FRESH AND FROZEN FISH BUYING MANUAL

CIRCULAR 20

FISH AND WILDLIFE SERVICE

UNITED STATES DEPARTMENT OF THE INTERIOR

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Fish and Wildlife Service
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United States Department of the Interior
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PREFACE

THIS MANUAL is intended to help food buyers and dietitians select the types of fish and shellfish likely to be available in their localities, within the limitations of their budgets and their menus. The manual is arranged to show, in order, the general market forms and containers in which fish and shellfish can be bought; purchasing criteria; handling and storage; and what, where, and when to buy. Since the Service has made available a number of booklets on fish cookery, that subject is not discussed in detail here; and this manual does not cover prepared fishery products.

This manual is a revision of a Service publication "Fresh and Frozen Fishery Products Reference Manual," prepared by A. W. Anderson, Chief, Branch of Commercial Fisheries, as a supplement to *Fishery Market News* in August 1941. The revision has been prepared by the Educational and Market Development Section of the Branch with the cooperation of other sections.

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FRESH AND FROZEN FISH BUYING MANUAL

Each year about 3 billion pounds of fish and shellfish, comprising about 200 different species of fish and 40 kinds of shellfish and miscellaneous items, are caught commercially for food in the United States and Alaska. Of this number, however, only a few are well known as edible fish or shellfish. The following species accounted for more than three-fourths of the United States production in 1950 for human consumption.

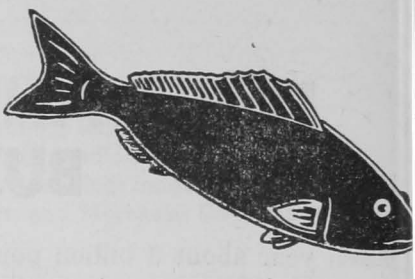
	Landed weight (pounds)	*Marketed mainly as—*
FISH:		
1. Pilchard (California sardines)	563, 422, 000	Canned.
2. Tuna and tunalike fishes	392, 273, 000	Do.
3. Salmon	328, 645, 000	Canned, frozen, fresh.
4 Ocean perch	207, 793, 000	Frozen.
5. Sea herring (Maine sardines)	198, 398, 000	Canned.
6. Haddock	158, 559, 000	Frozen.
7. Flounder	131, 694, 000	Do.
8. Whiting	67, 332, 000	Do.
9. Cod	65, 436, 000	Do.
10. Mackerel	54, 754, 000	Canned, fresh, frozen.
11. Halibut	51, 630, 000	Frozen.
SHELLFISH:		
1. Shrimp	191, 474, 000	Frozen, fresh, canned.
2. Crab	159, 278, 000	Cooked meat.
3. Oyster meat	76, 415, 000	Fresh, canned, frozen.

The fact that the average consumer has little information about many species of fish and shellfish available, has contributed to the concentration of consumption on a few well-known varieties. Since many fish and shellfish are marketed under several local names, the consumer has added difficulty in buying. To help consumers select from the many names and species in the markets, a guide is needed.

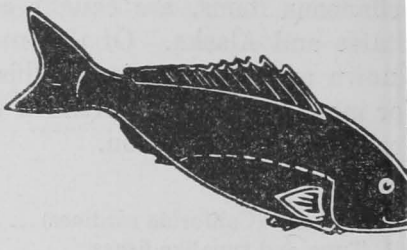
MARKET FORMS OF FISH

Fresh and frozen fish may be bought in a variety of cuts, the more important of which are shown here. Knowing the cuts and their particular uses is important in buying or selling fish. The edible portion varies with the type of cut, from 100 percent for fillets to about 45 percent for whole fish.

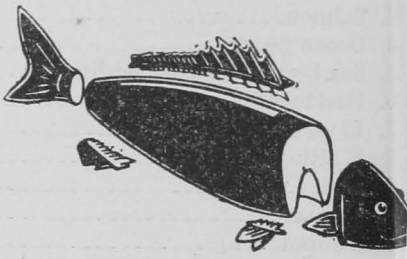
Whole or round fish are those marketed just as they come from the water. In this form, the edible portion is about 45 percent of the whole, but varies with size and kind of fish. To prepare for cooking, fish should be scaled and eviscerated and, if desired, head, tail, and fins should be removed. Fish then may be used for baking, or may be sliced, filleted, or cut into steaks or chunks. Small fish, like smelt, are often cooked with only the entrails removed.



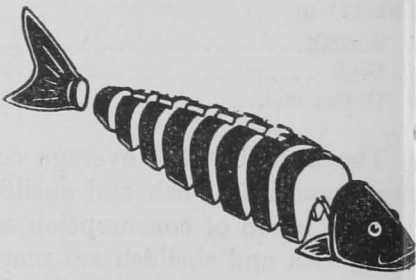
Drawn fish are those marketed with only the entrails removed. In this form, the edible portion is about 48 percent, but varies with size and kind of fish. To prepare for cooking, they are generally scaled. Head, tail, and fins may be removed, if desired, and the fish split, filleted, or cut into steaks or chunks.



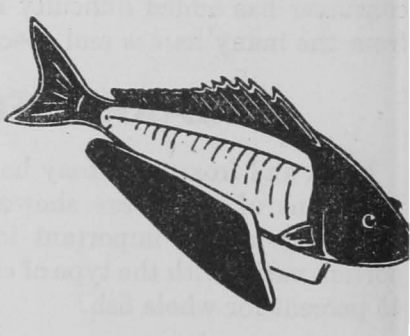
Dressed fish are scaled and eviscerated, usually with the head, tail, and fins removed. Edible portion in this form is about 67 percent, but varies with size and kind of fish. The smaller sizes are ready for cooking as purchased (pan dressed). The larger sizes may be baked as purchased or may be cut into fillets, steaks, or chunks.



Steaks are cross-section slices of the larger sizes of dressed fish, usually about ¾ of an inch thick. In this form the edible portion is about 84 percent. Steaks are ready to cook as purchased.

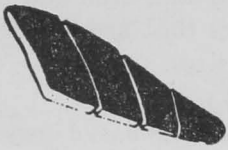


Fillets are the sides of fish cut away from the backbone. They are practically boneless and have little or no waste. Fillets are ready for cooking. The skin may be left on or may be removed. A fillet cut from one side of a fish is called a single fillet. This is the type most generally seen in the market.



Butterfly fillets are the two sides of the fish corresponding to two single fillets held together by the uncut flesh and skin of the belly.

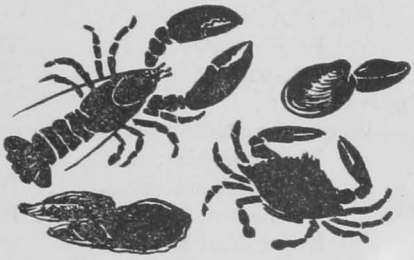
Sticks are pieces of fish cut lengthwise or crosswise from fillets into portions of uniform width and length, usually about 1 inch wide and 3 inches long.



MARKET FORMS OF SHELLFISH

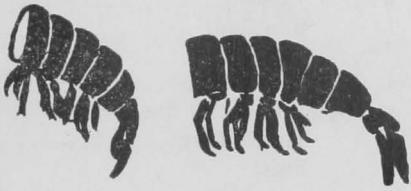
Some shellfish are marketed alive. Other market forms, depending on the variety, include cooked whole in the shell, fresh meat (shucked), headless, and cooked meat.

In shell: Shellfish, such as hard and soft blue crabs, lobsters, clams, and oysters should be alive if bought fresh in the shell. Crabs and lobsters may also be cooked in the shell. Edible portion varies widely. See page 13.



Shucked: Clam, oyster, and scallop meats may be bought free of the shell, commonly known as shucked. In this form the portion is 100 percent edible.

Headless: Only the tail part of shrimp is commonly marketed. Spiny-lobster tails are also a common market form. About 85 percent is edible.



Cooked meat: The edible portion is picked from the cooked shellfish. Crab, shrimp, and lobster meat is marketed in this way. Cooked meat is perishable, although packaged in containers, since it is not further processed by heat. It is 100 percent edible.

CONTAINERS

In general, a better product is received, prices are lower, and shipments are expedited, when the usual commercial fishery containers are used. Fishery containers are only partly standardized, but most of the important fresh and frozen fishery products are usually packed in the types that are listed here with the net weights contained in the various sizes.

	Containers and net weights
FRESH FISH:	
Whole, drawn, and dressed:	
Most varieties:	
Fresh-water	Boxes, 25, 40, 50, 60, 70, 100 lbs.; Church containers, 300 lbs.
Salt-water	Boxes, 15, 100, 125, 150, 200 lbs.; loose barrels, 200, 250 lbs.; Church containers, 300 lbs.; tight barrels, 150 lbs.
Some small fish:	
Fresh-water	Boxes, 10 to 20 lbs.
Salt-water	Boxes, 10 to 30 lbs.; tight barrels, 75 lbs.
Fillets and steaks:	
Fresh-water	Tins, 25 lbs.
Salt-water	Tins, 10, 15, 20, 25, 30 lbs.
FROZEN FISH:	
Whole, drawn, and dressed:	
Most varieties:	
Fresh-water	Boxes, 60, 70, 100, 125 lbs.
Salt-water	Boxes, 50, 100, 150, 200 lbs.
Some small fish:	
Fresh-water	Boxes, 10, 20 lbs.
Salt-water	Boxes and packages, 1, 5, 10, 15, 20, 25 lbs.
Fillets and steaks:	
Fresh-water	Packages, 5, 10 lbs.
Salt-water	Packages, 1, 5, 10, 15, 20, 25 lbs.; Church containers, 300 lbs.
SHELLFISH:	
Clams and oysters:	
In shell	Bags, 100, 225, 250 lbs.
Shucked:	
Fresh	Tins, 1 pt., 1 qt., ½, 1, 5 gals.
Frozen	Tins and packages, 12 oz.
Crabs:	
Hard: Live	Bushel baskets; barrels, 100 lbs.
Soft:	
Live	Trunks, 60, 80 lbs.
Frozen	Packages, up to 1 lb.
Crab meat, cooked:	
Blue	Tins, 1 lb.
Dungeness	Tins, 1, 5 lbs.
King	Packages, 6 oz., 3 lbs.
Lobsters, live	Barrels, 50, 100 lbs.
Lobster meat, cooked	Tins, 6, 14 oz., 1 lb.

SHELLFISH—Continued	*Containers and net weights*
Scallops, sea:	
Fresh meat	Tins, 1 gal.; bags, 30, 40 lbs.
Frozen meat	Tins, 1 gal.; packages, 1, 5, 10 lbs.
Scallops, bay: Fresh meat	Tins, 1 gal.
Shrimp, headless:	
Fresh	Boxes, 100 lbs.
Frozen	Tins and packages, 6, 12 oz.; packages, 1, 2½, 5, 10 lbs.
Breaded, frozen	Packages, 8, 10, 12 oz., 2½, 4, 5, lbs.
Shrimp meat, cooked and peeled.	Tins and packages, 4, 8, 12 oz., 1, 5 lbs.

BUYING FRESH FISH

Most varieties of fish are more abundant in some months than in others (see When to Buy, pp. 39–47). Local fish dealers can usually give information about seasonal offerings, and indicate the varieties that can be obtained at the best price advantage. Lesser-known species often may be as satisfactory as better-known, and higher-priced, species.

Tests for whole and drawn fish

Fresh fish have the following characteristics:

1. FLESH: Firm, elastic flesh, not separating from the bones, indicates that fish are fresh and have been handled carefully.

2. ODOR: Fresh and mild. A fish just taken from the water has practically no "fishy" odor. The fishy odor becomes more pronounced with passage of time, but it should not be disagreeably strong when the fish are bought.

3. EYES: Bright, clear, and full. The eyes of fresh fish are bright and transparent; as the fish become stale, the eyes become cloudy, and often turn pink. When fish are fresh the eyes often protrude, but with increasing staleness they tend to become sunken.

4. GILLS: Red, and free from slime. The color gradually fades with age to a light pink, then gray, and finally brownish or greenish.

5. SKIN: Shiny, with color unfaded. When first taken from the water, most fish have an iridescent appearance. Each species has its characteristic markings and colors which fade and become less pronounced as the fish loses freshness.

Tests for fillets and steaks

Fresh fillets and steaks have the following characteristics:

1. FLESH: Fresh-cut in appearance; the color should resemble that of freshly dressed fish. It should be firm in texture, without traces of browning about the edges and without a dried-out look.

2. ODOR: Fresh and mild.

258844°—54——2

3. WRAPPING: If the fillets or steaks are wrapped, the wrapping should be of moisture-vapor-proof material. There should be little or no air space between the fish and the wrapping.

How much to buy

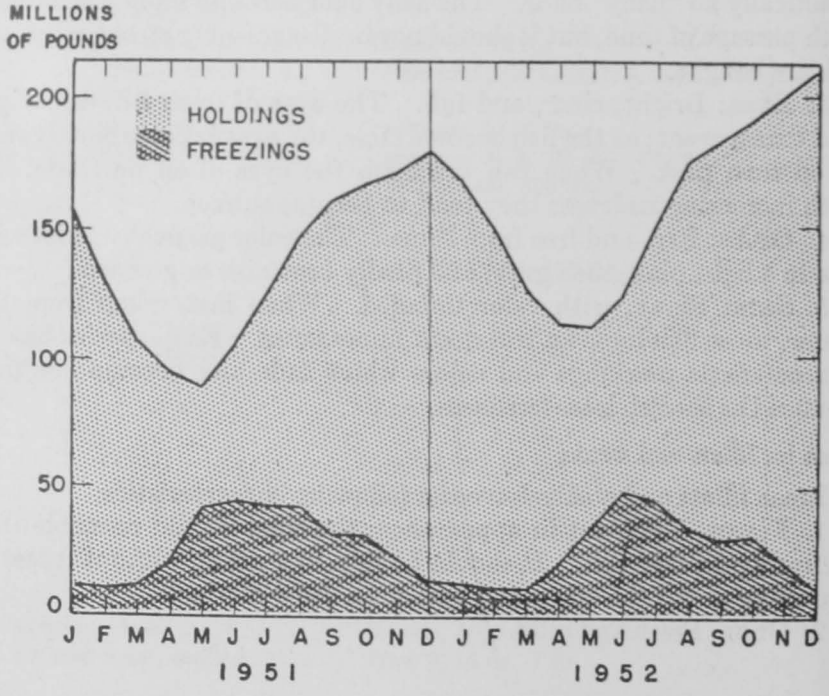
Servings of fish are generally based on one-third to one-half pound of the edible part for each person (see Edible Portion, p. 13). To provide this much edible fish for each person, the approximate amounts to buy of the different forms are as follows:

	Pounds per person	*Pounds per 100 persons*
Fillets, steaks, or sticks	⅓	30
Dressed fish	½	45
Whole or round fish	1	90

BUYING FROZEN FISH

Frozen varieties are usually packed during seasons of abundance at reasonable prices, and now are available the year around in practically all sections of the country (for list of species frozen, see table on p. 46). Since frozen fish are the equal of fresh fish in appearance, flavor, and food value, the two forms may be used interchangeably.

Freezings and total holdings of fish in cold storage are shown by months in the following graph. From this graph it is possible to draw some conclusions about the months when frozen fish are in best supply (for more detailed information, see pp. 46–47).



