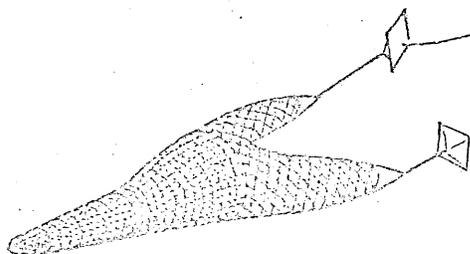
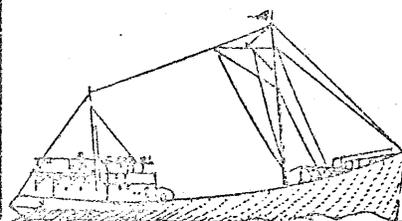


73-9

STOCK CATALOGUE  
OF THE  
NEW ENGLAND  
FISHERIES

RALPH K. MAYO

FOURTH QUARTER AND ANNUAL, 1973



NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST FISHERIES CENTER  
WOODS HOLE, MASSACHUSETTS, 02543

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## HADDOCK

Total U.S. New England haddock landings in 1973 equalled 3750 metric tons (M.T.), a decrease of 1480 M.T. from the 1972 total (Table 1). Scrod landings were 1345 M.T., representing 36% of the 1973 total compared to only 13% in 1972. The increase in scrod landings was almost entirely a result of a doubling of the Georges Bank scrod landings in 1973. Landings of large haddock, however, show a 50% decline in 1973 from Georges Bank and from all of Subarea 5.

U.S. Subarea 4 haddock landings in 1973 were 441 M.T., a total approximately equal to the 1972 figure.

In 1973, the Georges Bank commercial landings per standard day fished index declined for large haddock, while the scrod index increased. The index for all haddock combined declined drastically between 1972 and 1973 (Figure 1).

The age composition of the Georges Bank haddock landings, expressed as the number of fish in each age group landed per standard day fished, is presented in Figure 2. These data suggest the recruitment of a relatively strong 1971 year class in the 1973 catch. These two year old fish are apparently responsible for the increase in the scrod haddock catch as well as the landings per day fished index.

The 1973 autumn groundfish survey by ALBATROSS IV revealed a slight increase in the 0-group abundance index on Georges Bank continuing a trend evident from 1971 to 1973. The survey index for all haddock on Georges Bank also continued to increase in 1973 from a previous low in 1969.

These data suggest that the proportion of younger haddock is increasing in the Georges Bank fishery, while older fish continue to be less abundant.

## COD

Total U.S. cod landings in the New England fishery in 1973 equalled 22,248 M.T., a 1638 M.T. increase over the 1972 total (Table 1). This increase is attributable almost entirely to a 1586 M.T. increase in fourth quarter Georges Bank landings, resulting in an annual increase of 2787 M.T. from this area in 1973.

Annual U.S. cod landings from all other ICNAF areas decreased in 1973.

The 1973 commercial catch per day fished index indicates an apparent rise in abundance of Georges Bank cod. Although a shift towards more directed fishing effort on cod may be partially responsible for this apparent rise, the 1973 autumn groundfish survey also indicates a substantial rise in abundance of the Georges Bank cod stock.

#### POLLOCK

The fourth quarter and annual pollock catch by U.S. vessels increased slightly in 1973 (Table 1). Total pollock landings from New England in 1973 equalled 6252 M.T., a 9.9% increase over the 1972 total. The Gulf of Maine continued to be the area accounting for most of the U.S. pollock catch, followed by Georges Bank and the Nova Scotian shelf.

Since 1970, the commercial landings per day index has revealed an increase in the apparent abundance of Georges Bank pollock. The 1973 annual index is 50% greater than the 1972 value (Table 1). However, ALBATROSS IV fall groundfish surveys from 1963 to 1973 indicate little change in pollock relative abundance.

#### REDFISH

U.S. redfish landings in 1973 equalled 11,922 M.T. in ICNAF Subarea 5 and 12,928 M.T. in Subarea 4 (Table 2). The total U.S. New England landings of 24,850 M.T. in 1973 represent a 6.7% decrease from the 1972 total.

