

# TRENDS AND DEVELOPMENTS

## Additions to the Fleet of U. S. Fishing Vessels

A total of 44 vessels (5 net tons and over) received first documents as fishing craft during December 1950--19 less than in December 1949. Florida led with 12 vessels, followed by California with 10, the Treasury Department's Bureau of Customs reported.

During 1950, a total of 812 vessels were documented as compared with 1,002 during 1949.

Of the vessels receiving their first documents as fishing craft during December, 31 were built during 1949 and 1950 and the remainder were built prior to 1949.

Of the total vessels documented in 1950, 441 were built in 1950, 84 in 1949, and the balance (287) in years prior to 1949.

Vessels Obtaining Their First Documents as Fishing Craft, December 1950

Section	December		Annual Total	
	1950	1949	1950	1949
	Number	Number	Number	Number
New England .....	-	3	36	35
Middle Atlantic .....	-	2	45	44
Chesapeake Bay .....	4	12	81	87
South Atlantic and Gulf .....	21	33	320	369
Pacific Coast .....	14	9	231	327
Great Lakes .....	1	-	12	38
Alaska .....	3	4	83	96
Hawaii .....	1	-	4	5
Unknown .....	-	-	-	1
Total .....	44	63	812	1,002

Note: Vessels have been assigned to the various sections on the basis of their home port.



## Fishery Biology Notes

TECHNIQUE FOR REVEALING GROWTH RINGS IN TUNA VERTEBRAE: A successful technique for revealing growth rings in tuna vertebrae has been developed by the Laboratory Director of the Service's Shellfish Laboratory at Woods Hole, Mass. This technique has been developed at the request of the Service's North Atlantic Fishery Investigations. The procedure consists of treating the bones with potassium hydroxide solution, staining with alizarin Red S, and clarifying in glycerine.

## Federal Purchases of Fishery Products

FRESH AND FROZEN FISH PURCHASES BY DEPARTMENT OF THE ARMY, JANUARY 1951: Purchases of fresh and frozen fishery products during January this year by the U. S. Army Quartermaster Corps for military feeding amounted to 1,705,128 pounds (valued at \$732,373). This was an increase of 24.7 percent in quantity and 26.6 percent in value as compared with December 1949, and 45.8 percent in quantity and 46.5 percent in value over January 1950 (see table).

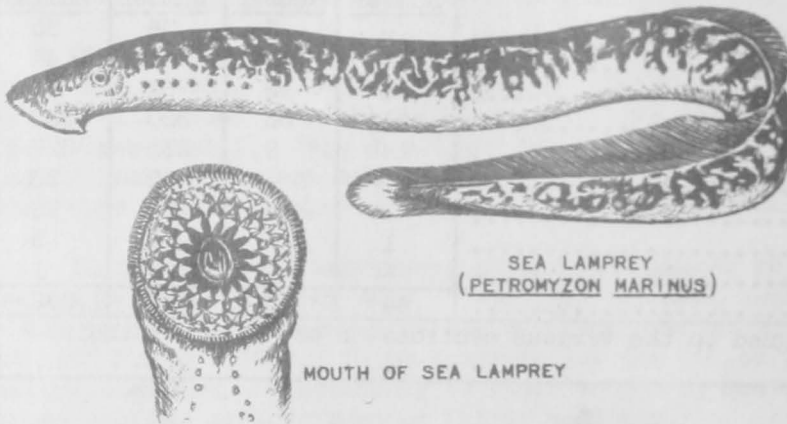
QUANTITY		VALUE	
January		January	
1951	1950	1951	1950
lbs.	lbs.	\$	\$
1,705,128	1,169,773	732,373	499,972



## Great Lakes Fishery Investigations

DISAPPEARANCE OF LAKE TROUT IN LAKES HURON AND MICHIGAN ATTRIBUTED TO SEA LAMPREY: A few people unacquainted with lake trout fishery trends have suggested that the decline of this fishery in Lake Huron and Lake Michigan was the result of overfishing; hence, the present industry distress is but just retribution for a wanton and destructive exploitation of the stocks. Complete and detailed statistics, beginning with 1929, on actual quantities of gear lifted that produced lake trout demonstrate conclusively that overfishing could not have brought about the collapse in the lake trout fishery in the United States waters of Lake Huron or in the State of Michigan waters of Lake Michigan, according to a January report from the Service's Great Lakes Fishery Investigations. Fishing pressure in both areas tended to be

below the modern average in the years immediately preceding and during the recent decline. The outside possibility that some obscure and altogether unsuspected factor may have destroyed the lake trout populations of Lakes Huron and Michigan cannot be ignored. However, the most careful consideration of presently available evidence nevertheless permits only the conclusion that the sea lamprey was the major, perhaps the only significant, cause of the lake trout decrease in both lakes.