Tests for frozen fish

Frozen fish of good quality have the following characteristics:

1. FLESH: Should be solidly frozen when bought. Virtually all deterioration in quality is prevented when fish is properly held in the frozen state. Unless care is taken, frozen fish thawed and refrozen is poorer in quality. There should be no discoloration, or brownish tinge in the flesh.

2. ODOR: Frozen fish should have little or no odor. A strong fishy odor means poor quality.

3. WRAPPING: Most frozen fillets and steaks are wrapped either individually or in packages of various weights. The wrapping should be of moisture-vapor-proof material. There should be little or no air space between the fish and the wrapping.

4. GLAZING: Whole fish frozen in the round or dressed forms are usually not wrapped, but covered with a glaze of ice to protect them from drying out, or from "freezer burn." This glaze should be on these forms of frozen fish when bought.

How much to buy

In buying frozen fish, the allowance for each serving is the same as for fresh fish (see p. 6).

BUYING SHELLFISH

Shellfish are sold in many different forms. Market forms of some of the most important species are described here.

Shrimp

Shrimp are sold as follows:

Fresh, whole (heads on)—mainly around New Orleans and near production points.

Fresh or frozen, headless, but with shells on.

Fresh or frozen cooked, generally peeled (shells removed) and cleaned.

Frozen, breaded with a coating of crumbs or cornmeal after being peeled and cleaned.

Fresh shrimp have a mild odor, and the meat is firm in texture. The color of the shell may be grayish green, pinkish tan, or light pink. When cooked, the shells turn red, and the meat takes on a similar attractive reddish tint, with possibly some dark-red spots. When shrimp are sold as "green shrimp," this does not refer to the color or species, but is a term used in the trade to describe shrimp that have not been cooked. Shrimp are usually sold on a size basis, with the larger sizes bringing the higher prices.

Clams and Oysters

Clams and oysters in the shell should be alive—the shells should close tight when tapped gently.

Shucked oysters should be plump and should have a natural creamy color with clear liquid. If in the original package or can, there should be not more than 10 percent of liquid (by weight). Oysters with an excess amount of liquor should be avoided, as this indicates that they have been improperly handled. Excessive water results in bloating of the oyster meat, and partial loss of flavor and food value. For purchasers who use a chemical test for freshness, the *p*H should be at least 6.0.

Oysters are sold on a size basis. The price differential between the various sizes does not reflect their quality. The sizes generally adopted by dealers conform to the Government classifications and specifications as shown on page 38.

Crabs and Lobsters

When bought alive, crabs, lobsters, and spiny lobsters should show movement of the legs. The "tail" of live lobsters curls under the body and does not hang down when the lobster is picked up.

Spiny-lobster or rock-lobster tails, frozen, should have meat of clear whitish color. There are several kinds on the market. Those from Florida, Cuba, and the Bahamas have a smooth, brownish-green shell, with white spots; those from South Africa, Australia,and New Zealand have a rough shell with the color varying from dark maroon to brown; those from Southern California and the west coast of Mexico are smooth and yellow green. As is true with other frozen fish and shellfish, frozen lobster tails should be hard-frozen when bought and should have no odor.

Crabs and lobsters, cooked, should be bright red and should have no disagreeable odor. By lifting slightly the lid under the body section of crabs it is possible to smell any strong, disagreeable odor very easily.

Crab meat, cooked, is marketed from four varieties of crabs:

Blue crabs: The meat from blue crabs is packed as—

Lump meat—whole lumps of white meat from the large body muscles that operate the swimming legs.

Flake meat—small pieces of white meat from the body.

Flake and lump—a combination of the first two kinds.

Claw meat—brownish-tinted meat from the claws.

Rock crabs: Crab meat from the New England rock crab is marketed in only one grade, and is brownish in color.

Dungeness crabs: Crab meat from the Dungeness crabs of the Pacific coast includes that from both the body and the claws. The claw, or leg, meat is reddish; the body meat is white.

King crabs: Crab meat from the king crabs of Alaska is taken mostly from the legs, then frozen and packed. The entire leg sections, cooked and frozen, are also marketed.

Soft crabs are Atlantic-coast blue crabs that have shed their old, hard shells. They should be alive when bought fresh. They are also obtainable frozen.

Scallops

Scallop meats consist of only the muscle that closes the shell of the sea scallop or the bay scallop. The meat of the large sea scallop is white; the meat of the smaller bay scallop is creamy white, light tan, or pinkish. Fresh scallops, and frozen scallops when thawed, should have a sweetish odor. When bought in packages, they should be practically free of liquid.

How much to buy

The quantity of shellfish to buy varies considerably with the method of cooking and type of recipe used. The following table is a general guide.

	To serve 6	*To serve 100*
Crabs:		
Hard:		
Live	6 to 12 pounds (18 to 36 crabs).	90 to 100 pounds.
Cooked meat	1 pound	15 pounds.
Dungeness, cooked	4 to 6 pounds (3 to 6 crabs).	50 pounds.
Lobsters:		
Live	4 to 6 pounds	75 to 100 pounds.
Cooked meat	¾ pound	12 pounds.
Oysters and clams:		
In shell	3 dozen	2½ bushels.
Shucked	1 quart	3½ gallons.
Scallops	1 pound	15 pounds.
Shrimp:		
Headless (fresh or frozen)	1½ pounds	24 to 30 pounds.
Cooked meat	¾ pound	12 to 15 pounds.

HANDLING AND STORING

Fish, being a perishable commodity, should be kept under refrigeration at all times. Only in this way can the quality of fresh or frozen fish be maintained. The three primary causes of breakdown in quality of fishery products are (1) bacterial action, (2) oxidation of the oil or fat in the flesh, and (3) enzymic action in the flesh.

Bacterial action contaminates fishery products when there is poor sanitation in handling and high temperature after the fish have been removed from the water. It is almost entirely arrested when fish are frozen and stored at very low temperatures. It can be considered practically eliminated as long as the fish are kept in this condition.

Oxidation of the oil or fat can cause spoilage of frozen fish even in cold-storage rooms of low temperature. Oxidation is indicated by a yellow discoloration on the surface of the skin or on the flesh in areas exposed to the air. This action is greatly retarded when the fish are properly glazed with a thin coating of ice, or are covered with any of several moisture-vapor-proof wrappings available.

Enzymes responsible for the third type of spoilage are substances in the flesh which build up and tear down the body tissues during the normal life processes. These reactions are common to all forms of animal life and are automatically controlled as long as life is maintained. Although the temperature at which fish are stored has a definite effect on the speed of the digestive reaction of the enzymes after death, the enzymic action cannot be stopped completely during handling and storage. Under good storage conditions, however, the action has no important effect on quality.

Detailed information on the care and handling of fishery products is contained in the following leaflets, available without charge from the Fish and Wildlife Service, Department of the Interior, Washington 25, D. C.

Refrigerated Locker Storage of Fish and Shellfish (FL 128).
Wrapping Materials for Frozen Fish (FL 213).
Fish Refrigeration (FL 214).
Retailing Fish (FL 258).
Steps in the Handling of Frozen Fish in Freezer Warehouses (FL 286).
Packaging Frozen Fishery Products (FL 324).

In addition, two motion pictures produced by the Service give information on the care and handling of fish. These are available for loan from the above address, without charge except cost of return transportation. They are—

Filleting and Packaging of Fish (Part II). 16-mm., black-and-white, sound, 10-minute picture showing methods of filleting fish.

Retailing Fish. 16-mm., color, sound, 18-minute picture showing how to select, handle, display, and merchandise fresh and frozen fish in the retail store.

HANDLING AND STORING FRESH FISH

Fresh fish should be kept constantly below 40° F., and preferably at 31° or 32° F. to ensure maximum storage life. Ice is the best preservative yet devised for keeping fresh fish, since it not only holds the temperature but also keeps the surface of the fish moist and in good condition.

Shipments of fresh fish should be examined immediately upon receipt for signs of spoilage and body damage. They should be packed in ice for delivery, and should be well iced when received. Finely crushed ice is preferable to large pieces, as it does not bruise the fish. Fished packed in orderly arrangement hold their natural shape longer

and better. Rough handling should be avoided, since bruises and punctures of the flesh induce and hasten breakdown in quality.

HANDLING AND STORING FROZEN FISH

Frozen fish should be kept solidly frozen until ready for use. Do not refreeze fish that have been thawed. Maximum storage life can be obtained by maintaining a temperature of 0° F. or below, and by providing adequate moisture-vapor-proof wrapping or glazing. In commercial practice, frozen whole fish, and sometimes dressed fish, are coated with a layer of ice by dipping in cold water after freezing. If fish are placed directly in the refrigerated space without suitable protective treatment, undesirable changes will take place during cold storage: a gradual loss of moisture will occur until the fish are shrunken and dried; this dehydration not only causes an unsightly appearance and alteration in texture, but also results in loss in weight and flavor.

Thawing frozen fish

Frozen fish, fillets, and steaks may be cooked as though they were in the unfrozen form, if additional cooking time is allowed. When fish are to be breaded and fried, or stuffed, it is more convenient to thaw them first to make handling easier. Thawing is necessary when whole or drawn fish are to be cleaned or dressed. Methods of thawing fish are as follows:

1. Thawing at refrigerator temperature (40° to 45° F.) is the recommended method. The fish should be held at this temperature only long enough to permit ease in preparation. A 1-pound fillet will thaw in about 18 hours.

2. Whole or drawn fish may be thawed by immersing in cold running water. This is the quickest method. Thawing time will vary with size and shape of fish. Fillets and steaks can be thawed in about one-half hour in cold water, but should not be removed from the package while being thawed.

3. Thawing at room temperature, although sometimes practiced, is not recommended. In this method, the thinner parts of the fish, such as the section near the tail, thaw faster than other parts and may become subject to spoilage if the thawing period is too long. A 1-pound package of fillets takes 3 or 4 hours to thaw by this method.

4. Whole or drawn fish may be thawed by being embedded in crushed ice, but this method is much slower than the others.

HANDLING AND STORING SHELLFISH

When storing fresh shellfish, the temperature should be maintained near 32° F. A few degrees higher can cause a considerable loss in quality in a few hours. Shellfish meats, either fresh or cooked, should not be exposed to bacterial contamination.

Frozen shellfish should receive the same care as that given frozen fish. Thawing methods for frozen shellfish are the same as those for frozen fish.

CLEANING, DRESSING, AND FILLETING

Most dealers, on request, will clean, dress, or fillet fresh fish for their customers. With their equipment—proper knives and scaling machines—and their experience, they can perform these tasks very quickly at little expense compared to the time and effort involved for a consumer who does not engage in cleaning and dressing fish as a full-time occupation. An experienced fishcutter also can usually secure a greater edible portion from a given fish or shellfish than can a novice. Therefore, it is recommended that this task be delegated to an expert.

Buyers of fresh and frozen fish who are interested in methods for cleaning, dressing, or filleting are referred to either of two Service publications, *Basic Fish Cookery* or *Fish Cookery for One Hundred.* Each of these booklets contains a section on cleaning, dressing, and filleting fish. Another Service publication, *How To Cook Oysters,* contains information on shucking oysters. For information on how to obtain these booklets, see page 14.

FOOD VALUE OF FISHERY PRODUCTS

Fishery products are excellent sources of highly digestible protein. In addition, many contain fat, mineral matter, and vitamins. Fish and shellfish can be included in the diet with full confidence that they supply high-quality food.

Proteins build and repair body tissues. About one-third of the protein consumed daily should come from animal sources to balance the less-efficient proteins of cereals and vegetables. An average serving of fish or shellfish supplies enough animal protein to satisfy this daily requirement. Fishery proteins are from 85 to 95 percent digestible and contain all of the so-called essential amino acids. Protein comprises about 18 percent by weight of the edible portions. These values are about equal to those of meat.

Minerals are essential for the performance of certain functions of the body and the maintenance of teeth and bones. In general, the mineral content of fish is similar to that of beef, although the iodine content is much greater in fish. The edible portions of most fish are satisfactory sources of magnesium, phosphorus, iron, copper, and iodine. Shellfish are particularly rich in these minerals. The flesh of both salt-water and fresh-water fish are quite low in salt content.

Vitamins are important for growth and the maintenance of general well-being. Fat fish, like salmon and mackerel, are excellent sources

of both vitamins A and D, an average serving supplying about 10 percent of the daily allowance of vitamin A and all of the vitamin D required. An average serving of either lean or fat fish will supply about 10 percent of the thiamine, 15 percent of the riboflavin, and 50 percent of the niacin needed each day.

Fats are used by the body for flesh and energy. The fat content of fishery products varies with the kinds of fish and the season of the year. Very lean fish may contain only 0.5 percent fat, while some fat fish may average 20 percent or more. The tables on pages 16–21 classify the more common fishes as to fat or lean. Either fat or lean fish can be used in diets since the amount of fat and calories can be adjusted through choice of cooking methods and type of sauce used.

Research has shown that the nutritional properties of fish flesh are approximately equal for all species. So far as those eating fish are concerned, flavor, texture, and color can determine the choice.

EDIBLE PORTION

Servings of fresh and frozen fishery products generally are based on portions of one-third to one-half pound for each person. The edible portion varies with the form in which the fishery product is bought, the season, and the variety of fish. The percentages, particularly those for fish, in the following table are only approximate. These percentages show how much of each form of fishery product, as purchased, is edible.

	Production area	*Edible percentage*
FISH:		
Whole or round	All	43 to 47.
Drawn (eviscerated only)	All	46 to 50.
Dressed (eviscerated, head and fins removed)	All	65 to 69.
Steaks	All	84 to 88.
Fillets	All	100.
SHELLFISH:		
Live in shell:		
Clams:		
Hard	New England	14 to 20.
Do	Chesapeake	7 to 8.
Do	Middle Atlantic	10 to 12.
Do	South Atlantic	6 to 8.
Do	Pacific	24 to 28.
Soft	New England	23 to 33.
Do	Middle Atlantic	27 to 32.
Oysters:		
Eastern	New England and Middle Atlantic.	8 to 11.
Do	Chesapeake	6 to 7.
Do	South Atlantic	4 to 6.
Do	Gulf	5 to 7.
Pacific		10 to 14.

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	Production area	Edible percentage
SHELLFISH—Continued		
Cooked in shell:		
Crabs:		
Hard	Atlantic and Gulf	10 to 18.
Dungeness	Pacific	22 to 26.
Lobsters	New England	35 to 37.
Shucked: Clams, oysters, and bay and sea scallops.	All	100.
Headless, raw: Shrimp	South Atlantic and Gulf	50 to 60.
Cooked meat: Crabs, lobsters, and shrimp.	All	100.

FISH COOKERY

The basic rules for cooking fish are few and easy. A few basic methods may be used for cooking all fish if allowance is made for fat content, which varies with the species (see pp. 16–21). Usuallyf at may be added by basting when cooking lean fish. Fat fish lose some of their fat in cooking.

Fish are *too often* overcooked. Just enough cooking to enable the flesh to be flaked easily from the bones will leave the fish moist and tender, and bring out the delicate flavor.

