

COMMERCIAL FISHERIES REVIEW

July 1951

Washington 25, D.C.

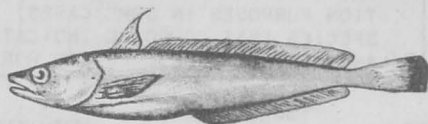
Vol. 13, No. 7

THE TRASH FISHERY OF SOUTHERN NEW ENGLAND IN 1950^{1/}

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GROWTH OF THE FISHERY

Greatly increased landings of "trash fish" (species formerly discarded during trawling operations) at New England ports during 1949 caused concern because of their possible effect on the existing fisheries in the area, especially since there were rumors that large numbers of young haddock, cod, and flounders were included in these trash landings. With the continuing growth of the trash fishery during 1950, the U. S. Fish and Wildlife Service began a systematic sampling of the landings, so as to obtain an estimate of the quantities contributed by each of the several species landed at southern New England ports during that year.



RED HAKE (*UROPHYCIS CHUSS*) IS ONE OF THE LEADING SPECIES INCLUDED IN NEW ENGLAND TRASH FISH LANDINGS AND COMPOSES 28.9 PERCENT OF THE TOTAL.

As reported by Snow (1950), trash fish had been landed in small amounts prior to 1949 for use as mink food. The increased use of fish meal in poultry and hog feeds led to an expanded demand by reduction plant operators for raw material to augment that afforded by the existing production from menhaden, cannery waste, and offal. This situation, together with the fact that flounder fishing (the mainstay of the small druggers) was poor, led fishermen to land trash fish in ever-increasing quantities.

If this new and growing fishery were dependent in a measurable part on the young of important edible species, it might adversely affect the established fisheries. However, this concept can be accepted only if the mortalities between juvenile and adult stages were proved to be low, and if the advantage to the marketable species in having their competitors and predators removed were disregarded.

TOTAL LANDINGS

Landings of trash fish at southern New England ports totaled 90.3 million pounds (table 1) during 1950, an increase of 20.1 percent over the 1949 landings of 75.2 million pounds. This rise, while not as large as that of the previous year when trash fishing commenced, indicates that the market for trash fish in this area is being maintained.

New Bedford was again the leading port with 56 million pounds, or 62.1 percent of the total. Landings at all southern New England ports increased steadily during the first five months, to a peak of 15.8 million pounds in May. Then, during the last week in that month, the price offered by dealers at New Bedford was reduced from \$20 to \$15 a ton. Similar reductions took place at other ports, resulting in a steady decrease in trash landings for the last six months of 1950 at all ports, as fishermen concentrated on more profitable species. Landings at all ports for November were only 2.2 million pounds. Thus, while the total poundage exceeded that of

^{1/}PREPARED AT THE REQUEST OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION. THE FISH AND WILDLIFE SERVICE IS THE STATUTORY RESEARCH AGENCY OF THE COMMISSION.

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1949, the trend during the latter part of the year was a reversal of the steady increases reported from March 1949 to May 1950.

Table 1 - Southern New England Trash Fish Landings, 1949-50^{1/}

Locality	1950		1949 ^{2/}	
	Thousands of lbs.	Percentage of Total	Thousands of lbs.	Percentage of Total
New Bedford, Mass.	56,041	62.1	44,115	58.6
Gloucester, Mass.	14,183	15.7	14,567	19.4
Provincetown, Mass. ^{2/}	5,542	6.2	2,234	3.0
Boston, Mass.	393	0.4	-	-
Point Judith, R. I.	9,404	10.4	9,989	13.3
Stonington, Conn.	4,735	5.2	4,290	5.7
Total	90,298	100.0	75,195	100.0

^{1/}FOR REDUCTION AND ANIMAL FOOD. ALTHOUGH THESE FIGURES COVER ONLY THE PORTS INDICATED, THEY PROBABLY ARE VERY CLOSE TO THE TOTAL NEW ENGLAND LANDINGS FOR THESE YEARS. NOT INCLUDED ARE LANDINGS IN MAINE, BUT THE SEA HERRING LANDED IN THAT STATE (ALTHOUGH SOLD FOR REDUCTION PURPOSES IN SOME CASES) IS NOT CONSIDERED A "TRASH FISH" AND THE LANDINGS OF OTHER SPECIES THAT COULD BE INDICATED AS "TRASH FISH" ARE NEGLIGIBLE.

