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CHICAGO RECEIPTS OF FRESH AND FROZEN FISHERY PRODUCTS, AND WHOLESALE MARKET TRENDS, 1961

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SUMMARY

Receipts of fresh and frozen fish and shellfish at Chicago in 1961 amounted to slightly more than 78 million pounds. The 10-percent drop from the previous year was largely confined to fresh-water fish receipts which were lower for a number of lake and river species. The 1961 Great Lakes production probably would surpass the previous year, but this was only because of increased industrial fish landings. With few exceptions, the commercial food fish catch from the Great Lakes was expected to be lower for most of the higher-priced species, with the slack taken up or exceeded by several varieties not presently used as food fish.

Frozen salt-water fish receipts in 1961 at Chicago were lower for halibut, several varieties of domestically-produced groundfish fillets, whiting, and sablefish, but were up for a number of species including fresh and frozen red snapper, and frozen fillets and steaks of swordfish. The lower receipts of certain frozen ocean fish varieties was partly due to a drop in 1961 landings coupled with the increased trend toward prepared and semiprepared fishery products and specialties that gain more consumer acceptance each year.

Receipts of selected shellfish products at Chicago held up well in 1961. Despite the drastically reduced 1961 shrimp landings, receipts of frozen raw headless shrimp dropped only slightly from the previous year because of increased receipts of the imported product. Receipts of frozen breaded and other processed shrimp at Chicago reached a new record high in 1961.

Fresh-water fish receipts of nearly 33 million pounds in 1961 dropped 12 percent from the previous year. Leading species were whitefish, chubs, buffalofish, and yellow pike which ranked in about the same order as the previous year. Receipts were lower for practically

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Note: Information on receipts of fishery products is based on data collected daily by the Chicago Fishery Market News Service Office from wholesale dealers (including smokers) and from other distributors in the Chicago area.



Fig. 1 - Chicago is an important distribution center for Great Lakes fresh-water fish as well as salt-water fishery products. For fishery products, it is the gateway to the Midwest.

all of the more choice fresh (iced) lake fish varieties, including lake trout, whitefish, and yellow pike. The year's receipts of those preferred and generally higher-priced species, however, did not decline as much as those of the coarse fish, which as a group dropped 20 percent from 1960. Receipts were much lower than the previous year for both carp and sheepshead varieties that now find much less consumer preference at Chicago. Buffalofish receipts of more than 4 million pounds dropped only slightly from the record high arrivals of 1960. Receipts of that species were unusually heavy in 1960, and while in the forefront during 1961, were displaced by chubs which were surpassed only by whitefish, a perennial favorite that still stands out as the mainstay of fresh-water fish supplies at Chicago.

Table 1 - Receipts of Fresh and Frozen Fish and Shellfish at Chicago, 1961-60 and Changes from 1960

Year	Fresh-Water Fish		Salt-Water Fish		Shellfish, Etc.		Total	
	1,000 Lbs.	% of Total	1,000 Lbs.	% of Total	1,000 Lbs.	% of Total	1,000 Lbs.	% of Total
1961	32,670	42	21,993	28	23,450	30	78,113	100
1960	37,012	43	25,635	29	24,380	28	87,027	100
Change from 1960	-4,342	-12	-3,642	-14	-930	-4	-8,914	-10

FRESH-WATER FISH

Chicago receipts in 1961 of a group of low- to moderately-priced lake fish, including chubs, herring, and smelt, were up from the previous year. The increase was principally due to larger receipts of chubs (more than 5 million pounds for the year, about 20 percent more than in 1960 and exceeding Chicago's receipts of that species for each year since 1957. The bigger

increase in the 1961 chub receipts was in deliveries from Michigan Lake Huron shippers, and a somewhat larger quantity from the Illinois commercial fishery. Despite the very good year in chub receipts, the fresh product was very scarce during the early months of 1961 when fishing was poor, and frozen stocks were nearly depleted. Low supplies and strong demand by smokers then resulted in the highest wholesale prices in several years. Fresh chub prices dropped sharply in the following months when landings started to improve.

