show the change in age class dominance over the last several years, a result of poor recruitment. Sixty-eight percent of the landings during 1969 were six and seven-year-olds (the 1963 and 62 year classes). Two-, three-, and four-year-olds, which usually make up the bulk of the landings, contributed only 20 percent to the 1969 catch.

The young-of-the-year index, derived from Albatross IV's annual fall survey, shows the 1969 year class to be low, following the trend set in 1964 (Figure 5). Therefore, low abundance on Georges Bank can be expected to continue for at least three years.

Total landings of haddock from Browns Bank in 1969 were down 43 percent from 1968 (Table 1). Although the Albatross IV survey indicated somewhat better recruitment in 1969, abundance will continue low on Browns Bank for the next three to four years.

For 1970, the International Commission for the Northwest Atlantic Fisheries (ICNAF) has adopted catch quotas and closed seasons on both Georges and Browns Banks as measures to aid the recovery of haddock stock.

TABLE 1

HADDOCK FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
Georges Bank								
Scrod	657	2795	1186	1870	9398	22872	1701	2280
Large	4389	6138	3602	4265	26893	33221	5182	3893
Total	5046	8933	4788	6135	36291	56093	6883	6173
Browns Bank								
Scrod	-	39	-	-	1908	3342	4905	6022
Large	1	22	-	-	969	1685	2491	3326
Total	1	61	-	-	2877	5027	7396	9948
Gulf of Maine								
Scrod	406	627	-	-	1457	3925	-	-
Large	1063	682	-	-	3845	3611	-	-
Total	1469	1309	-	-	5602	7536	-	-
Bay of Fundy								
Scrod	22	244	912	1938	587	1213	2454	2754
Large	58	246	5472	2171	569	720	2391	1697
Total	80	490	6384	4109	1156	1933	4845	4451
Total								
Scrod	1085	3705	1177	1877	13350	31352	2252	2830
Large	5511	7088	3626	4181	32276	39237	5034	3822
<u>1/ Total</u>	6596	10793	4803	6058	<u>1/45626</u>	70589	7286	6652