SEA LAMPREY  
(PETROMYZON MARINUS)

MOUTH OF SEA LAMPREY

THE SEA LAMPREY, WHICH FEEDS ON THE BLOOD AND FLESH OF FISH, IS PREYING ON THE LAKE TROUT OF THE GREAT LAKES AND IS THREATENING THAT FISHERY.

At prevailing market prices the actual cash-income loss to the commercial fishermen of Lakes Huron and Michigan resulting from decreases in the lake trout catch amounts to approximately \$3.5 million. At an interest rate of 4 percent, this amount represents an annual return from a capital investment of \$87.5. When one also applies the income decrease to fish wholesalers and retailers, transportation companies, and manufacturers of fishing equipment and supplies, and then adds to the above the value of other species of fish that have been harmed by the sea lamprey, the real gravity

of the economic losses suffered and the urgent need of sparing no effort to bring the parasite under control become even more obvious.

Although the sea lamprey was first reported in Lake Superior in 1945, its effects on lake trout have been only local in that Lake. Production of lake trout has held up, but no comfort should be taken from Lake Superior production data because records prove that (1) the catch per net is declining and the yield has been maintained in recent years only by increased fishing pressure; and (2) experiences in Lake Huron and especially in Lake Michigan, prove complete collapse of the fishery can take place in only a few years.



## Gulf Exploratory Fishery Program

### GROOVED SHRIMP LOCATED BY "OREGON" OFF FLORIDA WEST COAST ONLY IN KNOWN AREAS:

Locating pink grooved shrimp grounds in the southeast Gulf of Mexico was the main purpose of Cruise No. 6 of the Service's exploratory fishery vessel Oregon. The vessel left Pascagoula on January 8, 1951, and returned on January 28, 1951.

A series of shrimp trawls were made on Campeche Bank in depths between 14 and 120 fathoms. The area covered was found unsuitable for trawling and only one specimen of the pink grooved shrimp was taken.

The area between Tampa Bay and Dry Tortugas was worked in depths from 2 to 80 fathoms. Commercial concentrations of the pink grooved shrimp were found only in the area of the present fishery grounds. Trawling in the areas north to Tampa Bay produced very small catches of shrimp.

Trawling stations were made comparing the effectiveness of a "bottomless" trawl to that of the flat and "balloon" trawls in areas where dense sponge beds made conventional trawling prohibitive. In this series, the "bottomless" trawl picked up approximately 1/5 of the sponge taken in the other trawls. As yet, the "bottomless" trawl has not been tested and compared to other trawls in the catching of shrimp. However, in the stations already made it caught as many shrimp as did the other nets.

Two widely scattered schools of little tuna were observed about 90 miles north northeast of Alacran reef on January 10. Trolling lines failed to produce any catch although the Oregon was able to pass through the middle of the school of fish.

A series of 150-fathom bathythermograph recordings were made at 30-mile intervals from the Mississippi Coast to Campeche Bank. Plankton tows were made in the north and central Gulf.



## North Pacific Exploratory Fishery Program

### "JOHN N. COBB" EXPLORES EXTENT OF SHRIMP POPULATIONS OFF SOUTHEASTERN ALASKA:

The purpose of Cruise No. 7 of the John N. Cobb is to ascertain the extent and size of the shrimp and other shellfish populations in the waters of Icy Strait, Lynn

Canal, and adjacent areas; and to determine if concentrations of shrimp or other shellfish are found in these waters in quantities sufficient to support a commercial fishery. The John N. Cobb, one of the Service's exploratory fishing vessels, left Seattle about March 1 and was scheduled to return to Seattle between April 20 and May 1.

Several types of gear will be fished, including beam trawls, and shrimp and crab pots. Otter trawls will also be employed as a means of sampling the bottom life. Trawlability of the bottom will be ascertained by use of recording "Fathometer" traces, and oceanographic and other scientific observations will be made at each fishing station.