Receipts of 1.6 million pounds of catfish were only slightly below 1960 arrivals. Receipts from Midwest-producing areas during 1961 were less than the previous year, but increased substantially from southern shippers who accounted for about 70 percent of the total catfish supplies received at Chicago. Receipts of catfish during 1961 were especially good



Fig. 2 - Iced domestic and Canadian fresh-water fish stacked up inside a wholesale fish house in the Chicago Fulton Market area.

from shippers in Florida, North Carolina, and Virginia, who have been supplying the Chicago market to a greater extent than formerly. The demand for catfish in the Midwest ranged from very good to excellent during a good part of 1961, with wholesale prices often equal to, or exceeding, those of the most choice lake fish varieties.

While fresh-water fish receipts were lower for a number of the more familiar lake and river varieties marketed as round, drawn, or dressed fish, there were moderate to good increases for frozen brook trout, frozen fillets of lake trout, whitefish, and yellow perch, frozen smelt and sturgeon, and iced white bass from Lake Erie. Fishery receipts from Lake Erie production were of no great significance in 1961 and iced finfish supplies were largely carp, sheepshead, white bass, smelt, and some catfish. Canadian supplies originating from that Lake were very good for frozen smelt and yellow perch fillets, but were down substan-

tially for round yellow perch. There were virtually no Lake Erie yellow pike available on the Chicago wholesale market.

Total receipts of round yellow perch from all sources compared favorably with 1960, but this was only because of increased supplies from Lake Michigan production and sizable gains in supplies from Canada's northern lakes. The demand and market conditions for round yellow perch and fresh or frozen fillets of that species were strongest during the early part of the year when wholesale prices were at their highest level because of extremely low supplies. Prices for round perch declined during the spring months when supplies increased, but again climbed to the higher level in midsummer when Great Lakes landings were light. Market conditions for frozen yellow perch fillets were very strong from the beginning of the year through August because of the scarcity of raw fish for filleting. Wholesale prices for any available stocks of frozen yellow perch fillets were unprecedentedly high throughout that period, but a sharp break occurred in September when lower-priced round fish were available for processing.

Table 2 - Chicago Fishery Products Receipts by Principal Species for 1961 and Percentage Change from 1960

Species	Quantity	Change from 1960	Species	Quantity	Change from 1960
	1,000 Lbs.	%		1,000 Lbs.	%
Fresh-water fish:			Salt-water fish:		
Brook trout, frozen	381	+22	Cod, fresh ^{1/}	10	0
Buffalofish, fresh	4,404	-13	fillets, frozen	1,240	-19
Bullheads, fresh	158	-44	Flounder & sole, fresh ^{1/}	35	-38
Carp, fresh	1,481	-37	fillets, frozen	1,205	+12
Catfish, fresh	1,551	-5	Fish sticks, frozen	1,189	-10
Chubs, fresh	5,076	+18	Haddock, fresh ^{1/}	18	-44
Lake herring, fresh	1,433	-24	fillets, frozen	1,068	-22
Lake trout, fresh	726	-32	Halibut, frozen	5,083	-13
frozen ^{1/}	616	+20	fill., stks., & portions, frozen	1,306	-18
Menominee, fresh	24	0	Mackerel, fresh	32	-30
Pickereel, fresh	379	-14	frozen	92	+119
frozen ^{1/}	128	-51	Ocean perch fillets, frozen	4,713	-16
Rock bass, fresh	7	-36	Pollock fillets, frozen	122	-52
Sauger, fresh	519	-21	Sablefish, frozen	356	-20
frozen ^{1/}	38	+217	Salmon, fall, frozen	521	+14
Sheepshead, fresh	1,540	-26	king, fresh	26	-33
Smelt, fresh	703	-23	frozen	428	-24
frozen	353	+24	pink, frozen	6	-82
Suckers, fresh	312	-26	silver, fresh	11	-39
Sunfish, fresh	152	-15	frozen	973	+24
Tullibee, fresh	96	-1	fillets & steaks, frozen	64	-63
White bass, fresh	158	+28	Sea bass, fresh	12	-25
Whitefish, fresh	6,497	-15	Snapper, red, fresh	729	+3
frozen ^{1/}	566	+24	frozen ^{1/}	356	+21
Yellow perch, fresh	1,574	-13	Swordfish, fillets & steaks, frozen	203	+10
frozen ^{1/}	376	+32	Whiting (H & G & fillets), frozen	1,482	-38
Yellow pike, fresh	2,862	-10	Wolffish fillets, frozen	458	-5
frozen ^{1/}	290	-16	Other, fresh	200	-12
Other, fresh	96	-26	frozen	55	-69
frozen	174	-40	Total Salt-water	21,993	-14
Total Fresh-water	32,670	-12	Shellfish, etc. (Contd.):		
Shellfish, etc.:			Shellfish, etc. (Contd.):		
Clams, hard (in shell)	502	-9	Scallops, frozen	936	-5
Crabs, soft, fresh	26	-24	Shrimp, raw, headless, frozen	9,460	-4
Dungeness (cooked), froz.	51	-39	breaded, etc., frozen	5,926	+5
Crab meat, fresh	88	-2	Spiny lobster tails, frozen	3,215	-12
frozen	199	-24	Squid, frozen	428	+116
Frog legs, frozen	236	-24	Other, fresh	98	-20
Lobsters (live)	182	+26	frozen	394	+3
Oysters, in shell	788	-27	Total Shellfish, etc.	23,450	-4
shucked, fresh	816	-7	Grand Total	78,113	-10
frozen	105	-39			