1/ 85(X10³ live) from area 110-210 not shown - annually = 92

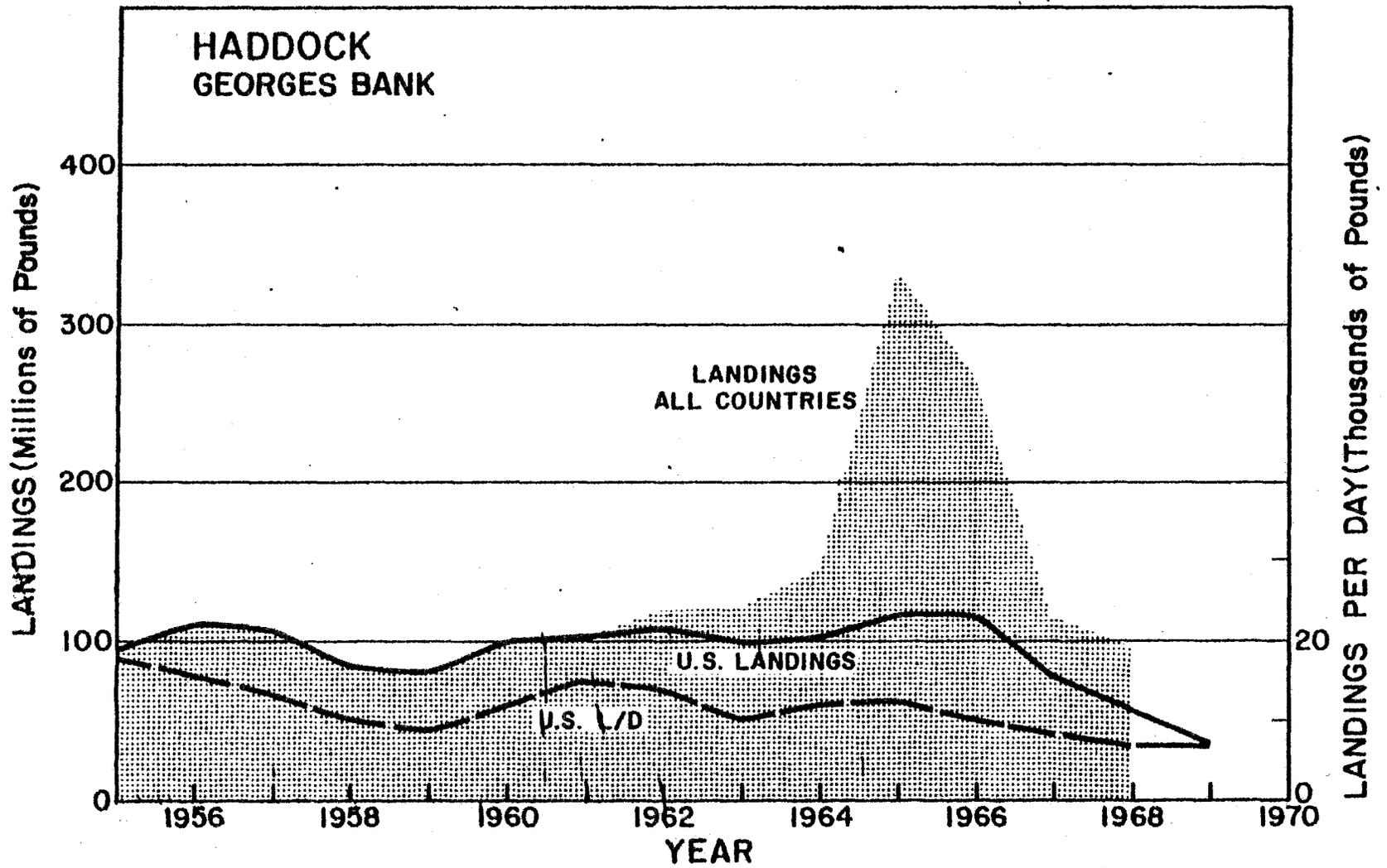


Figure 1

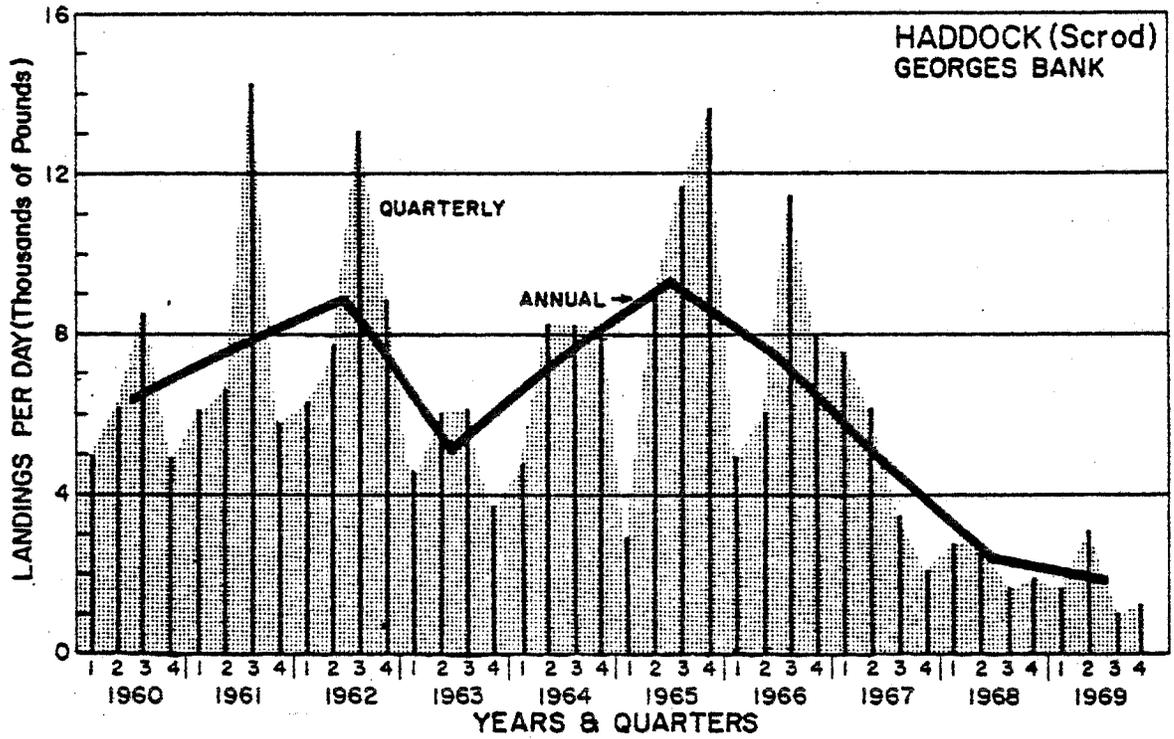


Figure 2

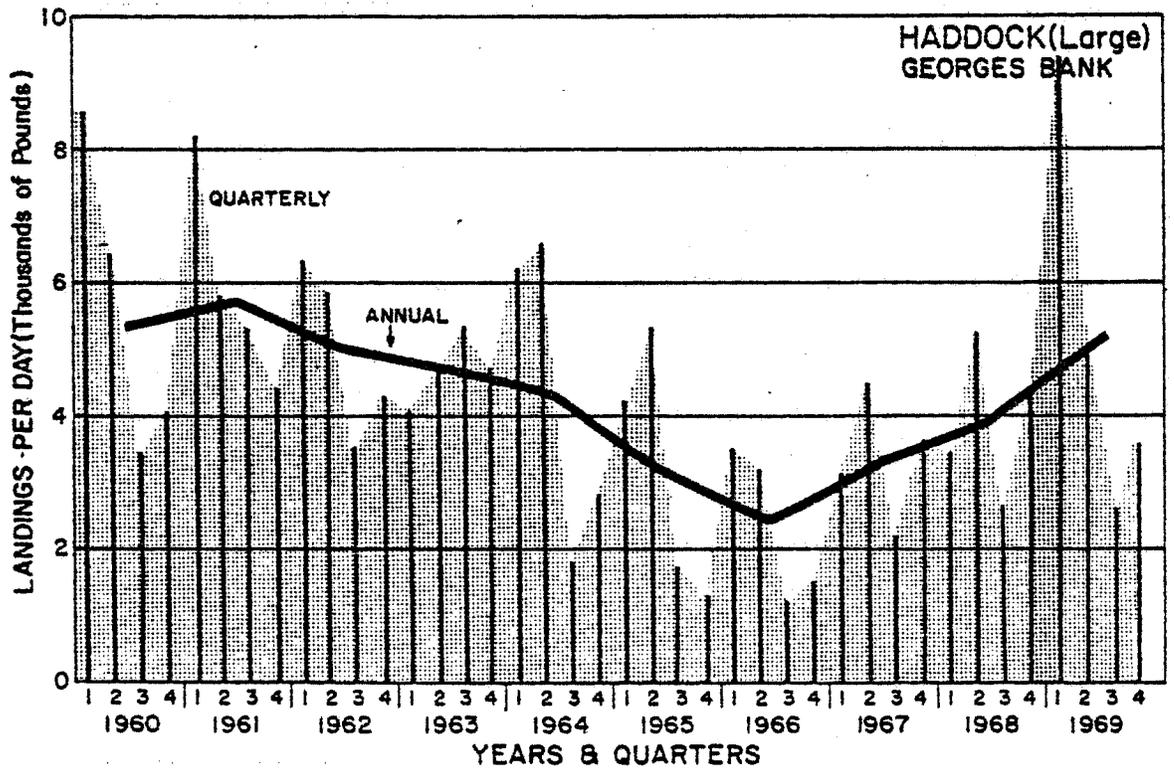


Figure 3

GEORGES BANK HADDOCK

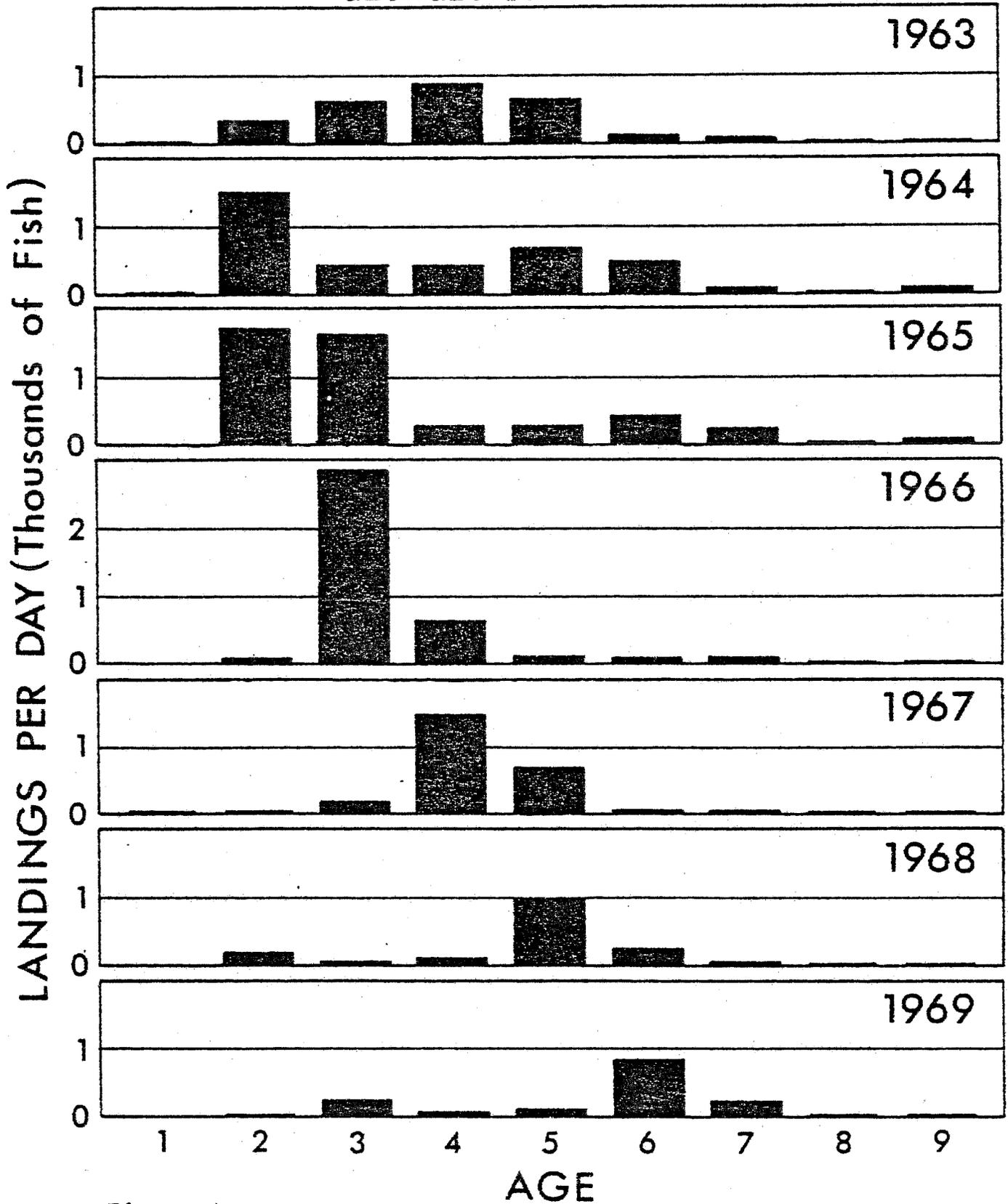