Experiments will be continued on freezing and canning shrimp at sea. These will be carried out by members of the staff of the Fishery Products Laboratory at Ketchikan, Alaska.



## Pacific Marine Fisheries Commission Meets

A meeting of the Pacific Marine Fisheries Commission was held at San Francisco, California, on December 4-5, 1950. Included in the business of the meeting was a discussion of the City of Tacoma's application to the Federal Power Commission for a permit to construct two dams on the Cowlitz River in Washington. Resolutions pointing out the effects of dams on salmon runs and requesting that the Federal Power Commission deny such permit were adopted by both the Pacific Marine Fisheries Commission and its Advisory Committee.

Research on the following fisheries was presented and discussed by representatives of the three Pacific Coast States, Canada, and Alaska:

Albacore: The size composition of the 1950 albacore catches as indicated by market samples taken at the various ports along the coast was reviewed. The group of small albacore (about 54 centimeters in length) which appeared in the 1949 catches was not present to any extent in the 1950 landings. Progress on racial studies on local and Japanese albacore was discussed as were methods of age determinations.

Otter Trawl: Research reported on the otter trawl fishery included tagging, age determinations, and sampling of the catches. Recoveries of tagged flatfish indicated, in general, but little migration of English, Dover, and petrale soles. The sampling program was directed primarily toward determining the composition of the catches as they are brought aboard the trawlers and prior to being culled for market. In this manner the changes occurring in the stocks both of commercial and non-commercial species is being measured.

Sablefish: About 4,000 sablefish (blackcod) were reported tagged along the Pacific Coast in 1950 in order to study the migrations of this species. The progress of racial analyses of these fish from various areas along the coast was discussed as were studies on age determinations, market sampling, and early life history.

Troll Salmon: Further findings concerning the ocean migrations of chinook and silver salmon as revealed by offshore tagging operations were conducted by

the various fisheries organizations along the Pacific Coast and extended from California to Alaska. Chinooks tagged off Alaska were recovered as far south as the Columbia River. Those tagged off California were recovered chiefly in the Sacramento-San Joaquin River system although a few were recaptured to the northward. Tagged silver salmon, in general, migrated shorter distances than the chinooks. Silvers tagged off California and Oregon moved northward while those tagged off Alaska tended to move southward in somewhat less directional migrations.

To supplement the tagging experiments, large numbers of fingerling chinook and silver salmon are being fin-marked and released in various rivers along the coast to migrate to the ocean. The subsequent recapture of these marked fish by the troll fishery will indicate the contribution of the several rivers to the troll fisheries of the different offshore areas.



## Pacific Oceanic Fishery Investigations

"HENRY O'MALLEY" DECOMMISSIONED AND OFFERED FOR SALE: After extensive repairs, sea trials proved that the Henry O'Malley was unseaworthy and it was not economically feasible to repair the vessel for research purposes. This vessel is one of the three research vessels used by the Service's Pacific Oceanic Fishery Investigations.

Early in February the Henry O'Malley, a 128-foot tuna bait boat, was offered for sale by the U. S. Fish and Wildlife Service. The vessel was sold for \$127,501 on February 16 in San Pedro, California.

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## Packaging Materials Shortage Foreseen

A discussion of the outlook for packaging materials was the main item of business at the February monthly meeting of the Federal Specifications Committee on Packaging, according to a staff member of the Service's College Park Fishery Technological Laboratory, who attended the meeting. The general opinion expressed was that all types of packaging materials, lumber, paper products, moisture-vapor proof films, and metal foils are already in short supply and the outlook is bearish.

The need for a continuous and active campaign of conservation of all packaging materials was stressed repeatedly by the Chairman of the meeting. This should consist of "doing without," reducing quality or grade when possible, and the salvaging and reuse of every possible material.

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## Wholesale and Retail Prices

WHOLESALE PRICES, JANUARY 1951: Because of an improvement in the production of and a slight decline in the demand for fresh and frozen processed fishery products, there was a small over-all drop in the January prices for these products. On the other hand, increased demand for canned fishery products and the short salmon pack this past season pushed prices for canned fish still higher.

The edible fish and shellfish (fresh, frozen, and canned) wholesale index for January was 113.7 percent of the 1947 average (see table 1)--0.7 percent higher than the previous month and 10.0 percent above January 1950, the Bureau of Labor Statistics of the Department of Labor reports.

