

## Additions to U. S. Fleet of Fishing Vessels, November 1955

A total of 25 vessels of 5 net tons and over were issued first documents as fishing craft during November 1955, according to the Bureau of Customs. Compared with the 36 newly-documented fishing craft reported for the corresponding month of the previous year, this was a decrease of 31 percent.

During November 1955 the Chesapeake arealed all others with 7 newly-documented craft, followed by the Gulf area with 5, the Alaska area with 4, the South Atlantic area with 3 , and the Pacific and Great Lakes areas with 2 each. The New England and Middle Atlantic areas each had 1 addition.

During January-November 1955, a total of 402 ves-

| Area | November | Jan. -Nov. |  | $\begin{aligned} & \hline \text { Total } \\ & 1954 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
|  | 1955 1954 | 1955 | 1954 |  |
|  | - | Number |  |  |
| New England . | 1 | 18 | 22 | 23 |
| Middle Atlantic | 1 1 | 13 | 15 | 15 |
| Chesapeake . | $7 \quad 7$ | 51 | 91 | 93 |
| South Atlantic | 3 4 | 64 | 114 | 119 |
| Gulf . | $5 \quad 13$ | 97 | 306 | 313 |
| Pacific | $2{ }^{2}$ | 112 | 111 | 117 |
| Great Lakes | 2 | 9 | 5 | 6 |
| Alaska | 4 2 | 35 | 26 | 27 |
| Hawaii | - - | 3 | 1 | 1 |
| Puerto Rico | 2 | - | 2 | 2 |
| Unknown. | - - | - | 1 | 1 |
| Total | 25 36 | 402 | 694 | 717 |

Note: Vessels have been assigned to the various areas on the basis of registered home ports. sels was documented for the first time as fishing craft, compared with 694 for the corresponding period of 1954-a decrease of 42 percent. During the 1955 period, the greatest decrease occurred in the Gulf area--a decline of 68 percent.


## California

## DISTRIBUTION OF YELLOWFIN AND BIG-EYED TUNA INVESTIGATED BY

 "N. B. SCOFIELD" (Cruise 5): Exploring the distribution and relative abundance of yellowfin and big-eyed tuna in the areas investigated by EASTROPIC was the principal objective of cruise 5 of the California Department of Fish and Game vessel N. B. Scofield. It is hoped that the catch data of this cruise combined with the intensive oceanographic observations of other EASTROPIC vessels may shed more light on the distribution and relative abundance of the tunas in the eastern Pacific.This cruise was part of a series (EASTROPIC) being conducted jointly by the U. S. Fish and Wildlife Service, Japan, Canada, and private scientific institutions to study the physical oceanography, biological conditions, and other scientific phenomena over wide areas of the Pacific Ocean.

A secondary objective of this N . B. Scofield cruise was to make limited oceanographic observations and biological collections pertinent to tuna life history.

For this cruise the California Department of Fish and Game provided the vessel for long-line fishing and limited oceanographic observations, and Scripps Institution of Oceanography provided

N. B. Scofield tuna long-line Cruise 55-S-5. certain essential oceanographic equipment and shoreside analysis of data.

The N. B. Scofield departed Los Angeles Harbor September 29, 1955, and proceeded to Station \#1 of Area A. Stations \#1 to \#9 of this area were occupied as scheduled. Due to heavy seas, operations could not be carried on at the remaining stations. The vessel then proceeded to Area D-3 and consecutively occupied Stations 16 to 45 before putting inat Puntarenas, Costa Rica, for fuel and provisions. Departed Puntarenas at 2200 hours, November 4, 1955, and occupied Stations 46 to 61 . After completing Station 61 on November 16,1955 , the vessel proceeded to Los Angeles Harbor arriving November 30, 1955.

Long-Line Fishing: Forty baskets of sardine-baited long-line gear, 11 hooks per basket, were set from 0600 to 0730 hours. While the gear fished from 0730 to 1230 hours, three lures were trolled from the starboard side of the vessel along the length of the set. Retrieving commenced at 1230 hours and was generally completed by 1500 hours.

At each long-line station 2 depths were fished by using 20 baskets with 15 -fathom float lines and 20 baskets with 5 -fathom float lines. Depths of fishing were approximated by the use of chemical sounding tubes. The average depths fished by the shallowest and deepest hooks were:

15-Fathom Float Lines $6 \frac{\text { DeepHook }}{64 \text { Fathoms }} \frac{\text { Shallow Hook }}{40 \text { Fathoms }}$

5-Fathom Float Lines<br>$\frac{\text { Deep Hook }}{55 \text { Fathoms }} \frac{\text { Shallow Hook }}{30 \text { Fathoms }}$

Tuna catches were the poorest in the outlying oceanic waters such as areas A and D-3. The best catches of tuna, up to 6.03 per 100 hooks, occurred in Area C. This area under observation by EASTROPIC encompasses the dividing line between the warm water of the Equatorial Countercurrent and the colder water of the Peru Current. The area of greatest temperature change occurred on November 11 along longitude line $87^{\circ} \mathrm{W}$. from $1^{\circ} 45^{\prime} \mathrm{S}$. latitude to $2^{\circ} 47^{\prime} \mathrm{S}$. latitude. Long-line station 52 was made on the northern edge of this area and produced the best catch of the expedition- 6.03 big-eyed tuna per 100 hooks. Most of these fish were well over 70 pounds each.

Twenty lancetfish, Aleposaurus borealis, were taken on the long-line gear at the stations west of the Galapagos Islands along the equator. One lancetfish caught at station 20 is believed to be a new southern distribution record for this species.

During the entire cruise not one station produced a catch of yellowfin and bigeyed tuna together. Practically all the yellowfin tuna were caught in Area B off Central America, while the entire big-eyed catch came from the areas along and immediately south of the equator.

Oceanographic Observations: (1) Bathythermograph observations originally scheduled every two hours while under way were discontinued after the first week because of a breakdown of the power winch. By using the forward plankton tow winch it was possible to take a BT on each long-line station and one at the night light station in the evening.

| Fishing Statistics |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item | Area A | D-3 | Galapagos | B | C | All Areas |  |
| Long-line stations . .... | 5 | 4 | 3 | 10 | 7 | 29 |  |
| Total baskets fished..... | 191 | 160 | 120 | 399 | 256 | 1126 |  |
| Total hooks fished...... | 2070 | 1732 | 1303 | 4331 | 2767 | 12203 |  |
| Yellowfin per 100 hooks... | 0.14 | 0.00 | 0.00 | 0.97 | 0.00 | 0.37 |  |
| Big-eyed per 100 hooks ... | 0.00 | 0.23 | 1.61 | 0.00 | 2.31 | 0.73 |  |
| Spearfish per 100 hooks ... | 0.53 | 0.12 | 0.38 | 2.49 | 0.90 | 1.32 |  |
| Sharks per 100 hooks .... | 2.32 | 0.40 | 0.23 | 4.36 | 1.73 | 2.52 |  |
| Total catch per 100 hooks. | 4.35 | 2.08 | 2.69 | 8.20 | 7.01 | 5.90 |  |

(2) Surface water samples for salinity determinations ashore were taken at each long-line and night light station.
(3) The $6,000-\mathrm{fa}$. fathometer was inoperative the entire trip.
(4) Surface water temperatures were taken every hour when possible and from every $\frac{1}{2}$ hour to 15 minutes when more critical observations were needed for delineating water masses in Area C.
(5) GEK observations were not taken because of mechanical difficulties with the set previous to departure.
(6) Fishing gear drift data at each long-line station was kept as scheduled.