Recipes for cooking fishery products may be obtained as follows:

From Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. (at prices shown; there is a 25-percent discount on orders for 100 or more):

- Basic Fish Cookery (TKS 2) — 20 cents a copy.
- How to Cook Oysters (TKS 3) — 10 cents a copy.
- How to Cook Salmon (TKS 4) — 15 cents a copy.
- How to Cook Ocean Perch (TKS 6) — 10 cents a copy.
- How to Cook Shrimp (TKS 7) — 15 cents a copy.
- How to Cook Clams (TKS 8) — 20 cents a copy.
- Fish Cookery for 100 (TKS 1) — 30 cents a copy.

From Fish and Wildlife Service, Department of the Interior, Washington 25, D. C. (no charge):

- Basic Recipes for Cooking Fish (FL 106).
- Fish for Breakfast and Why Not? (FL 247).
- Fish Cookery in the Open (FL 35).
- Sauces for Seafoods (FL 53).
- Fish and Shellfish Canapes and Hors d'Oeuvres (FL 275).
- Cod—The Beef of the Sea (FL 269).
- Rosefish (Ocean Perch) Recipes (FL 285).
- Recipes for Pacific Rockfish (FL 194).
- Salmon, Succulent and Savory (FL 202).

WHAT TO BUY

Some fishery products are known by different names in different areas, but most fishery products have one name that is more widely used than the others. In the following table the common commercial fishery products are listed alphabetically by their most common names. Other common or local names of some species, and the scientific names of all the species, are also given. The table shows the main producing areas for each species. For salt-water fish, and shellfish, the producing areas are—

1. New England.—Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut.
2. Middle Atlantic.—New York, New Jersey, Delaware, Maryland, Virginia.
3. South Atlantic.—North Carolina, South Carolina, Georgia, east coast of Florida.
4. Gulf.—West coast of Florida, Alabama, Mississippi, Louisiana, Texas.
5. Pacific coast.—California, Oregon, Washington.
6. Alaska.
7. Imported.—From outside the United States, without indication of particular countries of origin.

For fresh-water fish the producing areas are—

1. Great Lakes.
2. Other United States lakes.
3. Inland rivers.
4. Imported.

There is generally a considerable range in the marketable size of any species, and there are usually several forms in which they may be bought. This information is shown for each species. Some fish are considered fat, others lean. For fish, the table shows the fat-or-lean category into which each species falls. All shellfish are lean.

SALT-WATER FISH: NAMES, PRODUCING AREAS, WEIGHTS, AND MARKET FORMS

Most common name	Other common names	Scientific name	Main producing areas							Usual market size in pounds	Usual market form					Fat-or-lean category	
			New England	Middle Atlantic	South Atlantic	Gulf	Pacific coast	Alaska	Imported		Whole	Drawn	Dressed	Steaks	Fillets	Fat	Lean
Barracuda		*Sphyraena* sp					●			5–10	●		●	●			●
Bass (see Sea bass).																	
Bluefish		*Pomatomus saltatrix*		●	●	●				1–7	●	●					●
Blue runner	Crevalle	*Caranx crysos*				●				½–1	●	●					●
Butterfish	Harvestfish	*Poronotus triacanthus*		●	●					¼–1¼	●	●				●	
Cod	Codfish	*Gadus morhua*	●	●					●	1½–10		●	●	●	●		●
		Gadus macrocephalus					●	●	●	1½–10		●	●	●	●		●
Croaker	Hardhead	*Micropogon undulatus*		●	●					½–2	●	●			●		●
Cusk		*Brosme brosme*	●						●	1½–10		●		●	●		●
Drum:																	
Black	Oyster cracker, oyster drum, sea drum.	*Pogonias cromis*		●	●	●				1–40	●	●					●
Red	Channel bass, redfish.	*Sciaenops ocellata*			●	●			●	2–25	●	●			●		●
Eels, common		*Anguilla bostoniensis*	●	●	●					1–5	●		●			●	
Flounders:																	
Blackback	Winter flounder	*Pseudopleuronectes americanus.*	●	●					●	¾–2	●				●		●
Fluke	Summer flounder	*Paralichthys dentatus*	●	●						2–12	●				●		●
Dab	Sea dab	*Hippoglossoides platessoides.*	●							¾–2½	●				●		●
Gray sole		*Glyptocephalus cynoglossus.*	●						●	¾–4	●				●		●
Lemon sole		*Pseudopleuronectes dignabilis.*	●						●	¾–4	●				●		●
Southern		*Paralichthys lethostigmus*			●	●				2–12	●				●		●
Yellowtail	Rusty dab	*Limanda ferruginea*	●	●						¾–2	●				●		●
California halibut		*Paralichthys californicus*					●										

	dover, or English sole.																
Grouper		*Epinephelus* sp., *Myceteroperca* sp.				●				5–12		●	●	●	●		●
Haddock		*Melanogrammus aeglefinus*	●						●	1½–7		●			●		●
Hake:																	
Red	Mud hake	*Urophycis chuss*	●	●						2–5	●	●	●		●		●
White	Common, squirrel hake.	*Urophycis tenuis*	●	●						2–5	●	●	●		●		●
Halibut		*Hippoglossus* sp	●				●	●	●	5–75 (some larger).		●	●	●			●
Herring, sea	Atlantic herring	*Clupea harengus*	●	●						⅛–¼	●					●	
	Pacific herring	*Clupea pallasii*					●	●	●	⅛–¼	●					●	
King mackerel	Cero, kingfish	*Scomberomorus cavalla, S. regalis.*			●	●				5–20		●		●		●	
King whiting	Kingfish, ground mullet, whiting.	*Menticirrhus* sp		●	●	●				¾–3	●	●					●
Lingcod		*Ophiodon elongatus*					●	●	●	5–20		●			●		●
Mackerel (see also King and Spanish mackerel).		*Scomber scombrus*	●	●					●	½–2½	●					●	
		Pneumatophorus diego					●			½–2½	●					●	
Mullet	Jumping, striped, or silver mullet.	*Mugil* sp			●	●				½–3	●						●
Ocean perch	Rosefish	*Sebastes marinus*	●						●	½–1¼	●				●		●
Pollock	Boston bluefish	*Pollachius virens*	●						●	1½–12		●	●	●	●		●
Pompano	Great pompano	*Trachinotus* sp				●				½–3½	●					●	
Rockfish (see also Striped bass).	Rock cod, red cod, snapper.	*Sebastodes* sp					●		●	2–5		●			●		●
Sablefish	Black cod	*Anoplopoma fimbria*					●	●	●	5–15		●			●	●	
Salmon:																	
Atlantic		*Salmo salar*	●						●	5–10	●	●				●	
Chinook	King	*Oncorhynchus tshawytscha*					●	●	●	5–30			●	●	●	●	
Chum	Fall	*Oncorhynchus keta*					●	●	●	5–11			●	●	●	●	
Pink	Humpback	*Oncorhynchus gorbuscha*					●	●	●	3–6			●	●	●	●	
Silver	Coho	*Oncorhynchus kisutch*					●	●	●	5–12			●	●	●	●	
Scup	Porgy	*Stenotomus* sp	●	●	●					½–1½	●	●					●
Sea bass:																	
Black		*Stereolepis gigas*					●		●	50–600				●	●		●
Common	Blackfish, black sea bass.	*Centropristes striatus*	●	●	●					½–4	●	●			●		●
White		*Cynoscion nobilis*					●		●	Up to 50				●	●		●

SALT-WATER FISH: NAMES, PRODUCING AREAS, WEIGHTS, AND MARKET FORMS—Continued

Most common name	Other common names	Scientific name	Main producing areas							Usual market size in pounds	Usual market form					Fat-or-lean category	
			New England	Middle Atlantic	South Atlantic	Gulf	Pacific coast	Alaska	Imported		Whole	Drawn	Dressed	Steaks	Fillets	Fat	Lean
Sea trout:																	
Gray	Weakfish	*Cynoscion regalis*		●	●					1–6	●	●					●
Spotted	Speckled trout	*Cynoscion nebulosus*		●	●	●				1–4	●	●	●				●
White	White trout, sand trout.	*Cynoscion arenarius*				●				½–1½	●						●
Shad		*Alosa sapidissima*	●	●	●		●			1½–5	●	●				●	
Sheepshead		*Archosargus* sp			●	●				¾–10	●						●
Skate (rajafish)		*Raja* sp	●	●						1–20			●				●
Smelt		*Osmerus mordax*	●						●	1/16–⅛	●						●
	Eulachon	*Thaleichthys pacificus*					●		●	1/16–⅛	●					●	
	Silver	*Hypomesus pretiosus*					●		●	1/16–⅛	●					●	
Snapper, red		*Lutianus blackfordii*				●				2–20		●		●	●		●
Sole (see Flounders).																	
Spanish mackerel		*Scomberomorus maculatus*			●	●				1–4	●	●				●	
Spot		*Leiostomus xanthurus*		●	●					¼–1¼	●	●					●
Striped bass	Rockfish	*Roccus saxatilis*		●	●					2–25	●			●			●
Swellfish	Puffer, swell toad, globefish, blowfish.	*Spheroides maculatus*		●						2–10 per lb			●				●
Swordfish	Broadbill	*Xiphias gladius*	●	●			●		●	50–200			●	●			●
Tilefish		*Lopholatilus chameleonticeps.*	●	●						4–18	●	●	●	●			●
Tuna:																	
Albacore	Longfin tuna	*Germo alalunga*					●		●	12–25	●					●	
Bluefin		*Thunnus* sp	●	●						75–1,000	●		●			●	
Little		*Euthynnus alleteratus*	●	●						4–10		●				●	
Whiting		*Merluccius bilinearis*	●	●						4–18	●	●	●		●		
Wolffish	Ocean catfish	*Anarhichas lupas*	●						●	8		●	●	●	●		●

FRESH-WATER FISH: NAMES, PRODUCING AREAS, WEIGHTS, AND MARKET FORMS

Most common name	Other common names	Scientific name	Main producing areas				Usual market size in pounds	Usual market form					Fat-or-lean category	
			Great Lakes	Other U. S. lakes	Inland rivers	Imported		Whole	Drawn	Dressed	Steaks	Fillets	Fat	Lean
Blue pike		*Stizostedion vitreum glaucum.*	●			●	¾–1	●				●		●
Brook trout		Various sp. (hatchery raised in U. S.).				●	⅓–2			●			●	
Buffalofish	Winter carp	*Ictiobus* sp			●		3–25	●	●	●	●			●
Carp	Summer or German carp.	*Cyprinus carpio*	●	●	●		2–8	●						●
Catfish and bullheads		*Ameiurus* sp., *Ictalurus* sp.	●	●	●		1–40	●		●				●
Chub	Longjaw, blackfin, bluefin.	*Leucichthys sp*	●			●	3–10 per lb			●			●	
Lake herring	Bluefin, cisco	*Leucichthys artedi*	●			●	⅓–1	●	●			●		●
Lake trout		*Salvelinus* [=*Cristivomer*] *namaycush.*	●			●	1½–10		●	●		●	●	
Pickerel	Jack, grass pike	*Esox reticulatus, E. lucius*	●	●		●	2–10	●		●		●		●
Sauger	Sand pike	*Stizostedion canadense*	●			●	1–1½	●				●		●
Sheepshead	Fresh-water drum, gaspergou.	*Aplodinotus grunniens*	●	●	●	●	1½–8	●				●		●
Smelt		*Osmerus mordax*	●				10–20 per lb	●						●
Suckers	Mullet	*Catostomidae* sp	●	●	●	●	1½–6	●	●	●				●
Whitefish		*Coregonus clupeaformis*	●			●	1½–6	●	●	●		●	●	
Yellow perch		*Perca flavescens*	●	●	●	●	½–¾	●				●		●
Yellow pike	Pike perch	*Stizostedion vitreum vitreum.*	●	●		●	1½–4	●		●		●		●

SHELLFISH: NAMES, PRODUCING AREAS, WEIGHTS, AND MARKET FORMS

Most common name	Other common names	Scientific name	Main producing areas							Usual market condition			
			New England	Middle Atlantic	South Atlantic	Gulf	Pacific coast	Alaska	Imported	Live in shell (weight in pounds)	Shucked meats (number per gallon)	Headless, raw (weight)	Cooked meats (size containers)
Clams:													
Butter		*Saxidomus nuttali*					●	●	●	100 per sack	100–250		
Hard	Quahog, hard-shell clam.	*Venus mercenaria*	●	●	●					80 per bu	100–250		
Little neck		*Paphia staminea*					●	●	●	60 per bu			
Razor		*Siliqua patula*					●	●	●	80 per box			
Soft	Soft-shell clam	*Mya arenaria*	●	●						45 per bu	200–700		
Surf	Skimmer	*Mactra solidissimo*		●							100–300		
Crabs:													
Blue:													
Hard	Hard-shell crab	*Callinectes sapidus*		●	●	●				¼–1			1-lb. tins.
Soft	Soft-shell crab	*Callinectes sapidus*		●	●	●				¼–½			
Dungeness		*Cancer magister*					●	●	●	1¼–3½			1-, 5-lb. tins.
King		*Paralithodes camtschatica.*						●		6–20			6-oz., 3-lb. pkgs.
Rock		*Cancer irroratus*	●							½			1-lb. tins.
Cuttlefish	Sepia	*Sepia* sp							●				
Lobsters		*Homarus americanus.*	●						●	¼–4			6-, 14-oz., 1-lb. tins.
Lobsters, spiny	Sea crawfish, rock lobster.	*Panulirus argus*			●	●			●	1–4		½–2 lbs	
		Panulirus interruptus.					●		●				
Mussels, sea		*Mytilus edulis*	●	●						55 per bu			
Octopus	Pulpi, devilfish	*Octopus* sp					●		●				
Oysters:													
Eastern		*Crassostrea virginica*	●	●	●	●				80 per bu	150–200		
Pacific	Japanese	*Crassostrea gigas*					●			80 per sack	64–240		
Olympia	Western	*Ostrea lurida*					●			120 per sack	1, 500–1, 600		

Scallops:													
Bay		*Pecten irradians*	●	●	●	●					250–350		
Sea		*Pecten magellanicus*	●	●					●		100–150		
Shrimp	White shrimp, prawn.	*Penaeus setiferus*			●	●			●			12–70 per lb.	6-, 8-, 12-oz., 1-, 5-lb. tins.
	Pink grooved shrimp.	*Penaeus duorarum*			●	●			●			12–70 per lb.	6-, 8-, 12-oz., 1-, 5-lb. tins.
	Brown grooved shrimp.	*Penaeus aztecus*			●	●			●			12–70 per lb.	6-, 8-, 12-oz., 1-, 5-lb. tins.
	Alaska pink shrimp.	*Pandalus* sp						●				150–275 per lb.	1-, 5-lb. tins.
	California gray shrimp.	*Crago* sp					●					125–250 per lb.	
Squid		*Loligo pealei*	●	●					●				
		Loligo opalescens					●						

MISCELLANEOUS: NAMES, PRODUCING AREAS, WEIGHTS, AND MARKET FORMS

Most common name	Other common names	Scientific name	Main producing areas								Usual market condition	
			New England	Middle Atlantic	South Atlantic	Gulf	Pacific coast	Alaska	Imported	Inland waters	Size (in pounds)	Form
Frogs		*Rana* sp				●			●	●	½–1	Live.
											2-12 pair per lb	Legs and saddles.
Terrapin	Diamondback terrapin	*Malaclemys* sp			●	●					½–2	Live.
Turtles:												
Fresh-water	Soft-shelled turtle	*Trionyx* sp				●				●	2–100	Live, dressed.
Salt-water		Various sp				●					10–200	Live, dressed.

