

# TRENDS AND DEVELOPMENTS

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

A total of 49 vessels of 5 net tons and over received their first documents as fishing craft during September 1954--17 less than in September 1953. Virginia, Florida east coast, and California had 6 vessels each.

Vessels Obtaining Their First Documents as Fishing Craft, September 1954 and Comparisons					
Section	September		January-September		Total 1953
	1954	1953	1954	1953	
	Number	Number	Number	Number	Number
New England . . . . .	1	2	22	18	20
Middle Atlantic . . . . .	1	1	14	16	19
Chesapeake . . . . .	9	14	76	67	83
South Atlantic . . . . .	14	10	97	79	116
Gulf . . . . .	11	27	283	183	264
Pacific . . . . .	12	9	100	148	164
Great Lakes . . . . .	-	-	3	5	7
Alaska . . . . .	1	3	23	46	53
Hawaii . . . . .	-	-	1	2	3
Unknown . . . . .	-	-	1	-	-
Total . . . . .	49	66	620	564	729

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

In the first nine months of 1954 a total of 620 vessels received their first documentation as fishing vessels as compared with 564 during the similar period a year earlier, according to the Bureau of Customs.

The Gulf States led in the documentation of fishing craft during January-September 1954 with 283 vessels. The Pacific Coast States followed with 100 vessels, while 97 vessels were documented in the South Atlantic States during the period.



### Alabama

COMMERCIAL FISHING WITH HOOP NETS IN TVA LAKES STUDIES: Commercial fishing studies with 1½-inch-bar hoop nets were conducted in the TVA lakes of Alabama with the cooperation of TVA biologists and Alabama State conservation officers during March, April, and May 1954. The primary purposes of these studies were to determine the usefulness of the hoop net as a commercial fishing gear and to determine the percentages of game and commercial fish taken with the size mesh and distances from the bank now legalized, the Fish Management Section of the Alabama Department of Conservation points out in a June 16, 1954, report.

Certain sport fishermen in the TVA area somehow got the idea during the early part of 1954 that the new commercial fishing law and regulations now in effect are completely different from the law and regulations which had been in effect in

the TVA lakes for the past nine years. They apparently thought that our present law and regulations would lead to the general depletion of the sport fisheries.

Approximately 2.1 million pounds of carp, buffalofish, catfish, spoonbill, drum, and sturgeon are taken from the Tennessee Valley Authority (TVA) lakes of Alabama annually. The value of these fish to the commercial fishermen is approximately \$500,000 annually. With commercial fishing, game fishing in these lakes has held up exceptionally well. Probably some of the best fresh-water sport fishing in the world is provided by the TVA lakes.



Fishing with a hoop net.

Because of the fact that game fishing had held up so well in the TVA lakes where large-scale commercial fishing has been practiced and because other lakes in Alabama where commercial fishing had not been practiced appeared to be producing less and less game fish annually, a statewide commercial fishing law was unanimously passed during the 1953 session of the Alabama Legislature. In brief, this law specified the types of commercial fishing gear that could be used, and provided the Director of the Department of Conservation regulatory powers to designate when, where, and how such devices could be used.

Basically there was little difference in the provisions of the statewide law passed in 1953 and the TVA commercial fishing law passed in 1945. The principal differences are in regulations eliminating seines and stationary fish traps and providing for legal nets to be fished up to 25 feet of the banks of impoundments. The purpose of the 25-foot bank limit was to provide one general regulation limiting the distance a commercial fisherman could use commercial fishing gear in the upstream tributaries emptying into an impoundment. This one regulation, therefore, eliminated numerous complicated regulations which would have been necessary to list the numerous markers limiting the distance that commercial fishermen could fish upstream on each stream on each impoundment opened to commercial fishing within the State.

A total catch of 4,810 pounds of fish was recorded from the commercial nets studied during March, April, and May 1954. Of this total poundage taken, 97.27 percent was commercial or rough species and only 2.73 percent game species. The catch of game fish was very small for each of the months studied. A breakdown of all fish caught by months showed that commercial or rough species made up 94.71, 98.84, and 94.47 percent of the total weight taken during March, April, and May, respectively. Neither was there any great catch of game fish at any of the distances beginning at 25 feet from the banks. Commercial species made up 93.58, 93.15, and 99.39 percent of the total weight of fish taken from nets set at 25 to 49 feet, 50 to 99 feet, and 100 or more feet, respectively.

Baited hoop nets yielded considerably larger catches of fish than unbaited hoop nets. However, there was no great difference in the percentages of commercial and game fish taken in baited or unbaited nets. Commercial fish made up 97.52 and 93.90 percent of the catch in baited and unbaited hoop nets, respectively.

Since commercial or rough species comprised 97.27 percent of the total weight of 4,810 pounds of fish taken by the commercial fishermen's nets studied, it would appear that the  $1\frac{1}{2}$ -inch-bar hoop net is a very effective and selective type of commercial fishing gear when used according to the present laws and regulations. In analyzing the data obtained to date, it appears wise to continue commercial fishing in the TVA area under our present laws and regulations.

**COMMERCIAL FISHING STUDIES IN THE TIDAL STREAMS OF MOBILE AND BALDWIN COUNTIES:** Intensive studies to determine the effects of commercial fishing with  $1\frac{1}{4}$ - to  $1\frac{1}{2}$ -inch bar trammel nets in the tidal streams of Mobile and Baldwin Counties of South Alabama were conducted from January through March 1954 by the Fish Management Section of the Alabama State Department of Conservation. Preliminary studies were conducted during November and December 1953.

These studies were initiated after commercial fishermen requested that they be allowed to fish tidal streams with small-mesh trammel nets, a recent report by the Principal Biologist of the Fish Management Section points out. They felt that no harm could be done to the game- and sport-fish populations through the use of small-mesh trammel nets. In fact, most commercial fishermen thought that the removal of the commercial or rough species of fish would actually benefit the game fish population by relieving some of the competition for fish foods. Then too, the commercial fishermen wanted to fish the tidal streams during the fall and winter months when great numbers of mullet from the Bay and Gulf areas normally migrate into these streams. The commercial fishermen also stated that it was impossible to fish the Bay and Gulf areas on many days during the winter months and especially during periods when winds prevail from the northwest.

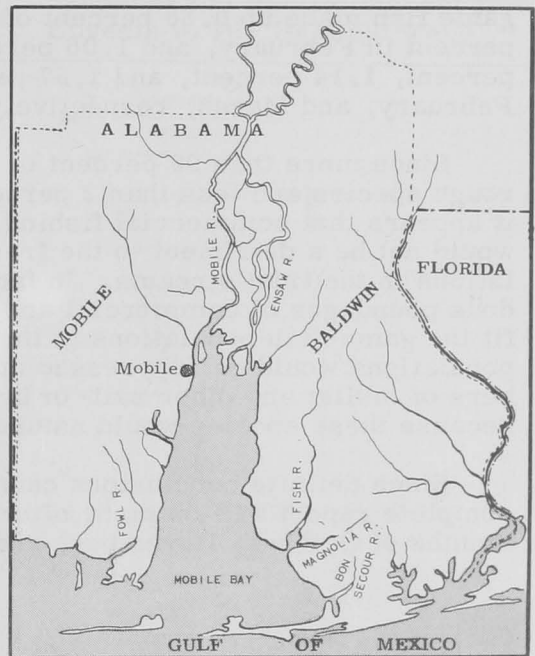
While commercial fishermen thought that they would do no harm to the game-fish species, many of the sport fishermen felt that the netting of tidal streams with small-mesh nets would be a detriment to the game-fish populations. In order to settle this controversy and arrive at a logical conclusion regarding the use of small-mesh trammel nets in tidal streams, officials of the Alabama Conservation Department decided that closely supervised and detailed studies should be conducted by fishery trained departmental personnel.