Biological Activities: (1) Tagging: All viable yellowfin tuna, big-eyed tuna, sailfish, and marlin were tagged with type G tubing tags and Woods Hole dart tags. Ten marlin and sailfish were tagged exclusively with dart tags while 72 tuna and skipjack were tagged alternately with dart and tubing tags.
(2) Morphometric measurements were taken on 3 yellowfin tuna and 5 big-eyed tuna. Further measurements will be taken on specimens preserved for study ashore.
(3) Complete bridge records were kept of all marine life observations during the entire expedition. Considerably more tuna schools, porpoise, and bird flocks occurred in Areas B and C than in the other areas. In Area B alone, 18 porpoise schools were observed and was more than all the other areas combined. Exceptionally large concentrations of colony-forming tunicates (Pyrosoma sp.) were observed at the stations along the equator from Area D-3 to the Galapagos Islands.
(4) Sexual maturity studies: Notes were made on the degree of sexual maturity for all fish hauled aboard. All of the large yellowfin tuna caught off Clipperton Island were in an advanced stage of development and would have probably spawned in the near future. The smaller troll-caught tuna, 90 cm . forklength and under, showed no development whatsoever. Off Central America indications were that at least a few of the fish, 110 cm . and under, were just starting to develop. All of the large yellowfin, 110 cm . to 160 cm ., caught in this area were in a more advanced stage of development. One female big-eyed tuna caught west of the Galapagos Islands had very probably just spawned.
(5) Trolling was carried on the length of the long-line set while the gear was fishing and also between stations. Very few stations produced any significant num-
bers of troll-caught tuna. Of the troll-caught tuna practically all came from Area B, and were below 90 cm . in length. Fifty percent of the long-line catch in this area was also in this same size group.
(6) Stomach samples were saved from as many tunas and spearfishes as practicable. Preliminary examination indicates the major items of food, were squid and crabs.
(7) A plankton tow to a depth of 300 meters (cable out 450 meters) was taken at all stations.
(8) Night light stations varying from half an hour to an hour were made between each long-line fishing station. An interesting highlight of the night light work was the collection of a rare member of the family Astronesthidae. These fish, commonly called snaggletooths, generally inhabit the depths of the ocean and are seldom seen or caught at the surface. Tuna-like larvae were collected at Socorroand Clipperton Islands.
Note: See Commercial Fisheries Review, January 1956, p. 33.

SECOND TAGGED STURGEON RECOVERED: Another sturgeon tagged on September 29, 1954, by California's Department of Fish and Game in San Pablo Bay, Calif., was recovered December 5, 1955, off the mouth of the Columbia River near Astoria, Ore.

This recovery brings further verification of the fact that there is an interchange of the big fish between the Sacramento and Columbia River systems.

The second migrant taken was a 41-inch green sturgeon, caught by a commercial fishing boat and returned to California by the Oregon Fish Commission. Note: See Commercial Fisher ies Review, October 1955, p. 48.

## Federal Purchases of Fishery Products

FRESH AND FROZEN FISHERY PRODUCTS PURCHASEDBY THE DEPARTMENT OF DEFENSE, NOVEMBER 1955: The Army Quartermaster Corps during November 1955 purchased 1.9

| Purchases of Fresh and Frozen Fishery Products by Department of Defense (November and the First 11 Months of 1955) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ITY |  |  | VALUE |  |  |  |
| November | Jan. -Nov. |  | November |  | Jan, -Nov. |  |
| 1955 1954 | 1955 | 1954 | 1955 | 1954 | 1955 | 105 |
| . (Millions of Pounds). . |  |  | . (Millions of Dollars) |  |  |  |
| 1.912 .3 | 23.2 | 23.3 | . | - | 10. |  | million pounds (valued at $\$ 0.9$ million) of fresh and frozen fishery products for the use of the U. S. Army, Navy, Marine Corps, and Air Force. This was adecrease of 2,4 percent in quantity and 2.0 percent in value as compared with October purchases. No-

vember 1955 purchases were lower by 16.5 percent in quantity and 8.2 percent in value than the purchases for November 1954.

Purchases of fresh and frozen fish for the first eleven months in 1955 totaled 23.2 million pounds (valued $\$ 10.0$ million)--lower by 0.4 percent in quantity, but higher by 4.7 percent in value as compared with the first eleven months of 1954.

Prices paid for these fishery products by the Department of Defense in November 1955 averaged 44.1 cents a pound as compared with 43.9 cents in October 1955 and 40.3 cents in November 1954.

## Chesapeake Bay Fisheries Trends, 1955

The principal developments in the fisheries of Chesapeake Bay in 1955 were (1) an increase in the harvesting of oysters and (2) a decrease in net fishing. Good catches were reported for alewives, menhaden, crabs, oysters, surf clams, soft clams, scup, and sea bass. Moderate catches were indicated for croaker and sea trout, and although they were better than for any immediately preceding year they were still far below the average catches which once were common for these species. Spot was fairly abundant during the year, reports the Service's Fishery Marketing Specialist in Virginia.

Oysters: Hurricanes plagued the Bay area as they did in 1954. Oyster grounds suffered the greatest damage from the hurricanes. The high winds caused serious damage in some cases, but even more destructive were the heavy rains. Oyster mortality was extreme where freshets wiped out salinity. Despite these losses, over-all oyster production equaled if it did not gain over the previous year, which was a good one. There was an excellent demand for oysters for frozen soups, stews, and other packs. Since standard, or small-size oysters were desired for this purpose, the price gap between these and selects narrowed. At the end of the year the highest ex-vessel prices ever known in the Chesapeake Bay area were paid for oysters.

In Virginia's James River, where most of the seed oysters used by the extensive planting industry come from, there was a steady and profitable production by the hundreds of boats working there. Hurricane effects lessened the volume somewhat because they dispersed the oysters to a certain extent and tongers had to spend more time in locating oysters. However, it was generally agreed that this spreading was beneficial because it would eventually enlarge the producing grounds.

At the beginning of the year crabs in the winter fishery were almost non-existent. Crab-meat packers turned to Southern States for a supply, importing crabs, principally from North Carolina, until the spring runs (which came unusually late) appeared. But once the season was under way, both hard and soft crabs were plentiful.

Fresh-Water Fishery: In the fresh-water areas new life was injected into the carp and catfish fisheries by an apparently insatiable demand for live fish for stocking inland ponds. A fleet of tank trucks was busy all year collecting them. Snapper turtles also were vigorously sought to meet the demands of a company producing frozen snapper soup.

Alewives: Alewives, running in abundance, exceeded the needs of the canning and salting companies, which have been finding it increasingly difficult to market their products.