MARKET CLASSIFICATIONS AND SPECIFICATIONS

No size standards for fish are fixed by Federal statute. Some States have regulations only on the minimum length or weight at which certain fish or shellfish may be caught or sold. In various sections of the country, general terms denoting classifications of size and weight have been developed by the fishing trade.

In Boston and Seattle, where there are exchanges for selling certain species as landed by the fishing vessels, terms with definite specifications have been set by the trade. New York and Chicago are examples of large terminal wholesale markets that receive fishery products from many producing areas in the United States, Alaska, and abroad. For ease in trading in these markets, the wholesale dealers have agreed on certain specifications and classifications for the major species handled. This is true also of most other terminal markets in the United States.

The following tables show the market classifications and specifications of the fishery products commonly sold in the larger consuming markets or areas. The trade practice in five markets—Boston, New York, the Gulf States, Seattle, and Chicago—is used as representative of the trade practice in most markets of the United States, though some other markets, such as Philadelphia, Pittsburgh, Baltimore, Washington, St. Louis, San Francisco, and Portland, may use some local classifications and specifications different from those shown in the table.

As an example of variations in trade practice, it will be noted that drawn haddock is available on both the Boston and the New York wholesale markets: in Boston "large" haddock are those 2½ pounds and up, whereas in New York "large" haddock are those 2 pounds and up.

BOSTON WHOLESALE MARKET CLASSIFICATIONS

The terms and classifications in this table are those developed and commonly accepted by the trade in Boston, Mass. An asterisk (*) denotes market sizes and weights as established by the New England Fish Exchange.

Species	Market classification	Approximate weight, size, or number	Usual market forms [1] (as landed [2])
SALT-WATER FISH			
Butterfish	Large	¾ lb. and over	Round.
	Mixed	⅛ lb. and over	Do.
	Small	Under ⅛ lb	Do.
Cod*	Whale	Over 25 lbs	Drawn.
	Large	10 to 25 lbs	Do.
	Market	2½ to 10 lbs	Do.
	Scrod	1½ to 2½ lbs	Do.
	Snapper	Under 1½ lbs	Mostly round, very few drawn.
Cusk*		Over 3 lbs	Drawn.
	Scrod	1½ to 3 lbs	Do.
Flounders:			
Blackback*	Large	¾ lb. and over	Round.
	Small	Under ¾ lb	Do.
Dab		1 lb. and over	Do.
Gray sole*	Large	2 lbs. and over	Do.
	Small	Under 2 lbs	Do.
Lemon sole*		3 lbs. and over	Do.
Yellowtail*	Large	1 lb. and over	Do.
	Small	Under 1 lb	Do.
Haddock*	Large	Over 2½ lbs	Drawn.
	Scrod	1½ to 2½ lbs	Do.
	Snapper	Under 1½ lbs	Mostly round, very few drawn.
Hake:			
Red		½ to 1½ lbs	Round.
White*	Large	6 lbs. and over	Dressed.
	Small	2½ to 6 lbs	Do.
Halibut:	Whale	Over 125 lbs	Drawn.
Eastern* [3]	Large	60 to 125 lbs	Do.
	Medium	12 to 60 lbs	Do.
	Chicken	7 to 12 lbs	Do.
	Snapper	Under 7 lbs	Do.
Western	Whale	Over 80 lbs	Dressed.
	Large	60 to 80 lbs	Do.
	Medium	10 to 60 lbs	Do.
	Chicken	5 to 10 lbs	Do.
Herring, sea	Sardines	Mixed sizes	Round.
Mackerel*	Large	2¼ lbs. and over	Do.
	Medium	1½ to 2¼ lbs	Do.
	Small	1 to 2½ lbs	Do.
	Tinker	½ to 1 lb	Do.
	Tack or spike	Under ½ lb	Do.

See footnotes at end of table.

BOSTON WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size, or number	Usual market forms [1] (as landed [2])
SALT-WATER FISH—con.			
Ocean perch	Mixed	½ to 3 lbs	Round.
Pollock*	Large	4 lbs. and over	Drawn.
	Scrod	1½ to 4 lbs	Do.
Shark	Mackerel shark	25 to 200 lbs	Dressed.
Skate (rajafish)		1 to 10 lbs	Dressed (saddles).
Smelt:			
Native	Green:		
	Medium	5½ to 7 inches (12 to 14 per lb.)	Round.
	Small	Under 5½ inches (15 or more per lb.)	Do.
Sea	Large	Over 7 inches (10 or less per lb.)	Do.
Canadian	Extra	Over 7 inches (8 to 10 per lb.).	Do.
	No. 1	5½ to 7 inches (12 to 14 per lb.).	Do.
	Medium	Under 5½ inches (15 or more per lb.).	Do.
Striped bass	Jumbo	Over 15 lbs	Do.
	Large	10 to 15 lbs	Do.
	Medium	5 to 10 lbs	Do.
	Small	3 to 5 lbs	Do.
Swordfish*	Large	110 lbs. and over	Dressed.
	Pups	Under 110 lbs	Do.
Tuna		75 to 1,000 lbs	Round or dressed.
Whiting	Round	½ to 4 lbs	Round.
	Dressed	½ to 4 lbs	Drawn.
	Steak	½ to 4 lbs	Dressed.
Wolffish (catfish)		2 to 30 lbs	Drawn.
SHELLFISH			
Clams:			
Hard	Sharp	100 to 125 per gal	Shucked.
		160 to 200 per bu	In shell.
	Cherrystone	325 to 360 per bu	Do.
	Littleneck	500 to 640 per bu	Do.
Soft	Large	200 to 300 per gal	Shucked.
	Medium	350 to 500 per gal	Do.
	Small	500 to 700 per gal	Do.
		800 to 1,000 per bu	In shell.
Crabs, rock		⅓ to ½ lb., depending on the season.	Live.

See footnotes at end of table.

BOSTON WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size, or number	Usual market forms [1] (as landed [2])
SHELLFISH—con.			
Crab meat	Flake	½- and 1-lb. cans	Fresh-cooked.
	Broken	1-lb. can	Do.
Lobsters	Two claw:		
	Jumbo	3 lbs. and over	Live.
	Select	1¼ to 3 lbs	Do.
	Chicken	1 lb. average	Do.
	Weaks	All sizes	Do..
	One claw, cull	All sizes	Do.
Mussels		Preferred size 2½ in. and over. 45 lbs. per bushel. Sold by pound.	In shell.
Oysters	Count	135 to 160 per gal	Shucked.
	Select	180 to 230 per gal	Do.
	Standard	300 to 350 per gal	Do.
	Large	500 per bbl	In shell.
	Medium	700 to 750 per bbl	Do.
	Small	900 to 1,050 per bbl	Do.
	Extra small	1,050 to 1,200 per bbl	Do.
Scallops:			
Bay		500 to 850 per gal. (9 lbs. per gal.).	Shucked.
Sea		110 to 170 per gal	Do.

[1] Round=as caught; drawn=eviscerated; dressed=eviscerated and heads off.

[2] Most of the groundfish and flounders are filleted after landing.

[3] All sizes are graded for weight and color. Grades of color, other than white, are light gray and dark gray.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS

The terms and classifications in this table are those developed and commonly accepted by the trade in Fulton Fish and Peck Slip markets, New York, N. Y.

Species	Market classification	Approximate weight, size or number	Usual market forms [1]
SALT-WATER FISH			
Bluefish	Large	2½ lbs. and up	Round and drawn.
	Medium	1½ lbs. and up	Do.
	Small	¾ to 1½ lbs	Do.
	Snapper	Under ¾ lb	Round.
Butterfish	Jumbo	½ lb. and up	Do.
	Large	200 to 300 per 100 lbs	Do.
	Medium	300 to 350 per 100 lbs	Do.
	Small	Over 350 per 100 lbs	Do.
Cod	Whale	20 lbs. and up	Drawn.
	Large	8 to 20 lbs	Do.
	Market	2½ to 8 lbs	Do.
	Scrod	1½ to 2½ lbs	Do.
	Steak	5 lbs. and up	Dressed.
Croaker	Large	1½ lbs. and up	Round.
	Medium	¾ to 1½ lbs	Do.
	Small	½ to ¾ lb	Do.
	Pins	Under ½ lb	Do.
Eels, common	Large	2 lbs. and up	Round (live, dead), dressed, and skinned.
	Medium	1 to 2 lbs	Do.
	Small	Under 1 lb	Round (live, dead).
Flounders:			
Blackback	Large	1½ lbs. and up	Round.
	Medium	¾ to 1½ lbs	Do.
	Small	Under ¾ lb	Do.
Fluke	Jumbo	4 lbs. and up	Do.
	Large	2 to 4 lbs	Do.
	Medium	1½ to 2 lbs	Do.
Dab, sea		1 lb. and up	Do.
Gray sole	Large	2 lbs. and up	Do.
	Small	Under 2 lbs	Do.
Lemon sole		3 lbs. and up	Do.
Yellowtail	Large	2½ lbs. and up	Do.
	Mixed	½ to 2½ lbs	Do.
Haddock	Large	2 lbs. and up	Drawn.
	Scrod	1 to 2 lbs	Do.
	Small scrod	Under 1 lb	Do.
Hake:			
Red		½ to 2 lbs	Round.
White	Large	3 lbs. and up	Dressed.
	Medium	1 to 3 lbs	Drawn.

See footnote at end of table.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms [1]
SALT-WATER FISH—continued			
Halibut:			
Eastern, white.	Whale	Over 80 lbs	Dressed and drawn.
	Large	50 to 80 lbs	Do.
	Medium	10 to 50 lbs	Do.
	Chicken	5 to 10 lbs	Do.
	Snapper	Under 5 lbs	Do.
Western	Whale	Over 80 lbs	Dressed.
	Large	60 to 80 lbs	Do.
	Medium	10 to 60 lbs	Do.
	Chicken	5 to 10 lbs	Do.
Herring, sea	Large	½ lb. and up	Round.
	Small	Under ½ lb	Do.
King mackerel	Jumbo	12 lbs. and up	Drawn.
	Large	8 to 12 lbs	Do.
	Medium	5 to 8 lbs	Do.
	Small	Under 5 lbs	Do.
King whiting (kingfish).	Large	Over 1 lb	Round.
	Small	Under 1 lb	Do.
Mackerel	Large	1¼ lbs. and up	Do.
	Medium	¾ to 1¼ lbs	Do.
	Tinker	½ to ¾ lbs	Do.
	Small	Under ½ lb	Do.
Mullet	Large	1 lb. and up	Do.
	Medium	¾ to 1 lb	Do.
	Small	Under ¾ lb	Do.
Pollock	Steak	4 lbs. and up	Dressed.
	Market	4 lbs. and up	Drawn.
	Scrod	1 to 4 lbs	Round and drawn.
Pompano	Large	1½ to 2½ lbs	Round.
	Medium	¾ to 1¼ lbs	Do.
	Small	Under ¾ lb	Do.
Salmon:			
Atlantic		5 lbs. and up	Round, dressed, drawn.
Chinook (king)	Large	10 lbs. and up	Dressed.
	Medium	5 to 10 lbs	Do.
Chum (fall)		7 to 10 lbs	Do.
Silver (coho)	Large	7 to 10 lbs	Do.
	Medium	4 to 7 lbs	Do.
Scup (porgy)	Large	1 to 2 lbs	Round.
	Medium	½ to 1 lb	Do.
	Small	Under ½ lb	Do.

See footnote at end of table.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms [1]
SALT-WATER FISH—con.			
Sea bass	Large	1¼ lbs. and up	Round.
	Medium	¾ to 1 lb	Do.
	Small	Under ½ lb	Do.
Sea trout:			
Gray	Large	3½ lbs. and up	Drawn.
	Large-medium	1½ to 3½ lbs	Do.
	Medium	1¼ to 1½ lbs	Do.
	Small	¾ to 1¼ lbs	Do.
	Pin	Under ½ lb	Do.
Spotted	Large	Over 3½ lbs	Round.
	Medium	1½ to 3½ lbs	Do.
	Small	Under 1½ lbs	Do.
	Pin	Under ½ lb	Do.
Shad	Roe	3 lbs. and up	Round and drawn.
	Buck	1½ lbs. and up	Round.
	Cut	2 lbs. and up	Do.
	Skip	¾ to 1½ lbs	Drawn.
Shad roe	Jumbo	14 oz. and up	Round.
	Large	10 to 14 oz	Per pair.
	Medium	8 to 10 oz	Do.
	Small	Under 8 oz	Do.
Skate (rajafish)	Wing	Any size	Dressed (saddles).
Smelt:			
New Brunswick.	Jumbo	7 in. and over	Round.
	No. 1	5¾ to 7 in	Do.
	Medium	4½ to 5¾ in	Do.
	Small	Under 4½ in	Do.
Great Lakes	Jumbo	4 to 6 fish per lb	Do.
	No. 1	7 to 10 fish per lb	Do.
	Medium	Over 10 fish per lb	Do.
Snapper, red	Large	5 lbs. and up	Drawn.
	Medium	2 to 5 lbs	Do.
	Small	Under 2 lbs	Do.
Spanish mackerel	Large	1½ lbs. and up	Do.
	Small	Under 1½ lbs	Do.
Spot	Large	¾ lb. and up	Round.
	Medium	½ to ¾ lb	Do.
	Small	Under ½ lb	Do.
Striped bass	Jumbo	15 lbs. and up	Do.
	Large	5 to 15 lbs	Do.
	Medium	2 to 5 lbs	Do.

See footnote at end of table.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms [1]
SALT-WATER FISH—con.			
Swellfish		All sizes	Dressed and skinned.
Swordfish:			
Fresh	Large	Over 100 lbs	Dressed.
	Pups	Under 100 lbs	Do.
Frozen	Dressed	Over 100 lbs	Do.
	Fillet or split	50 lbs. and up	Sides.
	Chunk	40 to 100 lbs	Portion.
Tautog		½ lb. and up	Round.
Tilefish	Large	7 lbs. and up	Drawn.
	Medium	4 to 7 lbs	Do.
	Kitten	Under 4 lbs	Do.
Tuna:			
Bluefin		75 to 1,000 lbs	Chunk.
Little		2 to 10 lbs	Drawn.
Whiting		¼ lb. and up	Round.
FRESH-WATER FISH			
Blue pike	Jumbo	1½ lbs and up	Do.
	Regular	½ to 1½ lbs	Do.
Brook trout	Third	⅓ lb	Do.
	Quarter	¼ lb	Do.
Buffalofish	Jumbo	7 lbs. and up	Round, dressed, or skinned.
	No. 1	4 to 7 lbs	Do.
Carp	Jumbo	7 lbs. and up	Round.
	No. 1	4 to 7 lbs	Do.
	Medium	Under 4 lbs	Do.
Lake herring	Large	3 per lb	Do.
	Regular	4 per lb. and up	Do.
Sauger		½ to 1½ lbs	Do.
Sucker (mullet)	Mixed	1 to 3 lbs	Do.
Whitefish	Jumbo	3 lbs. and up	Do.
	No. 1	1½ to 3 lbs	Do.
	Medium	1 to 1½ lbs	Do.
	Dressed	Mixed sizes	Dressed.
Yellow pike	Large	3½ lbs. and up	Round.
	No. 1	1½ to 3 lbs	Do.
	No. 2	1 to 1½ lbs	Do.