Prior to 1936 the tidal streams were opened to commercial fishing with small-mesh trammel nets. Since 1947 all tidal streams containing fresh-water game fish have been closed to commercial fishing with these small-mesh nets. Between 1936 and 1947 it was reported that many of the tidal streams or portions of these streams were opened and closed on several different occasions. Since search of departmental records failed to reveal any research studies concerning the effects of commercial fishing on sport fishing in tidal streams, it must be assumed that the opening and closing of tidal streams to commercial fishing was not based on scientifically-obtained data.

Streams studied during these experiments included Dog, East Fowl, West Fowl, and Little Rivers in Mobile County; and Fish River, Bon Secour River, Magnolia River, Hammock Creek, Palmetto Creek, Soldier Creek, Wolf Creek, Graham Creek, and Graham Bayou in Baldwin County.

Both day and night studies were conducted with the  $1\frac{1}{4}$ - to  $1\frac{1}{2}$ -inch bar trammel nets during January, February, and March. Beach, circle, and snake sets, with and without top nets, were made at various depths.

A total of 47,166 fish, turtles, and crabs were netted during the period of the experiments with a total weight of 38,471 pounds. Mullet, gar, blue catfish, shad,



suckers, and buffalofish made up 96.56 percent of the total weight. All fresh-water game fish netted constituted 0.57 percent of the total weight, while speckled sea trout made up 1.16 percent. The remaining 1.71 percent of the weight was made up of various species of commercial and rough or unusable fish, turtles, and crabs.

Commercial-fishing experiments were conducted during the day and at night. The greater catches of fish were recorded during the night experiments. However, there appeared to be no significant difference between the percentages of the weights of commercial and fresh-water game fish taken during the day or night experiments. A total of 26,027 pounds of fish were netted during the night experiments while 12,443 pounds were netted during the day studies. Mullet, gar, blue catfish, shad, suckers, and buffalofish made up 96.84 percent of the weight netted at night and 95.94 percent during the day. Fresh-water game fish constituted 0.67 percent of the night catch and 1.24 percent of the day catch while speckled sea trout made up 1.33 and 0.82 percent of the night and day catches, respectively.

The percentages of game, commercial, and rough species of fish netted were fairly constant during the months of January, February, and March. Mullet, gar, blue catfish, shad, suckers, and buffalofish made up 98.23 percent of the total weight of fish netted in January, 96.06 in February, and 95.76 in March. Fresh-water game fish made up 0.66 percent of the total weight of the fish netted in January, 1.01 percent in February, and 1.06 percent in March. Speckled sea trout made up 0.36 percent, 1.14 percent, and 1.67 percent of the total weight of fish netted in January, February, and March, respectively.

Since more than 98 percent of the total catch to date has been commercial or rough species and less than 2 percent fresh-water game fish and speckled sea trout, it appears that commercial fishing with  $1\frac{1}{4}$ - and  $1\frac{1}{2}$ -inch bar mesh trammel nets would not be a detriment to the fresh-water game fish and speckled sea trout populations in the tidal streams. In fact, it would seem that the removal of the tremendous poundages of commercial and competitive species of fish would actually benefit the game-fish populations in these streams. It is quite obvious that game-fish populations would be suppressed during the periods of the year when tremendous numbers of mullet and other salt- or brackish-water species migrate into the tidal streams because these species would naturally compete with game-fish species for food.

Since definite conclusions cannot be made until all studies are completed, a complete report will be made after additional detailed studies are made during the months of October, November, and December 1954.



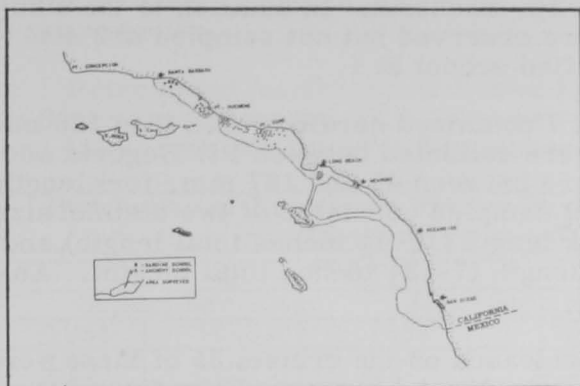
## California

### SARDINE ABUNDANCE SURVEY BY PLANE (Airplane Spotting Flight 54-2):

An aerial survey to determine the coastal distribution and approximate abundance of sardines off the coast of Southern California was made on October 2, 1954, by the California Department of Fish and Game's plane Beechcraft. The area surveyed included the inshore area between Santa Barbara and the California-Mexico border and around the southern end of Santa Catalina Island.

A total of 80 schools of fish were tallied and it was estimated that 74 of these were sardines. Estimation of the quantity of fish in these schools was difficult due to the present exploratory state of the aerial survey work. But from estimations based on information gathered from commercial aerial spotters it was probable that a few of the largest schools contained between 900-1,000 tons each. Most of the schools were smaller than this ranging from about 10 to 300 tons with an average of somewhere around 100-150 tons per school.

All the sardine schools observed off the Long Beach area were small (10-50 tons) crescent-shaped fast-moving surface schools. Most of the larger sardine schools in the area between Pt. Dume and Ventura were deep round- or oval-shaped schools that showed little evidence of movement.

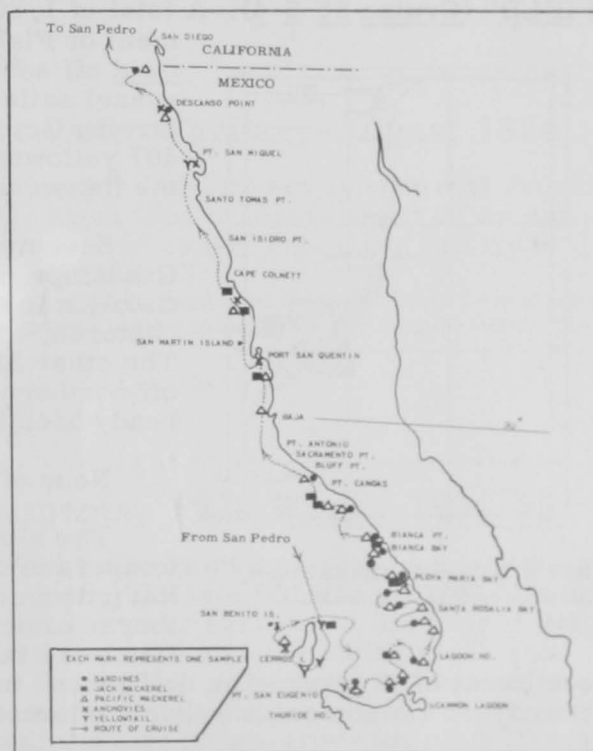


Airplane scouting flight 54-2 by State of California plane Beechcraft, October 2, 1954.

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**"YELLOWFIN" FINDS SARDINES AND PACIFIC MACKEREL ABUNDANT OFF SOUTHERN BAJA CALIFORNIA (Cruise 54-Y-9):** Sardines and Pacific mackerel were abundant along the California coast from Pt. Eugenia to Pt. Baja but were

scarce in the area from Pt. Baja to the California-Mexico boundary and around Cedros Island. This was the finding of the California Department of Fish and Game's research vessel Yellowfin on a 23-day cruise completed at Los Angeles on October 7. The cruise was designed to census fish population with the blanket net with special emphasis on sardines, Pacific mackerel, jack mackerel, and anchovies along the coast of northern Baja California. Seventeen percent of the light stations occupied yielded sardines as compared with 28 percent in the same area during the 1953 survey. Sardines appeared about equally abundant as in 1953 in the area from Pt. Eugenia to Pt. Baja. There appeared to be less sardines north of Pt. Baja than in 1953. Anchovies were scarce in Sebastian Viscaïno Bay but were more numerous north of Pt. Baja.



