Additions to the Fleet of U. S. Fishing Vessels

First documents as fishing craft were received during September 1952 by 51 vessels of 5 net tons and over--2 less than in September 1951. Louisiana led with 12 vessels, followed by Florida west coast with 6 vessels, and Virginiawith 5 vessels.


A total of 48 vessels of 5 net tons and over received their first documents as fishing craft during October 1952--5 more than in October 1951. Florida east coast led with 10 vessels, followed by Maryland with 7 vessels, and Texas and Florida west coast with 6 vessels each, the Bureau of Customs of the Treasury Department announced.


## Federal Purchases of Fishery Products

FRESH AND FROZEN FISH PURCHASES BY DEPARTNENT OF THE ARMY, OCTOBER 1952: In October the Army Quartermaster Corps purchased $3,009,6 \overline{18}$ pounds (value $\$ 1,500,691$ )

|  | U A N | T. I T | T Y |  | V A | U E |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| October |  | January-October |  | October |  | January-October |  |
| 1952 | 1951 | 1952 | 1951 | 1952 | 1951 | 1952 | 1951 |
| $3, \frac{1 \mathrm{bs}}{009}, 618$ | $3, \frac{1 \mathrm{bs} .}{260,165}$ | $\frac{1 \mathrm{lbs} .}{29,113,339}$ | $\frac{1 \mathrm{bs}}{27,845,614}$ | $1,500,691$ | $1,5 \frac{\mathbb{Q}}{}$ | $13,315,720$ | $\frac{\$}{\$ 1}, 639,081$ |

of fresh and frozen fishery products for the military feeding of the U. S. Army, Navy, Marine Corp, and Air Force (see table). This was a decrease of 16.4 percent in quantity and 4.4 percent in value as compared with purchases in September, and decreases of 7.7 percent in quantity and 3.0 percent in value from October 1951.

Purchases during January-October this year rose 4.5 percent in quantity and 14.4 percent. in value, compared with the corresponding period in 1951. The average cost per pound for all fresh and frozen fishery products was 45.7 cents for the first ten months this year and 41.8 cents for the same period last year.


## Gulf's Dead Fish Situation Being Studied

The great masses of dead fish reported blanketing the waters off the west coast of Florida are the result of a natural phenomenon which occurs periodically in many parts of the world, the Director of the U. S. Fish and Wildlife Service explained in a mid-November news release. Weather and water conditions combine, the Director said, to support enormous numbers of minute organisms called dinoflagellates which are believed to be responsible for killing the fish.

Answering the challenge of this plague, known in marine circles as the "Red Tide" because of an accompanying discoloration of the water, the Service is dispatching its research vessel, the Alaska, from its base at Galveston, Texas, to survey the areas affected. Having anticipated the outbreak, all was in readiness before the infection struck. On board the vessel will be a staff of marine biologists and chemists assembled by the Service's Branch of Fishery Biology.

The Alaska is a l00-foot oceanographic research craft equipped with a seagoing laboratory, devices for measuring the concentration of chemicals essential to the growth of these organisms, and instruments for recording temperatures and salinities. The equipment is capable of operations from the surface of the water to depths as great as three miles under the sea.

The Service has been studying "Red Tide" intensively ever since outbreaks in 1946 and 1947 killed an estimated half-billion fish off the Gulf Coast. The Alaska expedition plans to collect samples of the organisms for chemical analysis aboard the vessel and for shipment to laboratories in New York, Galveston, and Beaufort (North Carolina) where they will be cultured.

The Coast Guard is cooperating by flying scientists on a survey over the affected area.


## Gulf States Marine Fisheries Commission

THIRD ANNUAL MEETING: The Gulf States Marine Fisheries Commission held its third annual meeting, October 16-17 at Brownsville, Texas. Representatives from the States of Alabama, Florida, Louisiana, and Texas attended the meeting; there was no representative from Mississippi. Also in attendance were representatives of the Federal Government. Reports were submitted on the various projects of interest to the Commission.