Figure 4

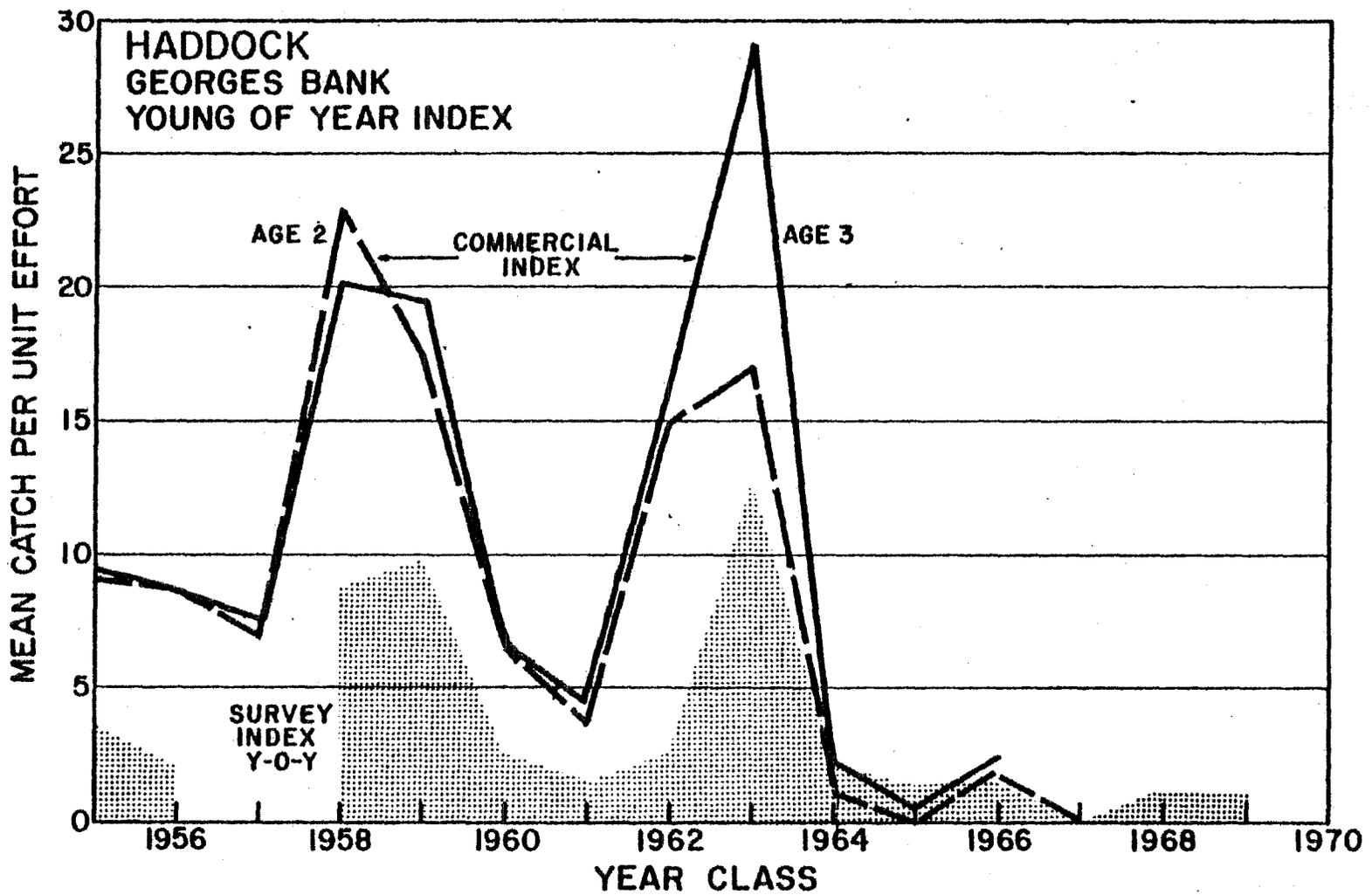


Figure 5

YELLOWTAIL

Yellowtail landings for food in 1969 were 64 million pounds, the same as in 1968 (Table 2). Landings per day on all fishing grounds were considerably lower than in 1968 (Figure 6).