^{1/}Includes fillets, steaks, etc.

Fresh and frozen yellow pike receipts at Chicago in 1961 amounted to slightly more than 3 million pounds, a 14-percent drop compared with 1960. The year's receipts of iced yellow pike were not much lower than in 1960, but there was a sharp drop in receipts of imported yellow pike fillets which was in part offset by a larger quantity of frozen drawn or dressed fish. Receipts of the iced product were quite substantial from Minnesota shipping points--Red Lake and the International Lakes region. Then there was nearly one million pounds from

Manitoba shippers--about the same quantity as the previous year--and good receipts from the Province of Alberta. The greatly reduced Lake Erie yellow pike landings were seen in the extremely light arrivals from Detroit wholesalers, and from Ohio and Ontario shippers. The upper peninsula provided little or no supplies of yellow pike during the year other than merely token deliveries that were far below the 1960 receipts from that area.

Yellow pike supplies at the Chicago market were readily available throughout the greater part of the year. Wholesale prices were high during the winter months but dropped to moderate levels with the appearance of seasonal supplies. Wholesale selling prices were especially low in June when market supplies were heavy, and declined even more during the fall months when supplies reached glut proportions.

SALT-WATER FISH

Fresh and frozen salt-water fish receipts of 22 million pounds in 1961 dropped for a number of species because of a decline in landings during the year. Landings in 1961 were lower for halibut, ocean perch, and whiting. Consequently receipts of those species at Chicago dropped. Frozen halibut again ranked as the principal species in that group at Chicago, followed by frozen ocean perch fillets, salmon, whiting, and various other frozen groundfish and other fillets both from domestic and foreign suppliers. Chicago has traditionally been a distribution center for frozen ocean fish fillets from New England, Canadian, and overseas suppliers. In 1961, however, Northwest packers of halibut, salmon, and sablefish shipped more Pacific ocean perch fillets and fillets of sole to Chicago. Receipts of frozen flounder and sole fillets were up from the previous year, standing out as a fishery product that was more readily available at low to moderate prices throughout most of the year, while other species of fillets were subject to periods of relative scarcity.

Frozen fish sticks, and fish portions in particular, were an important part of the Chicago supplies for the institutional trade during 1961. The demand for fish portions processed from species including halibut, swordfish, and red snapper, as well as from the various species of groundfish, has increased to the extent where frequently portion-control fishery products are preferred to regular fillets. Frozen groundfish fillets and halibut stocks were low at the beginning of 1961, and this resulted in increased sales of fish portions.