Commercial landings per day fished indices declined between 1972 and 1973 in three out of the four stock regions frequented by U.S. fishermen. In 1973, only the Georges Bank index increased.

Research cruise catch/tow indices show a recent decline in relative abundance of redfish in Divisions 5Y and 5Z. Commercial landings per day fished indices reveal a similar trend for all of Subarea 5.

## SILVER HAKE

Total U.S. silver hake landings in 1973 equalled 20,142 M.T., an increase of 8,142 M.T. over the 1972 total. New England landings accounted for 16,326 M.T., a 7798 M.T. increase over 1972 (Table 2). The major portion of this increase is attributed to large catches in the Gulf of Maine and on Georges Bank. Silver hake landings from the southern New England and middle Atlantic areas also exhibited slight increases in 1973.

The 1973 autumn groundfish survey shows increasing abundance of silver hake in the Gulf of Maine and relatively stable conditions on Georges Bank and in the southern New England area.

Relative abundance of the 1971 year class was high, while that of the 1972 and 1973 year classes was also good. Stock sizes should increase in the near future as a result of these good year classes.

## RED HAKE

U.S. red hake landings in 1973 equalled 3,956 M.T., an increase of 1428 M.T. over the 1972 total. New England landings in 1973 were 3286 M.T., a 1409 M.T. increase over 1972 (Table 2). Over 72% of the red hake landed by U.S. vessels was taken from ICNAF Division 5Zw and almost all of these fish were landed for industrial purposes. Red hake accounted for 21% of the 5Zw industrial landings and 34% of the 6A industrial landings.

In 1973, the 5Zw industrial landings of red hake accounted for 80% of the overall increase.

## YELLOWTAIL FLOUNDER

The total U.S. New England yellowtail catch in 1973 equalled 28,159 M.T., a decrease of 3765 M.T. from the 1972 total (Table 3). In the management area west of 69° W longitude, the total U.S. catch was 9596 M.T., while in the area east of 69° W the yellowtail catch equalled 16,471 M.T. These figures represent a 19.1% decrease and a 7.5% increase, respectively.

The U.S. New England yellowtail catch from Statistical Area 6 in 1973 equalled 2403 M.T., a decrease of 2658 M.T.

Yellowtail abundance indices from the 1973 fall groundfish survey are the lowest ever recorded since 1963 in the southern New England area and in Statistical Area 6. The pre-recruit index for southern New England has been steadily declining since 1966. Current assessments indicate that yellowtail stock abundance in the southern New England area and in Statistical Area 6 is less than 1/3 of the 1968 level.

In the management area E. of 69<sup>o</sup>, the decline since 1963 has been less severe. Research cruise abundance indices as well as the commercial catch per standard day fished have remained relatively constant since 1970.

#### OTHER FLOUNDERS

In 1973, the U.S. New England catch of other flounders equalled 13,343 M.T., a 37.2% increase over the 1972 total (Table 3). The greatest increase occurred in the southern New England food fishery where landings increased from 1093 M.T. in 1972 to 2383 M.T. in 1973. Lesser increases were also evident in the Gulf of Maine, on Georges Bank, and in the middle Atlantic area.

Except for the Gulf of Maine area, fourth quarter landings of other flounders were less in 1973 than in 1972.

#### SEA HERRING

U.S. sea herring landings from Subarea 5 in 1973 equalled 25,707 M.T., a 14,769 M.T. decrease from 1972 (Table 4). New England landings from Statistical Area 6 were 287 M.T., an increase of 186 M.T. over 1972.

The U.S. herring fishery is concentrated in the 5Y stock region. In 1973, the 5Y herring landings equalled 21,601 M.T., a decrease of 16,610 M.T. as compared to the 1972 total. The major cause of this decline, and the resulting decline in total U.S. sea herring landings, was a decrease of 13,497 M.T. in the adult 5Y fishery. The 1973 5Y juvenile fishery accounted for 16,400 M.T., a decrease of 3,113 M.T. from 1972.

U.S. vessels fishing in the 5Z-6 stock region landed 4393 M.T. of sea herring, a 2027 M.T. increase over the 1972 figure. The difference was due almost entirely to an increase in the 5Zw food fishery landings.