New Products: There was little adventuring in new products. One firm introduced a clam soup made up of a combination of surf clams and hard clams. Dur-
ing the periods when crab meat was cheap, packs varying from canned flakes to frozen deviled crabs were put up. Sizable packs of three products (tuna, fish sticks, and shrimp), the raw materials for which do not originate in the Chesapeake Bay, were reported as in the last few years.

Menhaden: Although Virginja's byproducts processors did not foresee a menhaden catch equal to the record breaker of 1954, the 1955 catch actually passed the 1954 record by several million pounds. This yield was swelled by two additional months of plentiful pound net-caught menhaden and alewives.

Soft Clams: The soft clam industry, which is the Chesapeake's newest fishery, showed signs of bursting its bounds in the two Maryland counties to which it had been confined during the five years of its existence. Fishing intensity has been confined to a small operating area, and expansion to other counties and even into Virginia was sought.


## Maine

1955 CANNED SARDINE PACK: The 1955 Maine canned sardine pack amounted to $1,254,222$ cases, according to official figures released by the State Department of Agriculture on January 18, 1956, reports the Maine Sardine Industry. The industry's Executive Secretary said that the pack was the smallest for any year since 1939 and that this was reflected in packers' inventories which were also near an all-time low for the month of January.

The 1956 Maine sardine canning season legally opens on April 15, but no sizable pack can be expected until late May if the trend of the past ten years continues.


## North Atlantic Fisheries Exploration and Gear Research


14): More than 7, 000 pounds of deep-water lobsters (Homarus americanus) were brought aboard the Service's ex-


Cruise 14 of the Service's exploratory fishing vessel Delaware. ploratory vessel Delaware during cruise 14, which was completed with the return of the vessel to East Boston on January 28, 1956. During the 13-day trip, exploratory trawling operations were conducted in three areas (marked A, B, and C on the chart) at the edge of the continental shelf, south and east of Georges Bank. In each area successive tows were made in depths between the 100 - and 400 -fathom range.

A standard No. 41 otter trawl, rigged without rollers, was used in areas "A" and "B." In area "C" it was necessary to re-rig the net with rollers, because of the many bottom obstructions encountered.

Five tows were made in area "A," with poor results--a catch of only 19 lobsters. The best single catch was made in the 240 - to 260 -fathom depth range.

The best fishing was encountered in area " $B$, " where 13 tows were made. The greatest single catch of the cruise--132 lobsters--was made in this area in the 200275 fathom depth range. The average was 65 lobsters (approximately 455 pounds) a tow.

Fishing results in area "C" were clouded by the many hang-ups encountered. A total of 178 lobsters was taken in 12 tows.

The average weight of the lobsters taken on this trip was approximately seven pounds each.

In cooperation with the Massachusetts Division of Marine Fisheries, a total of 415 lobsters was tagged and released where caught, In addition, 62 lobsters were tagged and released in shallow water in the Beverly area.

Of the total of 1,041 lobsters taken, 56.6 percent were females and 43.4 percent were males. Of the females 159 (or 15.2 percent) of the total catch were eggbearing.

Samples of quick-frozen cooked lobster meat were processed on board and stored ashore for consumer-acceptance and storage tests.

Production-type exploratory fishing for ocean perch in deep-water south of Sable Island will be the Delaware's mission on Cruise 15, scheduled to start at East Boston on February 6, 1956.


## North Atlantic Herring Research

## PLANKTON SURVEY OF GULF OF

 MAINE BY" THEODOREN. GILL" (Cruise 9): During the second and third weeks of December 1955, a second plankton survey was made in the Gulf of Maine by the U. S. Fish and Wildlife Service research vessel, Theodore N. Gill. Hardy Plankton Recorders were used on this cruise as on cruise 8. This work is being done in an effort to determine monthly the numbers distribution of the developing herring young, the product of the 1955 spawning.Two of the recorders were towed over the track line shown on the chart at a speed of approximately 9 knots. One was towed at the surface and the other at the $10-\mathrm{me}-$ ter depth. Plankton tows were also made at 8 -hour intervals using a conical silk gauze meter net. Surface and subsurface temperature records were kept as on previous cruises.

This cruise was to cover the area from the upper part of the Bay of Fundy to 50 miles southeast of Nantucket Island, including Cashes Ledge, Browns Bank, and


Cruise 9 of $\mathrm{M} / \mathrm{V}$ Theodore N. Gill (12/13-12/19/55).
the waters off southern Nova Scotia. However, after having been slowed considerably by unfavorable weather, the vessel returned to Boothbay Harbor with engine trouble on December 19. The work will be resumed when the vessel is again in seaworthy condition.

## Pacific Oceanic Fishery Investigations

TAGGED BIG-EYED TUNA RECAPTURED BY THE JAPANESE: The first tagged big-eyed tuna ever recaptured in the Pacific was recently taken by Japanese fishermen, thus contributing to the knowledge of the growth and migration habits of this large tuna. According to the Director of the Pacific Oceanic Fishery Investigations, this fish, known locally as "mebachi shibi" or "ahi," was tagged and released by the U. S. Fish and Wildlife Service research vessel John R. Manning, on January 31, 1955, at a point 400 miles northeast of Midway Island.

The fish was retaken by a Japanese long-line fishing vessel, the No. 5 Nikko Maru of the Fukushima Prefecture on November 24, 1955, at a point 690 miles due north of Oahu. The tagged fish had been at liberty for a period of 10 months and moved at least 800 miles during the interval of its freedom. Measurements taken of the fish both at the time of release and at recapture showed that the fish had grown approximately 10 pounds.

This recovery is the first from a total of 82 big-eyed tuna tagged in North Pacific waters by the POFI research vessels between January and September 1955. Besides contributing to the study of the growth and migration of the big-eyed tuna, about which there is very little information to date, the recovery demonstrates the excellent cooperation between scientists and commercial fishermen, in this case between United States scientists and Japanese fishermen.


## Fishery Products Market Outlook, January-March 1956

If the American housewife fails to find canned salmon on her grocer's shelves at any time during 1956, she will find plenty of fish sticks in the freezers, the Janu-ary-March 1956 Commercial Fisheries Outlook (Fishery Leaflet 336aa) of the U. S. Fish and Wildlife Service points outs. Although the Maine sardine pack is the lowest it has been in 15 years, the canned tuna supply is ample. While cod and haddock fillets, halibut, swordfish, shrimp, salt herring, and some fresh-water fish supplies are well below the five-year average, there are plenty of flounder fillets, whiting, and spiny lobster tails.

All of this would indicate a generally steady market for most of the major fishery products with slight price increases for the items which are in short supply.

The salmon pack for 1955 was exceptionally small, both in the United States and Canada. As a result of this small pack canners report that already 95 percent of their 1955 output has gone into trade channels. The Alaskan salmon pack for 1955 was $2,385,000$ standard cases, 710,000 cases below the 1954 output. British Columbia canners produced $1,406,000$ cases, or 304,000 cases less than in 1954.