Supplies of most varieties of frozen salmon were much more abundant in 1961 as compared with the very light Northwest landings and low supplies of the previous year. The demand for frozen salmon at Chicago, however, was especially light during the early months of the year because of strong resistance to very high wholesale prices. Receipts of all varieties of frozen salmon in 1961 amounted to 2 million pounds which were about the same as in 1960. Much more frozen chum and coho salmon was received, but receipts were lower for frozen king (chinook) salmon and all varieties of the fresh product. The high 1960 frozen salmon prices at Chicago carried into 1961, but started to drop shortly after the beginning of the year. Prices continued their downward decline through the first half of the year. Wholesale selling prices for some varieties of frozen salmon dropped as much as 25 percent by the end of the first six months of 1961, a complete reversal of the strong and price-spiralling market during the same period the previous year. There was more buying interest in the last half of 1961 when market conditions improved to be a relatively steady level, and then firmed up considerably in the latter months of the year.

SHELLFISH

Chicago's shellfish receipts for the year were dominated by frozen shrimp and spiny lobster tails which combined accounted for 80 percent of the total 1961 receipts in that classi-



Fig. 3 - Portion of inside delivery room of wholesale firm in Chicago.

fication. Other leaders in that group included frozen sea scallop meats, fresh and frozen oyster meats, oysters in the shell, hard clams, and substantially increased receipts of frozen squid and live lobsters. New England suppliers provided the bulk of the live lobsters marketed at Chicago during the year. Receipts of that product from that region were more than double those in 1960, but were considerably lower from suppliers in the Canadian Maritime Provinces. But no doubt some of the live lobsters received from New England actually originated in Canada. The 1961 receipts of frozen scallop meats held near the one million pound mark, the same as in 1960. New Bedford landings of sea scallops during the year were even greater than in 1960--a banner catch year. Market conditions for that product were at a much more steady level during 1961. Wholesale selling prices at Chicago were lowest in July-August but did not drop to the lows of the same months in 1960 when market conditions for frozen sea scallops were nearly demoralized because of heavy supplies.

The notable increase in frozen squid receipts from West Coast shippers brought 1961 receipts up to nearly 0.5 million pounds. This was over 100 percent more than in 1960 and about the same as the 1959 receipts which were the highest in five years.

Market conditions at Chicago for other selected shellfish products were invariably strong during 1961, and wholesale selling prices for some items were believed at an all-time high. These included oysters which were in very short supply because of low production, spiny lobster tails which were even higher priced than in 1960 when preferred sizes were marketed at record high prices, and frozen shrimp. Because of low supplies, market conditions for frozen shrimp became progressively stronger during the last half of 1961 when wholesale selling prices were not far from the very high levels that prevailed in the years previous to 1959.

METHODS OF TRANSPORTATION

Truck transportation of fresh and frozen fishery products into the Chicago area during 1961 greatly outstripped other carriers. Rail express and rail freight carload arrivals of fresh and frozen fishery products for the year declined to 240 cars as compared with 320 carloads in 1960. The bigger and more pronounced drop was in car shipments from the Province of Alberta--only 19 cars in 1961 as against 78 in 1960 and 211 in 1959. The transition from rail express carload transportation to truck hauling of iced fresh-water fish was massive in the two-year period since 1959. Trucks hauled 85 percent of the more than 5 million pounds of fresh-water fish received at Chicago from the Province of Alberta during 1961.

Table 3 - Chicago Fishery Products Receipts by Methods of Transportation, 1961

Item	Truck		Express		Freight		Total	
	1,000 Lbs.	%	1,000 Lbs.	%	1,000 Lbs.	%	1,000 Lbs.	%
Total	60,979	100	7,770	100	9,364	100	78,113	100
By Major Classifications:								
Fresh-water	24,686	40	7,294	94	690	7	32,670	42
Salt-water	13,858	23	120	2	8,015	86	21,993	28
Shellfish, etc.	22,435	37	356	4	659	7	23,450	30
By Origin:								
Domestic	49,131	81	7,021	90	1,975	21	58,127	74
Imported ^{1/}	11,848	19	749	10	7,389	79	19,986	26

^{1/}Includes "in bond" shipments through British Columbia of United States-caught fish landed in that Province, and also Alaska fish.

