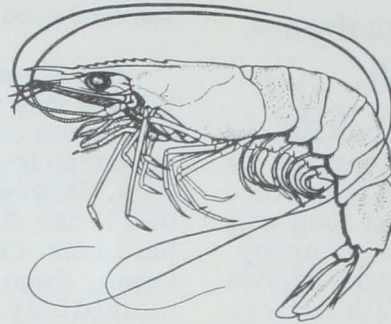


FOOD FISH FACTS



NORTHERN SHRIMP
(*Pandalus borealis*)

The northern shrimp has traditionally supported a small, highly variable fishery in Maine and Massachusetts. The Gulf of Maine is considered the southern limit of these shrimp in the Northwestern Atlantic. Fishing for northern shrimp is a rapidly expanding industry growing from less than one million pounds caught annually prior to 1964 to over 13 million pounds in 1970. The fishing fleet, including many converted lobster boats, is growing at a comparable pace.

DESCRIPTION

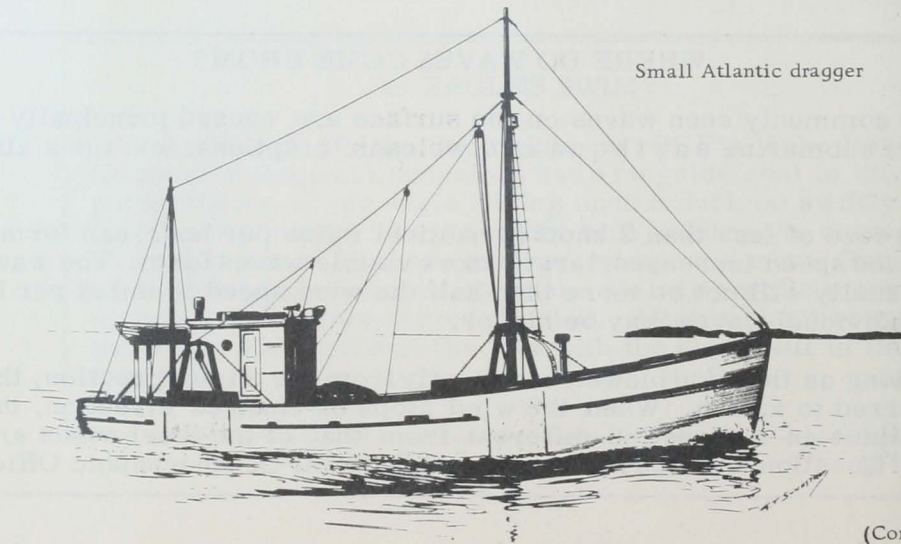
Northern shrimp are pink and are usually three to four inches in length. Some individuals may reach six inches. Their body shape resembles a small lobster or crayfish without pincers or claws.

HABITAT

On the Atlantic coast, northern shrimp are found on muddy or sandy bottoms in water depths from 150 to 900 feet deep. These shrimp are also found off the coasts of Alaska and British Columbia.

SHRIMP FISHING

Along the North Atlantic coast shrimp are caught from small vessels called otter trawlers or "draggers." The term "draggers" comes from the method of fishing. These vessels drag a large flattened cone of nylon netting, called an otter trawl, along the ocean floor. As the net is dragged or towed along the bottom, shrimp are swept into the mouth of the net and concentrated into the bag or cod end.



Small Atlantic dragger

(Continued following)

MANAGEMENT AND CONSERVATION

Most northern shrimp are caught during the fall-to-spring months on fishing grounds within a 50-mile radius of Portland, Maine. Northern shrimp are the only species of commercial interest which are concentrated and available in this area during the winter. Because of this the shrimp have attracted considerable fishing effort throughout the history of the fishery. The catch, however, of these northern delicacies has fluctuated greatly in the years prior to 1964. In 1964 the northern shrimp catch rose to over two million pounds, partly because fishermen began operating further offshore.

Interest in northern shrimp has increased greatly in recent years and, in 1967, BCF began an extensive systematic survey of these shrimp resources. Fishery scientists aboard the research vessel, 'Delaware,' operating out of the Bureau's Exploratory Fishing and Gear Research Base in Gloucester, Massachusetts, made four experimental cruises in the Gulf of Maine during 1967 and 1968. Cruises were made during different seasons of the year to determine if northern shrimp could be commercially harvested at times other than the fall-to-spring months.