See footnote at end of table.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms [1]
SHELLFISH, ETC.			
Clams:			
Hard	Chowder, large	125 per bu	In shell.
	Medium	180 per bu	Do.
	Cherrystone	300 to 325 per bu	Do.
	Littleneck	450 to 650 per bu	Do.
Soft	Large	400 per bu	Do.
	Medium or steamers.	600 to 800 per bu	Do.
	Large	200 to 250 per gal	Shucked.
	Medium	350 to 400 per gal	Do.
	Small	600 to 700 per gal	Do.
Conchs		All sizes	In shell.
Crabs:			
Hard		All sizes	Alive.
Soft	Jumbo	5½ in. across back	Do.
	Large prime	5 to 5½ in. across back	Do.
	Prime	4½ to 5 in. across back	Do.
	Hotel prime	4 to 4½ in. across back	Do.
	Large medium	3½ to 4 in. across back	Do.
	Medium	Under 3½ in. across back.	Do.
	Culls	All sizes	Do.
Crab meat	Jumbo lump	All large lump	Cooked.
	Lump	Lump only	Do.
	Mixed, mostly lump.	More than ½ lump	Do.
	Mixed, mostly flake.	Topped with lump	Do.
	Flake	All white flake meat	Do.
	Claw	Claw meat	Do.
Cuttlefish (sepia)		½ to ¾ lb. and up	Round.
Lobsters:			
Common	Jumbo	Over 3 lbs	Live.
	Large	1½ to 2½ lbs	Do.
	Quarter	1¼ to 1½ lbs	Do.
	Chicken	¾ to 1 lb	Do.
Spiny	Jumbo	16 oz. and over	Tail.
	Large	12 to 16 oz	Do.
	Medium	9 to 12 oz	Do.
	Small	6 to 9 oz	Do.
Lobster meat		6 to 14 oz. per can	Cooked.
Mussels, sea		All sizes	In shell.
Octopus (pulpi)		¾ lb. and up	Round.

See footnote at end of table.

NEW YORK WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms[1]
SHELLFISH, ETC.—continued			
Oysters	Box	150 per bu	In shell.
	Medium	200 per bu	Do.
	Half shell	325 per bu	Do.
	Blue point	400 per bu	Do.
	Count	Under 160 per gal	Shucked.
	Extra select	160 to 210 per gal	Do.
	Select	210 to 300 per gal	Do.
	Standard	300 to 500 per gal	Do.
Scallops:			
Bay	Large	¾ in. in diameter	Do.
	Medium	½ to ¾ in. in diameter	Do.
	Small	Under ½ in. in diameter.	Do.
Sea		All sizes	Do.
Shrimp		Under 15 shrimp per lb.	Headless.
		15 to 20 shrimp per lb.	Do.
		21 to 25 shrimp per lb.	Do.
		26 to 30 shrimp per lb.	Do.
		31 to 35 shrimp per lb.	Do.
		36 to 40 shrimp per lb.	Do.
		41 to 45 shrimp per lb.	Do.
		46 to 50 shrimp per lb.	Do.
		51 to 60 shrimp per lb.	Do.
		Over 60 shrimp per lb.	Do.
Squid		All sizes	Round.
Frog legs	Extra large	2 to 3 pairs per lb	Legs and saddle.
	Large	4 to 5 pairs per lb	Do.
	Medium	6 to 8 pairs per lb	Do.
	Small	9 to 12 pairs per lb	Do.

[1] Round=as caught; drawn=eviscerated; dressed=eviscerated and heads off.

GULF STATES WHOLESALE MARKET CLASSIFICATIONS

The terms and classifications in this table are those developed and commonly accepted by the trade in the Gulf States wholesale markets, especially at New Orleans, La.

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
SALT-WATER FISH			
Bluefish		1 to 6 lbs	Round or drawn.
Blue runner		½ to 1 lb	Round.
Croaker		¼ to 1 lb	Do.
Drum:			
Black	Bulls	15 to 40 lbs	Round or drawn.
	Large	4 to 15 lbs	Do.
	Medium	1 to 4 lbs	Do.
	Small	¼ to 1 lb	Round.
Red	Bulls	15 to 40 lbs	Round or drawn.
	Medium	3 to 15 lbs	Do.
	Rats	1½ to 3 lbs	Round.
Flounder	Large	1 to 5 lbs	Round or drawn.
	Small	½ to 1 lb	Round.
Grouper		5 to 15 lbs	Drawn.
King whiting (ground mullet).		¼ to 1 lb	Round.
Mullet		½ to 2 lbs	Do.
Pompano		½ to 3½ lbs	Do.
Sea trout:			
Spotted	Large	1 to 4 lbs	Round or drawn.
	Medium	¾ to 1 lb	Do.
	Small	½ to ¾ lb	Do.
White		½ to 1½ lbs	Round.
Sheepshead		¾ to 10 lbs	Do.
Snapper, red		2 to 20 lbs	Drawn.
Spanish mackerel		1 to 3 lbs	Do.
FRESH-WATER FISH			
Buffalofish		3 to 20 lbs	Do.
Catfish		1 to 40 lbs	Do.
Sheepshead (gaspergou).		1 to 5 lbs	Do.
SHELLFISH, ETC.			
Crabs:			
Hard		⅓ to ⅔ lb	Live.
Soft		⅙ to ½ lb	Do.
Crayfish		20 to 25 per lb	Do.

See footnote at end of table.

GULF STATES WHOLESALE MARKET CLASSIFICATIONS—Con.

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
SHELLFISH ETC.—continued			
Diamondback terrapin.	Cows	1½ to 2 lbs	Live.
	Heifers	1 lb	Do.
	Bulls	½ to 1 lb	Do.
Frogs		½ to 1 lb	Do.
Shrimp	Large	Under 18 per lb	Heads on.
	Medium	18 to 35 per lb	Do.
	Small	Over 35 per lb	Do.
Turtles:			
Fresh-water		2 to 100 lbs	Live or dressed.
Sea		10 to 200 lbs	Do.

[1] Round=as caught; drawn=eviscerated; dressed=eviscerated and heads off.

SEATTLE WHOLESALE MARKET CLASSIFICATIONS

The terms and classifications in this table are those developed and commonly accepted by the trade in Seattle, Wash.

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
SALT WATER FISH			
Cod		3 lbs. and over	Round, dressed.
Flounders:			
Dover	Large	24 to 30 in	Round.
	Small	10 to 23 in	Do.
English	Large	13 in. and over	Do.
	Small	11½ to 13 in	Do.
Petrale		16 to 18 in	Do.
Rex		11½ in. and over	Do.
Rock		do	Do.
Sand		do	Do.
Turbot		3 to 4 lbs. and over	Do.
Halibut	Whale	Over 80 lbs	Dressed.
	Large	60 to 80 lbs	Do.
	Medium	10 to 60 lbs	Do.
	Chicken	5 to 10 lbs	Do.
Herring, sea		4 to 6 fish per lb	Round.
Lingcod		5 lbs. and over	Dressed, some Round.
Rockfish		4 to 5 lbs	Round, dressed.
Sablefish (black cod)	Large	5 lbs. and over	Dressed, some round.
	Small	Under 5 lbs	Do.

See footnote at end of table.

SEATTLE WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
SALT-WATER FISH—continued			
Salmon:			
Chinook (king)	Large red	12 lbs. and over	Drawn.
	Small red	Not under 26 in. and up to 12 lbs.	Do.
	White	26 in. and over	Do.
Chum (fall)		5 to 11 lbs	Round.
Pink (humpback).		4 to 6 lbs	Round, few drawn.
Silver (coho)		6 to 12 lbs	Round, drawn.
Sole (see Flounders).			
Smelt:			
Eulachon		5 to 8 fish per lb	Do.
Silver		5 to 12 fish per lb	Do.
Tuna, albacore		10 to 15 lbs	Do.
SHELLFISH, ETC.			
Clams:			
Butter		Sack—100 lbs	In shell.
		Box—80 lbs	Do.
Littleneck		Sack—100 lbs	Do.
		Box—80 lbs	Do.
Razor		3½ in. and over	Do.
Crabs, Dungeness	Ocean	24 lbs. per doz	Live.
	Puget Sound	22 lbs. per doz	Do.
Crab meat:			
Dungeness and king	Regular	1- and 5-lb. cans	Fresh cooked.
Oysters:			
Olympia		1,500 to 1,600 count per gal.	Shucked.
		Sack—120 lbs	In shell.
Pacific	Large	Not more than 64 per gal.	Shucked.
	Medium	65 to 96 count per gal.	Do.
	Small	97 to 144 count per gal.	Do.
	Extra small	More than 144 count per gal.	Do.
		Sack—80 lbs	In shell.
Scallops, bay		Sack—60 lbs	Do.
		Gallon—8½ lbs	Shucked.
Shrimp	Local		Fresh cooked.
Shrimp meat		1- and 5-lb. cans	Do.
Octopus			Round.
Squid		5 to 6 per lb	Do.

[1] Round=as caught; drawn=eviscerated only; dressed=eviscerated and heads off.

CHICAGO WHOLESALE MARKET CLASSIFICATIONS

The terms and classifications in this table are those developed and commonly accepted by the trade in Chicago, Ill. There are no fixed legal standards except those arrived at by mutual agreement among dealers in the market; the sizes shown have generally been accepted by fishermen and purchasers. Fish will vary in weight according to seasons, owing to fatness. In all cases, irrespective of weight, small fish must meet legal requirements of the various States, for weight or for length.

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
SALT-WATER FISH			
Halibut	Large and whale	Over 60 lbs	Dressed.
	Medium	10 to 60 lbs	Do.
	Chicken	5 to 10 lbs	Do.
Mackerel		½ to 2½ lbs	Round.
Sablefish (black cod).	Large	5 lbs. and over	Dressed, some round.
	Small	Under 5 lbs	Do.
Salmon:			
Chinook (king).	Large red	12 lbs. and over	Dressed.
	Small red	Not under 26 in. and up to 12 lbs.	Do.
	White	26 in. and over	Do.
Chum (fall)		5 to 11 lbs	Do.
Silver (coho)		6 to 12 lbs	Do.
Snapper, red		2 to 20 lbs	Drawn.
FRESH-WATER FISH			
Blue pike		¼ lb	Round.
	Pins	5 to 6 fish per lb	Do.
Buffalofish	Jumbo	Over 8 lbs	Do.
	No. 1	4 to 8 lbs	Do.
	Medium	2 to 4 lbs	Do.
Bullheads	Jumbo	Over ¾ lb	Dressed and skinned.
	Large	½ lb	Do.
Carp	Jumbo	Over 8 lbs	Round.
	No. 1	4 to 8 lbs	Do.
	Medium	2 to 4 lbs	Do.
Catfish	Large	Over 3 lbs	Dressed and skinned.
	No. 1	1½ to 3 lbs	Do.
Chub	Large	3 to 4 per lb	Drawn.
	Medium	5 to 7 lb	Do.
	Small	Over 7 per lb	Do.
Lake herring	Regular	4 to 7 fish per lb	Drawn mostly.
	Bluefin (Minnesota).	3 to 4 fish per lb	Do.

See footnote at end of table.

CHICAGO WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size, or number	Usual market forms [1]
FRESH-WATER FISH—continued			
Lake trout	Large	8 to 10 lbs	Drawn.
	Medium	4 to 8 lbs	Do.
	No. 1	2 to 4 lbs	Do.
	"Headless"	Over 8 lbs	Dressed.
	Halfbreed and fat	All sizes	Drawn.
Pickerel	Large	Over 3 lbs	Dressed.
	Medium	1½ to 3 lbs	Round.
Sauger	Lake Erie	½ lb	Do.
	Winnipeg	½ to ¾ lb	Do.
	Manitoba	¾ to 1 lb	Do.
Sheepshead	Hard and soft meat:		
	Large	Over 5 lbs	Round.
	Medium	1½ to 5 lbs	Do.
	Small	¾ to 1½ lbs	Do.
	Lake Erie	1 to 5 lbs	Do.
Smelt	Jumbo	Less than 7 fish per lb.	Do.
	No. 1	7 to 10 fish per lb	Do.
	Medium	Over 10 fish per lb	Do.
Suckers	Jumbo	4 to 6 lbs	Drawn.
	Medium	Under 4 lbs	Do.
	Mullet	All sizes	Round.
Whitefish	Jumbo	Over 4 lbs	Mostly drawn.
	Medium-large	3 to 4 lbs	Do.
	No. 1	1 to 3 lbs	Do.
Yellow perch	Native:		
	Jumbo	½ to ¾ lb	Round.
	Large	Approx. 3 fish per lb	Do.
	Medium	4 fish per lb	Do.
	Small	Over 4 fish per lb	Do.
	Canadian:		
	Jumbo	¾ lb	Do.
	Large	Approx. 2 fish per lb	Do.
Yellow pike	Jumbo	Over 4 lbs	Mostly round.
	Large	2 to 4 lbs	Do.
	No. 1 hard (Lake Erie).	2½ to 3½ lbs	Do.
	No. 2 hard (Lake Erie).	1 to 2½ lbs	Do.

See footnote at end of table.

CHICAGO WHOLESALE MARKET CLASSIFICATIONS—Continued

Species	Market classification	Approximate weight, size or number	Usual market forms[1]
SHELLFISH, ETC.			
Clams:			
Hard			In shell, shucked.
Soft			In shell.
Frog legs			Legs and saddles.
Lobsters:			
Common			Live.
Spiny			Tails.
Oysters			In shell, shucked.
Scallops			Shucked.
Shrimp	Extra jumbo	Less than 15 shrimp per lb.	Heads off.
	Jumbo	15 to 20 shrimp per lb.	Do.
	Large	21 to 25 shrimp per lb.	Do.
	Large-medium	26 to 30 shrimp per lb.	Do.
	Medium	31 to 42 shrimp per lb.	Do.
	Small	43 to 65 shrimp per lb.	Do.
	Very small or bait	66 shrimp or more per lb.	Do.

[1] Round=as caught; drawn=eviscerated; dressed=eviscerated and heads off.

GOVERNMENT CLASSIFICATIONS AND SPECIFICATIONS

There are few regulations prescribing detailed standards for fresh and frozen products of the fishing industry.

Federal Specifications, as approved by the Commissioner, Federal Supply Service, for the use of all Departments and establishments of the Government in buying fresh and frozen fishery products, represent an approach to Federal standards. The fishery products for which these specifications exist are as follows:

	Type	*Specification*
Fish:		
	Type I. Fresh (chilled)	PP–F–381c.
	Type II. Frozen	
Clams:		
	Type I. Fresh (chilled)	PP–C–401a.
	Type II. Frozen	

Crabmeat: *Type*	*Specification*
Type I. Lump	PP-C-656 and Amendment I.
Type II. Flake	
Type III. Claw	
Oysters:	
Type I. Fresh	PP-O-956b.
Type II. Frozen	

Copies of the detailed specifications listed above may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 5 cents each.