Shrimp prices which advanced rather unexpectedly during the autumn months will continue high through Lent. Hurricanes interfered with shrimp fishing in the Gulf of Mexico during the fall months and catches were light. With the short supply,
many buyers apparently entered the market simultaneously with a resulting rise in prices. Some buyer resistance was noted late in December but since holdings will probably not increase this quarter, prices will continue at a high level. However, good catches on the west coast of Mexico may stabilize prices to a certain extent.

While the Maine sardine pack took a sharp drop during the year, the California sardine pack showed an increase but the strong export demand which is in evidence enhances marketing prospects for the California product.

Hurricanes also hit the oyster industry during the past two years and the supplies this season will be light. The market is strong and prices will be higher than they were a year ago.

Because of bad weather in the closing days of the 1955 halibut season in the Pacific, the catch was less than in 1954 by 13 million pounds. Storage holdings are down 5 million pounds. All of which indicates that there will be an increase in halibut prices.

America will experience its usual midwinter lull in fresh-water fish production, but imports from Canada are expected to follow their usual high midwinter pattern.

Prices on cod, haddock, and ocean perch fillets will rise slightly and show some stability at the higher level.

But America's newest fish morsel, the fish stick, is stepping into a lot of gaps. Production for the first nine months of 1955 was up 45 percent above the like period in 1954. Supplies at present are ample and the prices are competitive.


## Saltonstall-Kennedy Act Fisheries Projects

ACTIVITIES OF THE FIRST YEAR (FISCAL YEAR 1955): Nearly half of the $\$ 3,0 \overline{00,000}$ provided the Fish and Wildlife Service by the Saltonstall-Kennedy Act for the year ending June 30, 1955, was used for biological research on fish and fisheries, according to a report issued by the Secretary of the Interior on December 30. The report is titled: "Research and Activities under the Saltonstall-Kennedy Act, Fiscal Year 1955 (Annual Report of the Secretary of the Interior)." A total of $\$ 1,434,000$ was expended on these studies. Approximately the same amount $(\$ 1,444,000)$ was spent for research in the exploration, development, and utilization of our fishery resources. About $\$ 92,000$ was allotted to general administrative expenses and $\$ 30,000$ to construction.

The Saltonstall-Kennedy Act was passed in 1954, amending existing statutes. It provides funds "to promote the free flow of domestically produced fishery products in commerce by conducting a fishery educational service and fishery technological, biological and related programs--and to develop increased markets for fishery products of domestic origin... ."

In carrying out this policy, the Department has let about 60 contracts for research work in every section of the country for over 40 percent of the year's funds. The contractors include 30 universities, colleges, and public institutions, and 13 commercial and independent scientific research organizations. These contracts represent in excess of $\$ 1,250,000$.

More than 100 projects, representing a potential expenditure of more than $\$ 10,000,000$ have been suggested for study under the Saltonstall-Kennedy funds. An advisory committee named by the Secretary of the Interior advises in preparing rules and regulations and in recommending priority of projects.

The biological studies covered a variety of subjects including:
Salmon and related species, $\$ 216,700$ to determine the racial characteristics of salmon, develop methods of counting, and to secure escapement data.

Pacific sardine, $\$ 114,500$, to determine why the supply of sardine, anchovy, and mackerel on the Pacific Coast fluctuates to such a degree.

North Atlantic trawl fishes, \$401, 600 to secure biological data on sea scallops, whitings, flounders and ocean perch; to continue operation of the research vessel Albatross $\amalg$ and to study the ocean environment of the offshore banks.

Herring, $\$ 71,900$, studies on the biology of herring.
Gulf of Mexico fishes, $\$ 149,300$, research on shrimp, sponges, and red tide.
High seas research, $\$ 50,000$, on stocks of king crab of the Bering Sea and North Pacific Ocean.

Tuna research in the Pacific, $\$ 216,500$.
Commercial shellfishery research, $\$ 145,600$ of which $\$ 85,000$ was on New England oysters, $\$ 39,000$ on Middle Atlantic oysters, and $\$ 21,600$ on oysters in the Gulf of Mexico. Menhaden research required $\$ 30,000$, and $\$ 23,100$ went to improve cultural methods for channel catfish.

The report shows that $\$ 1,385,000$ has been allocated for most of these studies in the fiscal year ending June 30, 1956, but in varying amounts. New studies include investigation on Alaska salmon predators and effects of logging for which $\$ 108,300$ has been allotted and another allocation of $\$ 32,000$ for Atlantic striped bass studies. There will be no expenditure on king crab or sponges from Salton-stall-Kennedy funds in 1956.

A total of $\$ 351,500$ was spent on exploratory fishing and gear research. For the current fiscal year ending June 30, 1956, \$299, 000 has been allotted for these studies. Maine sardine explorations in the past year cost $\$ 71,000$; North Atlantic explorations cost $\$ 163,400$. Both of these projects are being continued and about the same amounts have been allocated.

There was $\$ 78,000$ spent on construction of a gear research vessel in the past year. Overhauling of the electrical system and the purchase of a radar set for the Oregon in the Gulf explorations was a $\$ 39,000$ expense which will not be repeated in fiscal 1956, but $\$ 60,000$ has been allocated for South Atlantic shrimp explorations in fiscal 1956 as contrasted with no expenditures for the past year.

Fish technological studies accounted for an expenditure of $\$ 424,000$ in the year ending June 30, 1955, and $\$ 464,000$ has been allocated for the present fiscal year ending June 30, 1956. The 1955 expenditures include $\$ 139,000$ for the development
of voluntary fishery products standards; $\$ 40,000$ for research on handling, freezing, and packaging southern oysters; $\$ 65,000$ to develop an index for the nutritive value of fish meal; $\$ 170,000$ to develop new uses for fish oil; and $\$ 10,000$ on freezing skipjack tuna at sea. All of these programs have been extended into 1956.

Market development and fishery education spent \$304, 300 in fiscal year 1955 and will have $\$ 315,000$ in fiscal 1956. The regular education and market development program cost $\$ 167,000$. The expanded program cost $\$ 137,300$. This included expanded school-lunch activities, locker-plant studies, and special marketing programs.


#### Abstract

With the approval of the legislation on the first day of the fiscal year (July 1, 1954) in which it became effective, it was incumbent upon the Department of the Interior to implement the purposes of the Act without delay. This was possible because the American fishing industry had in the past made its needs well-known to the Department and the Fish and Wildlife Service. In addition, there was a wealth of background material on the needs and wishes of the domestic industry resulting from the hearings held by the Senate Subcommittee of the Committee on Interstate and Foreign Commerce on April 1, 1954. As a result, the Service was able to develop and the Department to announce a program on September 10, 1954, calling for the expenditure of approximately $\$ 1,800,000$ of the funds available in the first year under the Act.


The Secretary of the Interior was authorized under the Act to appoint an advisory committee of the American fishing industry to advise him in the formulation of policy, rules, and regulations pertaining to requests for assistance, and other matters.

Because of the loss of time necessarily taken up with administrative details in connection with the appointment of the Advisory Committee members, the first year's program was largely developed without the advice of the Committee. However, when the Committee met on April 28 and 29, 1955, there was still unallocated and unexpended a total of about $\$ 700,000$. The Committee endorsed the program and activities already under way, and made recommendations for the expenditure of the remaining $\$ 700,000$.
Note: See Commercial Fisheries Review, October 1955, pp. 69-70.