Bureau scientists were also interested in: (1) whether shifts in shrimp population occurred from season to season (and, if so, to what extent); (2) boundary limits of these concentrations at different times of the year; (3) production potential of the shrimp population; (4) behavior and accessibility to fishing gear of northern shrimp populations; and (5) biological characteristics such as spawning seasons and size range, which might be important for commercial utilization of the resource. In addition, fishery equipment specialists tested and modified a new mechanical shrimp-fish separator. Fishery technologists, in search of new ways to get the best product to the consumer, also investigated several new methods of handling freshly caught shrimp.

USES OF NORTHERN SHRIMP

Shrimp, the most popular of all shellfish, are an excellent source of high-quality protein, vitamins, and minerals. Shrimp are low in calories and fat and have a distinctive flavor. Northern shrimp may be used interchangeably with other varieties of shrimp in any recipe. Northern shrimp range from 40 to 50 per pound when caught. Headless shrimp run from 60 to 70 per pound; and peeled, headless shrimp range from 70 to 90 per pound.

These cold-water delicacies in raw, headless, frozen form are sold in 2- and 5-pound boxes. Peeled meats, which have been individually quick frozen, are sold in 9-, 10-, 16-, and 24-ounce poly-bags or rigid plastic containers. Block frozen, peeled meats in one pound, reusable plastic containers were recently introduced to frozen seafood counters. (Source: U.S. Marketing Services Office, Bureau of Commercial Fisheries, U.S. Dept. of Interior, 1000 East Ohio, Room 526, Chicago, Ill. 60611.)

MOVE OVER, MAINE CLAMBAKE!

Shrimp are No. 1 in popularity over all other fish and shellfish in the United States. It is not surprising because shrimp have a distinctive flavor and are so versatile they are used in appetizers, canapes, dips, chowders, or many pleasing entrees that will satisfy the most delicate or the heartiest of appetites. There are several kinds of shrimp available in the United States. Among the more important ones are tiny, North Pacific shrimp, the white shrimp, and northern shrimp found off the coasts of Maine and Massachusetts. BCF research vessels have recently located new resources in this area.

Shrimp are all lean meat, low in calories, and a complete, easily-digested protein as well as being a fine source of needed minerals. They can be served plain or fancy and come in a wide variety of market styles. The tails of shrimp are the only edible portion and these can be purchased either fresh or frozen, cooked in the shell, or cooked, peeled, and deveined--ready to use. Shrimp are also available in handy-dandy, shelf-ready, 4½- or 5-ounce cans, either packed in brine or dry. Breaded shrimp, ready to fry, can be found at many seafood counters.

Maine Shrimp in Wine Sauce, a new recipe from BCF, was created with the moderate-sized northern shrimp in mind; however, any shrimp may be used. This recipe features shrimp in a subtle sauce that is irresistibly delicious. Mushrooms and chopped onion are cooked and added to chicken bouillon, then sour cream and dry white wine are added with the shrimp just before serving. Serve it for hearty appetites over hot, fluffy rice, or show off a little and serve it with toast points or patty shells. Either way, this recipe is a year-round classic that can be served whenever you want the ultimate in good eating.

MAINE SHRIMP IN WINE SAUCE

1 pound cooked, peeled, and cleaned Maine shrimp, fresh or frozen	1 cup chicken bouillon
$\frac{3}{4}$ cup chopped onion	$\frac{1}{2}$ cup sour cream
$\frac{3}{4}$ cup sliced mushrooms	$\frac{1}{4}$ cup dry white wine
$\frac{1}{4}$ cup butter or margarine, melted	Rice, toast points, or patty shells
3 tablespoons flour	

Thaw frozen shrimp. Cook onion and mushrooms in butter until tender. Blend in flour. Add chicken bouillon gradually and cook until thick, stirring constantly. Add sour cream, wine, and shrimp. Heat, stirring occasionally. Serve over hot fluffy rice, toast points, or in patty shells. Makes 6 servings.

Three booklets, two in full-color, are available on shrimp and how to cook and eat them. They are: "How To Cook Shrimp" (1 49.39:7)--20¢; "Convenient Ways With Shrimp" (1 49.49/2:2)--35¢; and "Shrimp Tips From New Orleans" (1 49.4:41)--25¢. Write to: Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20540. (Source: National Marketing Services Office, Bureau of Commercial Fisheries, U.S. Department of the Interior, 100 East Ohio, Room 526, Chicago, Ill. 60611.)