Heavier landings of haddock in New England and a better supply of fresh-water fish from the Great Lakes (mostly from Canada) resulted in a decline of 2.8 percent in the drawn, dressed, or whole fin fish subgroup from December 1950 to January 1951, but this index was still 2.2 percent higher than in January 1950. Compared with January 1950, average prices in January this year for large drawn offshore haddock were 12.3 percent lower, while for frozen dressed Western halibut they were 19.6 percent higher and for frozen large and medium king salmon, 15.1 percent higher.

Table 1 - Wholesale Average Prices and Indexes of Fish and Shellfish, January 1951, with Comparative Data								
GROUP, SUBGROUP, AND ITEM SPECIFICATION	POINT OF PRICING	UNIT	AVERAGE PRICES (\$)			INDEXES (1947 = 100)		
			Jan. 1951	Dec. 1950	Jan. 1950	Jan. 1951	Dec. 1950	Jan. 1950
ALL FISH AND SHELLFISH (Fresh, Frozen, and Canned) .....								
Fresh and Frozen Fishery Products: .....						113.7	112.9	103.4
Drawn, Dressed, or Whole Finfish: .....						126.6	130.2	123.9
Haddock, large, offshore, drawn, fresh ....	Boston	lb.	.13	.14	.15	133.7	142.4	152.5
Halibut, Western, 20/80 lbs., dressed, fresh or frozen .....	New York City	"	.39	.40	.33	114.1	115.3	95.4
Salmon, king, lge. & med., dressed, fresh or frozen .....	" " "	"	.54	.55	.47	132.5	134.4	115.1
Lake trout, domestic, mostly No. 1, drawn (dressed), fresh .....	Chicago	"	.57	.50	.56	125.2	109.8	123.2
Whitefish, mostly Lake Superior, drawn (dressed), fresh .....	"	"	.48	.51	.50	139.6	146.0	143.4
Whitefish, mostly Lake Erie pound net, round, fresh .....	New York City	"	.46	.61	.52	104.0	137.9	117.1
Yellow pike, mostly Michigan (Lakes Michigan & Huron), round, fresh .....	" " "	"	.47	.39	.45	111.2	92.2	105.8
Processed, Fresh (Fish and Shellfish): .....						98.1	95.1	97.5
Fillets, haddock, small, skins on, 20-lb. tins .....	Boston	lb.	.34	.28	.38	122.3	99.9	137.8
Shrimp, lge. (26-30 count), headless, fresh or frozen .....	New York City	"	.57	.55	.63	82.4	79.7	91.2
Oysters, shucked, standards .....	Norfolk area	gal.	4.80	4.88	3.95	118.2	120.0	97.2
Processed, Frozen (Fish and Shellfish): .....						99.1	97.4	102.0
Fillets: Flounder (yellowtail), skinless, 10-lb. boxes .....	Boston	lb.	.35	.35	.30	113.0	113.0	96.8
Haddock, small, 10-lb. cello-pack .....	"	"	.22	.22	.29	99.8	100.7	131.2
Rosefish, 10-lb. cello-pack .....	Gloucester	"	.28	.26	.21	137.8	131.9	106.0
Shrimp, lge. (26-30 count), 5- to 10-lb. bxs. .....	Chicago	"	.53	.53	.63	77.0	75.9	91.1
Canned Fishery Products: .....						115.7	112.9	91.6
Salmon, pink, No. 1 tall (16 oz.), 48 cans per case .....	Seattle	case	24.03	23.64	15.76	156.7	154.1	102.7
Tuna, light meat, solid pack, No. 1/2 tuna (7 oz.), 48 cans per case .....	Los Angeles	"	14.90	14.75	14.25	96.9	96.0	92.7
Sardines (pilchards), California, tomato pack, No. 1 oval (15 oz.), 48 cans per case ..	" "	"	6.62	6.25	5.75	74.1	69.9	64.3
Sardines, Maine, keyless oil, No. 1/2 drawn (3 1/2 oz.), 100 cans per case .....	New York City	"	6.20	5.50	7.25	60.8	53.9	71.1

Although the fresh processed fishery products subgroup index this January rose 3.2 percent over December 1950, it was only 0.6 percent higher than in January 1950. Compared with December 1950, prices quoted during January for fresh haddock fillets and large headless shrimp were higher, but they were still considerably below the corresponding month a year earlier.