The United States Food and Drug Administration administers the Federal Food, Drug, and Cosmetic Act which applies to all food products that move in interstate commerce. Among the important adulteration provisions of the Act applicable to fishery products are those prohibiting the addition of poisonous substances, the production, packing, or handling of a food under unsanitary conditions, and the shipment of foods that are in whole or in part filthy, putrid, decomposed, or otherwise unfit for food. One of the sections of the Act requires the label to bear the common or usual name of the food, and makes it illegal to label one fish with the name of another. The law provides for the declaration of standards of identity, quality, and fill of container for food products. At present only a few standards for fishery products are effective:

Raw oysters	Standard of identity.
Canned oysters	Standard of identity.
	Standard of fill.
Canned shrimp	Standard of fill.

Sizes for raw, shucked or opened, oysters are as follows:

Eastern or Gulf oysters:	*Trade name*	*Number per gallon*
Extra large	Counts	160 or less.
Large	Extra selects	161 to 210.
Medium	Selects	211 to 300.
Small	Standards	301 to 500.
Very small	----------	Over 500.

Pacific oysters:	*Number per gallon*
Large	64 or less.
Medium	65 to 96.
Small	97 to 144.
Extra small	Over 144.

Where no standard has been issued, the general provisions of the law apply. Provision is also made for the packing of seafood products under the continuous supervision of the Food and Drug Administration. The industry has the option of requesting the service. The only continuous-inspection service being conducted is at the plants of some packers of canned shrimp and canned oysters.

The United States Public Health Service is particularly interested in shellfish. Through cooperative arrangements, this agency endorses the sanitation control program of the States meeting the minimum requirements it specifies. These pertain mainly to sanitary control, origin, labeling, and shipment.

The Federal Trade Commission in preventing deceptive advertising and sales practices, issues cease-and-desist orders against unfair restraint of trade. It in effect fixes standards of identity by limiting the use of certain names to particular species.

The United States Department of the Interior administers the Black Bass Act. On July 16, 1952, this act was amended to include the interstate shipment of any fish, and now makes it illegal to ship, transport, possess, purchase, or sell fish "at any time, contrary to the law of the State, Territory, or the District of Columbia, in which it was caught, killed, taken, sold, purchased, or possessed." For example, a fish, illegal in size or weight in one State, cannot be shipped to another State and sold, even though the second State does not impose the same limitations.

Some States impose standards of weight and length with respect to the minimum sizes of certain fish that may be caught and marketed, but very few have any standards of either quality or measure for fresh and frozen fishery products.

WHEN TO BUY

Fresh fish and shellfish

Seasonal variations in the supply of fresh fishery products in a number of the more important areas may be determined by referring to the following tables. In some instances the tables cover large areas. In others they are limited to single cities that are important markets, distributing centers, or landing ports. The seasonal variations for these cities usually hold true for surrounding territory for considerable distances.

For each variety received, the month in which the largest receipts occurred has been given a value of 100; receipts in other months have been expressed as percentages of the largest month. An average index number for the year is also given. The higher the index number, the greater is the available supply of the particular species and, usually, the more reasonable the price. In general, it should prove advantageous to buy a fresh fishery product in any month in which its index number is higher than the average for the year.

These sectional and city tables show fresh fishery products only; for frozen fishery products, see page 46.

MAINE LANDINGS INDEX

[Based on data for landings, 1952, as reported to Fish and Wildlife Service]

Item	Landings in largest month (pounds)	Percentage of largest month's landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Cod	944,085	17	14	48	50	100	85	27	20	21	18	11	18	36
Cusk	166,526	29	34	83	74	100	98	57	38	53	35	25	25	54
Flounders:														
Blackback	187,104	48	65	70	60	99	83	59	20	76	37	36	100	63
Dab	538,919	8	11	31	100	84	39	32	11	10	5	8	7	29
Gray sole	248,474	19	24	33	47	100	83	90	58	51	15	10	13	45
Yellowtail	12,040	----	----	19	18	71	7	4	14	53	82	87	100	46
Haddock	741,059	43	45	47	51	45	71	68	84	100	71	45	54	60
Hake:														
Red	60,875	7	8	15		12	100	83	61	80	8	----	----	38
White	982,740	8	8	9	12	31	83	100	53	49	24	16	12	34
Halibut	31,752	7	8	30	55	100	17	8	4	2	6	3	4	20
Mackerel	666,955	----	----	----	----	30	100	56	44	54	28	----	----	52
Ocean perch	8,078,174	29	36	57	75	80	100	90	80	71	57	37	41	63
Pollock	1,166,430	18	15	19	40	79	100	32	48	38	29	77	51	46
Smelt	33,686	72	49	6	53	----	----	2	----	100	78	50	17	47
Tuna	28,774	----	----	----	----	----	7	100	20	2	----	----	----	32
Whiting	9,435,327	----	----	----	2	22	76	100	29	11	4	----	----	35
Wolffish	37,949	13	13	58	65	100	65	34	26	17	13	11	12	36
SHELLFISH														
Clams:														
Hard	114,588	5	17	20	16	33	17	69	100	42	23	17	10	31
Soft	718,145	46	47	70	96	100	56	54	95	69	47	57	31	64
Lobsters	4,719,654	17	13	12	13	17	16	51	100	80	49	34	22	35
Mussels, sea	104,815	11	41	100	67	38	3	----	----	----	1	9	5	31
Scallops, sea	241,304	36	29	41	10	29	52	100	82	68	47	66	61	52

MASSACHUSETTS LANDINGS INDEX

[Based on data for landings, 1952, as reported to Fish and Wildlife Service]

Item	Landings in largest month (pounds)	Percentage of largest month's landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Cod	5,191,616	33	41	97	100	69	45	48	39	34	37	29	28	50
Cusk	245,394	43	36	49	95	91	89	89	100	82	72	77	78	74
Flounders:														
Blackback	1,964,447	17	12	19	40	100	59	44	49	58	48	41	35	44
Dab	1,302,937	65	18	16	34	100	57	26	32	18	10	12	30	35
Fluke	1,090,450	15	47	100	73	28	38	22	19	22	27	42	8	37
Gray sole	848,855	35	98	25	100	50	38	22	25	15	9	22	67	42
Lemon sole	546,083	15	10	12	25	80	100	60	51	75	60	38	38	46
Yellowtail	2,408,206	27	27	26	28	28	44	100	81	59	78	71	43	51
Haddock	19,318,656	33	58	82	100	58	64	63	64	59	47	32	42	58
Hake:														
Red	736,945	64	11	14	----	67	26	35	80	100	75	23	11	46
White	708,120	34	57	21	33	50	72	70	64	93	100	92	39	60
Halibut	65,537	18	27	62	100	95	44	20	7	9	5	8	11	34
Mackerel	3,073,809	1	----	1	----	12	100	61	15	75	61	5	3	33
Ocean perch	19,464,142	20	17	17	45	77	100	79	88	75	75	39	29	55
Pollock	2,886,479	100	59	32	47	32	47	41	31	39	37	69	70	50
Scup (porgy)	207,890	34	67	----	9	57	100	53	33	22	15	2	2	36
Swordfish	89,944	----	----	----	----	----	----	46	100	23	96	----	----	66
Whiting	10,422,144	1	3	3	8	50	95	100	65	64	52	31	4	40
Wolffish	423,934	16	29	65	100	72	28	12	6	5	4	5	5	29
SHELLFISH														
Scallops, sea	1,690,368	44	33	41	73	98	65	76	100	83	71	55	59	66

NEW YORK, N. Y., RECEIPTS AND LANDINGS INDEX

[Based on 1952 data for salt-water market only, as reported to Fish and Wildlife Service; items shown are those usually having an annual volume of 50,000 pounds or more]

Item	Receipts and landings in largest month (pounds)	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Bluefish	555,932	22	25	18	24	100	35	24	46	52	62	24	18	38
Butterfish	936,140	100	90	96	50	14	75	55	55	61	51	46	17	59
Cod:														
Market	840,270	100	65	79	79	66	54	55	55	47	55	66	78	67
Steak	565,917	89	73	100	85	86	73	49	42	33	41	54	68	66
Croakers	94,865	20	5	41	48	9	37	41	100	33	16	11	26	32
Eels, common	184,655	10	10	11	24	29	28	20	20	32	23	10	100	26
Flounders:														
Blackback	1,315,887	36	30	40	59	100	85	83	70	78	74	65	67	66
Dab	403,150	100	26	45	58	64	22	6	13	13	7	20	18	35
Fluke	1,129,477	40	55	100	90	21	76	53	57	50	30	39	36	54
Gray sole	553,619	47	89	44	100	72	59	41	37	32	21	21	61	52
Lemon sole	189,950	27	21	26	37	78	100	87	58	88	95	58	69	62
Yellowtail	634,283	64	49	72	48	37	51	89	66	52	100	67	91	66
Haddock	638,853	37	57	100	61	45	55	43	45	59	48	32	45	52
Hake:														
Red	310,408	62	73	100	19	33	2	2	15	31	23	42	33	36
White	433,824	32	43	33	27	39	54	62	58	79	100	63	38	52
Halibut	597,894	-----	4	11	27	47	100	72	50	15	11	6	-----	34
Herring:														
Sardine	75,989	18	45	41	76	87	100	59	66	60	92	59	8	59
Sea, large	53,891	100	78	85	87	11	2	1	6	2	14	14	37	36
King mackerel (kingfish)	116,765	100	66	45	9	16	1	5	45	5	6	18	47	30
Mackerel	789,981	75	76	37	93	58	100	64	34	75	53	41	95	67
Mullet	238,774	49	15	10	13	7	14	18	62	68	100	73	40	39
Pollock	292,221	100	58	61	56	62	68	56	74	83	78	92	94	74
Salmon:														
Chinook (king)	614,109	-----	-----	13	26	82	96	100	78	44	20	5	2	47
Chum (fall)	92,325	-----	-----	-----	52	-----	-----	-----	-----	-----	40	100	-----	64
Silver (coho)	266,436	-----	-----	4	4	-----	-----	19	70	100	96	33	-----	47
Scup (porgy)	2,710,948	49	31	57	49	100	67	53	48	51	35	34	41	51
Sea bass	861,974	41	54	53	51	51	100	52	27	21	20	15	16	43
Sea trout:														
Gray	74,256	6	15	1	6	38	40	24	69	83	100	3	30	35
Spotted	40,903	28	19	1	10	16	-----	5	1	-----	26	91	100	30
Shad	1,016,352	1	5	40	100	48	5	-----	-----	1	1	1	1	20
Smelt	68,921	49	80	83	11	1	-----	-----	1	30	90	84	100	53
Snapper, red	74,784	69	23	20	22	73	33	18	31	3	48	31	100	39
Spanish mackerel	115,056	100	43	11	6	19	-----	-----	6	1	6	36	85	31
Spot	117,556	-----	-----	-----	-----	1	1	25	44	100	94	13	-----	40
Striped bass	287,186	39	100	97	99	32	11	10	12	22	63	79	19	49
Swellfish	167,752	7	28	8	33	100	33	8	10	14	9	-----	12	21
Swordfish	116,545	-----	-----	-----	-----	-----	2	94	100	86	12	-----	-----	59
Tilefish	625,963	13	27	86	100	23	1	-----	-----	-----	-----	-----	1	36
Tuna	76,483	-----	-----	-----	-----	-----	31	97	54	100	10	-----	-----	58
Whiting	1,142,096	49	53	44	56	87	91	96	83	85	77	100	70	74
SHELLFISH														
Clams, in shell: [1]														
Hard	361,196	83	78	82	93	87	91	100	95	91	89	75	89	88
Soft	29,536	54	73	69	65	68	100	81	48	70	68	50	40	66
Crab meat	99,881	48	43	48	66	62	91	100	84	80	62	45	38	64
Crabs:														
Hard	43,515	20	18	21	45	52	64	67	100	94	59	38	19	50
Soft	187,008	-----	-----	-----	17	100	85	67	65	38	5	-----	-----	54
Lobsters	782,066	69	53	53	61	99	94	96	90	88	81	64	100	79
Lobster meat	110,287	2	-----	-----	-----	77	73	27	100	91	10	-----	-----	54
Mussels, bay [1]	30,650	53	45	59	66	80	90	77	76	84	78	61	100	72
Oysters:														
In shell [1]	117,523	94	79	76	69	2	-----	-----	-----	70	100	83	92	74
Shucked	121,490	95	60	67	68	4	-----	-----	-----	62	96	79	100	70
Scallops, sea [1]	320,418	50	32	50	79	85	94	100	89	80	86	63	68	73
Shrimp	1,581,500	81	53	56	54	73	100	88	77	85	80	69	72	74
Squid	306,650	4	5	84	3	33	66	100	62	13	21	17	8	35

[1] Poundage is based on actual weight of meats for shellfish sold in the shell.

MARYLAND (CERTAIN AREAS) RECEIPTS AND LANDINGS INDEX

[Based on 1952 data as reported to Fish and Wildlife Service]

Item	Receipts and landings in largest month	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Ocean City:														
Salt-water fish:	*Pounds*													
Croaker	77, 800	----	----	----	----	----	----	----	1	42	100	----	----	48
Flounder, fluke	95, 500	----	----	----	10	32	77	71	100	37	25	59	44	51
Mackerel	158, 300	----	14	7	11	----	----	----	----	----	----	2	100	27
Scup (porgy)	123, 300	----	----	----	40	100	3	----	1	----	3	7	----	20
Sea bass	54, 600	----	----	----	----	35	92	100	73	38	25	9	----	53
Sea trout, gray	122, 500	----	----	----	----	----	48	----	----	13	100	33	----	48
Cambridge:														
Salt-water fish:														
Croaker	38, 300	----	----	----	100	99	5	8	86	----	----	----	----	60
Shad	93, 000	----	----	12	100	24	----	----	----	----	----	----	----	43
Striped bass	370, 900	5	6	38	100	5	----	----	----	----	3	1	1	20
White perch	116, 400	3	19	100	73	4	----	----	----	----	----	----	----	40
Shellfish:														
Crab meat	151, 510	34	23	18	29	44	88	100	95	60	41	14	11	46
	Gallons													
Oysters, shucked	62, 350	78	56	47	7	----	----	----	----	21	56	91	100	57
Crisfield:														
Shellfish:	*Pounds*													
Crab meat	251, 470	62	52	50	46	74	90	100	98	75	73	18	19	63
Crabs:	*Bushels*													
Hard	4, 385	----	----	----	----	61	90	69	99	100	55	----	----	79
	Dozen													
Soft	183, 490	----	----	----	----	26	85	92	100	62	7	----	----	64
	Gallons													
Oysters, shucked	90, 295	65	37	31	11	----	----	----	----	14	78	76	100	52

VIRGINIA (CERTAIN AREAS) RECEIPTS AND LANDINGS INDEX

[Based on 1952 data as reported to Fish and Wildlife Service]