Review of Activities: The Commission's Secretary-Treasurer gave this brief resume of activities in the Gulf area:

All of the Gulf States are working toward the maintenance of oyster production at a high level through biological research and reef development.

Texas is compiling valuable data on the speckled sea trout, red drum (redfish), black drum, and flounder. Louisiana, in addition to its oyster program,
 is expected to start investigations on a number of the finfishes of commercial and sports interest. Mississippi has already undertaken a flounder program and work will soon start on the life history of the speckled sea trout. A survey of the water bottoms was undertaken last summer. Alabama is to start taxonomical work on the finfishes in the near future and an oceanographic survey of Mobile Bay and Alabama's Mississippi Sound is in prospect. Florida has developed valuable data on the growth rates, spawning periods, sizes, and other information concerning the mullet in the area from Apalachee Bay west to the Alabama line. Technological work involving refrigerated holding and transport of shrimp is another Florida project.

The U. S. Fish and Wildlife Service's Biological Laboratory at Pensacola is continuing its study of the genetics of the oyster and the enemies of the oyster.

In the Gulf proper, one Branch of the U. S. Fish and Wildlife Service is carrying on programs in exploratory fishing, gear development, freezing shrimp at sea, and a trash-fish study. Another Branchis covering the Gulf in a program of fishery biology with all its ramifications, even including the chemical constituency of the waters.

An oceanographic survey of the Gulf is being made by the Texas A\&M Department of Oceanography with the U. S. Navy sponsoring the programs.

Work on the life history and habits of shrimp is indicated for the coming year. It is understood that data compiled over a period of years will soon be made available by the Fish and Wildlife Service and this information is expected to indicate what further investigations are necessary. Such work will undoubtedly be a joint state and federal project.

A program designed to bring about better conservation of the marine fisheries through educational procedure is an aim of the Commission. Due to the lack of sufficient information the program cannot become effective in the immediate future.

Attention was given last year to the making of an oceanographic survey of the inshore waters of the Gulf. Such a program, suggested to be a joint state and federal project, has been acted upon favorably by the Commission and the Fish and Wildlife Service, and doubtless will be undertaken when funds and personnel become available.

Working from a digest of the fishery laws of the several states, the Commission's attorneys and biologists met at Pensacola in July of this year, and certain recommendations came out of the meeting which are being studied by the Commission.

Recommendations and Resolutions: The recommendation of Commission scientists for a uniform closed season for the oyster fishery from May 15 through the end of September each year, as a means of increasing poundage production, was designated a subject for further study. A resolution to proper state authorities was adopted requesting investigation of the oyster fishery to determine causes of general decline in production.

The following resolutions were adopted by the Commission:
".... that the reporting of statistical data in regard to the salt water fisheries by its member states is of prime importance; and be it further
"RESOLVED that the proper authorities of each of the compacted states be requested to furnish statistical information in regard to their marine fishery products on a minimum standard as prescribed by the U. S. Fish and WildlifeService and that the state officials be advised that the secretary of the Commission is being instructed to coordinate this work between the states and the Fish and Wildlife Service.
"WHEREAS the Gulf States Marine Fisheries Commission is concerned with the development and proper utilization of the fisheries of the Gulf Coast States; and
"WHEREAS it appears likely that at some future time the Congress of the United States will give consideration to legislation relating to the diversion of funds for use in various categories of fisheries work, such as are presented in H. R. 6862-Kennedy (82nd. Congress); now therefore be it
"RESOLVED that the Gulf States Marine Fisheries Commission is opposed to such legislation as would make federal funds available for the purpose of purchasing surplus fishery products; and be it further
"RESOLVED that this Commission favors legislation which would result in a direct and recurring allocation to the Department of the Interior of a portion of the monies derived from duties collected on imported fishery products provided such funds are used in the conduct of an educational program designed exclusively to gain a wider acceptance of products of the American fisheries and thus assist in the development of such fisheries, and for providing such complete and current statistical records as are considered necessary to the proper management of the fisheries; and further, that the Congressional Delegations of the states of Alabama, Florida, Louisiana, Mississippi and Texas be advised of this action on the part of the Gulf States Marine Fisheries Conmission."