Fourth quarter yellowtail statistics exhibited similar downward trends; however, Georges Bank landings were slightly higher. In essence, for 1969 it took more effort to land the same poundage as in 1968 (Figure 7 and 8).

There are indications of lower recruitment in 1969. With abundance in 1969 down, and a lack of good recruitment, 1970 should have about the same, or slightly lower abundance with a probable decline in abundance for 1971.

TABLE 2

YELLOWTAIL FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
S. New England	8580	9136	6026	6671	25094	31456	5950	6408
Georges Bank	8626	7598	6115	7691	35151	28223	5894	6782
Middle Atlantic	409	167	7312	12011	1203	1056	7421	7920
Cape Cod Grounds	498	760	4924	9230	2968	3454	5759	6414
Total	18113	17661	6060	7270	64416	64189	6003	6609

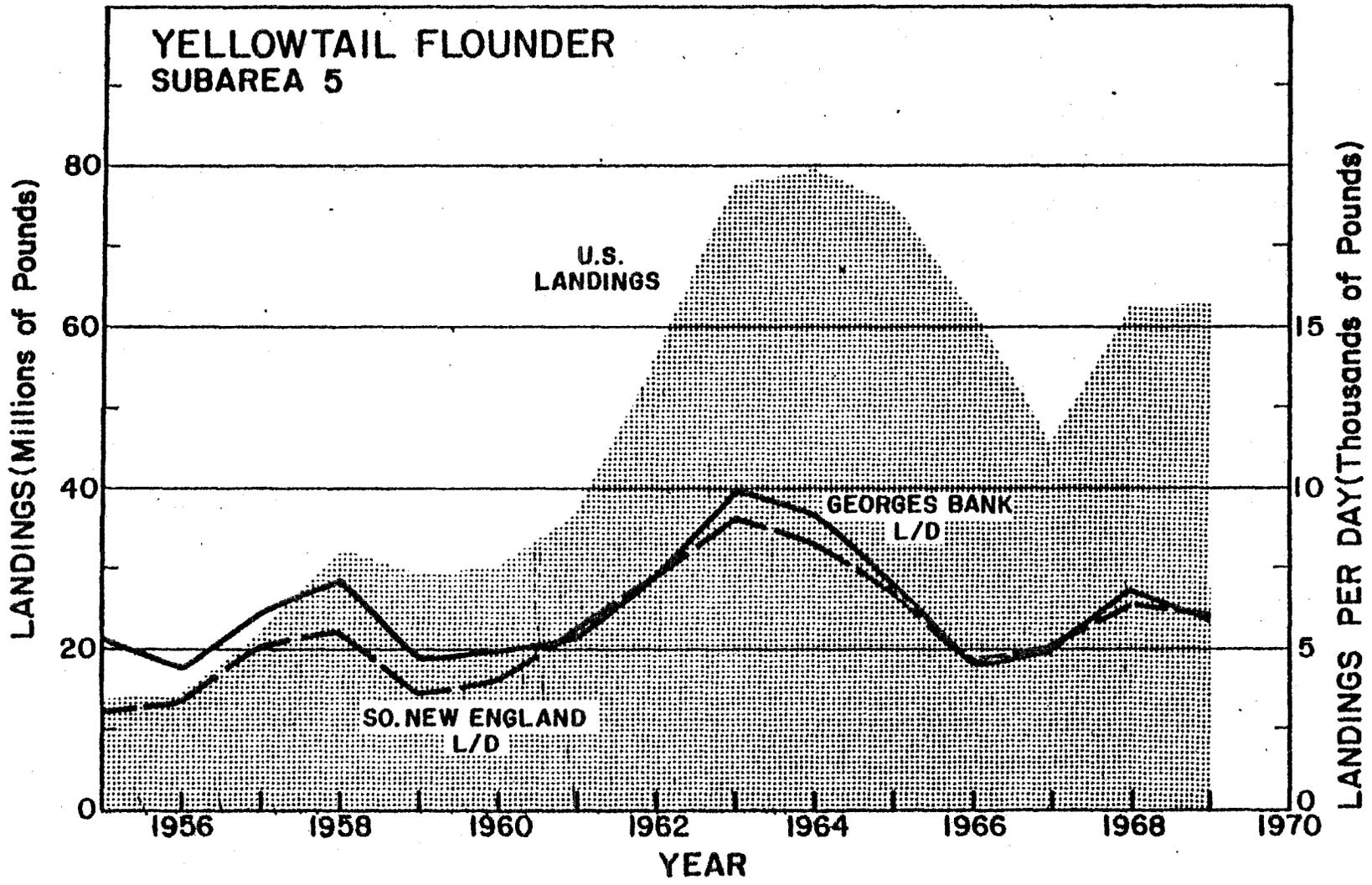


Figure 6

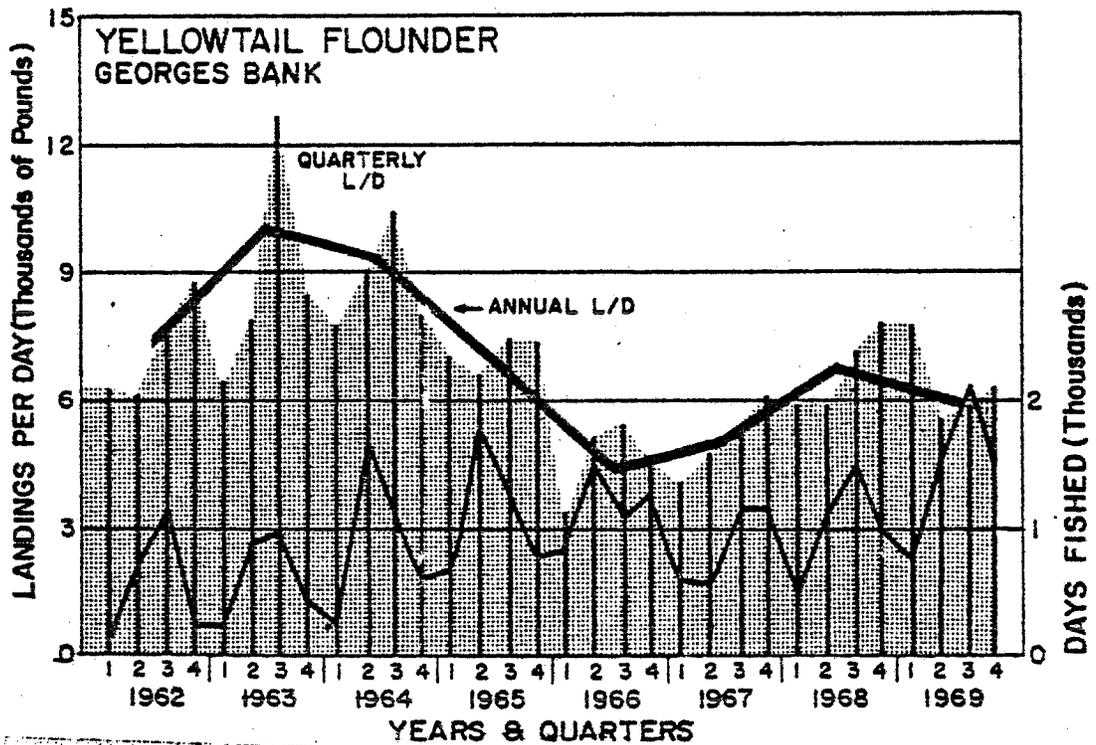


Figure 7

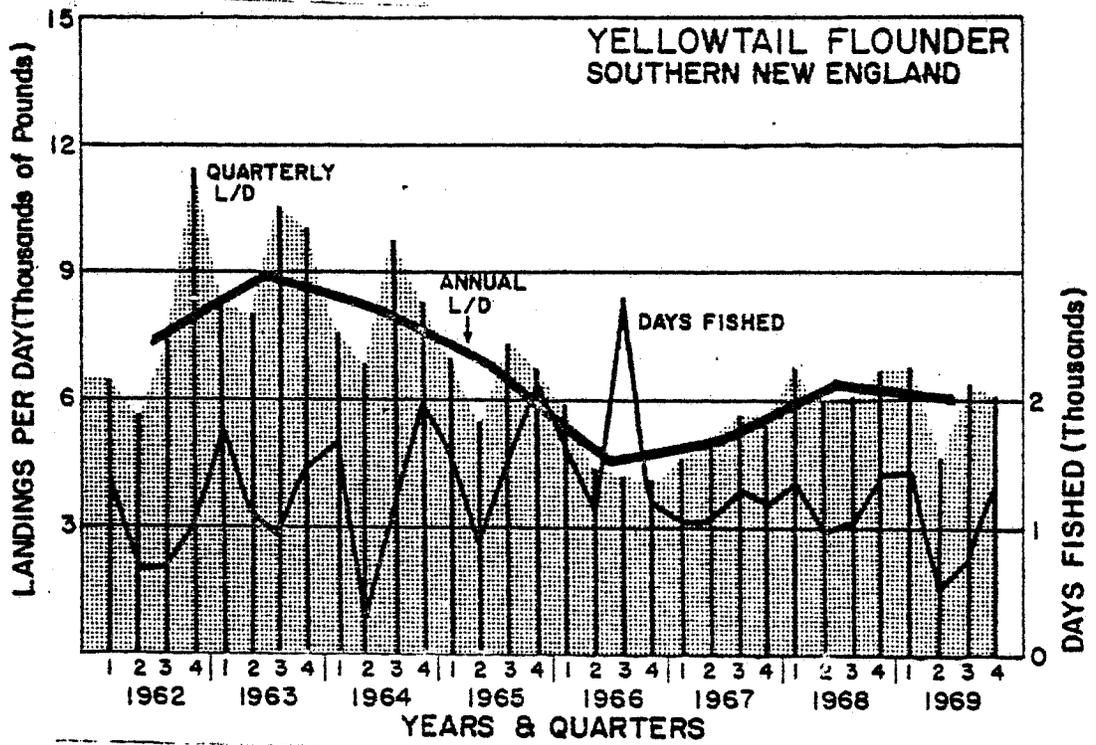


Figure 8

COD

Total cod landings by the United States in 1969 increased eight million pounds when compared with 1968 (Table 3). Georges Bank, the principle fishing area for the U.S. fleet, produced 35 million pounds, three million more than 1968.

Landings per day were slightly higher in 1969 than in 1968 (Figures 9 and 10); however, these statistics are based on effort of the changing haddock fleet, and may not be indicative of actual abundance changes.

Foreign fishing for cod remained high through 1968 (Table 9) and if U.S. landings are indicative of overall catch, 1969 landings of cod by foreign countries will be higher than 1968. It seems improbable that long term yields can remain at this level.

TABLE 3

COD FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
Georges Bank	6887	6766	5094	2758	35483	32008	3641	3106
Total by U.S.	12397	10300			56000	48000		

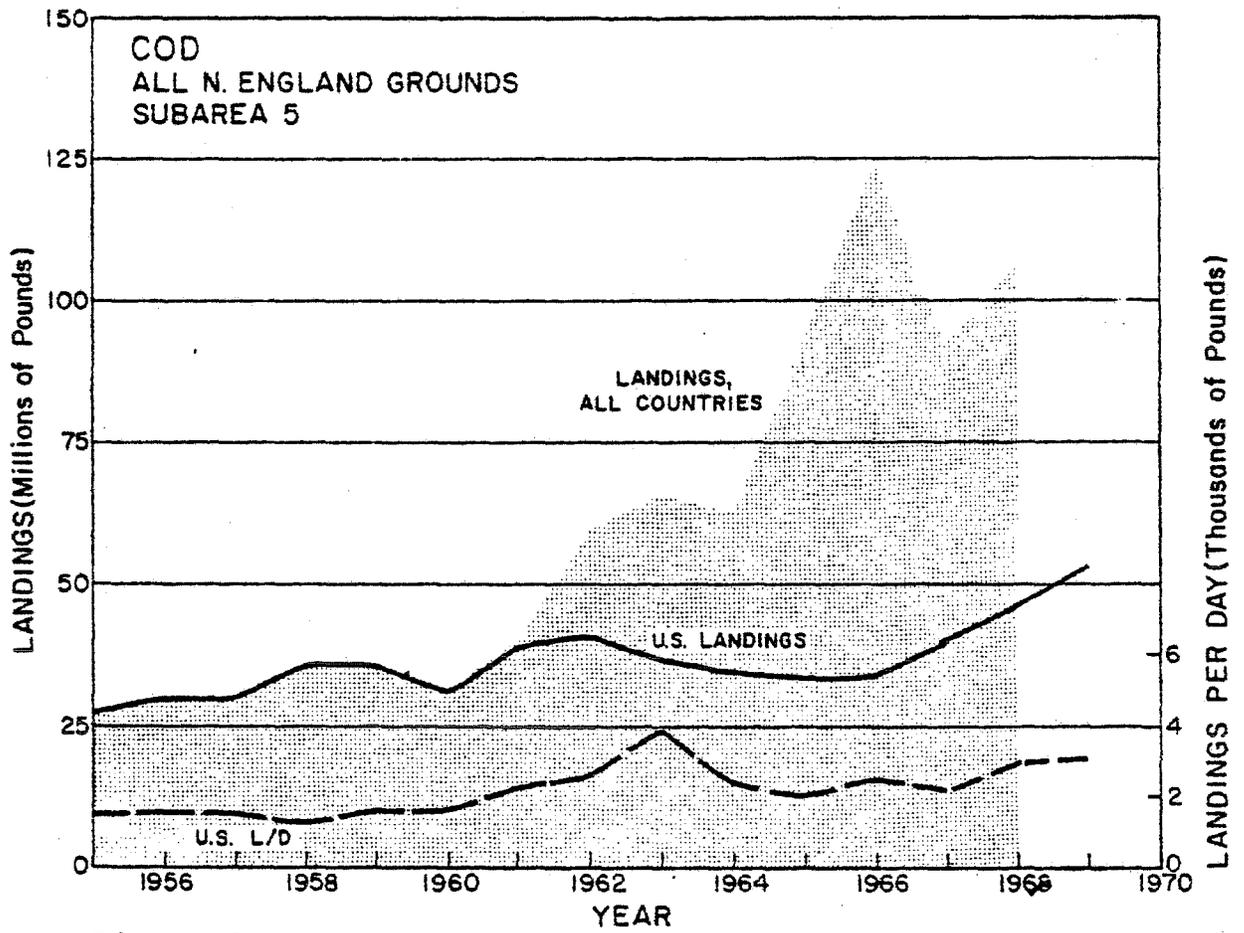


Figure 9

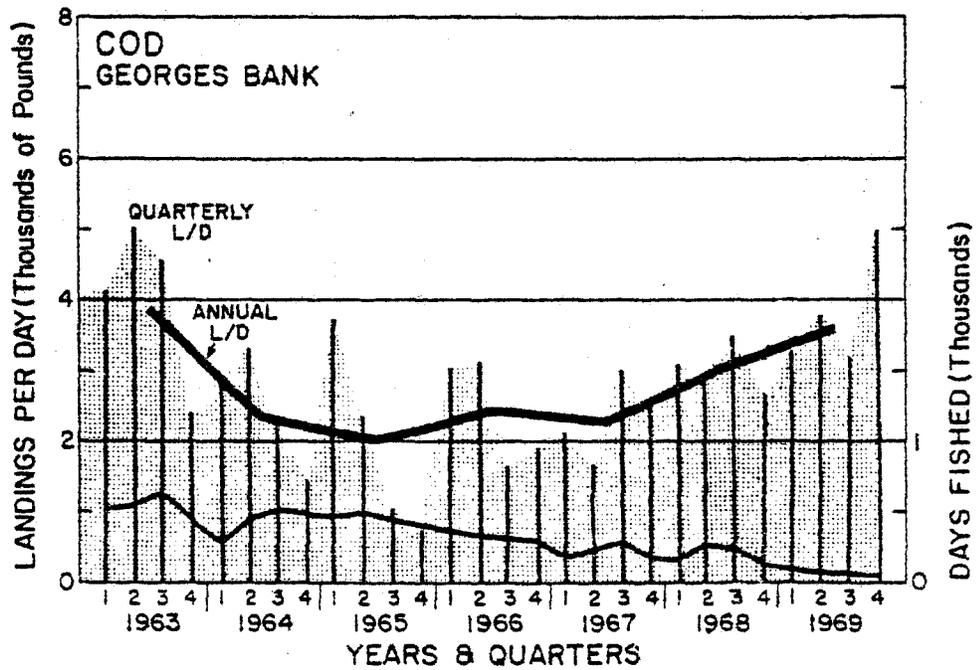


Figure 10

REDFISH

Redfish landings by the United States from the Gulf of Maine increased 12 million pounds over 1968 (Table 4 and Figure 11), although landings per day were down slightly. Landings from the Nova Scotian Shelf (Figure 12) as well as the Gulf of St. Lawrence (Figure 13) were lower than 1968 landings. The decrease in landings was due more to lower effort rather than lower abundance, and population abundance, especially in the Gulf of Maine, remains high. Landings in 1970 will depend largely upon market demand.