Item	Receipts and landings in largest month	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Eastern Shore:														
Salt-water fish:	*Pounds*													
Croaker	137,700	----	----	----	----	----	1	27	96	100	----	----	----	56
Flounder, fluke	26,900	9	----	----	----	19	28	100	74	19	20	25	20	35
Mackerel	591,100	26	36	32	100	----	----	----	----	----	----	----	37	46
Sea trout, gray	72,900	----	----	----	18	38	100	32	8	17	7	----	----	31
Spot	165,400	----	----	----	----	----	2	33	66	100	26	10	----	40
Shellfish:														
Crab meat	29,770	62	55	64	92	100	99	79	92	77	76	63	73	78
	Gallons													
Oysters, shucked	39,086	80	49	51	31	----	----	----	5	48	90	86	100	60
Hampton Roads:														
Salt-water fish:	*Pounds*													
Butterfish	241,300	43	40	15	100	9	43	39	31	42	31	4	23	35
Croaker	540,400	16	12	17	37	27	63	56	100	55	3	2	28	35
Flounder, fluke	326,500	100	52	43	64	22	6	13	18	8	11	32	51	35
King whiting	59,400	4	3	1	5	2	2	5	11	2	2	1	100	12
Mackerel	20,600	----	----	4	100	----	----	----	----	----	----	----	----	52
Scup (porgy)	1,884,000	40	61	90	100	29	5	----	----	8	17	37	41	43
Sea bass	2,439,300	75	98	100	66	46	1	1	----	----	2	7	31	43
Sea trout, gray	281,400	9	10	5	2	50	39	37	76	100	60	8	49	37
Shad	199,400	----	----	100	90	20	----	----	----	----	----	----	----	70
Spot	387,000	----	----	----	----	11	30	38	92	100	55	1	----	46
Striped bass	57,200	----	----	100	31	9	2	1	3	7	28	51	5	24
Shellfish:														
Crab meat	347,651	60	54	51	74	72	91	99	100	81	77	40	46	70
	Gallons													
Oysters, shucked	82,565	73	57	59	24	8	9	4	9	72	100	85	99	50
	Pounds													
Squid	20,500	10	2	4	----	6	----	3	1	----	----	14	100	18
Lower Northern Neck:														
Salt-water fish:														
Croaker	143,600	----	----	----	14	13	83	100	67	18	----	----	----	49
Sea trout, gray	22,000	----	----	----	----	41	100	9	15	10	6	----	----	30
Shad	148,400	----	----	35	100	33	----	----	----	----	----	----	----	56
Spot	319,800	----	----	----	----	1	12	49	100	43	10	----	----	36
Striped bass	13,900	----	----	24	100	6	6	----	----	----	----	----	----	34
Shellfish:														
Crab meat	68,881	----	----	----	----	9	87	100	82	69	58	24	23	56
	Gallons													
Oysters, shucked	96,710	100	77	54	6	----	----	----	4	24	49	69	75	51

NORTH CAROLINA (ATLANTIC, BEAUFORT, AND MOREHEAD CITY) RECEIPTS AND LANDINGS INDEX

Based on 1952 data as reported to Fish and Wildlife Service]

Item	Receipts and landings in largest month (pounds)	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Bluefish	109,100	----	----	2	2	13	27	8	5	25	100	1	----	20
Butterfish	30,300	100	12	1	----	28	51	48	82	3	4	2	12	31
Croaker	128,800	27	18	75	36	----	----	4	2	----	----	16	100	35
Flunder, fluke	347,900	62	6	1	14	2	6	4	3	1	4	----	100	18
King whiting	176,600	100	52	5	37	15	3	2	3	1	6	84	70	32
Mullet	395,000	----	----	----	----	----	3	16	53	64	100	8	13	37
Sea trout:														
Gray	131,600	11	4	15	5	5	3	8	13	6	19	24	100	18
Spotted	33,200	----	----	----	2	3	----	14	4	25	100	99	5	32
Shad	15,900	44	63	100	56	----	----	----	----	----	----	----	----	66
Spanish mackerel	37,500	----	----	----	----	----	100	69	74	16	10	----	----	54
Spot	328,500	----	----	1	----	1	2	11	5	100	97	49	----	33
SHELLFISH [1]														
Shrimp	355,200	----	----	----	1	20	100	41	41	11	30	6	----	31

[1] No data available on shellfish other than shrimp.

GULF STATES RECEIPTS AND LANDINGS INDEX

[Based on 1952 data as reported to Fish and Wildlife Service]

Item	Receipts and landings in largest month	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
	Pounds													
Drum, red	58,940	87	71	42	53	29	35	30	28	17	57	55	100	50
Grouper	35,340	52	92	61	54	100	79	46	56	62	53	33	50	62
King whiting	60,820	45	33	46	100	98	31	18	19	32	37	22	38	43
Mullet	170,790	87	61	57	37	55	73	67	84	69	100	58	65	68
Sea trout, spotted	104,870	92	35	39	64	100	37	19	20	12	57	62	66	50
Snapper, red	226,050	92	69	58	73	100	75	57	44	47	36	58	72	65
FRESH-WATER FISH														
Catfish	157,210	64	62	83	85	100	88	84	77	62	77	54	55	74
SHELLFISH														
Crabs, hard	1,112,140	24	24	37	53	100	97	55	45	33	40	35	21	47
Crab meat	119,322	22	23	32	47	100	99	53	45	27	35	30	16	44
Oysters:	*Bushels*													
For canning	470,263	99	100	99	59	5	----	----	----	----	----	1	10	52
Other	87,908	100	83	70	70	62	31	12	16	53	98	88	97	65
Total oyster	555,030	100	98	95	61	14	5	2	3	8	16	15	24	37
Shrimp:	*Barrels*													
For canning	27,805	31	18	8	15	49	68	48	75	82	100	67	32	49
Other	55,026	67	51	37	40	52	55	55	72	95	100	56	52	61
Total shrimp	82,831	54	40	27	31	51	60	53	73	90	100	60	45	57

CALIFORNIA LANDINGS INDEX

[Based on 1951 data of California Bureau of Marine Fisheries]

Item	Landings in largest month (pounds)	Percentage of largest month's landing												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Barracuda	318,427	29	73	99	43	52	100	62	29	17	66	50	41	55
Flounders:														
Sand dab	67,666	43	44	98	84	62	59	82	100	95	73	37	24	67
Sole	2,322,417	31	26	40	55	54	99	94	100	92	96	62	34	65
Other	184,423	40	55	65	36	15	6	22	100	96	91	64	22	51
Halibut:														
California	124,800	45	67	93	83	41	53	100	64	56	41	35	22	58
Other	21,433	45	13	7	9	100	85	31	23	14	24	28	23	34
Kingfish	138,269	36	45	60	39	44	40	25	35	24	31	100	15	41
Lingcod	278,727	9	14	27	48	52	81	100	82	89	47	30	20	50
Perch	67,881	21	31	68	100	2	1	25	29	24	11	17	22	29
Pompano	14,419	48	6	100	81	5	15	5	18	37	70	47	13	37
Rockbass	60,869	50	40	36	13	42	69	43	21	20	18	100	22	40
Rockfish	1,271,703	61	60	75	71	75	76	92	83	100	73	57	45	72
Sablefish	337,319	27	46	58	90	78	98	84	68	100	64	37	17	64
Salmon	1,884,782	6	14	9	16	60	77	100	60	80	----	----	----	45
Sea bass:														
Black	75,780	27	18	14	14	10	25	9	31	19	100	68	32	31
White	287,234	4	19	32	16	29	54	48	68	97	100	51	16	44
Shad	494,296	----	----	----	22	100	1	----	----	----	----	----	----	10
Smelt	174,112	24	33	40	50	32	73	59	100	84	51	47	35	52
Swordfish	104,280	1	----	----	----	----	5	53	100	46	13	2	----	31
FRESH-WATER FISH														
Carp	146,141	36	61	100	58	48	46	72	42	60	38	42	32	53
Catfish	45,430	45	15	26	66	1	----	----	----	90	91	100	89	58
SHELLFISH														
Abalone	525,830	33	----	50	100	62	85	56	67	82	72	76	92	70
Crabs	2,124,745	100	81	55	90	37	13	14	----	----	----	76	78	60
Lobsters, spiny	516,638	76	16	10	----	----	----	----	----	----	56	100	28	48
Shrimp	174,468	16	15	15	33	28	39	73	100	99	66	33	17	44
Squid	7,814,316	----	----	----	1	100	31	11	7	2	----	1	4	20

SEATTLE, WASH., RECEIPTS AND LANDINGS INDEX

[Based on data for wholesale market receipts and landings, 1952, as reported to Fish and Wildlife Service; received weight of fresh products only, excluding fillets and frozen fish]

Item	Receipts and landings in largest month (pounds)	Percentage of largest month's receipts and landings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Cod	489,578	46	68	100	98	92	59	65	60	82	67	35	33	67
Flounder and sole	819,276	25	100	58	72	85	58	67	55	55	76	23	43	60
Halibut	3,438,395	-----	-----	-----	1	92	86	100	65	2	2	1	-----	44
Lingcod	309,142	31	56	100	54	54	48	34	19	27	29	18	48	43
Rockfish	717,896	68	85	91	100	88	33	27	51	65	61	24	47	62
Sablefish	836,536	-----	-----	-----	1	1	8	11	24	62	100	37	1	27
Salmon:														
Chinook (king)	2,542,378	1	1	9	28	46	65	100	60	25	11	2	1	29
Chum (fall)	2,836,178	-----	-----	-----	-----	-----	-----	-----	-----	6	50	100	7	41
Silver (coho)	2,360,650	-----	-----	-----	-----	-----	7	57	100	87	71	25	6	50
Smelt	235,276	-----	7	5	1	15	41	100	15	16	3	4	3	19
SHELLFISH														
Crab meat	208,239	74	72	66	100	69	43	19	1	1	58	16	24	45
Oysters, shucked	158,760	100	85	70	67	49	31	24	16	45	69	59	99	59

CHICAGO, ILL. RECEIPTS INDEX

[Based on data for wholesale market receipts, 1952 as reported to Fish and Wildlife Service; fresh products only, excluding fillets and frozen fish]

Item	Receipts in largest month (pounds)	Percentage of largest month's receipts												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Halibut	200,943	-----	-----	-----	-----	20	100	10	7	-----	-----	-----	-----	34
Mackerel	13,063	41	100	57	79	30	93	15	21	39	63	45	42	52
Salmon:														
Chinook (king)	100,044	-----	-----	-----	5	37	100	30	26	19	6	-----	-----	32
Silver (coho)	45,850	-----	-----	-----	-----	-----	-----	31	25	49	100	18	8	38
Snapper, red	37,881	57	50	27	68	76	100	33	65	82	79	84	27	62
FRESH-WATER FISH														
Blue pike	92,292	-----	-----	100	14	9	1	-----	1	1	15	91	24	28
Buffalofish	471,912	34	50	68	93	78	87	100	66	56	39	35	58	64
Bullhead	67,589	56	36	66	100	78	38	21	27	50	88	22	43	52
Carp	472,836	61	75	65	100	79	72	57	41	53	57	42	67	64
Catfish	177,232	37	30	40	100	86	92	37	53	37	67	72	53	59
Chub	508,975	65	73	50	60	58	73	96	100	73	83	41	52	69
Lake herring	369,511	100	73	65	74	55	63	47	70	67	81	67	67	69
Lake trout	559,668	19	18	21	53	70	62	81	98	100	53	19	25	52
Pickerel	129,660	39	54	87	48	41	100	23	28	55	56	31	43	50
Sauger	208,897	100	91	13	5	2	51	39	23	63	91	12	89	48
Sheepshead	471,452	46	27	61	100	97	81	28	32	37	46	41	30	52
Smelt	434,342	24	71	100	41	18	11	4	6	3	6	5	8	25
Sucker	137,738	42	44	61	88	56	79	48	53	68	100	57	48	62
Whitefish	1,018,302	63	60	64	45	79	100	94	71	60	55	37	59	66
Yellow perch	237,437	57	59	46	91	86	65	100	93	67	80	57	75	73
Yellow pike	497,759	60	48	26	85	75	100	67	80	64	64	30	69	64
SHELLFISH														
Clams, hard (in shell)	112,140	25	46	52	32	50	72	100	72	62	56	42	44	54
Lobsters	43,519	100	91	70	69	97	98	84	67	87	97	78	93	86
Oysters:														
In shell	243,876	84	74	88	39	-----	-----	-----	-----	60	78	87	100	76
Shucked	350,594	77	44	47	10	-----	-----	-----	-----	21	60	70	100	54
Scallops	49,061	4	2	1	17	37	21	31	21	29	15	1	100	23

Frozen fish and shellfish

Supplies of frozen fishery products are built up during the peak of the runs and generally are available throughout the year. Most frozen fish and shellfish are more widely distributed than the fresh products. The following table shows for the country as a whole the relative volume of frozen stock of fishery products in each month, expressed as percentages of the largest month's holdings.

COLD-STORAGE HOLDINGS INDEX: UNITED STATES AND ALASKA

[Lines indicated by asterisk represent 1951 data, all other data are for 1952; imported fishery products included]

Item	Holdings in largest month (pounds)	Percentage of largest month's holdings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
SALT-WATER FISH														
Bluefish*	419,140	69	63	52	37	30	43	63	58	60	100	87	75	61
Butterfish*	983,593	35	28	16	8	5	6	19	37	55	92	96	100	41
Cod, haddock, hake, and pollock (excluding fillets)	1,455,725	65	42	38	50	52	50	61	77	91	95	71	100	66
Croaker*	279,686	98	95	33	28	16	11	17	53	77	100	80	76	57
Eel*	380,773	37	39	32	23	20	23	11	25	25	32	74	100	37
Fillets:														
Cod	16,529,300	22	14	15	34	57	66	78	90	93	99	100	94	66
Flounder and sole	7,165,965	79	73	57	40	44	41	58	60	81	91	75	100	67
Haddock	12,769,154	45	27	28	54	74	74	81	95	100	99	94	93	72
Lingcod*	136,425	55	32	51	39	37	45	26	37	30	67	100	72	49
Mackerel	947,170	42	89	34	74	26	25	83	56	100	56	86	64	61
Pollock	2,618,210	68	70	66	62	70	74	96	99	97	90	86	100	82
Ocean perch	20,828,354	100	84	65	49	46	47	58	71	84	85	85	95	72
Whiting (including split butterfly)	3,176,281	63	59	66	32	36	48	56	80	85	87	84	100	66
Flounders (including sole, fluke, and California halibut)	2,570,970	37	37	43	38	53	52	61	100	50	51	99	60	54
Halibut	27,410,480	47	35	24	18	14	44	83	100	97	92	83	73	59
Herring, sea	1,810,795	83	100	98	85	97	91	80	74	68	68	59	58	80
Mackerel (excluding fillets, Spanish, and King)	2,811,004	43	39	32	14	15	15	59	75	79	97	96	100	5[illegible]
Mullet*	1,076,559	47	47	27	17	12	9	8	8	10	18	53	100	3[illegible]
Sablefish	2,811,004	100	88	74	70	55	51	51	54	46	67	93	92	70
Salmon:														
Chinook (king)	6,346,892	48	44	34	25	25	22	33	57	72	92	93	100	54
Chum (fall)	2,124,669	91	82	77	68	55	37	41	32	38	41	66	100	61
Pink (humpback)	288,768	16	12	4	3	2	2	6	17	26	17	22	100	19
Silver (coho)	5,972,874	73	66	53	45	36	30	28	49	70	88	100	91	61
Scup (porgy)	894,245	47	46	49	49	75	91	100	90	84	99	95	95	77
Sea trout*	353,059	100	33	69	55	40	29	28	32	24	32	64	44	46
Shad*	227,734	100	99	96	75	71	81	95	88	85	80	80	99	87
Smelt	1,272,111	48	43	45	56	69	75	95	100	86	91	92	94	74
Swordfish	5,474,803	97	100	93	72	68	58	49	53	56	55	50	58	67
Tuna	7,050,369	14	4	7	13	10	10	3	15	32	41	100	73	27
Whiting:														
Round	2,815,868	58	98	67	53	56	66	76	89	100	70	73	92	75
Headed and gutted (excluding fillets)	18,520,696	89	63	51	40	26	27	57	87	92	97	100	95	69