The next regular meeting of the Commission will be held at or in the vicinity of Mobile, Alabama, on April 17, 1953.


## New Fish Meal Growth Factor Discovered

What may prove to be a new vitamin has been discovered at the U. S. Department of Agriculture's poultry nutrition laboratory at the Agricultural Research Center, Beltsville, Md., an August 11 news release from that agency reports. A concentrate prepared from fish solubles was found to contain a factor that promotes rapid growth in young growing chicks, even when fed all the known nutrients.

This new finding was announced on August 12 at the annual meeting of the Poultry Science Association at Storrs, Conn., by R. J. Lillie, Henry Menge, C. A. Denton, J. R. Sizemore, and H. R. Bird, poultry scientists of the Bureau of Animal Industry.

The new factor is found in fish solubles, fish meal, and meat meal. These appear to be the only important sourcesamong commonly-used feedstuffs. These animal byproducts have been generally recommended for use in feeds for growing chickens even though, in recent years, it has been possible to supply all the known nutrients without them. Results of the Beltsville experiments justify the use of animal byproducts, but a search for other likely sources has revealed that the factor is made by certain microorganisms that might be suitable for commercial development.

The effect of the new factor is more pronounced on the growth of males than on that of females and more pronounced on the growth of a fast-growing strain of chickens than on that of a slow-growing strain. On the basis of this information the Beltsville workers devised a 4 -week test to measure quantities of the unknown factor in feeds, using New Hampshire males of a fast-growing strain.

Although the effort of the unknown factor can be observed in 4 -week-cld chickens, it is still greater in 10-week-cld birds.

The practical importance of this research is indicated by the average weights of two lots of 10 -week-cld New Hamsphire male chickens. The group fed a diet composed of corn, soybean meal, and alfalfa meal, plus the known vitamins and minerals and an antibiotic, averaged 3.0 pounds. The group fed the same diet plus 5 percent fish meal averaged 3.4 pounds.

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## Pacific Oceanic Fishery Investigations

"HUGH M. SMITH" OBSERVES SKIPJACK SCHOOLS (CRUISE NO. 17): Hydrographic conditions prevailing near the end of the local skipjack fishery season in the vicinity of the Hawaiian Islands were studied by the Service's Pacific Oceanic Fishery Investigations (POFI) research vessel Hugh M. Smith on a cruise completed in September. A network of stations surrounding the main islands was visited and both plankton as well as hydrographic material was collected. Systematic observations of skipjack schools revealed a paucity of fish when compared with last year. Emphasis to the studies was added when the local skipjack fishery proved to be very poor this year as contrasted with an excellent season last year. Considerable effort was applied towards activating the skipjack study program in the vicinity of the Hawaiian Islands.

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\ddot{*} \because * *
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"HUGH M. SMITH" FINDS RICH TUNA RESOURCES EXTEND ALONG EQUATOR FAR TO EAST OF HAWAII (CRUISE NO. 18): Results of experimental fishing by the Hugh M. Smith corroborated earlier indications that the band of rich tuna resources along the equator extend continuously far to the east of Hawaii's longitude, perhaps all the way to the American coast. However, the tuna were only one-fourth as plentiful on these easterly grounds as they are in waters directly south of Hawaii. After a 47-day cruise, this research vessel of the Service's Pacific Oceanic fishery investigations returned to Honolulu on November 22.

Experimental long-line fishing and hydrographic work were carried out 2,000 miles southeast of Hawaii along two sections crossing the equator at $120^{\circ}$ and $130^{\circ}$ W. longitude with the object of determining the abundance of tuna in that area at this season of the year. Plankton samples, water temperatures, and chemical analyses of the sea water were used to study factors believed to be related to the presence of tuna.