^{2/}LANDINGS AT MINOR CAPE COD PORTS INCLUDED.

SPECIES COMPOSITION OF THE LANDINGS

I examined samples of the landings at Provincetown and at New Bedford in Massachusetts and at Point Judith in Rhode Island.

Thirteen catches were sampled at New Bedford, 5 at Provincetown, and 4 at Point Judith by examining several baskets of fish as unloading progressed. Sorting each

Species Composition	Thousands of lbs.	Percentage of Total
<u>Principal Species:</u>		
Red hake	21,903	28.9
Eel pout	15,916	21.0
Skates	11,520	15.2
Whiting	8,185	10.8
Long horn sculpin ..	6,973	9.2
Goosefish	4,699	6.2
Butterfish	2,350	3.1
Daylight flounder ..	1,364	1.8
Yellowtail " ..	834	1.1
Other food species ^{1/}	1,137	1.5
Other trash species ^{2/}	909	1.2
Total	75,790	100.0

^{1/}INCLUDE: DABS, BLACKBACK FLOUNDER, FLUKE, HADDOCK, COD, WHITE HAKE, SEA BASS, SEA HERRING, HICKORY SHAD, ALEWIVES, AND SCUP.

^{2/}INCLUDE: TOADFISH, SHORT HORN SCULPIN, SEA RAVEN, SPINY DOGFISH, SEA ROBIN, FOUR-SPOTTED FLOUNDER, AND INVERTEBRATES.

sample by species, and recording the number of species and the weight of each sample, it was found that the samples taken weighed from 100 to 500 pounds, depending on the size of the load and on the amount of time available to return the fish in time to be loaded on the truck. Fishermen and dealers gave excellent cooperation during all sampling operations.

The practice of taking baskets at intervals during the unloading of a vessel revealed, for the most part, that the same species appeared in successive baskets, but the relative numbers of a given species varied considerably between baskets comprising the sample. The species composition indicated by a given sample, therefore, is a reliable index of the composition of a vessel's load, but the relative numbers of each species determined by combining the numbers in each basket, are at best only rough estimates of the actual numbers of each species present in the load. Thus, the species composition

of the landings from Provincetown to Stonington, as shown in table 2, may be regarded as reliable for species present, but the poundages shown are only an estimate of the true quantities.

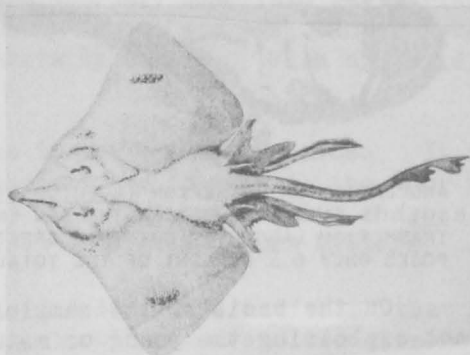
It will be noted in table 2 that red hake was the predominant species, with eel pout and skates following in that order. Of the important edible species, whiting were landed in the greatest numbers, comprising 10.8 percent by weight of the trash fish landed in ports where catches were sampled.

New Bedford landings included only small quantities of such edible species as yellowtail and blackback flounder, dab, butterfish, scup, haddock, and cod. Percentages of these species ranged from 1 to 4 percent by weight, except for one sample which contained 9.2 percent yellowtail flounder.

At Provincetown, yellowtail flounder was the only important edible species appearing in large numbers. Three samples contained by weight 11, 14, and 23 percent, respectively, yellowtail flounder. Other edible species, such as blackback flounder, cod, and haddock ranged from less than 1 percent to a maximum of 4 percent.

At Point Judith, one sample contained 40 percent butterfish. Other samples at this port yielded less than 1 percent of blackback flounder, scup, and fluke.