Sea herring abundance in the Northwest Atlantic, as indicated by spring and autumn research cruises, has declined in recent years. Spring indices from the southern New England and middle Atlantic areas increased slightly in 1973. The Georges Bank index, based on autumn cruises, shows a decrease in abundance.

#### MACKEREL

The total mackerel catch by all countries in the Northwest Atlantic (ICNAF Subarea 5 and Statistical Area 6) has risen drastically in recent years from 4,538 M.T. in 1965 to 381,166 M.T. in 1973. During this period, the Subarea 5 catch increased from 3,954 M.T. to a peak of 315,271 M.T. The catch from Statistical Area 6 rose from 584 M.T. in 1965 to a peak value of 232,304 M.T. in 1971, but declined to 65,895 M.T. in 1973.

U.S. mackerel landings have played an insignificant role in this increase. The 1973 U.S. catch equalled 621 M.T. in Subarea 5 and 715 M.T. in Statistical Area 6.

All of the U.S. Subarea 5 mackerel catch was taken in the New England fishery; however, only 31 M.T. were taken from Statistical Area 6 by New England fishermen (Table 4).

Gulf of Maine mackerel landings in 1973 were 338 M.T., a decrease of 557 M.T., while southern New England landings rose from 81 M.T. in 1972 to 232 M.T. in 1973.

Mackerel abundance in the Northwest Atlantic has declined steadily since 1968 according to U.S. spring survey indices, U.S. commercial indices, and distant water fleet indices.

#### SEA SCALLOPS

U.S. sea scallop landings in 1973 equalled 14,900 M.T., a 10.5% decrease from the 1972 total (Table 5). In Subarea 5, however, U.S. vessels accounted for 12,828 M.T., a 14.3% increase over the 1972 value.

The increase in the 1973 U.S. Subarea 5 landings is attributed to a rise of 2,146 M.T. from Division 5Ze which was partially offset by a decline of only 539 M.T. from Division 5Y.

The sea scallop fishery in Statistical Area 6 is conducted almost exclusively by U.S. vessels. U.S. landings in 1973 equalled 2072 M.T., a 61% decrease from 1972.

The commercial landings per day fished index for Georges Bank sea scallops increased slightly in 1973. Both landings and landings per day fished have exhibited only slight fluctuations since 1965.

## SQUIDS

The fishery for squid (Loligo pealei and Illex illecebrosus) in ICNAF Subarea 5 and Statistical Area 6 has undergone a rapid expansion in recent years. Total landings by all countries increased from 2,662 M.T. in 1967 to 56,637 M.T. in 1973 in the combined area 5-6 region. The total catch has been about equally divided between areas 5 and 6, but within Subarea 5, the major portion of the squid catch is taken from Division 5Z. Although both species are evident in the catches, the dominant species is L. pealei. Prior to 1973, however, the two species were not reported separately.

During this period of overall expansion, the U.S. squid catch has remained relatively constant, fluctuating between 1,829 and 1,061 M.T. The 1973 U.S. squid catch (both species combined) equalled 1,070 M.T., a 94% increase over 1972 (Table 5). Subarea 5 landings accounted for 904 M.T. while those from Statistical Area 6 equalled 166 M.T.

## INDUSTRIAL FISHERY

In 1973, U.S. landings for industrial purposes from ICNAF Subarea 5 were more than double those in 1972, reversing a trend which was evident from 1967 to 1972 (Table 6). Of the 12,407 M.T. landed from Subarea 5, 11,854 M.T. were taken from Division 5Zw, 130 M.T. from Division 5Ze, and 423 M.T. from Division 5Y. Landings from Statistical Area 6 equalled 1,542 M.T., a 34% increase over the 1972 total.

In the 5Zw fishery, the predominant species in the catch was ocean pout (26.2%) followed by red hake (20.8%), sculpins (17.6%) and skates (9.7%). The relative ranking of species in the SA6 fishery showed red hake dominating the catch (33.8%) followed by ocean pout (18.2%), sculpins (16.5%), and silver hake (6.5%).

It appears that, with the decreased availability of the more traditional species, effort is being shifted to less utilized species.

Table 1. United States haddock, cod, and pollock statistics  
(metric tons, live wt.) for the 4th quarter, 1973.