M/V Yellowfin, Cruise 54-Y-9, Sept. 14-Oct. 7, 1954.

The Yellowfin traveled a total of 619 miles while scouting for fish. A total of 466 schools were observed, of which it was estimated that 21 contained sardines, 47 Pacific mackerel, 67 anchovies, 267 sauries, and 6 large fish (believed to be bonito). An additional 22 schools were estimated to contain either sardines or round herring.

Other species taken by the blanket net included: halfmoon, saury, round herring, lizardfish, top smelt, jack smelt, squid, flyingfish, needlefish, and triggerfish.

Sea surface temperatures ranged from 14.50°C. (58.1°F.) to 22.05°C. (71.7°F.). Sardines were taken where surface temperatures ranged from 15.65°C. (60.2°F.) to 21.80°C. (71.2°F.).

A total of 93 light stations were occupied yielding 16 samples of sardines, 6 of anchovies, 9 of jack mackerel, and 23 of Pacific mackerel. In addition to the samples collected, sardines or round herring were observed but not sampled at 2 stations, Pacific mackerel at 1, and an unidentified school at 1.

Of the 16 samples of sardines collected, 7 contained sardines less than 125 mm. standard length ( $5\frac{3}{4}$  inches total length) and were collected between Pt. Eugenia and Pt. Baja. All the jack mackerel sampled were between 47 and 197 mm. fork length ( $2\frac{1}{4}$ - $8\frac{1}{2}$  inches total length). Pacific mackerel sampled consisted of two distinct size groups, one ranging from 37 to 100 mm. fork length ( $1\frac{3}{4}$ - $4\frac{1}{2}$  inches total length) and the other ranging from 167 to 320 mm. fork length ( $7$ - $13\frac{1}{2}$  inches total length). Anchovies were sampled only north of Pt. Baja.

A total of 70 yellowtail were tagged and released on the cruise; 35 of these were tagged with the plastic jaw tag and 35 with the vinylite tubing tag. Fifty-five of the yellowtail tagged were in areas where no previous tagging had been done (Sebastian Viscaino Bay northward to and including Todos Santos Bay).

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**ALBACORE TUNA AND YELLOWTAIL TAGGING CONTINUED BY "N. B. SCOFIELD" (Cruise 54-S-4):** A total of 1,867 fish was tagged by the California Department of Fish and Game's research vessel N. B. Scofield off southern California and Baja California. The vessel sailed from Los Angeles August 2 and before returning October 1, 1954, had tagged 1,456 albacore tuna, 407 yellowtail, 3 skipjack tuna, and 1 bluefin tuna. All the fish were tagged with the type "G" spaghetti tag.



M/V N. B. Scofield, Cruise 54-S-4, albacore tagging, Aug. 2-Oct. 1, 1954.

southwest of Pt. Arguello, in "green" water. These albacore tuna were feeding heavily on the numerous schools of small anchovies.

Seventy-two of the yellowtail were captured at Guadalupe Island, and tagged and released at Santa Catalina Island. Seven of these have already been recaptured, all in the same general area as released. The other 335 yellowtail were captured and released off northern Baja California, and 25 of these have already been recaptured.

None of the tagged albacore has so far been retaken.

The albacore were captured in water of a surface temperature ranging between 57.9° F. and 70.0° F. Bathythermograph observations indicated the top of the thermocline at from 200 to 270 feet depth. Many of the fish were tagged in an area between 40 and 80 miles



## Federal Purchases of Fishery Products

**PURCHASES OF FRESH AND FROZEN BY DEPARTMENT OF THE ARMY, SEPTEMBER 1954:** For the military feeding of the U. S. Army, Navy, Marine Corps, and Air Force, the Army Quartermaster Corps in September 1954 purchased fresh and frozen fishery products amounting to 2,842,611 pounds, valued at \$1,055,838 (see table). This was an increase of 27.2 percent in quantity and 8.0 percent in value as compared with August, and greater by 24.0 and 3.0 percent, respectively, than purchases in September 1953.

Army Quartermaster Corps purchases of fresh and frozen fish during the first nine months in 1954 totaled 18,984,900 pounds (valued at \$7,783,898), 11.3 percent lower in quantity and 16.3 percent less in value as compared with the similar period a year earlier.

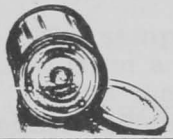
Prices paid for fresh and frozen fishery products by the Quartermaster Corps in September averaged 37.1 cents per pound as compared with 43.8 cents in August and 43.4 cents per pound in September 1953.

Purchases of Fresh and Frozen Fishery Products by Department of the Army (September and First Nine Months of 1954)							
QUANTITY				VALUE			
September		Jan. -Sept.		September		Jan. -Sept.	
1954	1953	1954	1953	1954	1953	1954	1953
Lbs.	Lbs.	Lbs.	Lbs.	\$	\$	\$	\$
2,842,611	2,292,199	18,984,900	21,406,211	1,055,838	1,025,071	7,783,898	9,294,731

In addition to the purchases of fresh and frozen fishery products indicated above, the Armed Forces generally make some local purchases which are not included in the above figures. Therefore, actual purchases are somewhat higher than indicated, but it is not possible to obtain data on the local purchases made by military installations throughout the country.



### Cans--Shipments for Fishery Products, January-August 1954



Total shipments of metal cans for fish and sea food during January-August 1954 amounted to 72,077 short tons of steel (based on the amount of steel consumed in the manufacture of cans), compared to 74,424 short tons for the same period last year.

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.



### Fishery Products Marketing Prospects, Fall-Winter 1954/55

**CONSUMPTION AND RETAIL PRICES:** The United States civilian consumption of fresh and processed edible fishery products during the late fall and winter (1954/55) is expected to be close to the per-capita rate of a year earlier. Supplies during this period are expected to be a little larger than in the corresponding months of 1953/54, especially if imports of frozen and canned fish continue at the rate of preceding months. Retail prices of fishery products during the period may average a little lower than a year earlier. Not only will the somewhat larger supplies this fall and winter have a moderating effect on prices, but competition from meats and poultry products is expected to be much keener than last fall and winter.

**CATCH, FREEZINGS, AND HOLDINGS:** Commercial landings of fishery products for sale in the fresh or frozen forms probably will be close to those of a year earlier during the fall and winter months unless weather conditions alter the seasonal pattern of fishing operations. However, supplies are expected to be up some during the next several months because of larger cold-storage stocks this October 1 than last year and the heavier imports in prospect for the next several months than a year earlier. Stocks of frozen fishery products in the United States and Alaska on

October 1 totaled 202 million pounds, up 16 percent from those of a year earlier. Imports of frozen fish fillets and blocks (used in producing "fish sticks") have been coming in at a much faster rate this year than last, and prospects are that imports will continue at this rate well into the winter season.

CANNED FISH: Domestic supplies of canned fishery products through mid-1955, when the new pack season begins, probably will be at least as large as a year earlier. The packs of canned salmon and Maine sardines indicated for 1954 are a little larger than those of last year, and the pack of canned tuna, which has been running ahead of the 1953 pack, may set a new record this year. However, the pack of canned mackerel is down. The total pack is expected to be supplemented by heavier imports of canned fish in the next several months than in the corresponding part of 1953/54.

Through July 1954 imports of major species of canned fish were about 6 percent higher than in the same period of 1953, and prospects are that they will continue heavier than a year earlier into the coming spring season. During the first seven months of 1954 exports of major canned fish items totaled almost a fourth smaller than in the same period of 1953, and prospects are that they will continue at a lower level at least until the new packs become available in 1955.