With cold storage holdings at the highest point for the year but still below a year earlier, the January index for processed frozen fish and shellfish increased 1.7 percent over December 1950, but was 2.8 percent below January 1950. During this period price increases were reported mainly for frozen rosefish fillets (holdings of which are below a year earlier) and shrimp (in spite of heavy imports from Mexico and large cold storage holdings). But larger catches of haddock at Boston increased the processing of frozen haddock fillets and consequently prices quoted for this product dropped slightly this January. On the other hand, compared with the corresponding month a year earlier, January prices for frozen haddock fillets and frozen shrimp were substantially lower, while quotations for frozen rosefish (ocean perch) fillets were substantially higher.

Prices of canned fishery products increased substantially in January. The month's index for this subgroup was 2.5 percent higher than December 1950, and 26.3 percent greater than in January 1951. Higher prices were reported during January for each canned product under this subgroup. Compared with January 1950, quotations this January were 52.6 percent higher for pink salmon, 15.2 percent higher for California sardines, 4.5 percent higher for tuna, but 14.5 percent lower for Maine sardines.

ADJUSTMENT OF CONSUMERS' PRICE INDEX: Adjustments to improve the Consumers' Price Index and to make it a more accurate measure of price changes in the mobilization period have been incorporated in this index issued by the Bureau of Labor Statistics, U. S. Department of Labor, according to a February 20 news release from that Bureau. The improved index was recalculated back to January 1950 so that it will measure price changes over the critical periods before and after the outbreak of the Korean conflict. These recalculated indexes will replace those released by the Bureau each month during the year 1950.

The adjustments introduced as of January 1950 include the revision of population weights, correction of the "new unit bias" in the rent index, the addition of new items, and the revision of commodity weights. Revised population weights for use in combining data for individual cities into a United States average were calculated, using the population figures from the 1950 Decennial Census. Among the new items added were frozen foods, but as far as fishery products are concerned the Bureau has been pricing quick-frozen fish since March 1950.

No changes have been made in the pricing procedures or specifications for fishery products. However, in revising the commodity weights, the importance of fishery products in the "all foods" category has dropped from 3.4 percent under the old index to 3.0 percent under the adjusted index. The Bureau reports that "the importance attached to the various items and groups of items in the index calculations have been adjusted to reflect present-day family spending habits. These adjustments of 'weights' are based on recent studies of what families buy and how much they spend." The Bureau has relied principally on its own studies of family expenditures in seven cities since 1947; and valuable information has been drawn also from recent food consumption surveys by the Department of Agriculture, and from trade and official sources on production, marketing, sales, and other facts pertinent to consumption and expenditures. Data from all these sources were used to estimate 1949 quantity consumption at 1950 prices, as a basis for adjusted index weights.

Indexes calculated with the adjusted weights have been linked to the "old series" at January 1950 to form a continuous series. Therefore, the original base periods have not been changed and the major characteristics of the Consumers' Price Index remain unchanged. The adjusted series is an improved measure of the movement of prices of goods and services purchased by moderate-income families in large cities. No change has been made in the basic index formula, the calculation procedures, or the price collection method. In the case of fishery products, the only change is the drop in commodity-weight value within the "all foods" category and the indirect effect that the use of 1950 Decennial Census populations figures will have on the index as a whole and its components, including the fishery products component.

RETAIL PRICES, JANUARY 1951: Retail prices of fishery products bought by moderate-income urban families continued their rise between December 1950 and January this year (table 2), according to the Bureau of Labor Statistics, U. S. Department of Labor. However, the increase in fishery products was not as great as that for all foods as a group.

Retail prices of fish and shellfish (fresh, frozen, and canned) increased 1.5 percent, on the average, between mid-December and mid-January. On January 15, the

Item	Base	I N D E X E S		
		Jan. 15, 1951	Dec. 15, 1950	Jan. 15, 1950
All foods .....	1935-39 = 100	221.9	216.3	196.0
All fish and shellfish (fresh, frozen, & canned) ...	do	345.3	340.3	301.9
Fresh and frozen fish .....	1938-39 = 100	283.0	279.5	272.2
Canned salmon: pink .....	do	493.7	484.5	355.9

adjusted all fish and shellfish index was 345.3 percent of the 1935-39 average--1.3 percent higher than the previous month and 14.4 percent above mid-January 1950. Again the major portion of the increase in the fishery products index was due to higher prices quoted for canned fish, especially canned salmon.