Species/Area/Mkt. Cat.	Landings		Landings/Day		Annual Landings	
	1973	1972	1973	1972	1973	1972
<u>Haddock</u>						
Georges Bank(5Z)	516	585	0.96	2.02	2,788	3,870
Scrod	225	49	1.64	1.11	1,080	445
Large	291	536	0.25	1.44	1,708	3,425
Gulf of Maine(5Y)	103	147			521	901
Scrod	44	9			64	21
Large	59	138			457	880
E. Scotian Shelf(4W)	2	1			174	74
Scrod	1	---			91	31
Large	1	1			83	43
Browns Bank (4X)	2	6	0.41	0.74	267	385
Scrod	---	1	---	---	110	189
Large	2	5	0.41	0.74	157	196
TOTAL	623	759			3,750	5,230
Scrod	270	60			1,345	686
Large	353	699			2,405	4,544
<u>Cod</u>						
Georges Bank(5Z)	4,572	2,986	5.0	2.7	15,937	13,150
Gulf of Maine (5Y)	1,378	1,255			6,063	6,776
E. Scotian Shelf(4W)	4	8			48	271
Browns Bank (4X)	12	46			133	323
Mid-Atlantic(SA6)	26	16			67	100
TOTAL	5,992	4,311			22,248	20,610
<u>Pollock</u>						
Nova Scotian Shelf(4X)	32	48			502	444
Gulf of Maine (5Y)	2,348	2,304			3,581	3,164
Georges Bank (5Ze)	787	602	1.5	1.0	2,169	2,083
TOTAL	3,167	2,954			6,252	5,691

\*Approx. 3 M.T. from 4V.