FISHERY STA TISTICAL OFFICE OPENED IN BROWNSVILLE, TEX. , AND KEY WEST, FLA.: Statistical offices for the collection of fishery data have been opened at Brownsville, Tex., and Key West, Fla., by the Branch of Commercial Fisheries, U. S. Fish and Wildlife Service. These offices will collect detailed data on employment in the fisheries, number of craft and quantity of gear operated, the catch of fishery products, and related information on the fisheries in the vicinity of Brownsville and Key West. Detailed statistics on the shrimp fishery will be obtained in connection with the Service's expanded program for the collection of shrimp statistics. James H. Ryan will be in charge of the Key West office. These new of fices are being financed by funds provided by the Saltonstall-Kennedy Act (68th Stat. 376).

The information on shrimp production will be released in the daily Fishery Products Report published by the Service in New Orleans and in the monthly bulletins entitled Shrimp Landings published by the Service in Washington, D. C. Copies of the Fishery Products Report may be obtained from the Fish and Wildlife Service, Federal Building, New Orleans 12, Louisiana; and of Shrimp Landings from the Statistical Section, Branch of Commercial Fisheries, Fish and Wildlife Service, Washington 25, D. C. The first issue of Shrimp Landings will cover landings during January 1956.

## School-Lunch Program

FISH-COOKERY DEMONSTRATION PROGRAM FOR 1956: An estimated 200 fish-cookery demonstrations, most of them for school-lunch groups, will be given by the Fish and Wildlife Service during 1956, Acting Secretary of the Interior Clarence A. Davis said December 27, 1955. At present 180 demonstrations have been


Sampling the fish dishes prepared at the fish-cookery demonstration at the Santa Rita Elementary School in San Angelo, Tex., January 23, 1956. scheduled or are in the process of being scheduled.

The fish-cookery demonstrations are part of the broader program of the Fish and Wildlife Service in the development of wider markets for fish and shellfish. Currently the work is being done under responsibility established by the Saltonstall-Kennedy Act. The activity is financed by funds made available by the same Act. Recipes developed intest kitchens at College Park, Md., and Seattle, Wash., are used in the demonstrations.

The Fish and Wildlife Service has given approximately 1,300 fish-cookery demonstrations since 1946. Of these 1,000 have been for school-lunch groups and 300 for educational, institutional, and homemaker groups. School-lunch demonstrations for the most part are given to those actually responsible for the preparation of school lunches. This is true also of the institutional classes. The homemaker and educational demonstrations are given for persons whoteach others, such as college home-economic classes, extension workers, and gas and electric cooking-school personnel. One fish-cookery demonstration given to a cooking-specialist class by the Fish and Wildlife Service was passed along to 16,000 individual homemakers during the following year.

Until recently most of the work has been done in the eastern half of the United States. In many of the more sparsely-settled states demonstrations have been arranged for summer "workshops" or short courses for school-lunch personnel.

In 1956 the project will be expanded to provide for a nationwide program. In some of the states in which demonstrations were given five or more years ago, additional series are now being scheduled to train persons who have entered the schoollunch program recently.

To date, the following demonstrations have been scheduled, with others tofollow: Texas 50 demonstrations; California 48; Maryland 10; Missouri 12; Wisconsin 12; Virginia 25; and South Carolina 23.

## South Atlantic Exploratory Fishery Program

NEW GEAR RESEARCH VESSEL COMMLSSIONED: A new gear research and exploratory fishing vessel, the George M. Bowers, was commissioned January 7 in Miami, Fla., by the U. S. Fish and Wildlife Service. This addition to the Service's fleet of exploratory fishing vessels has a wooden hull and is 73 feet long. It was built with funds provided by the SaltonstallKennedy Act of 1954 which was designed to promote fishery technological, biological, and market studies. It was constructed for the U. S. Fish and Wildlife Service by the Tampa Steamways, and will be based in Miami.


Fig. 1 - The George $M$. Bowers, a new gear research and exploratory fishing vessel recently commissioned by the U. S. Fish and Wildife Service.

The George M. Bowers is especially equipped for research work onfishing gear and will be primarily a gear-research vessel but can be used for deep-sea exploration also. The wooden hull was chosen because a wooden vessel is better suited to the electronic equipment which will be used in the research program. Among other things, the vessel has underwater television equipment which will permit close study of fishing gear operation under water, the effect of gear on any fish habitat on the bottom, escapement through the nets, and numerous other technical questions that have concerned our commercial fisheries for years.

The Director of the Service accepted the vessel for the U. S. Fish and Wildlife Service. The vessel is named after George M. Bowers, Commissioner of Fisheries, from 1898 to 1913. His son, George M. Bowers, Jr., gave Fig. 2 - U. S. Fish and Wildlife Service Director John L. Farley, principal speaker at the commissioning ceremony of the George M. Bowers. a brief biographical sketch of his father. The new vessel will be under the command of Captain A. M. Morgan.

For an indefinite period the George M. Bowers will work close to Miami because the extremely clear water there makes it well adaptable to the type of research to be pursued. Its immediate objective will be to assist in shrimp exploration on the southeast Atlantic Coast, a project also financed by Saltonstall-Kennedy funds.


## Sport Fishing and Hunting Economic Survey Under Way

The Nation's first survey to determine the importance of hunting and fishing in our economy was begun about January 3, 1956. The survey is being conducted by Crossley S-D Surveys, Inc., under a contract signed on June 1, 1955, with the U. S. Fish and Wildlife Service.

About 15, 000 households, some in every state of the Nation, will be visited initially and interviews will be conducted with hunters and fishermen in about 5,000 of these. The survey is designed to show how much time and money was spent on hunting and fishing activities last year. Americans have long been aware of the intangible values and the national re-


A sport fisherman's catch. laxation afforded by hunting and fishing and will now see the economic side of the picture.

With our increasing population gradually squeezing hunting and fishing resources and with that same increasing population demanding more fish and more game, America is facing a real challenge. One of the logical steps to meet this challenge is the present survey.

In September of 1954, the U. S. Fish and Wildlife Service was requested to make this survey, the request coming from the International Association of Game, Fish and Conservation Commissioners, representing the fish and game departments in the 48 states. Several of the states have also contracted with the survey firm to conduct similar studies.


## Public Eating Places Survey

NUMBER SERVING FISH AND SHELLFISH: Public eating places are still a fertile field for exploration by those who deal in fish and shellfish, a survey being conducted by the U. S. Fish and Wildlife Service indicates. Projecting the preliminary results of a probability sampling of 4,500 public eating places for one phase

of the study, only half of the various types of public eating places in the United States served fish or shellfish in 1955.