This analysis appeared in a report prepared by the Agricultural Marketing Service, U. S. Department of Agriculture, in cooperation with the U. S. Fish and Wildlife Service, and published in the former agency's October 29 release of The National Food Situation (NFS-70).



## Florida

FISHERIES RESEARCH BY UNIVERSITY OF MIAMI MARINE LABORATORY, APRIL-JUNE 1954: Mullet: The mullet research program at the University of Miami Marine Laboratory proceeded as planned; several field trips to collect samples were made during April-June 1954. On one trip up the Florida west coast 51 tagged mullet were recovered from fishermen and smaller numbers were picked up on other occasions. Concerning the tagging, considerable attention is being given to mortality rates of the mullet as revealed by tags. In this connection a new type of tag is being sought which will give more accurate results than the Petersen tag now in use. The Petersen tag has a tendency to be caught in the fishermen's nets, giving an incorrect value for mortalities. Several possibilities are being considered, according to the Florida State Board of Conservation's Quarterly Report on Fishery Research, June 1954.

Mullet Fish Sticks: More attention is being given to problems of marketing fresh fish, particularly mullet, in Florida. A greatly expanded program is planned for the coming year. Meanwhile attempts are being made to develop new products to replace the old method of marketing mullet in the round. One such method is the production of mullet "fish sticks."

In cooperation with the Southeastern Fisheries Association and a St. Simons Island, Georgia, firm, mullet fish sticks were made up on an experimental basis.

Organoleptic taste-panel tests were run on these mullet sticks at the Marine Laboratory and consumer acceptance tests were run at the Annual Convention of the Southeastern Fisheries Association in Jacksonville in June. In these tests fish sticks made from mullet were compared with commercial varieties made from cod and haddock. Results of both tests were similar and showed that mullet fish sticks would be acceptable to the public. Many people expressed a preference for mullet



over the other varieties, although somewhat more thought the leaner cod and had-dock were superior. It now remains to be determined whether mullet can be produced cheaply enough to compete with New England varieties. This aspect of the problem is being studied.

Shrimp Reaction to Electrical Stimulus: During the quarter the final experiments were run to test reactions of shrimp to electrical stimuli. At 10 milliamperes per square inch, tests were run at 2.5 and 7 pulses per second and at current ratios of 1:49, 1:24, 1:9, 1:3, and 1:1. These same variables were also run at 15 and 20 milliamperes per square inch. Since it was thought that temperature might affect the reactions of the shrimp, tests were run at "optimum" electrical conditions at constant temperatures ( $\pm 1^{\circ}$  C.) of 20, 25, and 30 $^{\circ}$  C. At 20 $^{\circ}$  C., 66 percent of the reactions were positive; at 25 $^{\circ}$  C., 78 percent were positive; and at 30 $^{\circ}$  C., 63 percent were positive.



### Frozen Fish Retail Survey in Washington, D. C.

A survey of the availability and display of frozen foods (including fishery products) was made in 27 chain and independent retail stores in Washington, D. C., from August 3 to September 12, 1953, according to Marketing Research Report No. 73, a U. S. Department of Agriculture publication of August 1954.

The sample of stores was drawn from a list of all stores in the City that handled frozen foods and did an annual business of \$75,000 or more. The sample consisted of 8 small, 8 medium, and 11 large stores.

There were 153 different frozen food items on sale in the sample stores during the 6 weeks period, including 21 fishery products. Not all of the fishery items were for sale in all stores; the small stores averaged 6, the medium 7, and the large 13 items, making an over-all average of 9 (see table).



During the 6 weeks, frozen food sales averaged \$0.79 per square inch of display space for all stores. Fishery products occupied 10.2 percent of the space and accounted for 7.2 percent of the sales. Fishery products accounted for more than twice the proportion of the total space in the large stores as in either the medium or small stores. Sales of fishery products were the smallest of any commodity group in relation to the average proportion of space devoted to them in all stores. However, the ratio of percentage of sales to percentage of space was considerably better in the small-store group than in the others.

Returns from the sale of fishery products were next to the lowest of any category, with an all-store average of \$0.56 per square inch. Average returns were \$0.24 per square inch in the small and medium stores, and \$0.63 in the large stores.

Among the fishery products sold, breaded shrimp had the highest rank in sales values followed by haddock, and perch (understood to be ocean perch). Unbreaded

Retail Frozen Fishery Products Availability and Display Survey, Washington, D. C., August 3-September 12, 1953

Item	Stores Handling	Total Sales	Rank in Total Sales	Sales Per Sq. Inch	Brands Available	Item	Stores Handling	Total Sales	Rank in Total Sales	Sales Per Sq. Inch	Brands Available
	Number	\$	Number	\$	Number		Number	\$	Number	\$	Number
Frozen Packaged:						Breaded and/or Cooked:					
Cod	17	311.11	53	.37	8	Cod	5	.38	144	.00	2
Crabs	4	55.08	101	.45	1	Codfish cakes	10	203.03	63	.43	2
Flounder	21	595.26	32	.68	8	Crab cakes	20	357.06	48	.52	3
Frog legs	4	114.40	84	.38	1	Crab, deviled	13	177.97	68	.38	5
Haddock	26	1,456.10	15	.74	11	Crab meat	3	7.12	127	.05	5
Halibut	15	485.18	38	.54	7	Filleta	2	4.68	134	.09	1
Herring roe	1	-	-	-	1	Fish cakes	2	3.56	137	.06	1
Herring	5	13.71	122	.10	1	Fish sticks	5	13.78	121	.15	2
Lobster tails	16	419.77	41	.50	3	Flounder	4	26.23	114	.58	2
Mackerel	2	30.68	112	.21	1	Haddock	14	302.77	57	.80	4
Oysters	10	120.04	81	.40	5	Herring	1	4.13	136	.14	1
Perch (ocean perch)	26	1,180.16	18	.67	9	Oysters	16	106.28	86	.19	6
Rockfish	5	146.99	75	.75	2	Perch (ocean perch)	6	47.83	105	.27	3
Salmon	16	310.37	54	.37	4	Rockfish fillets	2	72.05	90	.97	1
Scallops	19	163.08	71	.24	8	Scallops	19	297.00	58	.49	6
Shrimp	25	714.19	26	.65	9	Seafood dinner	16	334.51	51	.48	3
Sole	17	533.50	37	.61	8	Shrimp	27	2,595.40	11	1.21	12
Swordfish	8	166.89	70	.96	3	Smelts	1	.78	143	.26	1
Trout, mountain	4	74.76	89	.98	2						
Trout, sea	6	307.65	55	.51	2						
Whiting	8	408.74	44	.62	3						

shrimp was fourth in rank, followed by flounder, sole, and halibut. Lobster tails ranked eighth and whiting ninth. It is astounding that precooked seafood dinners had the tenth place; cod and salmon ranked eleventh and twelfth, respectively.



## Great Lakes Fishery Investigations

### TRAWLS TESTED FOR CHUBS IN LAKE MICHIGAN BY "CISCO" (Cruise VIII):

New trawls, designed to catch chubs or bloaters (*Leucichthys hoyi*) in quantity, were tested in Lake Michigan off Grand Haven by the Service's research vessel *Cisco*. The vessel, on a 12-day fishery and limnological survey of southern Lake Michigan, completed the cruise at Grand Haven on October 10. The nets tried had various combinations of 3-, 2½-, 2-, and 1½-inch mesh (stretched measure) netting in the wings and bodies and all had 1½-inch mesh cod ends. It appeared that a net made up of 2½-inch mesh in the wings, 2-inch mesh in the body, and 1½-inch mesh in the cod end was most efficient in capturing chubs. However, not enough tows were made with each net to justify a firm conclusion. A close similarity in the length-frequency distributions of fish caught in the different nets indicates that selectivity is controlled by the size of mesh in the cod end. Differences in efficiency which may develop between nets with similar cod ends but with different mesh sizes in wings and body probably can be attributed to causes other than differences in escape-ment.