In 1961, rail freight continued as the traditional method in transporting frozen fishery products from the Northwest. A total of 209 carload shipments were made to Chicago from that region during the year. These were composed of frozen halibut, salmon, sablefish, and other species landed in the Pacific Northwest. Carloads from Arizona, consisting of Mexican west coast frozen shrimp, were up from the previous year--7 cars as against 5 cars in 1960. The bulk of the frozen shrimp shipped to Chicago through Arizona, however, was hauled by trucks. Five carloads of frozen fishery products, mostly groundfish fillets, were received from Nova Scotia in 1961 as against only one carload the year previous.

RECEIPTS BY MONTHS

Total monthly receipts at Chicago were at their peak in August when 8.5 million pounds were reported. The August receipts were outstanding for fresh-water fish--Canadian white-

fish, yellow pike, chubs, and buffalofish. Frozen salt-water fish receipts also were at a high level in August when ocean perch fillets, halibut, and whiting were relatively heavy. Monthly receipts again were substantial in October when fresh-water fish arrivals were near the 3-million-pound mark, and shellfish products receipts in that month were the highest for the year. Receipts were lowest in April because of extremely light frozen salt-water fish deliveries, and generally light fresh-water fish and shellfish products arrivals.

LAKE TROUT

Fresh and frozen lake trout receipts (including fillets) of 1.3 million pounds in 1961 did not decline to the same extent as the previous years. Fresh iced lake trout receipts were lower from all Lake Superior shipping points, and there was a drop in arrivals of the iced product from Canada's northwest lakes. The 1961 lake trout receipts from Canada of frozen dressed, drawn, and fillets, however, were up 20 percent from the previous year. This offset to some extent the more marked 30-percent drop in receipts of iced lake trout.

Chicago's lake trout receipts were extremely light during the first half of 1961. The local wholesale market was practically bare of any variety of lake trout during that period, and the small supplies of Canada-produced fish that were available commanded fancy prices. Market supplies improved slightly in July when wholesale prices were still maintained at the higher level. Lake trout became more readily available in August-September when receipts were quite good for both iced fish and the frozen products. Wholesale prices for lake trout

Table 4 - Lake Trout and Whitefish Receipts at Chicago, 1951-61

Year	Lake Trout ^{1/}			Year	Whitefish ^{1/}		
	Total Receipts	Percentage of Arrivals from:			Totals Receipts	Percentage of Arrivals from:	
	Quantity	U. S.	Canada		Quantity	U. S.	Canada
	1,000 Lbs.	%	%		1,000 Lbs.	%	%
1961	1,341	13	87	1961	7,064	12	88
1960	1,587	19	81	1960	8,065	11	89
1959	1,926	33	67	1959	8,246	14	86
1958	2,313	27	73	1958	8,900	14	86
1957	2,428	20	80	1957	8,069	14	86
1956	2,934	29	71	1956	7,712	23	77
1955	3,579	32	68	1955	8,820	21	79
1954	4,327	41	59	1954	9,710	29	71
1953	3,580	53	47	1953	9,014	37	63
1952	4,021	58	42	1952	10,179	35	65
1951	4,054	52	48	1951	9,774	29	71
10-year average 1952-61	2,804	-	-	10-year average 1952-61	8,578	-	-

^{1/}Includes fresh, frozen, fillets, etc.

remained at the upper level during the greater part of the year with the average price for domestically-produced fish from Lake Superior higher than in 1960. The demand at Chicago for iced lake trout from Canada's northern lakes was exceptionally good in 1961. Wholesale market prices were highest during the first quarter of the year, and continued strong throughout the summer months. Prices for the Canadian product dropped briefly in September but did not decline to the extent as in the same month the previous year.