Fifteen long-line fishing stations along $120^{\circ} \mathrm{W}$. between $10^{\circ} \mathrm{N}$. latitude and $10^{\circ} \mathrm{S}$. latitude indicated a low abundance of deep-swimming tuna (average tuna catch was 2.11 fish per hundred hooks). The distribution of the catches along the line did not form any pattern that could be related to variations in the environment. The results of the $l l$ stations on $130^{\circ} \mathrm{W}$. between $5^{\circ} \mathrm{S}$. and 90 N . were essentially the same as along $120^{\circ} \mathrm{W}$. (average tuna catch was 1.95 fish per hundred hooks).

Surface temperatures along both lines were in the low eighties in the countercurrent. On the equator, surface temperatures of around 730 F . were encountered. This drop was not gradual, rather being accomplished by two zones of rapid temperature change on both lines. The more northern zone was located at about $5^{\circ} \mathrm{N}$, and the second at about 20 N . The temperature change at each point was about $3^{\circ} \mathrm{F}$. Along $120^{\circ}$ the temperature change at $2^{\circ} \mathrm{N}$. was very abrupt, being accomplished over 100 yards of sea surface. The change zone was characterized by a narrow band of confused seas extending $E$. and W. as far as the eye could see. This zone was re-examined about 20 hours after the first encounter and had moved about 20 odd miles south of its previous location.

The cruise is important to fill out the knowledge regarding the limits and variability of the rich new tuna fishing grounds discovered last year by POFI research vessels about 1,200 miles south of Hawaii.

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"CAVALIERI" AND "JOHN R. MANNING" EXPLORE FOR TUNA: The Cavalieri returned from a commercial venture to the equatorial Pacific in September. An estimated total of 47 tons of tuna and 4 tons of marlin and shark were landed by the vessel. While the Cavalieri catch was not as great as expected, it did return with a capacity load. The vessel's brine wells were full and one dry box also was utilized for brine preservation of tuna. The other dry box carried the 4 tons of shark and marlin sold on the Honolulu market. Fishing was carried on for 31 days, but during the first 8 days was according to a preconceived plan to provide biological data and was not always in the most advantageous location. The daily catch during the 23 days of commercial fishing varied from a low of about one ton to a high of over 3 tons. Abundant fish were located the last four days, during which time 10.1 tuna per 100 hooks per day were captured. Fishing at this rate would have loaded the boat in 18 days, but hold capacity, fuel, fresh water, and food prevented the Cavalieri from remaining longer on the fishing grounds and taking greater advantage of the abundant tuna.

John R. Manning: This research vessel returned to Honolulu late in September. Fishing along $140^{\circ}$ and $150^{\circ} \mathrm{W}$. longitude, yellowfin catches were only moderately good. Special studies of comparing night and day catches as well as listing the time of day when the fish were caught occupied a portion of the cruise period. From the standpoint of contributing to the basic knowledge of the adundance and distribution of yellowfin tuna, the almost simultaneous cruises of the John $\underline{R}$. Manning and the Cavalieri were most successful.

SCOUTING METHODS FOR SKIPJACK TUNA STUDIED BY＂CHARLES H．GILBERT＂（CRUISE NO． 3 AND FLICHT NO．1）：A study of scouting methods for oceanic skipjack tuna in the central Hawaiian area was carried out by the Charles $H$ ．Gilbert．This vessel of the Service＇s Pacific Oceanic Fishery Investigations was accompanied by a U．S．Navy Flying Boat on this cruise，which was completed November 14 ．The prosecution of many of the ob－ jectives was severely limited by trade winds of fresh gale force， the apparent seasonal scarcity of fish，and vessel－design shortcomings．However，bait－ catching and holdingoperations were quite successful on the cruise．


SKIPJACK TUNA

Electro－narcosis tests on small bonefish，barracuda，puffer，and half－beaks indicated a wide range of variation between species，sizes，and individuals．The aerial survey results suggested the feasibility of surveys by plane but under bet－ ter weather conditions than encountered by the Charles $\underset{\text { ．Gilbert on this cruise．}}{\text { ．}}$