Trawls tested in previous cruises were rigged so that they fished with a small vertical opening. New trawls tested during this cruise had heavier lead lines and a greater number of head-line floats so that they would open wider vertically.

Samples taken at various depths (0-130 feet) during the intensive study contained very little phytoplankton. Trawls towed at middepth through a "scattering" layer that appeared at night on the fathometer between 10 and 15 fathoms below the surface produced a few spottail shiners (*Notropis hudsonius*) and small coregonids.

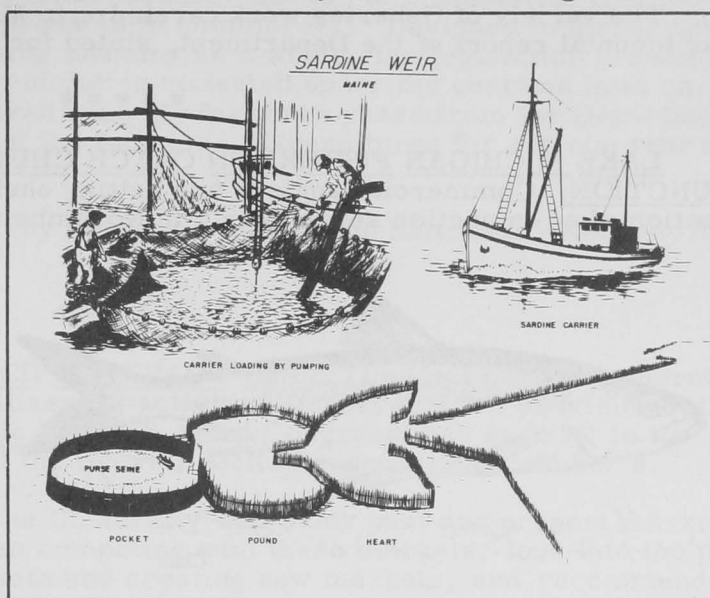
Two transects were made across Lake Michigan, one from Grand Haven to Milwaukee and the other from Manitowoc to Ludington. Six hydrographic stations were visited along the transects. Experimental nylon and linen gill nets were set at 25 and at 50 fathoms off Grand Haven. Fish populations were sampled with trawls towed at various depths off Grand Haven and Ludington, and in the area between Milwaukee and Port Washington, and between Sheboygan and Manitowoc. Bathythermograph casts were made at five-mile intervals along the transects and at all stations. A six-hour intensive limnological study was made off Grand Haven.



## Maine

**SARDINE CANNING SEASON CLOSES NOVEMBER 30 WITH AVERAGE-SIZE PACK:** The 1954 Maine sardine packing season officially ended at midnight November 30, according to a release from the Maine Sardine Industry. Although total production figures have not been compiled as yet, the industry's Executive Secretary said that the pack was of average size and would run well over two million cases. (Editors' note: Latest reports indicate a pack of almost three million standard cases-- 100  $\frac{1}{4}$  drawn cans per case.)

Only 2 or 3 of the state's 44 plants remained open until the final day. Most of the others had been shut down for several weeks due to a scarcity of fish. Activity is due to start again next April 15, when the 77th consecutive packing season will get under way.



The Executive Secretary said that distribution of the fish supply had been somewhat better than during the previous three years, yet the former large runs in Eastern Washington County waters did not develop. A large percentage of the volume was packed in the area from Portland to Jonesport.

He said that sales were running about normal and predicted that the industry would have no trouble disposing of its inventories during the winter months. Generally the fish, and therefore the production, was of excellent quality, he stated.

Packing activity started earlier than usual this season (fish were caught in late April) and continued on a fairly regular scale during the following seven months.



## Michigan

**FISHERIES PROGRAM POLICIES:** Michigan fisheries workers in the coming year of operations will be guided by a six-point policy program that in recent years has defined the objectives of their work, a bulletin from the Michigan Department of Conservation points out.

The official policy states that the Conservation Department's Fish Division will:

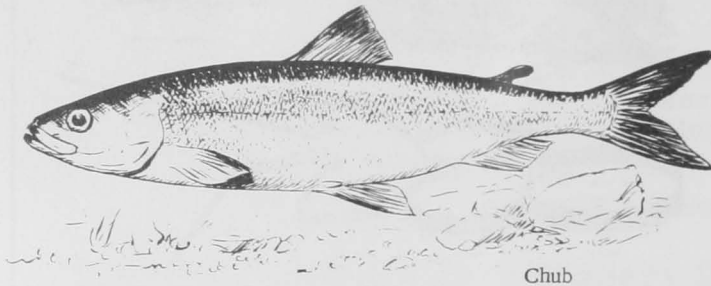
- (1) Continue and increase the present active program to improve fish habitat;
- (2) Acquire, develop, and maintain additional lands to insure public access to lakes and streams;
- (3) Continue the present active program of practical fisheries research with special emphasis on warm-water fish problems;
- (4) Restrict the planting of warm-water species of fish to waters where such desirable species are not present or for replacement when winter kill or some other catastrophe had destroyed the population;

- (5) Raise and plant trout of legal, sublegal, and fingerling sizes; and
- (6) Use regulations as a tool in shaping a better fish management structure.

The variety of fisheries work carried on in Michigan is summarized in the regular biennial report of the Department, slated for publication in the near future.

\* \* \* \* \*

LAKE MICHIGAN FISHERMEN CATCH CHUBS UNDER PROTECTION OF INJUNCTION: Commercial anglers are netting chubs out of Lake Michigan under protection of an injunction served early in November against the Director of the Michigan Department of Conservation, according to a recent bulletin from that agency. The injunction enjoins the Director from enforcing the closed season on chubs in Lake Michigan during November.



Chub

The fishermen asked the Director in late October to open the season because the chub population is high and in need of harvest. The Director answered that he had no legal authority to open the season. Under the statute, fishing for chubs is not permitted in the Great Lakes during November.

The Director stated that the Conservation Department would oppose the injunction. "We are asking that the bill be dismissed and the injunction dissolved," he said.

The law was put into effect in the early 1930's to protect lake trout, which spawn during November. However, in recent years the sea lamprey has virtually wiped out lake trout in Lake Michigan and the need for the law has been reduced.



## Saltonstall-Kennedy Act Fishery Projects

SHRIMP INDUSTRY ECONOMIC RESEARCH STUDY: The first economic research project to be conducted by the U. S. Fish and Wildlife Service under the Saltonstall-Kennedy Act (Public Law 466, 83rd Congress) will be an economic study of the shrimp industry, Secretary of the Interior McKay announced November 8.

The project's main emphasis will be on finding better ways of distributing and marketing shrimp. Recommendations to this effect were made recently by the Gulf States Marine Fisheries Commission and the Atlantic States Marine Fisheries Commission.

To initiate the work, the Service has enlisted the services of Charles A. Carter, formerly with the U. S. Tariff Commission and an expert in fisheries matters. Contracts with leading marketing research firms also are being let. Independent research by the Service's Branch of Commercial Fisheries also will be conducted.

The domestic shrimp industry produces about 225 million pounds of shrimp annually, valued at around \$50 million. The industry provides a livelihood for approximately 15,000 fishermen and contributes to the income of another 15,000 em-

ployees in shore establishments numbering around 600. Shrimp are distributed by about 1,500 wholesale firms and 170,000 retail stores.

The basic purpose of the Saltonstall-Kennedy Act is "to promote the free flow of domestically produced fishery products in commerce." Designed to strengthen the United States commercial fishing industry as a whole, the legislation provides that an amount equal to 30 percent of duties collected under the customs laws on fishery products shall be transferred annually for three years from the Department of Agriculture to the Department of the Interior. Expenditures for any one year may not exceed \$3 million.