WHITEFISH

The 1961 receipts of fresh and frozen whitefish (including fillets) at Chicago amounted to more than 7 million pounds. The year's receipts comprised about one-fifth the total 1961 fresh-water fish arrivals. Whitefish continued to rank as the principal fresh-water fish variety marketed at Chicago. Canada-produced fish from the northwest lakes accounted for 88 percent of Chicago's total whitefish receipts while domestic Great Lakes shippers supplied the remainder. The percentage of receipts of domestically-produced whitefish was up from the previous year as a result of very good Great Lakes catches which turned out to be the best since 1957. In the first 11 months of 1961, United States Great Lakes whitefish landings totaled more than one million pounds, 36 percent more than landings in the full year of 1960. Whitefish landings for the period increased substantially at all lakes except Lake Erie. The increase in whitefish landings at Lake Michigan was especially large--about 200 percent more than in 1960. The 1961 iced whitefish receipts from domestic shippers of the Upper Peninsula of that State increased 40 percent from the previous year. Receipts of that species from Minnesota suppliers, however, were only half of those in 1960 because of the curtailed fall season at Red Lake.

Whitefish arrivals at Chicago, while quite good at the start of 1961, were somewhat erratic during the first four months of the year. Winter fishing in Canada provided moderate

to good supplies until April-May when receipts were the lowest for the year. Receipts started to pick up in June when Canadian summer fishing operations got under way, and reached a high point in August-September when whitefish arrivals were the largest for the year.

Market conditions for Great Lakes whitefish were consistently strong during most of the year. Wholesale prices remained at the upper level but did not reach the Jewish Holiday high of 1960. The more abrupt price break for Great Lakes whitefish came in December 1961 when market prices were sharply reduced for a brief period. But prices again climbed to the higher level as the year closed. Prices for Canadian whitefish were somewhat lower than in 1960, but with wide variations which are not unique in the marketing and price structure of that product.

HALIBUT

Frozen halibut receipts at Chicago in 1961 continued to lead the salt-water fish group. The year's receipts of 6.4 million pounds (including fillets, steaks, and portions) declined from 1960 mainly because of the relative shortage of supplies from Northwest packers before the start of the 1961 Pacific halibut fishing season, and also because of the increasingly strong demand for fresh and frozen halibut in other parts of the country. Chicago's receipts during the year were lower for frozen dressed halibut from United States shippers, but increased substantially for Canada-produced fish shipped from British Columbia. Receipts of frozen halibut fillets and steaks were about the same as in 1960, but with some increase for frozen halibut portions which are now stocked by the majority of Chicago distributors.

Receipts of frozen halibut averaged one-half million pounds for each month during the first quarter of 1961, but dropped sharply in April (just before the new fishing season began in the North Pacific) when receipts were the lightest in several years. Inventories were then virtually depleted, and a number of Chicago distributors were completely out of supplies. New seasonal supplies accounted for greatly increased frozen halibut receipts in June when volume for that month climbed to nearly one million pounds. Monthly receipts were more evenly spread out during the last half of the year when they averaged better than one-half million pounds for each month. Market conditions for frozen halibut were steady to firm in 1961. Except for a brief decline in June, wholesale prices at Chicago advanced steadily until the year closed, averaging about 15 percent higher than in 1960.

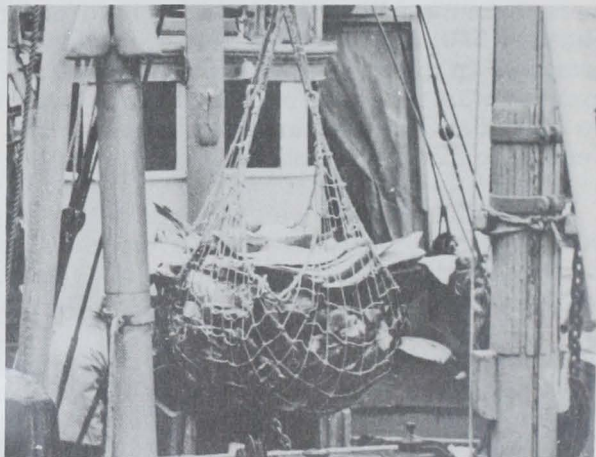


Fig. 4 - Unloading halibut with a cargo net from a fishing vessel docked at Seattle, Wash.