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FREEZING TECHNIQUE FOR PRESERVING PHOSFHATE SAMPLES TESTED BY＂CHARLES $H$ ． GILBERT＂（CRUISE NO．4）：Sea－water samples from depths of 50，300，and 500 me－ ters were collected off the coast of Waianae on November 19 by the Charles $H$ ． Gilbert．Some samples were frozen for analysis to test the validity of a freez－ ing technique for preservation of phosphate．Other samples collected were to be used to determine the rate of change of phosphate concentration over a period of a few hours after sampling．Initial analysis for phosphate was made immediately after samples were collected．Samples in plastic bags were simultaneously placed in an alcohol bath for freezing．The vessel returned to port on November 20.

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## Metal Cans－Shipments for Fishery Products，September 1952

Total shipments of metal cans for fish and sea food for September this year amounted to 11,295 short tons of steel（based on the amount of steel consumed in the manufacture of cans），an increase of 12 percent when compared with the corresponding month in 1951．This is based on a November 24 report issued by the Bureau of the Census．

For the first nine months of this year，metal－can shipments for fishery products totaled 85,582 short tons of steel as compared with 78，971 short tons of steel during January－September 1951.
NOTE：STATISTICS COVER ALL COMMERCIAL AND CAPTIVE PLANTS KNOWN TO BE PRODUCING METAL CANS． REPORTED IN BASE BOXES OF STEEL CONSUMED IN THE MANUFACTURE OF CANS，THE DATA FOR FISHERY PRODUCTS ARE CONVERTED TO TONS OF STEEL BY USING THE FACTOR： 23.0 BASE BOXES OF STEEL EQUAL ONE SHORT TON OF STEEL．


## Wholesale and Retail Prices

WHOLESALE PRICES, OCTOBER 1952: Prices for edible fishery products during October were lower than the previous month and for the same month of 1951. Although production was at about the same level as in September, a decline in demand was responsible for the lower prices. The edible fish and shellfish (fresh, frozen, and canned) wholesale index for October was 101.6 percent of the 1947-49 average (see table 1) - -6.0 percent lower than in September and 2.6 percent below October 1951, the Bureau of Labor Statistics of the Department of Labor reports.


From September to October the products included in the drawn, dressed, or whole finfish subgroup showed some marked price differences. The ex-vessel price for large offshore haddock in October was slightly higher than a month earlier in spite of the heavier production reported at Boston. Salmon prices at New York City weakened considerably during the period and were substantially lower than in October 1951. The large drop in halibut prices at New York City was caused by fluctuations in fresh halibut--some very small shipments of fresh West Coast halibut, which was in good demand, caused prices to rise considerably from August to September and then drop somewhat from September to October. However, prices for frozen West Coast halibut in October remained fairly steady with only some slight fluctuations. Whitefish prices at New York City and Chicago and yellow pikeprices at New York City during October declined from the very high September levels when the Hebraic holidays caused prices to rise abnormally. Because the more desirable sizes of lake trout were available at Chicago in October, prices for this variety were above those quoted in September. Drawn, dressed, or whole finfish prices as a group in October were 13.5 percent below the previous month and 2.2 percent lower than in October 1951.

Processed fresh fish and shellfish prices in October were 3.7 percent lower than in September and 2.3 percent above October 1951. The general decrease in
demand adversely affected haddock fillets and shrimp. However, compared with October 1951, shrimp prices at New York were 14.6 percent higher, but prices for fresh haddock fillets at Boston were 24 percent lower. Shucked oyster prices have remained steady for the past 12 months.

October prices for frozen processed fish and shellfish products were slightly weaker. Shrimp prices at Chicago during the month dropped 7.7 percent below September, but were still 12.4 percent higher than in October 1951。 Frozen fillets of flounder, haddock, and ocean perch in October 1952 all sold substantially below the same month a year earlier.