This project is being financed by funds provided by the Saltonstall-Kennedy Bill, P. L. 466 (83rd Congress).

\* \* \* \* \*

FLORIDA FISHERY RESEARCH CONTRACT LET: The first contract whereby the Fish and Wildlife Service localizes its activities in carrying out provisions of the Saltonstall-Kennedy Act (Public Law 466, 83rd Congress) has been let to the University of Miami, Secretary of the Interior McKay announced November 8.

Under terms of the contract the University will study past and present markets for Florida fish, investigate forces competing with these markets, look into the possibility of expanding present markets and creating new markets, and recommend changes in methods of handling, preserving, packaging, shipping, and selling Florida fish.

The University, which serves as the official fishery research arm of the Florida State Board of Conservation, reports through its Marine Laboratory staff that the Florida fisheries for finfish are suffering heavily from declining markets. This condition has become so serious that many dealers have ceased operations in recent months, while others are holding on precariously, taking losses in the hope that conditions will improve. In many areas fishing has been greatly curtailed, with fishermen frequently being placed on catch quotas.

Mullet is the chief food fish in Florida's commercial catch, and the market for this species has declined sharply. The markets for grouper, Spanish mackerel, and other Florida species also are on the decline. Through implementation of provisions in the Saltonstall-Kennedy Act, the Service hopes to alleviate the situation.

This project is being financed by funds provided by the Saltonstall-Kennedy Bill, P. L. 466 (83rd Congress).



### South Carolina

FISHERIES RESEARCH AT BEARS BLUFF LABORATORIES, JULY-SEPTEMBER 1954: Oysters: Further study is needed on the experiment to test the usefulness of scrap asphalt roofing shingles as a substitute oyster cultch at the State of South Carolina's Bears Bluff Laboratories, Wadmalaw Island. However, information so far obtained indicates that scrap asphalt shingles broadcast on oyster beds is subject to wave action and does not stay in place. Shingle scrap held in wire baskets indicates that although they collect some few young oysters, setting intensity is much less on shingle than shell. Wire baskets of shell placed alongside wire baskets of shingle scrap in June when examined in September showed that the oyster shell were completely covered with



young oysters while only about  $6\frac{1}{2}$  percent of the shingle strips supported young oysters, and these were noticeably smaller than those caught on shell cultch.

**Shrimp:** During this quarter, 88 regular standard drags were made and the hauls analyzed. In addition, a considerably larger number of experimental tows were made to determine the selectivity of different net mesh sizes. Sufficient information has accumulated now on selective gear that as soon as time is available a report showing the selectivity of various mesh sizes can be written.

In general, the entire shrimp picture in South Carolina is not as good this year as last. Due possibly to unusually dry weather, the shrimp season got a late start. After rather poor fishing in July and August, catches picked up in September to about normal. Unfortunately, the price of shrimp this year has fallen far below that of last year. Whereas the average price of shrimp in 1953 was slightly more than 60 cents a pound ex-vessel, the price ranged from 15 to 35 cents a pound this year.

**Salt-Water Ponds:** In a small ( $1/10$  of an acre) pond a few brown shrimp (*Penaeus aztecus*) were held in captivity from mid-June to September 8. The result of this experiment gives some indication of the rate of growth and the mortality of shrimp. The results of this experiment cannot be accepted as final since the number of shrimp used in the experiment was small and the possibility of recruitment cannot be entirely discounted. The average size of the shrimp stocked in mid-June was 4 inches in length. Those recovered, one month and ten days later, averaged 5 inches. Thirty-eight percent of those stocked in June were not recovered in July and presumably died. A portion of the shrimp recovered in July were again stocked in the pond. By September 8 the average shrimp was  $6\frac{1}{4}$  inches. The recovery was considerably less and apparently 60 percent of those stocked in July died or were not recovered by September 8.

Two other experiments in the large ponds at Bears Bluff are now under way. In June, 7,000 small white shrimp (*P. setiferus*) were stocked in one pond. The average size of these shrimp was 3 inches. The pond was to be drained in mid-October at which time growth and mortality would be determined. The flood gate to this pond was screened with  $\frac{1}{4}$ -inch hardware cloth in an attempt to keep out all but very small shrimp and fish. The other large salt-water pond was left as a control. No attempt was made to screen out fish or shrimp and no shrimp were stocked in this pond. In October when this pond is drained the shrimp taken will be the result of the natural recruitment of shrimp to the pond.

A report dealing largely with the economics of salt-water pond production is in progress. This indicates that a one-acre salt-water pond will yield, under management, from 6- to  $8\frac{1}{2}$ -percent return on the amount of money necessary to construct a pond plus the cost of operation.



## U. S. Fish Stick Production Continues High in Third Quarter

Approximately 34.8 million pounds of fish sticks, the popular new breaded food item, were produced in the United States during the first nine months of 1954, the Service's Branch of Commercial Fisheries revealed November 9 (see table). This compares with about 2.2 pounds for the same period last year.

After the limited output of 1953's first nine months, a fish-stick boom, which has given new life to the commercial fishing industry, began in October of that year when monthly production first rose above the one-million-pound mark. Monthly output cleared the 2-million-pound mark in December 1953, and increased steadily to March 1954, when 4.1 million pounds were reported. Monthly production hit a rec-

ord high in June--4.4 million pounds--and averaged 4.2 million pounds in the third quarter. Total output for the year is expected to reach 50 million pounds, as compared with 7.5 million pounds last year.

Fish sticks are uniformly shaped pieces of fish dipped in batter, breaded, and frozen in consumer-size packages. Closely resembling French-fried potatoes in

U. S. Fish-Sticks Production, January-September 1954

Month	Cooked	Uncooked	Total
January . . . . .	2,491,000	335,000	2,826,000
February . . . . .	2,920,600	321,300	3,241,900
March . . . . .	3,650,300	439,800	4,090,100
April . . . . .	3,357,900	450,600	3,808,500
May . . . . .	3,463,000	445,700	3,908,700
June . . . . .	4,072,500	361,200	4,433,700
July . . . . .	3,329,800	456,800	3,786,600
August . . . . .	3,925,800	459,800	4,385,600
September . . . . .	3,774,400	519,400	4,293,800
Total Jan. -Sept. 1954 . . . . .	30,985,300	3,789,600	34,774,900
Total Jan. -Dec. 1953 . . . . .	1/	1/	7,501,900

1/Breakdown not available.

appearance, they can be purchased in precooked or uncooked form. The precooked sticks, which have been deep-fat fried before freezing, are easily heated in the oven at home for serving. The uncooked sticks are designed for those housewives who prefer to do the frying themselves. Consumer acceptance of fish sticks has been so widespread that some sources expect them to do for the fishing industry what fruit juice concentrates have done for the citrus fruit trade.

Note: See Commercial Fisheries Review, April 1954, p. 29.



## U. S. Foreign Trade

EDIBLE FISHERY PRODUCTS, AUGUST 1954: United States imports of fresh, frozen, and processed edible fish and shellfish in August 1954 amounted to 83.1 million pounds (valued at \$18.3 million), according to a Department of Commerce sum-

United States Foreign Trade in Edible Fishery Products, August 1954 with Comparisons

Item	Aug. 1954		Aug. 1953		Year 1953	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 Lbs.	Million \$	1,000 Lbs.	Million \$	1,000 Lbs.	Million \$
IMPORTS:						
Fish & shellfish: Fresh, frozen & processed <sup>1/</sup>	83,083	18.3	79,078	17.3	724,656	193.2
EXPORTS:						
Fish & shellfish: Processed <sup>1/</sup> only (excluding fresh and frozen)	4,080	0.9	2,889	0.8	58,920	14.4

1/ Includes pastes, sauces, clam chowder and juice, and other specialties.

mary tabulation (see table). This was an increase of 1 percent in quantity and 2 percent in value as compared with July imports of 82.5 million pounds (valued at \$17.9 million). Compared with a year earlier, August imports were up 5 percent in volume and 6 percent in value.