TABLE 4

REDFISH FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
Gulf of Maine	3368	809	17214	17886	21178	8959	25768	30607
Nova Scotia	204	815	24024	34074	2523	10108	33773	34892
Gulf of St. Lawrence	5794	9644	35194	40831	26718	36238	38710	49024
Total	9366	11268	28485	38695	50419	55305	33027	43457

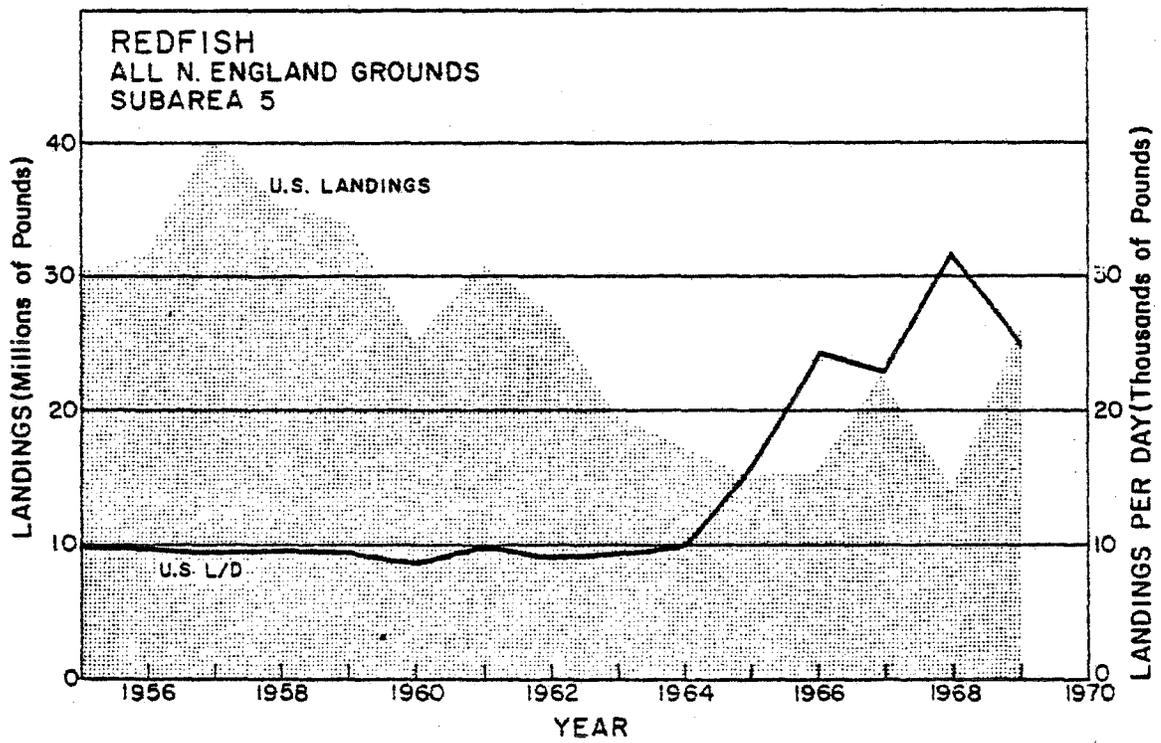


Figure 11

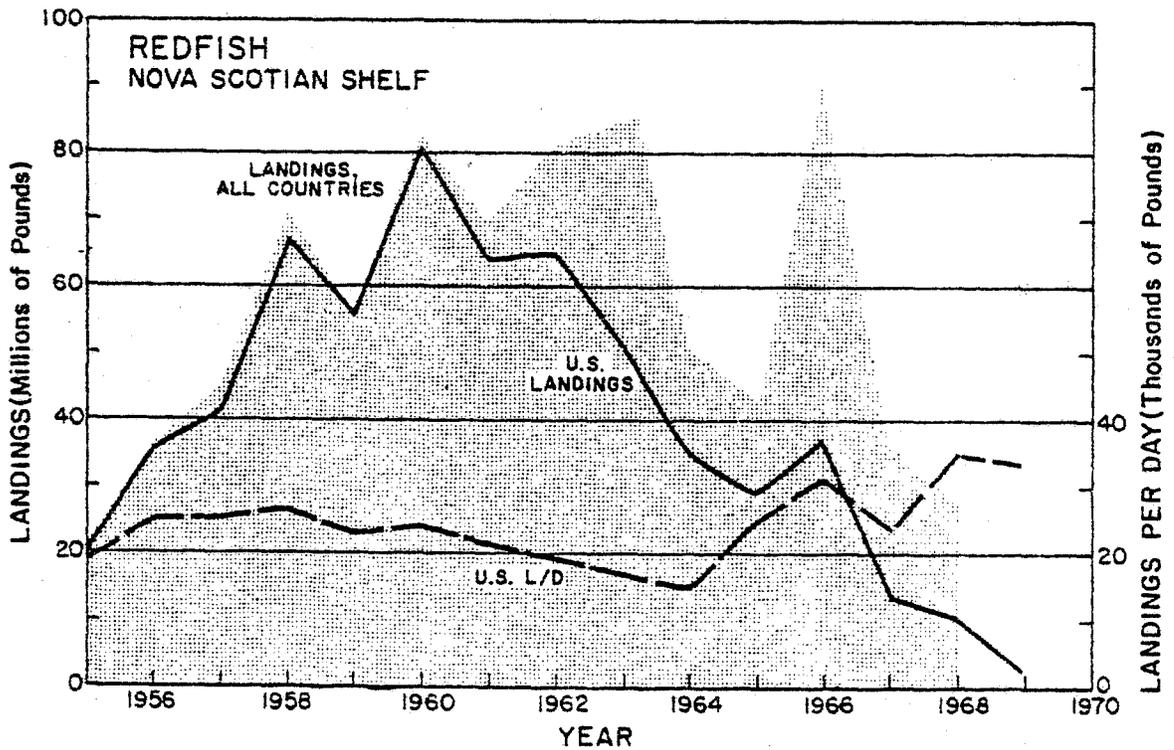


Figure 12

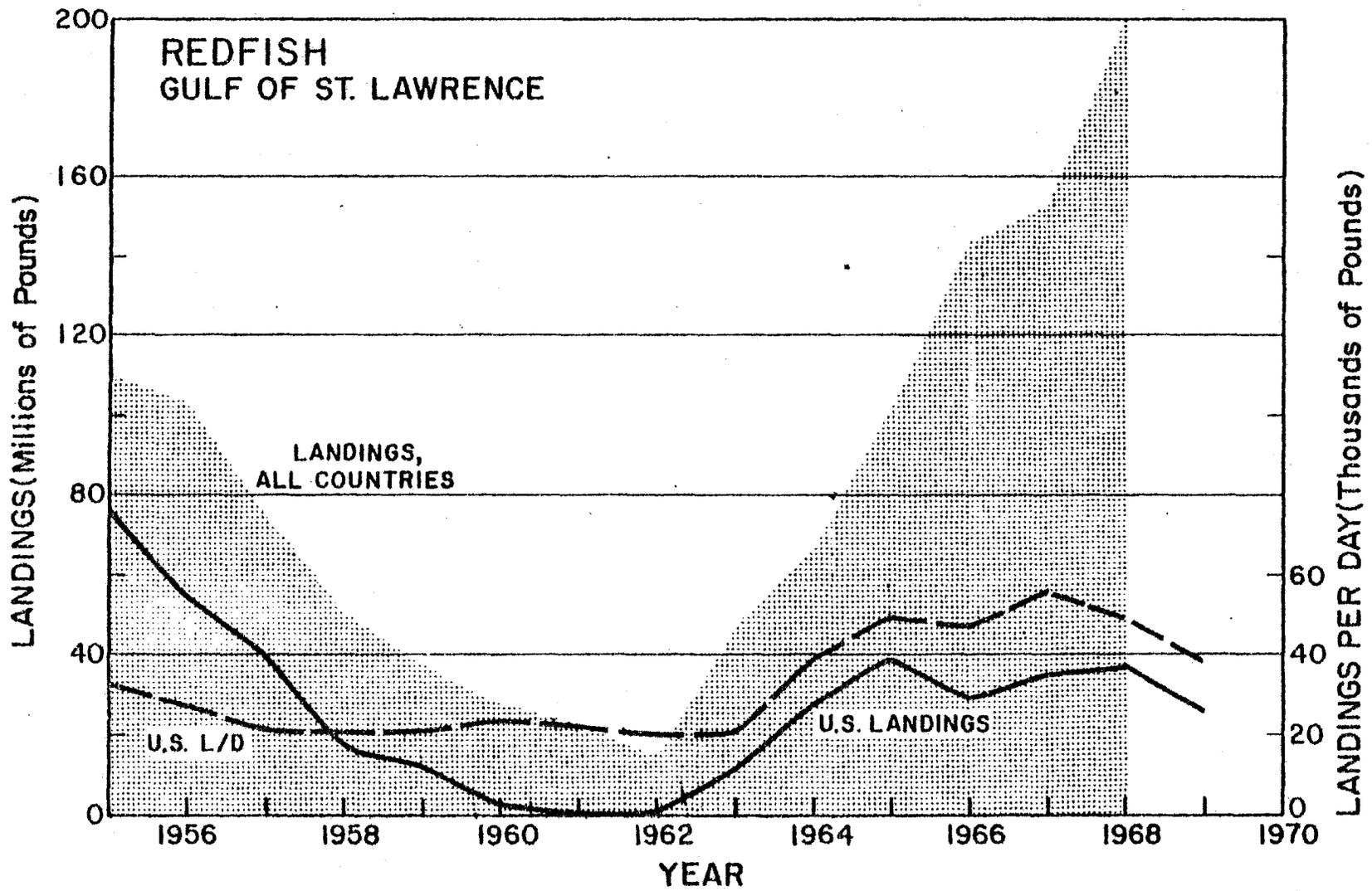


Figure 13

SILVER HAKE
(Food Fish)

Total U.S. landings of silver hake for food in 1969 were 39 million pounds compared with 71 million pounds in 1968 (Table 5 and Figure 14). There was a 41 percent decline in landings from the Gulf of Maine and a 59 percent decline from Georges Bank.

Abundance estimates (Figures 14 and 15) were lower for all fishing areas. A combination of moderate to poor recruitment and heavy fishing caused the decline on Georges Bank. In the Gulf of Maine, the abundance decrease was due to poor recruitment since 1962. For 1970, an abundance level similar to, or slightly less than, 1969 can be expected.