All items in the canned fishery products subgroup held steady at September prices with the exception of Maine sardines which increased 11.7 percent from September to October. Although the pack of Maine sardines this season was substantially higher than in 1951, it did not meet expectations nor the 1950 pack. Compared with October 1951, prices for Maine sardines were 16.8 percent lower and pink salmon 14.3 percent less. On the other hand, prices were higher for canned tuna by 13.7 percent and for California sardines by 38.8 percent. This season's sardine fishery in California seems a complete failure and not even a fair pack is expected.

RETAIL PRICES, OCTOBER 1952: Retail prices of all foods purchased by moder-ate-income urban families dropped ( 0.3 percent) from September 15 to October 15, but were higher ( 1.4 percent) than during the same period a year ago. This was the second straight month that these prices declined and is contrary to the trend of the past few years when prices rose at this time of year. Prices of all finfish (fresh, frozen, and canned) also declined ( 0.4 percent) from the previous month and were lower ( 4.3 percent) than a year earlier.

| Item | Base | I | N D E X E | 5 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Oct. 15, 1952 | Sept. 15, 1952 | Oct. 15, 1951 |
| All foods | $1935-39=100$ | 232.4 | 233.2 | 229.2 |
| All finfish (fresh, |  |  |  |  |
| frozen, and canned) | do. | 338.1 | 339.3 | 353.2 |
| Fresh and frozen finfish ........ | $1938-39=100$ | 292.2 | 291.5 | 294.7 |
| Canned salmon: pink | do. | 437.4 | 444.2 | 489.1 |

Retail prices for fresh and frozen finfish from September 15 to October 15 increased 0.2 percent, a normal increase for this time of year, but were 0.8 percent lower than in mid-October 1951. Canned pink salmon prices continued downward and were 1.5 percent lower than in mid-September and 10.6 percent below mid-October 1951. The canned pink salmon prices have declined continuously each month since June 1951。

| Table 3-Average Retail Prices and Price Ranges of Individual Finfish Products, |
| :--- | :--- | :--- | :--- | :--- |
| October 15,1952 |

1 PRICED IN 46 CITIES OUT OF 56.
2/PRICED IN 47 CITIES OUT OF 56 .

Frozen ocean perch fillets retailed at an average of 45.7 cents and frozen haddock fillets at an average of 50.7 cents per pound in mid-October this year. During the same period a year earlier, retail prices for frozen ocean perch fillets averaged 46.1 cents and frozen haddock fillets averaged 50.5 cents per pound. In mid-October canned pink salmon retailed at an average of 54.1 cents per 16 -oz. can, compared with 62.9 cents per can in mid-October a year ago.

## United States \& Alaska 1952 Fisheries Production Below 1951

CATCH: The estimated catch of fish and shellfish in the United States and Alaska during 1952 declined slightly in both quantity and value from that of 1951 。

The 1952 catch was estimated at 4.3 billion pounds, with an ex-vessel value of $\$ 335$ million. This was approximately 100 million pounds and $\$ 10$ million less than the previous year.

The decline in catch was due to smaller landings of California pilchard, Alaska herring, salmon, and ocean perch. Pilchard production was the lowest it has been since it first became a major fishery. The decreases in these four important fisheries during 1952 were only partially offset by increased landings of menhaden and Maine herring. The 1952 menhaden catch of 1.3 billion pounds established a new production record for this fishery.

CANNED FISHERY PRODUCTS: The 1952 pack of canned fishery products was expected to be slightly less than the previous year's 800 million pounds. Smaller packs of canned California sardines and salmon were almost offset by larger packs of Naine sardines, Pacific mackerel, and jack mackerel, and record packs of tuna and anchovies. Because the domestic catch of tuna in 1952 was about the same as in 1951 and considerably less than in 1950, the record pack of tuna was attributed to increased imports of frozen tuna for canning.


## WHALE MEAT FOR BABIES

Doctors at the University of Rochester announced that whale meat may become a nursery food for certain allergic babies, according to a Chicago press report. The University reports that processed whale meat appears to be a "milk" food that may be used for infents who are allergic to all other substitutes for mothers' milk.