Exports of processed edible fish and shellfish (excluding fresh and frozen) in August 1954 totaled 4.1 million pounds (valued at \$0.9 million)--an increase of 25 percent in quantity and 13 percent in value as compared with July exports of 3.3 million pounds (valued at \$0.8 million). August exports were up 41 percent in quantity and 13 percent in value as compared with a year ago.



\*\*\*\*\*

**IMPORTS OF GROUND FISH FILLETS SET NEW RECORD:** United States imports of cod, haddock, hake, pollock, cusk, and ocean perch fillets during the first ten months of 1954 amounted 117.7 million pounds--nearly 10 million pounds greater than the entire former record year 1952, when 108 million pounds of groundfish fillets were imported (see graph in Fishery Indicators section).

The increase in imports of groundfish and ocean perch fillets during 1954 is largely due to the importation of blocks and slabs for use in the production of fish sticks. Production of fish sticks during the first nine months of 1954 is estimated at about 35 million pounds.



**U. S. Marine-Animal Oil Production and Foreign Trade, 1953/54**

The total estimated United States production of fish, whale, and seal oils (excluding cod oil and fish-liver oils) during 1954 will be about 160 million pounds, based on an October 1 estimate. This is an increase of 7 percent as compared with

Items Grouped by Major Use	Production October-August		Stocks on Hand August 31	
	1953/54	1952/53	1954	1953
. . . . . (Millions of Pounds) . . . . .				
Soap fats & oils:				
Fish oil . . . . .	124.2	115.4	37.6	59.8
Whale and seal oils . . . . .	-	-	1/	.3
Other industrial oils & fats:				
Sperm oil . . . . .	-	-	8.6	8.6
Cod oil and fish-liver oils . . . . .	1.3	1.2	5.9	6.4
Grand Total . . . . .	125.5	116.6	52.1	75.1

1/Breakdown not available.

the 1953 production of 150 million pounds and 8 percent higher than the 1952 production of 148 million pounds, but 28 percent below the 1937-41 average annual output of 223 million pounds. During the period October 1953-August 1954, fish-oil output from domestic and imported materials totaled 124.2 million pounds as against 115.4 million pounds in the same period a year earlier (table 1).

Inventories of marine-animal oils in the United States on August 31 totaled 52.1 million pounds, 9 percent less than a month earlier and 31 percent below the previous year (table 1). Fish oil comprised the bulk of the stocks on hand.



Exports of marine-animal oils during October 1953-July 1954 totaled 128.7 million pounds, well above the similar period a year earlier when exports were 79.0

Table 2 - U. S. Imports and Exports of Marine-Animal Oils, October-July 1952/53-1953/54

Item	Imports--Oct. -July		Exports--Oct. -July	
	1953/54	1952/53	1953/54	1952/53
. . . . . (Millions of Pounds) . . . . .				
Soap fats and oils:				
Fish and fish-liver oils				
non-medicinal . . . . .	14.8	6.8	128.3	78.5
Marine-mammal oils . . . . .	25.1	29.9	.1	.2
Other industrial oils and fats:				
Fish-liver oils, medicinal . . .	20.0	18.9	.3	.3
Grand Total . . . . .	59.9	55.6	128.7	79.0

million pounds (table 2). The outward movement of fish and fish-liver oils was well above the previous record set in 1952/53. Imports during October-July 1953/54 were above the similar period in 1952/53 due mainly to the large increase in the receipts of fish and fish-liver oils.



### U. S. Buying More Whale Meat

United States imports of Norwegian deep-frozen whale meat have more than doubled since 1953, reports a Brooklyn, N. Y., representative of several packers in Norway. On November 1, 300,000 pounds arrived in New York aboard the Norwegian liner M. S. Ranenfjord, a November 11 bulletin from the Norwegian Information Service reports.

In 1952 a mere 60,000 pounds of Norwegian whale meat entered the United States; in 1953 the total was 700,000 pounds; and in 1954 it totaled more than 2,000,000 pounds. Most of it is used to feed animals, especially minks. For human consumption, whale meat tenderloin comes in one-pound packages of which 20,000 pounds were imported in 1954.

All of the whale meat coming from Norway is from animals caught in the North Atlantic by catchers operating from four shore bases. During the 1954 season Norwegians landed a total of 3,200 small whales at these land stations.



### Virginia

SHRIMP SURVEY IN CHESAPEAKE BAY: For many years it has been known that the commercial varieties of shrimp occur in Chesapeake Bay. Pound netters occasionally catch shrimp in their nets, and some captures are made in oyster and crab dredges in fall and winter, a recent news bulletin from the Virginia Fisheries Laboratory at Gloucester Point states.

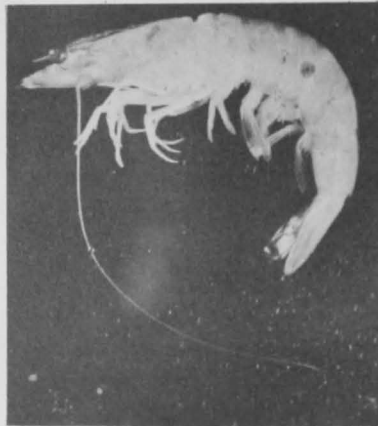
In early October 1954 pound netters operating off New Point Comfort reported shrimp in their catches on several successive days. About 100 pounds were landed on the best day. These were identified as the green or white shrimp (Penaeus setiferus). Young green shrimp were also taken in the Pamunkey River (a tributary of the York), in Skiffes Creek (a tributary of the James), and in Lynnhaven Inlet during September.

The brown-spotted shrimp (Penaeus duorarum) also is found in Chesapeake Bay. Large adults were taken in the lower part of the Bay during surveys in 1953 and 1954. Young of this species were caught in Lynnhaven Inlet in 1954.

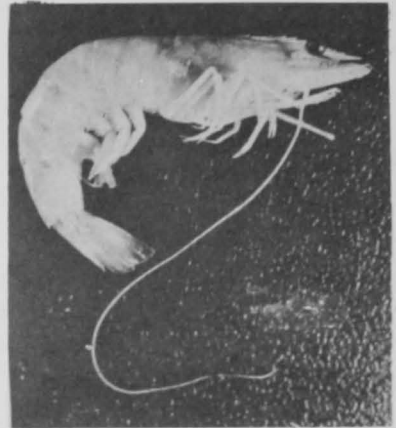
The brown shrimp (Penaeus aztecus) also occurs in Chesapeake Bay, but it apparently is not common.



White Shrimp  
(Penaeus setiferus)



Brown-spotted Shrimp  
(Penaeus duorarum)



Brown Shrimp  
(Penaeus aztecus)

Another shrimp, of considerable commercial value in Louisiana, was recently reported from Virginia waters for the first time. This is the river shrimp (Macrobrachium ohione). Recent surveys have shown that this shrimp may be more abundant than was originally suspected.

The recent serious decline in landings of migratory food fishes in Chesapeake Bay has awakened considerable interest in the possibility of establishing a shrimp fishery in the region. Biologists at the Virginia Fisheries Laboratory, assisted by various fishermen, are conducting surveys to chart the distribution and abundance of these crustaceans. To date there are no indications that shrimp are present in sufficient abundance to support a fishery.