COLD-STORAGE HOLDINGS INDEX: UNITED STATES AND ALASKA—Continued

Item	Holdings in largest month (pounds)	Percentage of largest month's holdings												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
FRESH-WATER FISH														
Blue pike and sauger (excluding fillets)*	461, 884	100	96	41	51	36	32	41	15	10	14	83	96	51
Catfish and bullhead*	1, 544, 396	100	68	49	47	27	45	50	62	83	64	61	73	61
Chub	1, 259, 805	76	72	68	44	31	24	25	43	54	78	100	81	58
Fillets:														
Blue pike*	271, 601	67	49	59	15	15	17	18	67	79	100	53	80	52
Lake herring*	76, 125	78	34	5	2	11	2	3	1	16	8	18	100	23
Yellow perch*	538, 647	45	27	29	22	43	38	26	30	48	58	87	100	46
Yellow pike*	113, 618	96	93	100	55	36	39	48	44	38	39	81	83	63
Lake herring and cisco (excluding fillets)	1, 637, 984	70	54	54	27	23	21	37	26	24	22	20	100	40
Lake trout	1, 057, 646	71	69	47	41	44	30	32	34	43	78	100	99	57
Pickerel*	133, 543	100	91	59	34	35	28	54	34	25	23	79	64	52
Sturgeon and spoonbill cat*	350, 464	64	53	34	28	27	46	54	69	83	90	90	100	62
Tullibee*	178, 236	100	52	27	18	10	6	-----	2	46	58	57	58	39
Yellow perch (excluding fillets)*	916, 279	22	19	12	35	23	24	35	41	41	63	100	98	43
Yellow pike (excluding fillets)*	360, 888	80	73	80	75	67	72	71	83	65	58	80	100	75
Whitefish	2, 291, 784	47	41	46	44	45	37	50	73	79	97	100	97	63
SHELLFISH														
Clams*	417, 359	89	82	82	90	100	96	77	68	72	67	87	72	80
Crabs (including crab meat)	781, 779	89	81	80	64	85	100	93	86	76	60	61	62	78
Lobster tails (spiny lobster)	2, 579, 755	100	94	81	73	72	56	70	55	43	50	52	86	69
Oysters	479, 789	42	54	75	63	83	92	100	99	72	73	75	84	76
Scallops	2, 823, 453	78	79	44	32	30	39	41	61	73	86	98	100	63
Shrimp (including shrimp meat)	27, 552, 429	100	97	84	72	60	56	57	52	46	45	52	60	65
Squid	1, 736, 589	92	68	54	37	18	30	25	58	68	80	100	80	59

SOURCES OF COMMERCIAL-FISHERY INFORMATION

Federal

DEPARTMENT OF AGRICULTURE, AGRICULTURAL MARKETING SERVICE:

Agricultural Statistics.—An annual summary of statistics on production and trade in agricultural and related products. Contains a section on fisheries.

Cold Storage Report.—A monthly report showing movement and holdings of principal food commodities throughout the country.

National Food Situation.—A quarterly summary of food-marketing conditions for the United States. Contains a section on fisheries.

DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS:

Quarterly Summary of Foreign Commerce of the United States.—Report on quantity and value of products imported and exported.

U. S. Imports of Merchandise for Consumption.—Report FT 110. A monthly report containing statistics on exports, by commodity and country of destination.

Foreign Commerce and Navigation of the Unit es.—Annual report on imports and exports, listed by commodity and cou
Facts for Industry, Fats and Oils.—A month ement on f uction and stocks, and consumption of animal ble fa also a quarterly statement of quantity used in v sses.
Animal and Vegetable Fats and Oils.—An an ry of f ction, stocks, imports, exports, and consumption
Statistical Abstract of the United States.—A ummar ics on population, trade, production, finance, a as oth section devoted to fish and the fishing in

DEPARTMENT OF COMMERCE, BUREAU OF

Foreign Commerce Weekly.—A textual and port and commodi ared in the interes trade
World Trade in ities.—Includes s or trade in fish products.

DEPARTMENT O RIOR, FISH A

Current Fishery
Landings of fish in import detailed data f Massachuse Texas.
Freezings and hol ry produ United States a
Imports and Expor Produc
Canned Fish and B annua United States an
Packaged Fish.—An fo
Fish Meal and Oil.— Alaska.
Manufactured Fishery on production of fres fishery products and
Sectional Surveys.—An and quantity of gea fishery wholesale a Middle Atlantic, Ch Lakes and Mississip

Annual Statistical Dig
Fishery Statistics of th tistics listed above,
Alaska Fishery and F formation on the fis

Fishery News:

Market News Reports production, movem field offices in Bost and San Pedro.
Commercial Fisheries the fishery industrie
Quarterly Outlook Re demand of the fish

Lists of [illegible] Processing Fishery Products:

Wholesa[illegible]ers.—Names and addresses, and products, by producing States and certain [illegible] cities.

[illegible]nned [illegible] Products and Byproducts.—Names and addresses, by product and State, [illegible] producing areas in the United States and Alaska.

[illegible]ckaged[illegible] Producers.—Lists of firms filleting and steaking fish.

[illegible]cker I[illegible]——Name[illegible]tion by States.

[illegible]bstract[illegible]rvice:

[illegible]mmerc[illegible] *[illegible]sheri[illegible]*—Monthly summary of important developments [illegible]abstra[illegible]om [illegible] reports and articles; prepared for ready reference [illegible]and fi[illegible]

[illegible]r furt[illegible]

[illegible]hery [illegible] [illegible]ilable Fish and Wildlife Service publications on the [illegible]sheri[illegible]

[illegible]*ery [illegible]* [illegible]l list of trade journals and newspapers concerning [illegible]sheri[illegible]

[illegible]*hery [illegible]* [illegible]nercial fishery laws and regulations.

[illegible]*shery [illegible]* [illegible]iled list and short description of the various statistical [illegible]publi[illegible] [illegible]rom the Fish and Wildlife Service.

[illegible]*shery [illegible]* [illegible]nery associations in the United States and Alaska.

[illegible]*sher [illegible]* [illegible]shery motion pictures.

[illegible]*shr [illegible]* [illegible]ishery cooperatives in the United States and Alaska.

[illegible]*[illegible]* [illegible]Fishermen's and fish shore workers' unions in the United [illegible] Hawaii.

[illegible]—United States per capita consumption of fishery products.

[illegible].—Information sources for students of commercial fisheries.

[illegible]*3.*—Preliminary review (statistical) of the fisheries of the United [illegible]

[illegible]*407 and 408.*—Fish and shellfish preferences of household con-[illegible]

[illegible] may be obtained free fro[illegible]d Wildlife Service, De[illegible] the Interior, Washingto[illegible]

[illegible]OF LABOR, BUREAU [illegible]CS:

[illegible]*esale Prices and [illegible] Individual Commodities.*—A [illegible]dex showing pri[illegible] charged by manufacturers or [illegible] those prevail[illegible]anges.

[illegible]*Index and [illegible]*—A monthly textual and statistical [illegible] aver[illegible] prices of foods, apparel, rent, and [illegible]ed [illegible]ower-salaried workers in large cities.

[illegible]tatistical report showing the retail prices [illegible]

[illegible]on containing regulatory orders issued by all [illegible]ble by subscription from the Superintendent of [illegible]t Printing Office, Washington 25, D. C.

[illegible]n in the United States and its possessions.

Foreign Commerce and Navigation of the United States.—Annual report on imports and exports, listed by commodity and country.

Facts for Industry, Fats and Oils.—A monthly statement on factory production and stocks, and consumption of animal and vegetable fats and oils, also a quarterly statement of quantity used in various processes.

Animal and Vegetable Fats and Oils.—An annual summary of factory production, stocks, imports, exports, and consumption.

Statistical Abstract of the United States.—An annual summary of statistics on population, trade, production, finance, and numerous other subjects, with a section devoted to fish and the fishing industry.

DEPARTMENT OF COMMERCE, BUREAU OF FOREIGN COMMERCE:

Foreign Commerce Weekly.—A textual and statistical report by country, industry, and commodity, prepared in the interest of foreign trade.

World Trade in Commodities.—Includes special reports on United States foreign trade in fish and fishery products.

DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE:

Current Fishery Statistics:

Landings of fishery products in important fishing areas. Monthly and annual detailed data for Maine, Massachusetts, New Jersey, Florida, Mississippi, and Texas.

Freezings and holdings of fishery products.—Monthly and annual reports for the United States and Alaska.

Imports and Exports of Fishery Products. An annual summary.

Canned Fish and Byproducts.—Annual report on the quantity and value for the United States and Alaska.

Packaged Fish.—Annual summary for the United States.

Fish Meal and Oil.—Monthly and annual summary for the United States and Alaska.

Manufactured Fishery Products.—Annual information for United States and Alaska on production of fresh and frozen packaged fish and shellfish, canned and cured fishery products and byproducts.

Sectional Surveys.—Annual information on number of commercial fishermen, type and quantity of gear operated, quantity and value of catch, employment in fishery wholesale and manufacturing establishments, for: New England, Middle Atlantic, Chesapeake Bay, South Atlantic, Gulf, Pacific Coast, Great Lakes and Mississippi River, and Alaska.

Annual Statistical Digests:

Fishery Statistics of the United States.—Annual summary of current fishery statistics listed above, usually in greater detail.

Alaska Fishery and Fur Seal Industries.—Annual report containing detailed information on the fisheries of Alaska and the Pribilof Islands fur-seal industry.

Fishery News:

Market News Reports.—Daily, monthly, and annual mimeographed reports on production, movement, prices, storage and canning of fishery products from field offices in Boston, New York, Hampton, New Orleans, Chicago, Seattle, and San Pedro.

Commercial Fisheries Review.—A monthly review of developments and news of the fishery industries, both domestic and foreign.

Quarterly Outlook Report.—A quarterly review and forecast of the supply and demand of the fisheries in the United States.

Lists of Firms Processing Fishery Products:

Wholesale Dealers.— Names and addresses, and products, by producing States and certain inland cities.

Canned Fishery Products and Byproducts.—Names and addresses, by product and State, for producing areas in the United States and Alaska.

Packaged Fish Producers.[1]—Lists of firms filleting and steaking fish.

Locker Plants.[1]—Names and location by States.

Abstracting Service:

Commercial Fisheries Abstracts.[1]—Monthly summary of important developments abstracted from technological reports and articles; prepared for ready reference and filing.

For further information:

Fishery Leaflet 9.—List of available Fish and Wildlife Service publications on the fisheries.

Fishery Leaflet 160.—Partial list of trade journals and newspapers concerning fisheries.

Fishery Leaflet 168.—Commercial fishery laws and regulations.

Fishery Leaflet 197.—Detailed list and short description of the various statistical publications available from the Fish and Wildlife Service.

Fishery Leaflet 254.—Fishery associations in the United States and Alaska.

Fishery Leaflet 255.—Fishery motion pictures.

Fishery Leaflet 292.—Fishery cooperatives in the United States and Alaska.

Fishery Leaflet 293.—Fishermen's and fish shore workers' unions in the United States, Alaska, and Hawaii.

Fishery Leaflet 352.—United States per capita consumption of fishery products.

Fishery Leaflet 362.—Information sources for students of commercial fisheries.

Fishery Leaflet 393.—Preliminary review (statistical) of the fisheries of the United States.

Fishery Leaflets 407 and 408.—Fish and shellfish preferences of household consumers, 1951.

Fishery leaflets may be obtained free from the Fish and Wildlife Service, Department of the Interior, Washington 25, D. C.

Department of Labor, Bureau of Labor Statistics:

Average Wholesale Prices and Index Numbers of Individual Commodities.—A monthly index showing primary market prices charged by manufacturers or producers, or those prevailing commodity exchanges.

Consumer Price Index and Retail Food Prices.—A monthly textual and statistical report showing average changes in retail prices of foods, apparel, rent, and services purchased by wage earners and lower-salaried workers in large cities.

Retail Food Prices by Cities.—A monthly statistical report showing the retail prices of principal articles of food by cities.

The National Archives:

Federal Register.—Daily publication containing regulatory orders issued by all Government agencies. Available by subscription from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

[1] Restricted generally to distribution in the United States and its possessions.

TARIFF COMMISSION:

Periodic Reports.—Includes studies on specific fisheries or fishery problems.

TREASURY DEPARTMENT, BUREAU OF CUSTOMS:

Import of Commodities Having Quota Limitations.—Monthly release containing data on imports of fresh or frozen filleted groundfish including ocean perch (rosefish).

State

Most States have a department, corresponding to the United States Fish and Wildlife Service, from which information on commercial fisheries can be obtained. (See Fishery Leaflet 168 above.)

Interstate Compact Commissions

ATLANTIC STATES MARINE FISHERIES COMMISSION, 22 West First St., Mount Vernon, N. Y.

GULF STATES MARINE FISHERIES COMMISSION, 931 Canal St., New Orleans 16, La.

PACIFIC MARINE FISHERIES COMMISSION, 340 State Office Building, 1400 Southwest Fifth Ave., Portland 1, Oreg.

International

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Viale delle Terme di Caracalla, Rome, Italy:

Yearbook of Fisheries Statistics.—A summary of statistics on production and foreign trade in world fisheries.

Fisheries Bulletin.—A bimonthly report on developments in world fisheries.

World Fishery Abstracts.—A bimonthly review of technical literature on fisheries and related industries.

Periodic reports.—Include studies of specific fisheries and fishery problems.

INTER-AMERICAN TROPICAL TUNA COMMISSION, c/o Scripps Oceanographic Institute, La Jolla, Calif.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES, Fish and Wildlife Service, U. S. Department of the Interior, Washington 25, D. C.

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION, University of British Columbia, Vancouver, B. C., Canada.

INTERNATIONAL PACIFIC HALIBUT COMMISSION, Fisheries Hall No. 2, University of Washington, Seattle 5, Wash.

INTERNATIONAL PACIFIC SALMON FISHERIES COMMISSION, Dominion Building, New Westminster, B. C., Canada.

INTERNATIONAL WHALING COMMISSION, U. S. National Museum, Washington 25, D. C.

Nongovernmental

AMERICAN SEAFOOD DISTRIBUTORS ASSOCIATION, 917 Fifteenth St. NW., Washington 5, D. C.

NATIONAL CANNERS ASSOCIATION, 1133 Twentieth St. NW., Washington 9, D. C.

NATIONAL FISHERIES INSTITUTE, 1614 Twentieth St. NW., Washington 9, D. C.

THE OYSTER INSTITUTE OF NORTH AMERICA, 6 Mayo Ave., Bay Ridge, Annapolis, Md.

U. S. GOVERNMENT PRINTING OFFICE: 1954