TABLE 5

SILVER HAKE FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
Gulf of Maine	3675	4700	2915	31656	32207	54429	10787	32442
Georges Bank	658	679	8762	4349	6933	17057	11464	25672
Total	4333	5379	2993	26861	39140	71486	10847	30804

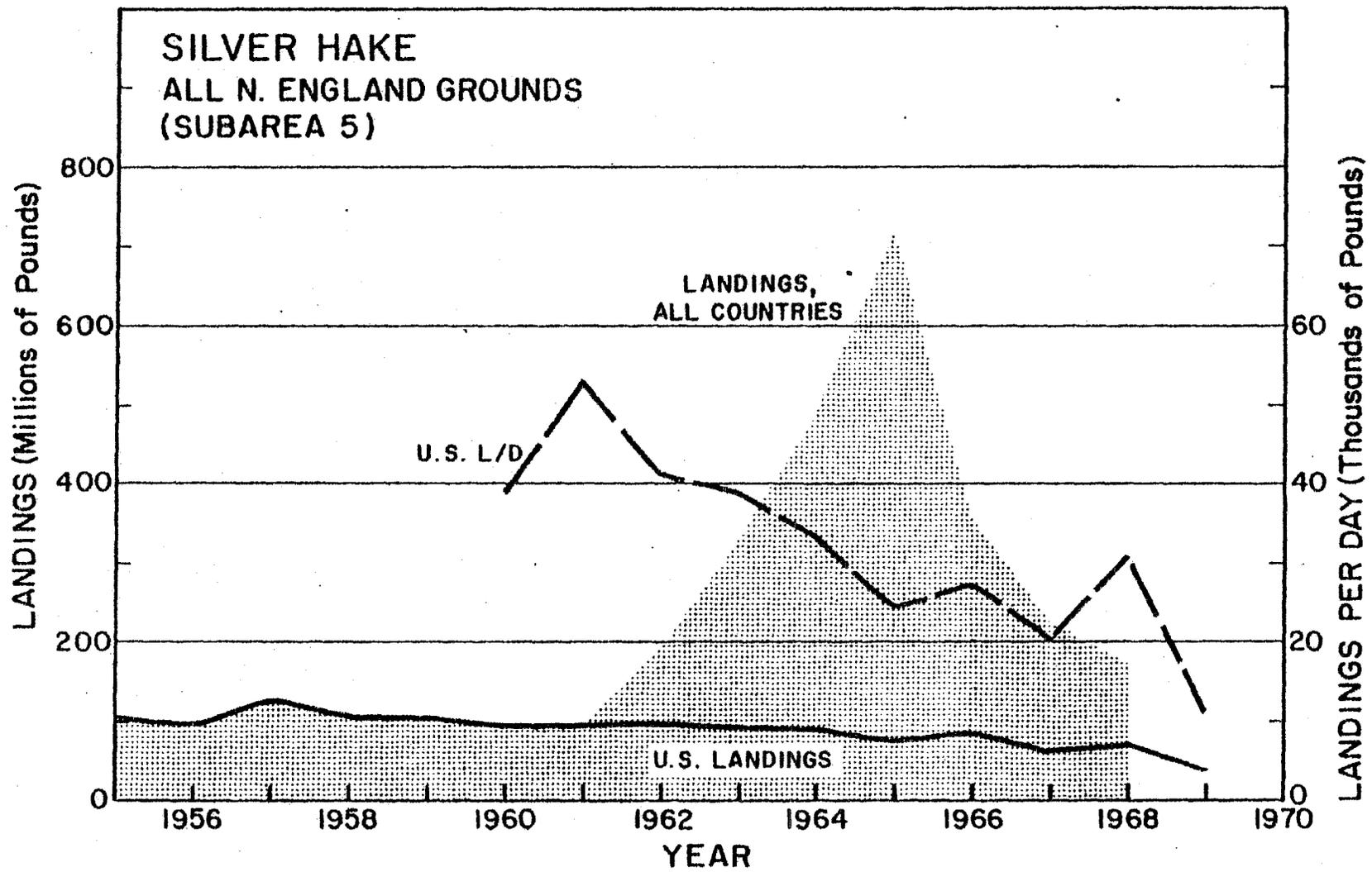


Figure 14

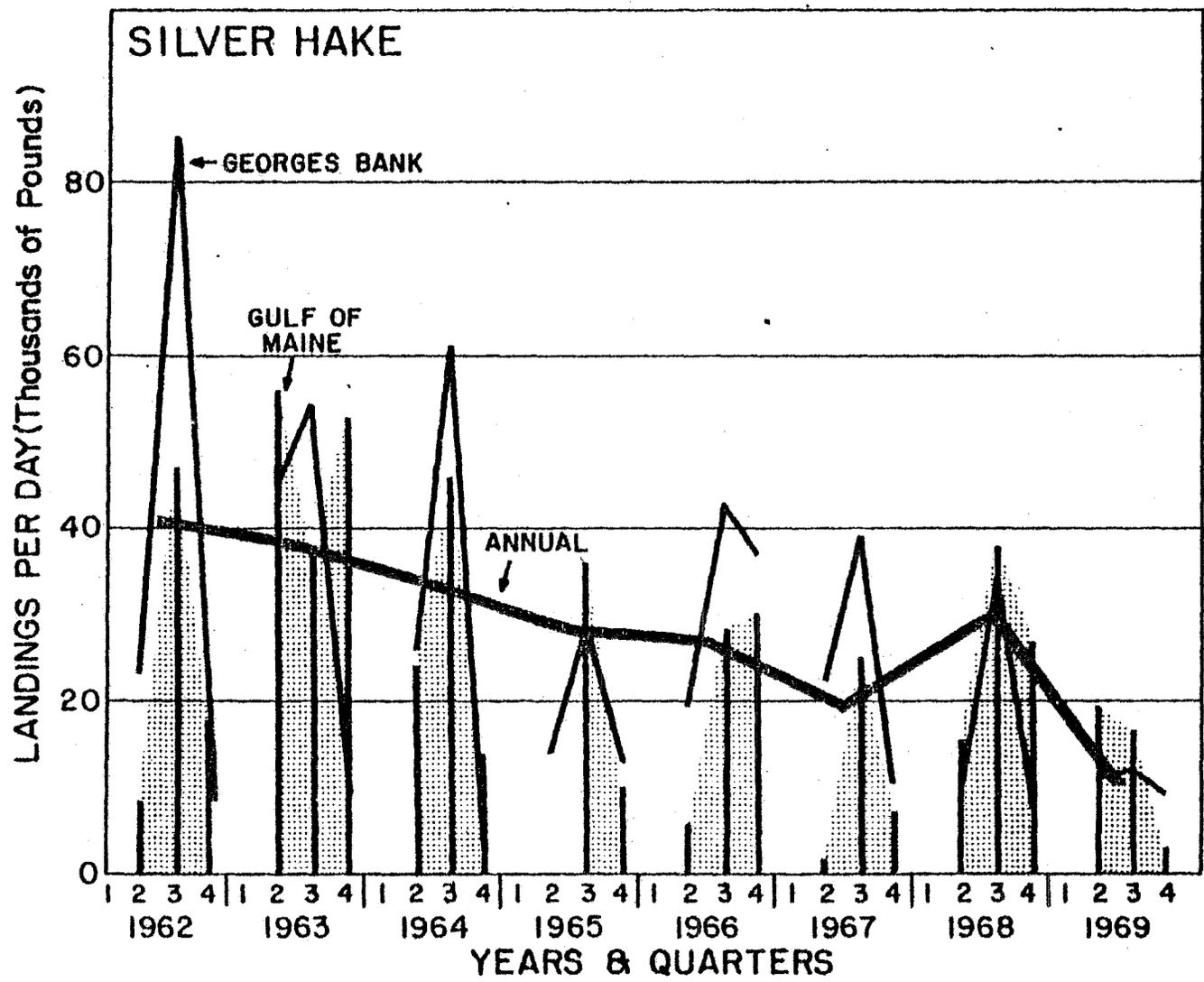


Figure 15

INDUSTRIAL SPECIES

Total industrial landings by the United States in 1969 were about 7 million pounds less than 1968 (Table 6, Figure 16). This decrease is a reflection of market conditions, since abundance was slightly higher than the 1968 level.

Industrial landings of red and silver hake from the southern New England fishing grounds declined 5 million pounds when compared to 1968. Percentagewise, red and silver hake were similar in 1968 and 1969 (Table 7).

Landings per day increased for both silver and red hake from the southern New England grounds (Figures 17 and 18) during 1969. An improvement in abundance of silver hake, and possibly red hake also, can be expected in 1970 if foreign fishing does not increase.