The survey made by the Service to find out about fish consumption in public eating places indicates that while more than 100,000 restaurants and cafeterias in this country did serve fish or shellfish in 1955, there were more than 20,000 which did not. A high percentage of the drug stores having soda fountains $(25,260$ out of the

| Type | Total | Nort | east | North | Central |  | uth |  | est |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Restaurants | 20,703 | 2,014 | 4.7 | 6,040 | 10.0 | 7,959 | 15.0 | 4,690 | 18.4 |
| Cafeterias . . . . . | 643 |  |  | 72 | . 1 | 499 | . 9 | 72 | . 3 |
| Restaurants or cafeterias located in hotels | 1,246 | 938 | 2.2 | 133 | . 2 | 175 | . 3 | - | - |
| Drug or proprietary stores with fountain . | 25,260 | 6,497 | 15.2 | 10,086 | 16.7 | 6,688 | 12.6 | 1,989 | 7.8 |
| Other (drinking places, caterers, lunch counters, and refreshment stands). | 134, 171 | 33, 350 | 77.9 | 44, 234 | 73.0 | 37,849 | 71.2 | 18,738 | 73.5 |
| Total | 182, 023 | 42, 799 | 100.0 | 60, 565 | 100.0 | 53,170 | 100.0 | 25,489 | 100.0 |

33,771 in the country) did not serve fish during the year. Under the "other" classification (includes various drinking places which serve food, catering establishments, lunch counters, and refreshment stands) there were 134,000 out of 206,000 (or 65 percent) which did not serve fishery products of any description during the past year.

The West and the South accounted for many of the restaurants which did not serve fishery products last year, but the miscellaneous eating places not serving fish seemed to be distributed fairly evenly around the Nation.

|  |  |  |  |  |  | Ty | of Publi | Eating P | ces |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Servings |  | otal | Resta | urant | Cafet | erias | Restaur eterias | it or CafHotels | Drug or tary | Proprieores |  |  |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| One serving . | 2,609 | 1.3 | 1,833 | 1.8 |  |  | 323 | 2.3 | (a) | (b) | 429 | (b) |
| Two servings . | 33, 353 | 16.6 | 19, 555 | 19.1 | 593 | 14.2 | 4,500 | 31.5 |  |  | 8,705 | 12.1 |
| Three servings | 60,365 | 30.0 | 37, 647 | 36.8 | 1,213 | 29.0 | 4,675 | 32.8 | 1,287 | 15.1 | 15,543 | 21.6 |
| Four servings. | 31,304 | 15.5 | 18, 014 | 17.6 | 1,327 | 31.7 | 1,438 | 10.1 | 1,896 | 22.3 | 8, 629 | 12.0 |
| Five servings | 3,580 | 1.8 | 1, 868 | 1.8 | 143 | 3.4 | 72 | (b) | 250 | 2.9 | 1,247 | 1.7 |
| Six servings . . | 1,356 | (b) | 428 | (b) |  |  |  |  |  |  | 928 | 1.3 |
| Seven servings | 72 | (b) | 72 | (b) |  |  |  | , | - | - |  | - |
| Eight servings | 245 | (b) | 72 | (b) | (a) | (b) |  | - | - | - | 143 | (b) |
| No reply or not applicable | 68,591 | 34.0 | 22,918 | 22.4 | 876 | 20.9 | 3,264 | 22.9 | 5, 056 | 59.4 | 36,477 | 50.6 |
| Public eating places serving fishery products in U. S. | 201, 475 | 100.0 | 102,407 | 100.0 | 4,182 | 100.0 | 14,272 | 100.0 |  | 100.0 | 72, 101 | 100,0 |
| (a) Less than 50 establistment | s. (b) | b) Less than one percent. |  | Note: Same as table 1. |  |  | 14,272 |  | 8,513 |  |  |  |

The survey included approximately 4,500 establishments and covered a oneweek period in May 1955. The Service contracted with the Bureau of the Census to conduct the survey.

Table 1 is a preliminary report on the distribution of establishments in the United States which reported whether they did or did not serve fish or shellfish products. Table 2 shows the average number of public eating places serving no fish or shellfish by type and by regions.

PORTION CONTROL FOR FISH FILLETS: A standard portion of fish or shellfish, individually wrapped in cellophane at a carefully inspected processing plant and placed before him virtually "untouched by human hands," may be in the offing for the patron of public eating places. One of the questions included in the U.S. Fish and Wildlife Service survey of 4,500 public eating places was designed to determine "how much fish is a portion," which in turn may be the basis for some major changes in the processing of fishery products for restaurant use.

This study is of particular interest to restaurants and other public eating places because of the increasing demand for fishery products in those establishments and because restaurants seem to be incurring losses in time and product waste because of "guess-cutting" by kitchen help who in many cases have not had the training to become adept in the particular job of determining the individual serving portion for fishery products.


There is a wide variance as to what constitutes a "portion" of fish fillets in restaurants and other public eating places, according to the preliminary results of this survey. The most popular serving of fish fillets is about five ounces per person, or about three servings to a pound of fillets. A very few of the restaurants indicate that they serve a pound of fillets per person. Then there are others who state that they serve six portions to a pound. Approximately one-third of them serve three. A nother one-third is about equally divided between serving two or four portions from a pound of fillets. Projecting the results of the probability sampling of 4,500 public eating places, we found that over 60 percent of the public eating places in the United States serve between 2 to 4 portions from a pound of fish fillets.


## U. S. Fish Stick Production

The fish stick--that recent addition to America's diet--has found a friend in the young American housewife and is proving to be an economic asset to several areas in the Nation, especially in New England, according to U. S. Fish and Wildlife Service reports.

1955 PRODUCTION: Data compiled by the Service show that the production of fish sticks in 1955 exceeded 65 million pounds, compared with almost 50 million pounds in 1954 , and 7.5 million pounds in 1953 (table 1). In 1952 the only production was in pilot plants engaged in getting this new industry started. Production is still centered in New England (which accounts for about 40 million pounds of the total), but the industry has spread to many states on the eastern and western seaboards and even into the Midwest.

During 1955, 88 percent of the production was made up of cooked fish sticks and the remaining 12 percent was uncooked.


OCTOBER-DECEMBER 1955: During the fourth quarter of 1955, the United States production of fish sticks amounted to 15.4 million pounds. This was slightly less than the production re-

| Table 2 |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| O. U. S. Production of Fish Sticks, |  |  |  |
| October-December 1955 |  |  |  | ported for the corresponding quarter of 1954 (table 2).

## YOUNG HOUSEWIVES

 PREFER FISH STICKS: A consumer survey completed by the U. S. Fish and Wildlife Service indicates that it is the young American housewife, the homemaker under 25 years of age, who favors the fish stick. The survey also showed that the white-collar worker was more inclined to purchase them than was the manual worker, and that only 20 percent of the families with annual incomes of less than $\$ 2,000$ were fish-stick purchasers, compared with 50 percent of the families with incomes of $\$ 10,000$ a year or more.The production figures for 1955 seemed to indicate a leveling off during the year at slightly less than 6 million pounds a month, but the consumer survey points out that 60 percent of the potential fish-stick market is still untouched. Also, the study emphasizes that 85 percent of the housewives who try fish sticks are satisfied with them.
Note: Also see Commercial Fisheries Review, October 1955, 1. 40; June 1955, p. 61; March 1955, p. 28.

## U. S. Foreign Trade

IMPORTS OF GROUNDFISH FILLETS, 1955: United States imports of groundfish (cod, haddock, hake, pollock, cusk, and ocean perch) fillets in 1955 amounted to almost 129.0 million pounds-6.3 percent less than in 1954 but still 40.8 percent more than in 1953.