GEORGES BANK HADDOCK

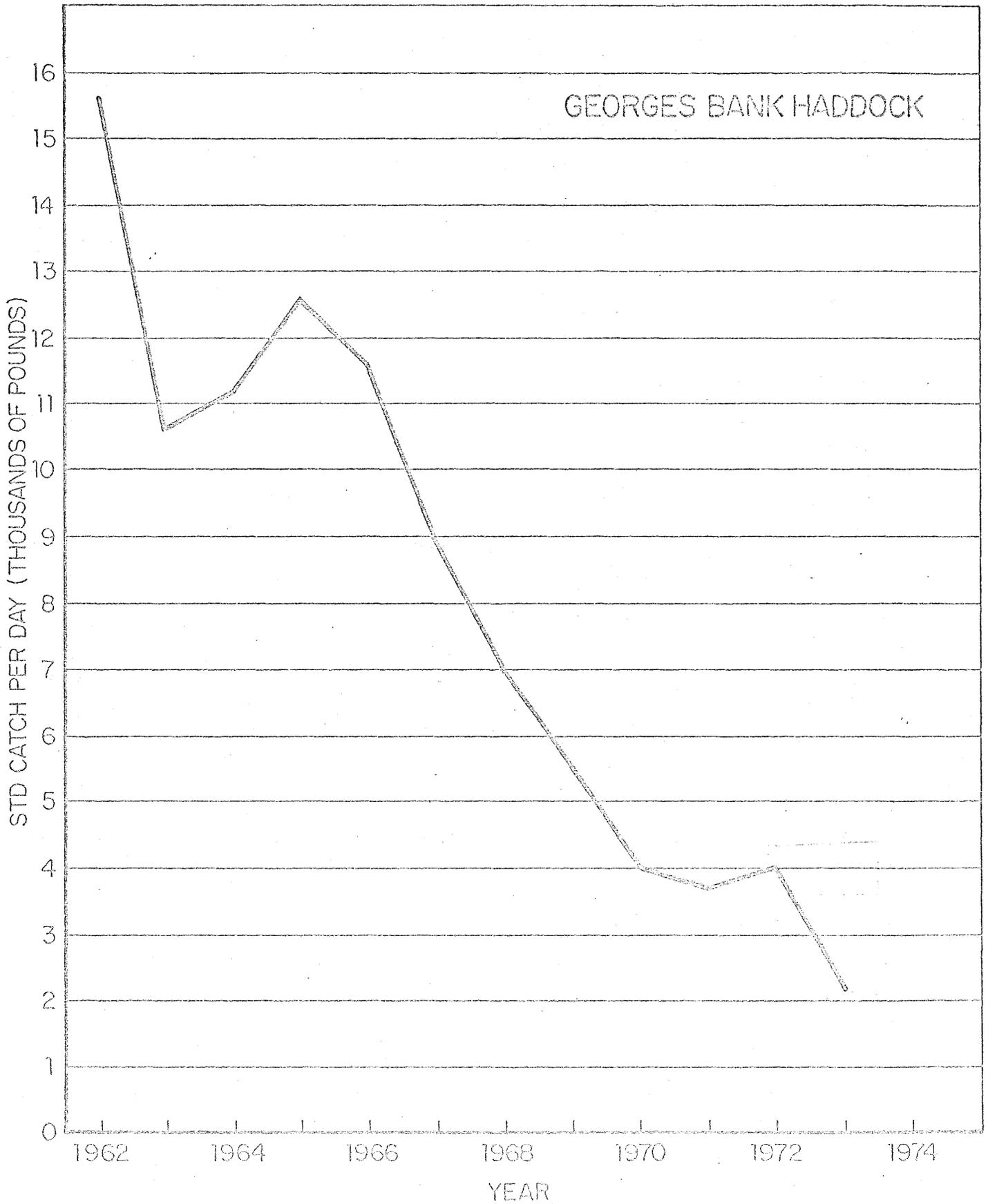




Table 2. United States Redfish, Silver Hake, and Red Hake Statistics  
(metric tons, live wt.) for the 4th quarter, 1973.

Species/Area	Landings		Landings/Day		Annual Landings	
	1973	1972	1973	1972	1973	1972
<u>Redfish</u>						
Gulf of St. Law. (4 R.S.T.)	176	280	9.5	10.8	1,638	1,112
Nova Scotian Shelf (4 VWX)	2,595	2,176	11.1	12.0	11,290	12,382
Gulf of Maine (5Y)	852	993	4.5	5.2	7,008	7,156
Georges Bank (5Ze)	366	459	4.4	2.2	4,914	5,978
TOTAL	3,989	3,908			24,850	26,628
<u>Silver Hake</u>						
Gulf of Maine (5Y)	3,217	2,540			8,345	5,563
Georges Bank (5Ze)	324	301			5,699	1,009
So. New England (5Zw)	380	171			1,918	1,615
Industrial Est.	91	44			795	117
Food	289	127			1,124	1,498
Mid-Atlantic	144	22			364	341
Industrial Est.	33	4			92	48
Food	111	18			272	293
TOTAL	4,064	3,034			16,326	8,528
<u>Red Hake</u>						
Gulf of Maine (5Y)	160	223			286	380
Georges Bank (5Ze)	26	4			77	159
So. New England (5Zw)	1,075	465			2,386	1,266
Industrial Est.	1,033	389			2,226	1,064
Food	42	76			160	202
Mid-Atlantic	330	38			537	72
Industrial Est.	321	37			518	59
Food	9	1			19	13
TOTAL	1,591	730			3,286	1,877

Table 3. United States Flounder Statistics (metric tons, live wt.)  
for the 4th quarter, 1973.

Species Group/Area	Landings		Landings/Day		Annual Landings	
	1973	1972	1973	1972	1973	1972
Yellowtail Catch						
East of 69°						
Food Landings	3,330	3,712	2.4	2.3	15,899	14,157
Discard Est.	200	422			572	1,159
TOTAL	3,530	4,134			16,471	15,316
West of 69°						
So. New England						
Food Landings	2,574	3,025	2.0	2.9	7,149 <sup>1</sup>	8,226
Discard Est.	8	642			92	1,941
Industrial Est.	196	67			343	327
TOTAL	2,778	3,734			7,584	10,494
Cape Cod Grounds						
Food Landings	478	351	1.8	1.8	1,662	1,364
Discard Est.	39	---			39 <sup>1</sup>	---
TOTAL	517	351			1,701	1,364
TOTAL	3,295	4,085			9,285	11,858
Mid-Atlantic Area						
Food Landings	13	634	3.2	6.4	2,111 <sup>1</sup>	5,061
Discard Est.	---	---			244	---
Industrial Est.	---	---			48	---
TOTAL	13	634			2,403	5,061
Other Flounders*						
Gulf of Maine	618	526			2,969	2,035
Georges Bank	1,649	1,784			6,599	5,952
So. New England	347	475			3,197	1,321
Food	285	431			2,383	1,093
Industrial	62	44			814	228
Mid-Atlantic	81	94			578	416
Food	70	91			521	376
Industrial	11	3			57	40

\*Am. plaice (dab), summer flounder (fluke), winter flounder (blackback, lemon sole), and witch (grey sole).