In mid-January prices of fresh and frozen fishery products rose 1.3 percent above those which were quoted in mid-December, and they were 4.0 percent higher than in mid-January a year earlier.

Prices for canned pink salmon continued to climb and the index on January 15 this year was 493.7 percent of the 1938-39 average--1.9 percent above the previous month and 38.7 percent above mid-January 1950.

Item	Base	INDEXES	
		Jan. 15, 1951	Dec. 15, 1950
All foods .....	1935-39 = 100	221.6	215.4
All fish and shellfish (fresh, frozen, and canned) .....	do	344.0	339.8
Fresh and frozen fish .....	1938-39 = 100	289.6	287.1
Canned salmon: pink .....	do	465.1	456.4

In the future, the retail index data published under this section will refer to the improved, adjusted series. However, for this month the January 15, 1951, and the December 15, 1950, index data from the "old series" is shown in table 3 for purposes of comparison to show how the improved, adjusted index series has affected the fishery products components of the index series.



### ECA Procurement Authorizations for Fishery Products

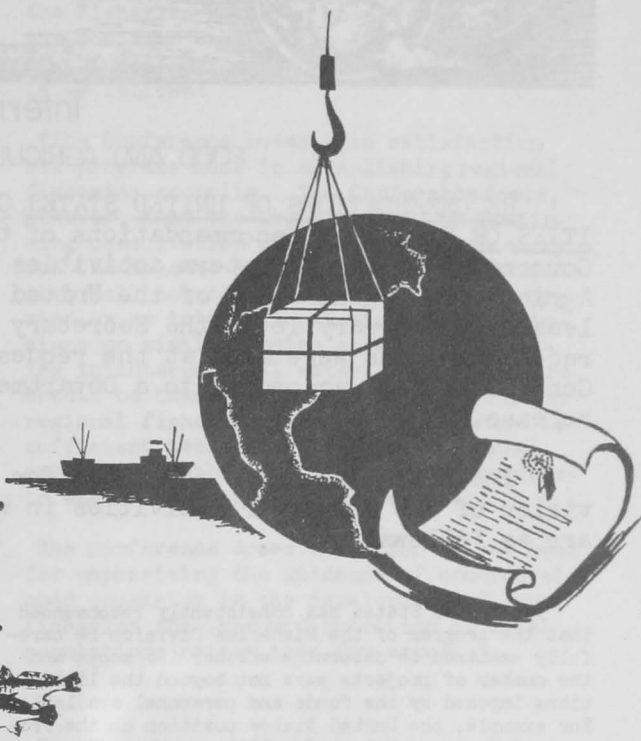
Among the procurement and reimbursement authorizations announced by the Economic Cooperation Administration during February this year was \$350,000 to be used for the purchase of canned fish from the United States and Possessions. Of this amount, \$150,000 was to be used by Greece for the purchase of canned fish (except shrimp, crab meat, lobster, salmon, or tuna) and the remaining \$200,000 was to be used by Belgium-Luxembourg also for canned fish (except shrimp, crab meat, or lobster).



There were no cancellations or decreases during February affecting previous authorizations for fishery products.

ECA procurement authorizations for fishery products for the period April 1, 1948, through February 28, 1951, totaled \$29,783,000 (\$17,094,000 for edible fishery products; \$11,149,000 for fish and whale oils; and \$1,540,000 for fish meal). Of this total \$10,694,000 was used for purchases in the United States and Possessions (canned fish \$7,606,000; salted fish, \$9,000; fish and whale oils, \$3,079,000). Also, during the entire period \$220,000 was authorized under the Far Eastern Aid Programs for use by Korea for the purchase of fish and whale oils from the United States and Possessions.

In addition to fishery products, there were authorizations for the purchase of various types of equipment used in the fisheries, such as vessels, materials for construction of fishing vessels and plants, etc., but exact amounts for these authorizations cannot be determined since in most cases they are in broad categories which include other industries besides fisheries.



PACKAGED FISH--1949

DO YOU KNOW.....

That the total production of groundfish (cod, cusk, haddock, hake, pollock) and rosefish fillets during 1949 in continental United States amounted to 140,078,191 pounds, valued at \$32,055,849 to the processors.



Imports of these fillets during the year amounted to 47,322,265 pounds, valued at \$8,728,272.

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That about 590,000,000 pounds of round fish were required to produce the 194,011,159 pounds of packaged fish produced in 1949 in the United States.

--Current Fishery Statistics 579