\* \* \* \* \*

HEAVY OYSTER MORTALITY IN SUMMER 1954: Virginia oyster planters were just beginning to realize that the death rate among oysters had been excessive this past summer and fall (1954) when hurricane "Hazel" added confusion to the picture, and perhaps masked completely the effects of other factors.

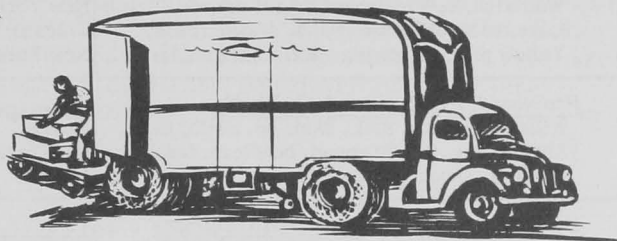
It appears that losses prior to the hurricane were the greatest since 1949. Tray-grown oysters at the Virginia Fisheries Laboratory at Gloucester Point suffered 45 to 50 percent mortality from July to September, according to the Director of that laboratory. This is almost twice the death rate for previous years. Most oysters found dead in trays were killed by Dermocystidium marinum, a fungus disease discovered in the Gulf of Mexico. This fungus is well distributed in the lower part of Chesapeake Bay. It is most active when salinities are moderately high (above 15 parts per thousand) and when water temperatures are quite high (about 75° F. or higher). A hot dry summer and fall seems to have allowed the fungus to do much damage to oyster beds.

Most oysters die during the warm months from July through October. Biologists at the Virginia Fisheries Laboratory are urging planters in salty areas where the fungus is prevalent to harvest their oysters as soon as they reach a marketable size. Since mortality rises sharply the second summer after transplanting oysters to areas endemic for the fungus, the yield reaches a peak some time after the first summer on the planted ground and declines rapidly early in the second summer. So far as the oysterman's yield is concerned, the objective of planters should be to avoid holding oysters through more high-mortality summer periods than is absolutely necessary.



## Wholesale Prices, October 1954

Good production and a light-to-moderate demand caused wholesale prices for fishery products to drop sharply from September to October 1954. The October 1954 over-all edible fish and shellfish (fresh, frozen, and canned) wholesale index was 101.8 percent of the 1947-49 average (see table)--10.6 percent lower than September and 8.5 percent less than a year earlier.



The resumption of activity by the Boston offshore fleet brought about substantial landings of haddock and a 45.4-percent decline in the ex-vessel prices for offshore drawn large haddock at Boston during October; these prices were 41.5 percent lower than in October 1953. Wholesale prices of western halibut at New York City also dropped substantially in that month--29.6 percent--due to the end of the fresh halibut season and return to frozen prices. Fresh king salmon October prices at New York City were higher than the previous month and October 1953. Fresh-water fish prices in October were much lower with the exception of lake trout at Chicago which was slightly higher, but September prices were high because of the Jewish holidays. The October index for the drawn, dressed, or whole finfish subgroup was 21.6 percent lower than September and 12.7 percent less than the same month in 1953.

Production of fresh haddock fillets in October was substantial and a 48.8-percent drop in prices more than offset the slight increase (2.1 percent) in fresh shrimp prices, causing a 7.6-percent decline in the fresh processed fish and shellfish index from September to October. This was the first rise in shrimp prices since early in 1954. Oyster prices again declined slightly (2.4 percent) for the second straight month. All items in the subgroup were well below a year earlier, and the subgroup index for fresh processed fish and shellfish in October was 18.5 percent below October 1953.

Prices for frozen haddock and flounder fillets were lower in October than the previous month, but ocean perch fillet prices remained unchanged. Frozen shrimp prices reflected a firmer market as they advanced 2.1 percent above September, but were 25.2 percent under October 1953. The October subgroup index for processed frozen fish was 2.1 percent lower than September and 13.2 percent less than the same month a year earlier.

The market for canned Maine sardines was firm and the wholesale price advanced 3.8 percent from September to October. The canned tuna market weakened due to extremely heavy stocks and prices declined 2.6 percent. Both tuna and Maine

sardine prices were lower than a year earlier. Canned pink salmon prices were the same as in September but 11.2 percent higher than October 1953. The October canned fishery products subgroup index was slightly lower than the previous month, but 3 percent above the same month in 1953.

Table 1 - Wholesale Average Prices and Indexes for Edible Fish and Shellfish, October 1954 and Comparisons

Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices <sup>1/</sup> (\$)		Indexes (1947-49=100)			
			Oct. 1954	Sept. 1954	Oct. 1954	Sept. 1954	Aug. 1954	Oct. 1953
ALL FISH & SHELLFISH (Fresh, Frozen, & Canned)					101.8	113.9	111.1	111.3
Fresh & Frozen Fishery Products:					104.9	124.8	120.1	122.7
Drawn, Dressed, or Whole Finfish:					113.6	144.9	134.3	130.1
Haddock, lge., offshore, drawn, fresh	Boston	lb.	.09	.17	94.7	167.3	161.0	162.0
Halibut, West., 20/80 lbs., drsd., fresh or froz.	New York	lb.	.32	.45	98.0	139.3	99.0	93.9
Salmon, king, lge. & med., drsd., fresh or froz.	New York	lb.	.63	.57	140.5	127.5	130.4	123.9
Whitefish, L. Superior, drawn, fresh	Chicago	lb.	.53	.58	130.1	142.5	131.4	121.5
Whitefish, L. Erie pound or gill net, rnd., fresh	New York	lb.	.63	.75	126.4	151.6	131.4	104.1
Lake trout, domestic, No. 1, drawn, fresh	Chicago	lb.	.58	.53	117.8	108.6	107.6	107.6
Yellow pike, L. Michigan & Huron, rnd., fresh	New York	lb.	.50	.55	117.2	129.0	114.9	105.5
Processed, Fresh (Fish & Shellfish):					96.6	104.5	107.1	118.5
Fillets, haddock, sml., skins on, 20-lb. tins	Boston	lb.	.21	.41	71.4	139.5	114.0	129.3
Shrimp, lge. (26-30 count), headless, fresh	New York	lb.	.50	.49	79.0	77.4	85.9	106.4
Oysters, shucked, standards	Norfolk	gal.	5.00	5.13	123.7	126.8	129.9	129.9
Processed, Frozen (Fish & Shellfish):					89.7	91.6	93.9	103.4
Fillets: Flounder (yellowtail), skinless, 1-lb. pkg.	Boston	lb.	.38	.39	98.2	100.8	100.8	108.7
Haddock, sml., skins on, 1-lb. pkg.	Boston	lb.	.27	.31	84.7	95.7	95.7	98.6
Ocean perch, skins on, 1-lb. pkg.	Boston	lb.	.28	.28	111.8	111.8	111.8	105.9
Shrimp, lge. (26-30 count), 5-lb. pkg.	Chicago	lb.	.50	.49	76.4	74.8	80.2	102.2
Canned Fishery Products:					97.3	97.7	97.7	94.5
Salmon, pink, No. 1 tall (16 oz.), 48 cans/cs.	Seattle	case	19.70	19.70	104.4	104.4	104.4	93.9
Tuna, lt. meat, chunk, No. 1/2 tuna (6-1/2 oz.), 48 cans/cs.	Los Angeles	case	12.90	13.25	93.0	95.5	95.5	95.5
Sardines, Maine, keyless oil, No. 1/4 drawn (3-1/4 oz.), 100 cans/cs.	New York	case	6.95	6.70	74.0	71.3	71.3	87.3

<sup>1/</sup>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.



### HUGE SHARKS OFF LOFOTEN

Five huge basking sharks were recently caught by drift gill-netters participating in the Norwegian Lofoten cod fisheries. The two largest weighed three metric tons each, yielding a total of 1,200 quarts of livers.

--News of Norway, April 8, 1954