Canada again led as the largest foreign supplier of groundfish fillets in 1955, shipping 74.7 percent of the total, while in 1954 it shipped 63 percent of the total imports. Iceland was the second largest supplier, but while in 1954 it shipped 27 percent of the total United States imports, in 1955 it supplied only 15.4 percent. Norway, the United Kingdom, Denmark, West Germany, Miquelon and St. Pierre, and France all shipped less fillets to the United States in 1955 than in 1954. On the other hand, Greenland shipped more fillets to the United States in 1955 than in 1954.

| United States Imports of Groundfish (Including Ocean Perch) Fillets, 1953-55- |  |  |  |
| :---: | :---: | :---: | :---: |
| Country | $\underline{2 / 1955}$ | 1954 | 1953 |
|  | (1, 000 Pounds) |  |  |
| Canada | 96, 359 | 85, 632 | 59,673 |
| Iceland | 19, 875 | 39, 269 | 25, 410 |
| Sweden |  |  |  |
| Norway | 4,220 | 4, 615 | 3,956 |
| Denmark | 3,926 | 2, 735 | 256 |
| United Kingdom. | 50 | 173 | 139 |
| Netherlands | 764 | 389 | 271 |
| France | 313 | 354 | 232 |
| West Germany | 2,426 | 3, 641 | 1, 532 |
| Japan . . . . | 1 | - |  |
| Miquelon and |  |  |  |
| St. Pierre | 299 | 612 | 148 |
| Greenland | 765 | 204 |  |
| Total | 128,999 | 137,624 | 91,617 |
| 1/ Includes blocks and slabs $\overline{2} /$ Preliminary. | the raw mate | lar for fish |  |

Imports of groundfish fillets permitted to enter the United States at the $1 \frac{7}{8}$ -cents-per-pound rate of duty in the calendar year of 1955 were $35,432,624$ pounds,
compared with $33,950,386$ pounds in 1954. Imports in excess of the quota enter at a duty of $2 \frac{1}{2}$ cents per pound.

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GROUNDFISH FLLLET IMPORTS LOWER IN DECEMBER 1955: Imports of groundfish fillets, including ocean perch fillets, during December 1955 amounted to 4.2 million pounds (see chart 7 in this issue). Compared with the 5.7 million pounds of these fillets reported for the corresponding month of 1954, this was a decline of 27 percent. The decline was caused primarily by substantially lower imports from Iceland. Canada also exported less fillets to the United States during December. West Germany and the United Kingdom exported no groundfish fillets to the United States during December 1954 but did export some fillets during the corresponding month of 1955. Denmark and the Netherlands both exported more fillets to the United States during December 1955 than during the same month of the previous year.

Canada led all other countries export-


Unloading a refrigerated trailer loaded with imported frozen fillets at Fulton Market, Chicago, Ill. ing groundfish fillets to the United States with 3.9 million pounds during December 1955--12 percent less than during the same month of 1954. Canada accounted for 92 percent of the total groundfish fillet imports for December 1955.

EDIBLE FISHERY PRODUCTS, OCTOBER 1955: United States imports of fresh, frozen, and processed edible fish and shellfish in October 1955 amounted
 to 74.3 million pounds (valued at $\$ 5.7$ million), according to a U. S. Department of Commerce summary (see table). This was an increase of 27.7 percent in quantity and 12.8 percent in value as compared with September 1955. Compared with a year earlier, October 1955 imports were higher by 9.7 percent in quantity and 7.6 percent in value.

Exports of processed edible fish and shellfish in October totaled 5.7 million pounds (valued at $\$ 6.8$ million), an increase of 39.0 percent in quantity and 6.3 percent in value as compared with September 1955. October 1955 exports were lower by 16.2 percent in quantity and 30.4 percent in value as compared with October 1954 exports.


## United States and Alaska Salmon Catch and Pack, 1955

CATCH: The catch of salmon in the United States and Alaska declined sharply in 1955 , amounting to about 286 million pounds, as compared with 325 million pounds the previous year, preliminary data indicate. Reduced catches of red (sockeye) salmon on Puget Sound and chum salmon in Alaska were responsible for the decline.

| Species | 1955 |  |  | 1954 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alaska | Wash., Ore., \& Calif. | Total | Alaska | Wash., Ore., \& Calif. | Total |
| Chinook | . . . . (1,000 Lbs.) . . . . |  |  | $\cdots \cdot \cdot \cdot(1,000$ Lbs.) . . . . |  |  |
| Chum . | 27, 950 | 6,116 | 34, 066 | 67, 084 | 9,149 | 76, 233 |
| Pink | 96,493 | 31, 911 | 128, 404 | 88, 692 | 2 | 88, 694 |
| Red. | 49, 250 | 6,115 | 55, 365 | 56, 468 | 35, 269 | 91, 737 |
| Silver | 16,146 | 13,938 | 30, 084 | 22,581 | 8,846 | 31, 427 |
| Total. | 200,967 | 84, 851 | 285, 818 | 247,033 | 77,473 | 324,506 |
| 1/ Preliminary data. |  |  |  |  |  |  |

Pink salmon was the only species showing an important increase in catch. Largely because of the catch of nearly 32 million pounds of pink salmon on Puget Sound, the landings of pinks amounted to 128 million pounds as compared with 89 million pounds in 1954.


CANNED PACK: The estimated pack of canned salmon in 1955 amounted to $3,224,500$ cases as compared with $4,163,100$ cases for the previous year. The 1955 pack was only 36 percent as large as the record 1936 production of $8,965,000$ cases and was the smallest since 1906 .

| Species | 1955 |  |  | 1954 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alaska | Wash., Ore., \& Calif. | Total | Alaska | Wash., Ore., \& Calif. | Total |
|  | - (Std. Cases-48 1-1b. Cans) . |  |  | - (Std. Cases--48 1-1b. Cans) |  |  |
| Chinook |  |  |  | 51,373 | 78,560 | 129,933 |
| Chum | 365, 000 | 69, 000 | 434, 000 | 1,006,951 | 322, 805 | 1, 329, 756 |
| Pink. | 1, 244, 000 | 415, 000 | 1, 659, 000 | 1,136,792 | 14, 334 | 1, 151, 126 |
| Red | 620, 000 | 128,000 | 748, 000 | 732,338 | 591, 492 | 1, 323, 830 |
| Silver . | 109, 000 | 84, 000 | 193, 000 | 167,299 | 47, 824 | 215, 123 |
| Steelhead |  | 13, 000 | 13, 000 | - | 13, 379 | 13, 379 |
| Total. | 2,385,000 | 839,500 | 3,224,500 | 3,094,753 | 1, 068,394 | 4, 163,147 |
| 1/Preliminary data. |  |  |  |  |  |  |

## Wholesale Prices, December 1955

Some cold and wintry weather both along the East and West Coasts and in the Gulf of Mexico plus the usual light landings during the Christmas holidays curtailed the supply of fishery products during December 1955. The rise in the December 1955 index (112.6 percent of the 1947-49 average) for all edible fish and shellfish (fresh, frozen, and canned) was slight when compared with November 1955, but 12 percent above December 1954.