TABLE 6

INDUSTRIAL RED AND SILVER HAKE FOURTH QUARTER STATISTICS

(Landings in thousands of pounds. Live weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
S. New England								
Red Hake	1070	2450	15817	12264	9996	13278	18064	15394
Silver Hake	836	1890	11740	10267	5686	7664	10095	8861
Total	1906	4340	27557	22531	15682	20942	28159	24255
Total Ind.	(6309)	(12919)	(81529)	(71299)	(59112)	(76564)	(106262)	(89529)
Mid-Atlantic								
Red Hake	74	19	7492	4196	1140	34	11792	2419
Silver Hake	37	43	3047	5861	834	48	8244	2755
Total	111	62	10539	10057	1974	82	20036	5174
Total Ind.	(416)	(679)	(42325)	(66610)	(12006)	(1824)	(104355)	(67196)
Total								
Red Hake	1144	2469	14645	12202	11136	13362	12283	15306
Silver Hake	873	1933	9635	10193	6520	7712	8154	8647
Total Industrial	6725	13598	77078	70957	71118	78388	105890	89012

TABLE 7
INDUSTRIAL SPECIES COMPOSITION
FOR SOUTHERN NEW ENGLAND IN PERCENT

Year	Silver Hake	Red Hake	Flounder*	Eel Pout	Other
1963	19.5	43.7	4.4	2.1	30.3
1964	20.0	42.6	11.6	0.9	24.9
1965	20.4	38.0	6.9	1.8	32.9
1966	9.6	10.2	18.2	25.0	37.0
1967	10.2	14.7	18.5	18.9	37.7
1968	9.9	17.2	16.5	24.2	32.2
1969	9.5	17.0	21.3	20.8	31.4

*Predominately yellowtail

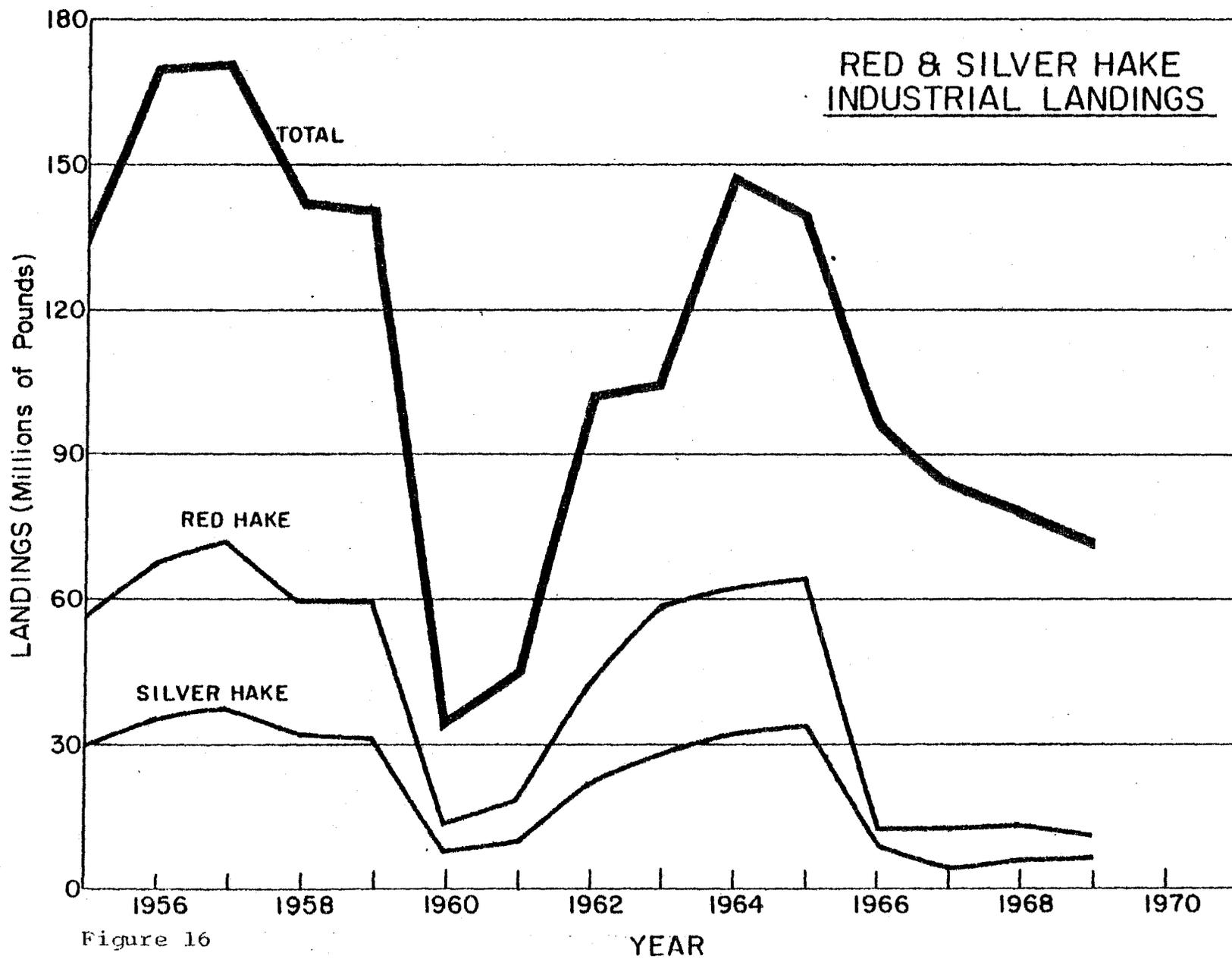


Figure 16

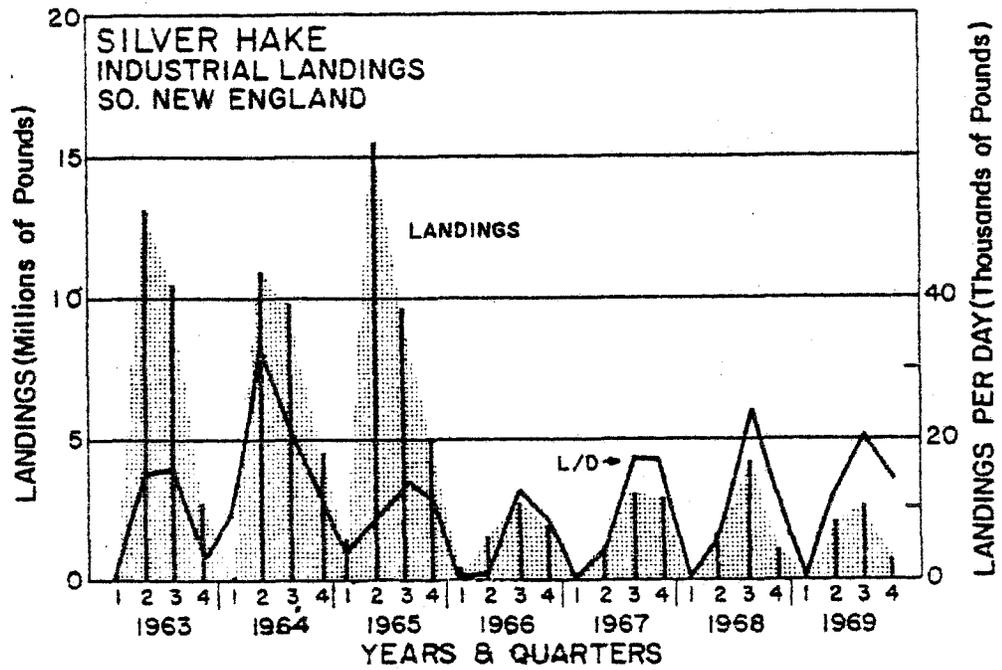


Figure 17

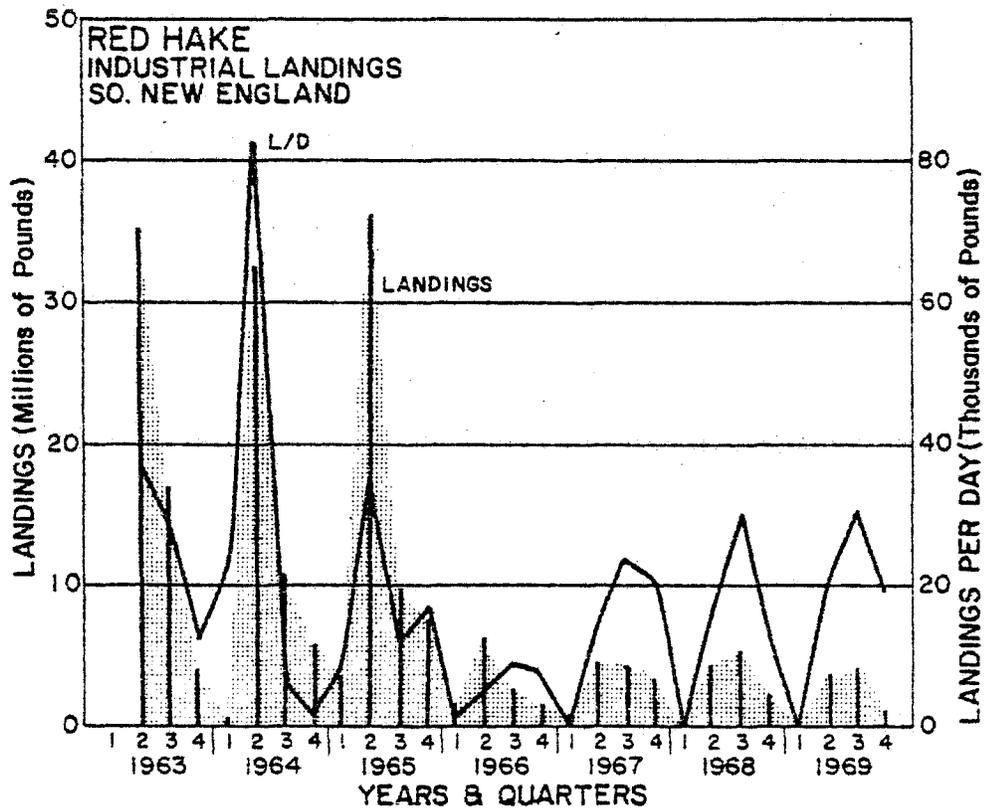


Figure 18

SEA SCALLOPS

Total sea scallop landings by the U.S. declined four million pounds in 1969 compared to 1968 (Table 8 and Figure 19). All of this loss was from the Middle Atlantic grounds; Georges Bank landings were about the same as in 1968. Landings per day for both major banks decreased in 1969 (Figures 20 and 21).