SHRIMP

The United States shrimp industry in 1961 was faced with a number of problems including very low landings, natural disasters, and diminishing inventories. A newer development was the purchase of United States frozen shrimp by foreign buyers. The 1961 frozen shrimp receipts at Chicago, however, were not greatly affected by these developments. The year's total receipts of all frozen shrimp amounted to more than 15 million pounds--only one-half percent less than in 1960. A 4-percent drop in receipts of the raw headless product in 1961 was offset by the same percentage increase in receipts of breaded and other processed shrimp (total receipts of those products were 6 million pounds). Receipts of raw headless shrimp from Texas were only 5 percent below the previous year but were down sharply from Louisiana shipping points. The gap was filled by a 35-percent increase in receipts of Mexican west coast shrimp shipped through Arizona and California ports of entry.

Frozen shrimp receipts at Chicago by months were generally heavy at the beginning of 1961 when they averaged about 1.5 million pounds for each month through March. The April receipts fell off sharply to the low point for the year. The flow of supplies into the Chicago

market was moderate during the summer months, but again slumped in September when the effects of hurricane Carla were felt. Gulf Coast shrimp landings were up briefly thereafter resulting in October receipts at Chicago of nearly 2 million pounds. Monthly receipts of breaded and other processed shrimp averaged well over one-half million pounds a month and jumped to nearly twice that amount in August.

Market conditions for frozen shrimp at Chicago were mostly steady during the first half of 1961. There were signs of some uncertainty because of heavy inventories carried through March, but the effects were not significant and price fluctuations were small. The shrimp supply and market situation commenced changing swiftly about July when warehouse stocks started their rapid decline, and wholesale prices advanced to very high levels the remainder of the year.



BLUEFIN TUNA SWIMS 4,500 MILES IN 119 DAYS

A bluefin tuna of about 400 pounds was tagged at Cat Cay, Fla., on June 10, 1961, and recaptured on October 6, 1961, by a commercial seiner off Bergen, Norway; a distance of about 4,500 miles along the steamer routes. This amazing feat indicates that the tuna swam at an average speed of almost 40 miles per day, provided the fish started out the moment it was released off Florida and was caught the moment it arrived off Norway, and also provided that the tuna was keeping on a compass course with which not even the toughest second mate could find fault!

The bluefin tuna was tagged by the captain of the sportfisherman Caliban II. The captain together with his associate who is president of the International Game Fish Association) tagged 89 giant tuna in the cooperative game fish tagging program of the Woods Hole Oceanographic Institution.

A second tagged bluefin was recaptured off Bergen after 120 days of freedom. This fish was tagged on June 1, 1961, also off Cat Cay and was estimated then at 500 pounds. At recapture on September 28, 1961, the fish weighed 484 pounds.

The Ocean Research Institute at Bergen, Norway, which reported both recoveries, stated that this late season there were many giant tuna in lean condition in the catches. In other late seasons the commercial catches also are occasionally mixed with very big tuna in bad condition. The fishermen call these fish "long-tailed tuna." The Institute speculated that these fish must be lean after their Atlantic migration during the feeding period. This second recovery seems to indicate that the first fish was not an isolated straggler.

Of the 1,000 bluefin tuna that have been marked through the fall of 1961 less than 100 were in the "giant" class (over 300 lbs.). Of the others, two 18-pound fish marked off No Mans Land in 1954 and 1957 were recaptured in the Bay of Biscay by French commercial fishermen in 1959 and weighed then about 150 pounds. One small tuna tagged off Chatham, Mass., in August 1957, was recaptured off Gloucester in August 1959. Another one tagged 320 miles off Ocean City, Md., on May 24, 1959, was taken commercially off Provincetown, Mass., on August 20, of the same year. Of interest also is the fact that of the 6 bluefin tuna originally tagged by sportfishermen, 4 were caught by commercial fishermen.

The return of the large bluefin from Norway may indicate a migration during the summer, whereas the tuna migrations generally are believed to take place in the spring and fall. Together with the returns from the Bay of Biscay it also indicates more strongly that western and eastern Atlantic tuna indeed do mingle. (Oceanus, December 1961, Woods Hole Oceanographic Institution.)