1. Based on recalculated annual discard ratios.

Table 4. United States Sea Herring and Mackerel Statistics (metric tons, live wt.) for the 4th quarter, 1973.

Species/Area	Landings		Annual Landings	
	1973	1972	1973	1972
<u>Sea Herring</u>				
Gulf of Maine (5Y)	5,697	4,469	21,601	38,211
Adult Fishery	889	1,674	5,201	18,698
Juvenile Fishery	4,808	2,794	16,400	19,513
Georges Bank (5Ze)	1	---	162	12
So. New England (5Zw)	19	243	3,944	2,253
Food	<1	235	3,885	2,212
Industrial Est.	19	8	59	41
Mid-Atlantic (SA6)	1	17	287	101
Food	<1	14	285	86
Industrial Est.	1	3	2	15
TOTAL	5,718	4,729	25,994	40,577
<u>Mackerel</u>				
Gulf of Maine (5Y)	53	65	388	945
Georges Bank (5Ze)	<1	<1	1	6
So. New England (5Zw)	---	3	232	81
Mid-Atlantic (SA6)	1	1	31	17
TOTAL	115	70	652	1,050

Table 5. United States Sea Scallop and Squid Statistics (metric tons, live wt.) for 4th quarter, 1973.

Species/Area	Landings		Landings/Day		Annual Landings	
	1973	1972	1973	1972	1973	1972
<u>Sea Scallops</u>						
Gulf of Maine (5Y)	1,140	1,827	--	.7	3,834	4,373
Georges Bank (5Ze)	2,477	2,819	.6	.5	8,994	6,848
Mid-Atlantic (SA6)	265	306	.3	.3	2,072	5,328
TOTAL	3,882	4,952			14,900	16,649
<u>Squid</u>						
Gulf of Maine (5Y)	24	14			57	48
Georges Bank (5Ze)	12	3			21	10
So. New England (5Zw)	151	59			826	426
Food	149	57			799	413
Industrial	2	2			27	13
Mid-Atlantic (SA6)	84	18			166	67
Food	52	16			134	65
Industrial	32	2			32	2
TOTAL	271	94			1,070	551

Table 6. Estimated Percent Species Composition and Landings (metric tons, live wt.) for the U.S. Industrial Fishery, 4th quarter, 1973.

	Fourth Quarter Percentage		Annual Percentage	
	1973	1972	1973	1972
<u>Southern New England</u>				
Ocean Pout		5.1	26.2	35.3
Red Hake		40.4	20.8	17.9
Sculpin		4.2	17.6	11.8
Skates	<u>1./</u>	16.5	9.7	13.0
Yellowtail		6.9	3.2	6.0
Other Flounders		10.6	7.2	5.3
Silver Hake		4.6	7.4	2.1
Other Species		11.7	7.9	8.6
Total Landings	2,228	963	11,854	5,602
<u>Middle Atlantic</u>				
Ocean Pout		5.7	18.2	40.4
Red Hake		42.0	33.8	24.3
Sculpin		7.4	16.5	9.2
Skates		16.1	5.3	7.8
Yellowtail	<u>1./</u>	0.0	3.1	5.2
Other Flounders		12.5	3.8	4.3
Silver Hake		4.5	6.5	4.4
Scup		5.5	5.3	1.7
Butterfish		3.7	3.4	0.3
Squid		2.3	2.1	---
Other Species		0.3	2.0	2.4
Total Landings	565	88	1,542	1,149
<u>Georges Bank</u>				
Total Landings	24	--	130	79
<u>Gulf of Maine</u>				
Total Landings	62	38	423	265

1./ Insufficient samples in fourth quarter, 1973.