The drop in the December 1955 index for the drawn, dressed, and whole finfish subgroup was due principally to better supplies of fresh whitefish and yellow pike. Prices for fresh large drawn haddock were almost unchanged, but prices of frozen dressed halibut increased slightly. From November 1955 to December 1955 this subgroup index dropped 2.1 percent, but was 8.9 percent higher than the index for De cember 1954.

Prices were substantially higher in December 1955 than in the previous month for fresh skin-on haddock fillets (up 8.3 percent) and fresh headless 26-30 count shrimp at New York City (up 12.8 percent)


A 34 -pound lobster caught off Montauk Point, L, I., on display at the fish section of a chain food store in Niantic, Conn. because supplies were fairly light. For the fresh processed fish and shellfish subgroup, the index in December 1955 was 6.0 percent higher than the previous month and 22.5 percent above the index for the same month in 1954.

Higher prices for fresh shrimp were reflected in a rise in the prices for frozen packaged shrimp. Prices at Chicago for frozen headless 26-30 count shrimp continued to increase from November to December 1955, but at a slower rate in spite of the 32 -percent increase from October to November 1955. The December 1955 index for the processed frozen fish and shellfish subgroup was up 3.6 percent from November and 27.5 percent above December 1954.

In the canned fishery products subgroup, canned Maine sardine prices rose in December 1955 because the pack for the 1955 season was the smallest in 15 years; canned light-meat chunk tuna prices were readjusted downward to reflect changes in marketing conditions; canned California sardine prices dropped because the pack

Table 1 - Wholesale Average Prices and Indexes for Edible Fish and Shellfish, December 1955 With Comparisons

| Group, Subgroup, and Item Specification | Point of Pricing | Unit | Avg. | $\text { ices } 1 /$ | Indexes$(1947-49=100)$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ALL FISH \& SHELLFISH (Fresh, Frozen, \& Canned) . . | . . . . . . | . . | ( $\left.\begin{aligned} & \text { Dec. } \\ & 1955\end{aligned} \right\rvert\,$ | Nov. $\underline{1955}$ . . | $\begin{aligned} & \text { Dec. } \\ & \frac{1955}{112.6} \end{aligned}$ | $\begin{aligned} & \text { Nov. } \\ & \underline{1955} \\ & \hline 112.0 \end{aligned}$ | $\begin{aligned} & \text { Oct. } \\ & \frac{1955}{107.4} \end{aligned}$ | Dec. 1954 100.5 |
| Fresh \& Frozen Fishery Products: <br> Drawn, Dressed, or Whole Finfish: |  |  |  |  | 121,0 | 118,5 | 110,1 | 102,9 |
|  |  |  |  |  | 117.0 | 119.3 | 115.6 | 107,4 |
| Haddock, 1ge., offshore, drawn, fresh | Boston | b. | . 12 | . 12 | 124,3 | 125.7 | 106.3 | 97.3 |
| Halibut, West., 20/80 lbs., drsd., fresh or froz. | New York | lb. | . 28 | . 27 | 85.1 | 84.6 | 99.3 | 87.7 |
| Salmon, king, lge. \& med., drsd., fresh or froz. | New York | 1 b . | . 59 | . 60 | 133.1 | 133.7 | 135.1 | 129.2 |
| Whitefish, L. Superior, drawn, fresh . | Chicago | lb. | . 53 | . 75 | 131.4 | 185.9 | 161.1 | 109.1 |
| Whitefish, L. Erie pound or gill net, rnd., fres | New York | lb. | . 68 | . 85 | 136.5 | 171.9 | 161.7 | 114.2 |
| Lake trout, domestic, No. 1, drawn, fresh | Chicago | lb. | . 65 | . 65 | 132.2 | 132.2 | 116.8 | 129.1 |
| Yellow pike, L. Michigan \& Huron, rnd., fresh | New York | b. | . 44 | . 44 | 102.0 | 102.0 | 75.1 | 90.3 |
| Processed, Fresh (Fish \& Shellfish): . . . . . . . . . . . . . . . . . . . . |  |  |  |  | 124,1 | 117.1 | 108,9 | 101,3 |
| Fillets, haddock, sml., skins on, $20-1 \mathrm{~b}$, tins . . | Boston | lb. | . 39 | . 36 | 132.7 | 122.5 | 102.1 | 91.9 |
| Shrimp, lge. (26-30 count), headless, fresh . | New York | lb. | . 72 | . 64 | 113.4 | 100.5 | 87.1 | 84.2 |
| Oysters, shucked, standards | Norfolk | gal. | 5.50 | 5.50 | 136.1 | 136.1 | 136.1 | 123.7 |
| Processed, Frozen (Fish $\frac{\&}{\text { Fillets: }}$ Flounder (yello Stish): . . . . . . . . . . . . . . . . . . . . |  |  |  |  | 113.7 | 109.7 | 93,3 | 89,2 |
| illets: Flounder (yellowtail), skinless, 1-1b. pkg. | Boston | b. | . 40 | . 40 | 104.7 | 104.7 | 102.1 | 98.2 |
| Haddock, sml.,skins on, 1-1b, pkg | Boston | lb. | . 29 | . 29 | 89.5 | 89.5 | 84.7 | 90.2 |
| Ocean perch, skins on, 1-1b. pkg. | Boston | 1 b . | . 28 | . 27 | 112.8 | 108.8 | 106.7 | 111.8 |
| Shrimp, lge. (26-30 count), 5-1b. pkg. . | Chicago | b. | . 76 | . 71 | 116.5 | 110.0 | 83.3 | 72.5 |
|  |  |  |  |  | 100.5 | 102.6 | 103,4 | 96,8 |
| Salmon, pink, No. 1 tall ( 16 oz. ), 48 can/cs. . Tuna, it. meat, chunk, No. $1 / 2$ tuna ( $6-1 / 2 \mathrm{oz}$.$) ,$ 48 cans/ cs.. <br> Sardines, Calif., tom, pack,No. 1 oval ( 15 oz. ), 48 cans/cs. <br> Sardines,Maine, keyless oil, No. 1/4 drawn (3-1/4 oz.), 100 cans/cs. | Seattle | case | 21.70 | 21.70 | 114.8 | 114.8 | 114.8 | 104.4 |
|  | Los Angeles | case | 11.80 | 12.60 | 85.1 | 90.8 | 92.3 | 93.0 |
|  | Los Angeles | case | 7.00 | 7.38 | 81.7 | 86.1 | 88.1 | 2/ |
|  | New York | case | 8.70 | 8.20 | 92.6 | 87.3 | 87.3 | 1.3 |

1/Represent average prices for one day (Monday or Tuesday) during the week in which the 15th of the month occurs.
These prices are published as indicators of movement and not necessarily absolute level. Daily Market News Service "Fishery Products Reports" should be referred to for actual prices.
2/Not avaiable.
was better than early season predictions had indicated; and canned salmon prices remained unchanged although stocks were practically exhausted. This subgroup index dropped 2 percent from November to December 1955, but was still 3.8 percent higher than a year earlier.