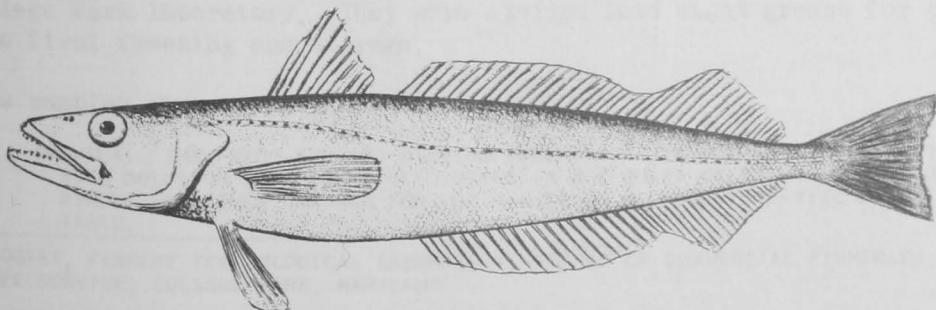
Conversations with fishermen during field trips indicated landings of small yellowtail flounders at Provincetown in greater numbers than were observed in the samples examined at that port. Other reports dealt with landings of small butterfish at Sandwich, Massachusetts, and at Point Judith, Rhode Island. I was unable to confirm the Sandwich report. One vessel's catch at Point Judith, as mentioned earlier, contained 40 percent butterfish by weight. Such reports often become exaggerated and the fishermen, with few exceptions, are conservation-minded enough to try to avoid taking trash fish in areas known to contain large numbers of the young of important edible species. Therefore, the unconfirmed reports cannot be accepted as seriously affecting the estimate of landings by species which appears in table 2.



ONE OF THE SKATES INCLUDED IN THE NEW ENGLAND TRASH FISH LANDINGS. ALL SKATES COMPOSE ABOUT 15.2 PERCENT OF THE TOTAL. THIS PARTICULAR SPECIES IS THE BARNDOOR SKATE (RAJA LAEVIS).

SUMMARY AND CONCLUSIONS

The 1950 trash fish landings for southern New England were 90.3 million pounds. While greater than the 1949 landings of 75.2 million pounds, a reversal of the 1949



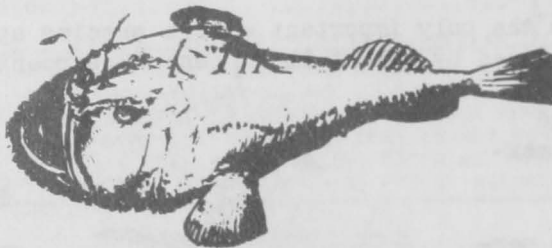
WHITING (MERLUCCIVS BILINEARIS) ALTHOUGH INCLUDED IN NEW ENGLAND TRASH LANDINGS, COMPOSES ONLY ABOUT 10.8 PERCENT OF THE TOTAL

trend was indicated when landings decreased steadily during the latter half of the year.

Fifty-six million pounds or 62.1 percent of the landings were made at New Bedford, while in 1949 only 58.6 percent or 44 million pounds of the total landings were reported at that port.

Sampling of the landings at Provincetown and New Bedford, Mass., and at Point Judith, R. I., showed that red hake comprised 29 percent, eelpout, 21 percent and skates 15 percent of the total.

New Bedford, with the bulk of the landings, showed the smallest percentage of important edible species. One sample contained 9.2 percent yellowtail flounder.



ANGLERFISH OR GOOSEFISH (LOPHIUS PISCATOR-IUS) IS ALSO INCLUDED IN THE NEW ENGLAND TRASH FISH LANDINGS, BUT THIS SPECIES COMPOSES ONLY 6.2 PERCENT OF THE TOTAL CATCH.

Others yielded from 1 to 4 percent yellowtail and blackback flounder, dabs, haddock, cod, butterfish, and scup. Thus, the New Bedford samples failed to show appreciable quantities of young or mature individuals of the important edible species.

Three of the four samples taken at Provincetown showed 11, 14, and 23 percent, respectively, of yellowtail flounder, with 1 to 4 percent of blackback flounder, dabs, cod, white hake, butterfish, and pollock.

On the basis of the samples taken, it appears that the New Bedford fleet is not exploiting the young or mature individuals of the important edible species to any appreciable extent. On the other hand, large numbers of small yellowtail flounders were landed at Provincetown, and at least one load of small butterfish was landed at Point Judith, Rhode Island. One sample at Point Judith contained 40 percent butterfish; others showed small quantities (less than 1 percent) of blackback flounder, scup, and fluke.

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1950. DEVELOPMENT OF TRASH FISHERY AT NEW BEDFORD, MASSACHUSETTS. COMMERCIAL FISHERIES REVIEW, VOL 12, NO. 7 (JULY 1950), PP. 8-10.