TABLE 8

SEA SCALLOP FOURTH QUARTER STATISTICS

(Landings in Thousands of Pounds. Meat Weight)

Area	Fourth Quarter				Annual			
	Landings		Land/Day		Landings		Land/Day	
	1969	1968	1969	1968	1969	1968	1969	1968
Georges Bank	751	791	1024	1126	3008	2348	1095	1237
Middle Atlantic	310	864	741	1002	2427	6802	993	1414
Total	1061	1655	921	1057	5435	9150	1047	1367

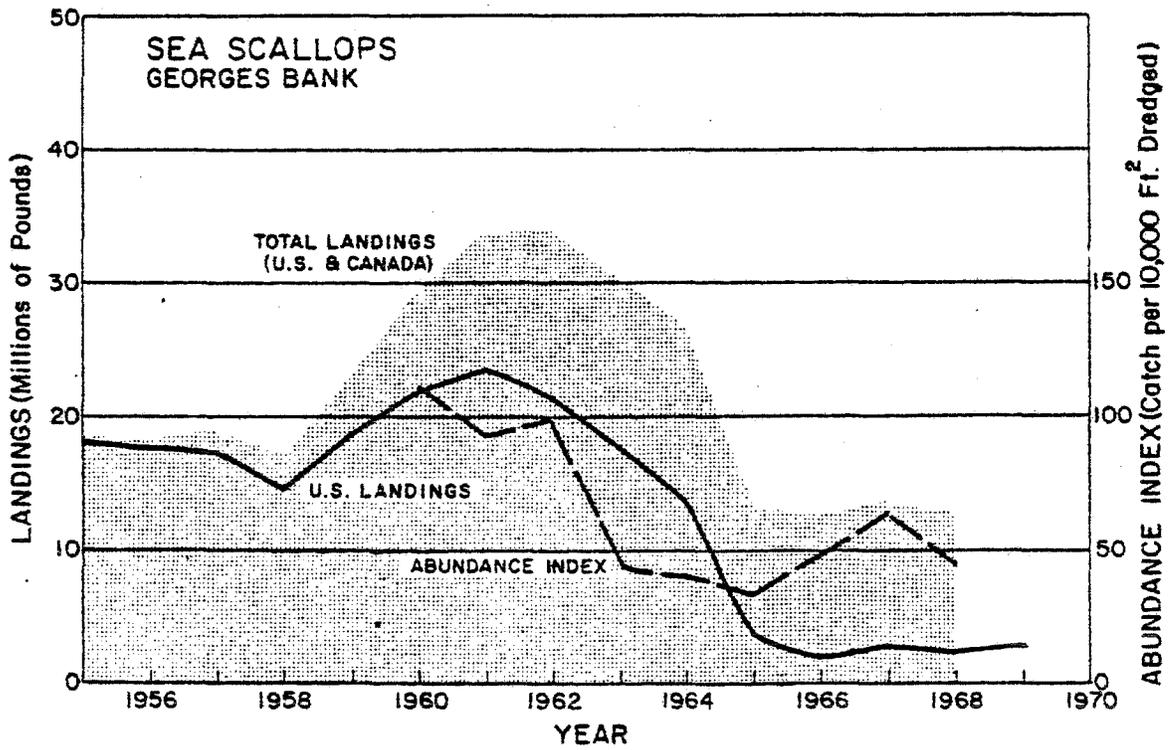


Figure 19

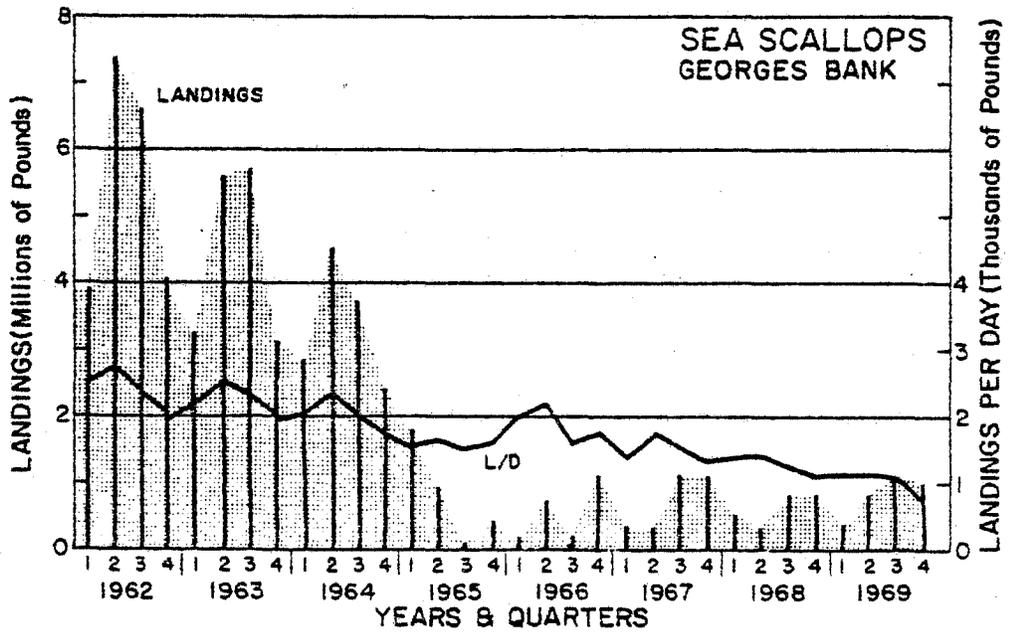


Figure 20

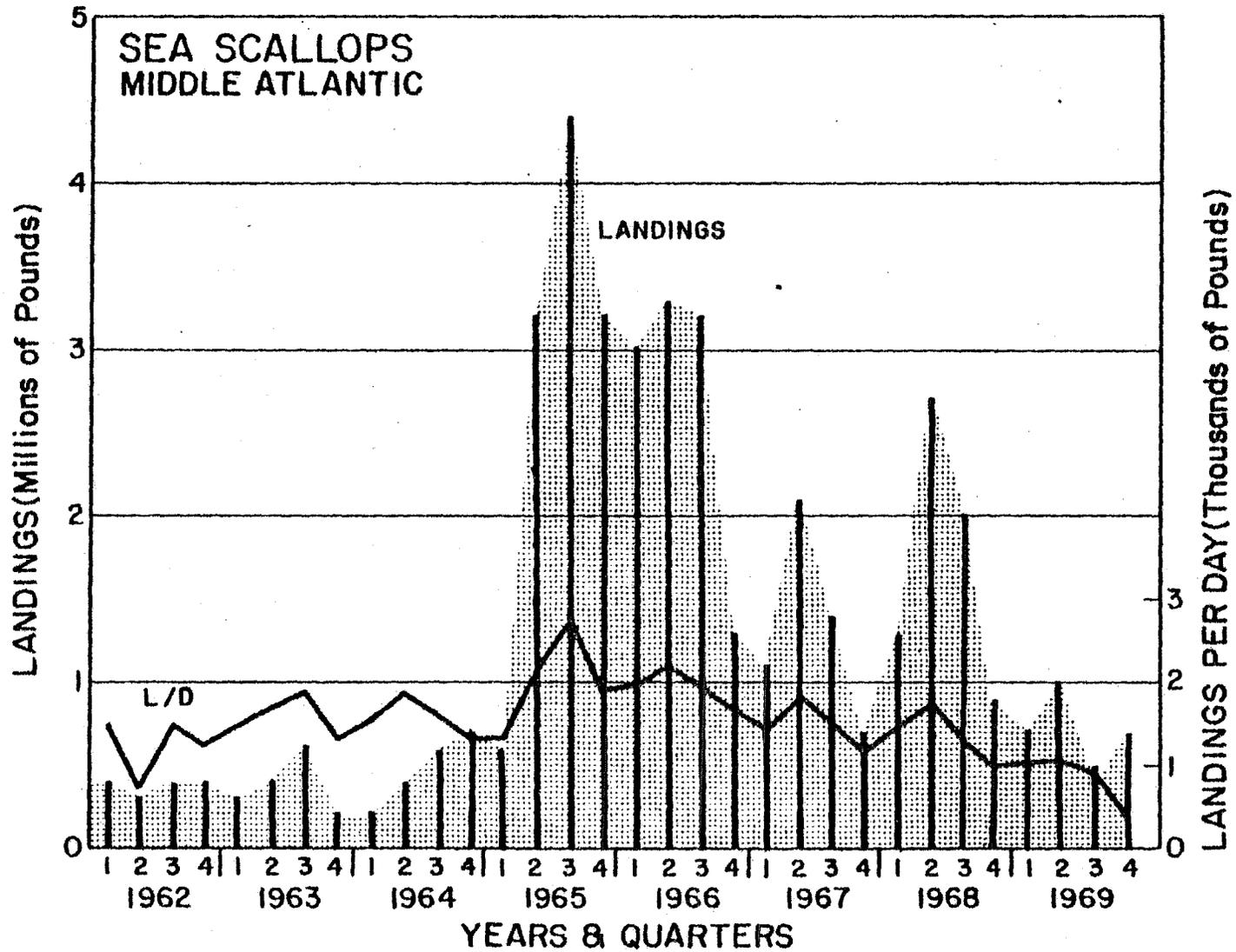


Figure 21