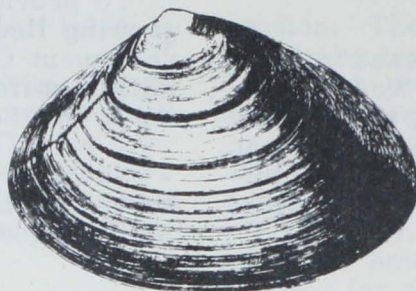


FOOD FISH FACTS



Surf Clam
(*Spisula solidissima*)

The name "clam" covers a wide variety of bivalve mollusks found along the coastlines of the United States. For thousands of years Indians utilized clams as food and used the shells of some species as decorations and as wampum. Early settlers in America soon found ways to enjoy these tasty gifts from the sea which were free-for-the-taking. Today clams are more popular than ever and the fishery has increased enormously in the past two decades. In 1967 the fishery yielded 71.5 million pounds of meats as compared to 39.6 million pounds in 1950. Surf clams accounted for over 45 million pounds of the total catch.

DESCRIPTION

The bivalve shells which encase the clam's body are joined together at the back by a hinge ligament which is usually visible from the outside. The shells, while varying in shape, are composed of three layers. The outer layer is often varnishlike; the thick middle layer is somewhat chalky; and the inner layer, which is usually hard, is often iridescent or lustrous in some species. Concentric rings are laid down on the shells as the clam grows. Some species have ridges which radiate from the hinge to the edge of the shell. Colors of the shell vary as they are affected by the habitat.

The two most prominent features of the clam's body are the foot or adductor muscle and the siphon or "neck." The muscular foot aids the clam in digging up or down in the soft sand or mud as well as in the opening and closing of the valves. The retractable siphon is a tube-like extension which conducts water in and out of the clam. In some species the siphon consists of two tubes. The incoming water brings food and oxygen to the clam; the outgoing water carries waste products and, during spawning, the eggs or sperm.

Along the Atlantic coast the three species which rank highest in commercial importance are:

The hard clams (*Venus mercenaria*) are known locally as quahogs. These clams are the most valuable of the three. Littlenecks and cherrystones are trade names for smaller-sized hard clams.

The surf clams (*Spisula solidissima*) are also known as skimmer, beach, giant, sea hen, or bar clams. This species makes up the largest volume caught along Atlantic shores, but is not as valuable as the hard or soft-shell clams. Canned clams are practically all surf clams.

The soft-shell clams (*Mya arenaria*) are known in the Chesapeake Bay area as "manninose." These popular clams, unlike the hard and surf clams, have elongated shells that are very thin and brittle. The soft-shell clams cannot close tightly because their long necks extend beyond the shells.

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Pacific coast clams accounted for nearly 600 thousands pounds taken commercially in 1967. Pacific coast clams include:

The razor clams (Siliqua patula); butter clams (Saxidomus nuttalli) and (Saxidomus giganteus); littleneck clams (Protothaca staminea); the Atlantic softshell clams (Mya arenaria) which have been transplanted; and the geoducks (Panope generosa) which may become commercially important with new beds discovered off the coast of Washington State.

HABITAT

Clams are found in subtidal or intertidal zones of beaches and mud flats out to depths of over 30 fathoms. Some live in quiet waters along the bottoms of protected bays, inlets, and sounds while others prefer sandy beaches on the open coast. Clams are usually buried in the bottom from just under the bottom surface to depths of over 4 feet, depending on the species. Atlantic clams range along coastlines of New England, the Middle Atlantic States, Chesapeake Bay, and some are found along South Atlantic shores. Pacific clams are found all along the coast with the largest commercial production in Washington.

HARVESTING CLAMS

Commercial harvesting of clams employs approximately 11,700 persons. These fishermen utilize around 346 vessels of 5 net tons or more and about 5,600 boats. Many of the boats or vessels are equipped with electronic depth recorders and hydraulic escalator dredges which are pushed along the bottom. The clams are loosened from the bottom with a high-pressure water spray, scooped onto a chain-mesh belt, carried up to the boat, and sorted by the crew. Commercially sized clams are retained, all debris and small clams fall back into the water. Fishing is restricted to certain areas and most dredges have a daily quota. Clam dredges are not used as extensively for commercial purposes on the Pacific coast as they are on the Atlantic coast. Other methods of taking clams include tongs, rakes, forks, shovels, or by hand.

CONSERVATION AND MANAGEMENT

Many factors, some beyond man's control, affect the abundance of clams. However, it is well known that pesticides; pollutants such as fuel oil, gasoline, and other liquid petroleum products; and the dumping of industrial wastes can and do destroy or otherwise damage this valuable resource. In most States special fishery agencies have been established to enforce laws and protect supplies of fishery products. The Bureau of Commercial Fisheries is making extensive studies of the occurrence and effects of pesticides and pollutants on shellfish.

Recent advances in techniques at the Bureau of Commercial Fisheries Laboratory in Milford, Connecticut, show that commercial propagation of clams may soon be feasible as well as profitable. The Washington State Laboratories at Brinnon, Washington have also done considerable study in the cultivation of clams. Within the next few years clam farming may be a new and profitable venture.

USES OF CLAMS

Clams, one of our most delicious shellfish, are high in protein, contain some calcium and iron, and have no fat. Fresh clams may be purchased alive in the shell; shucked; or shucked and quick frozen. Live clams in the shell should be tightly closed. Canned whole shucked meats; minced meats; bottled clam juice; and many frozen clam specialties are also available. Clams may be used in a variety of ways including a clam bake; steamed-in-the-shell; broiled-on-the-half-shell; in chowders, fritters, sauces, dips, salads, or canapes; fried; or combined with other foods. (Source: National Marketing Services Office, BCF, U.S. Department of the Interior, 100 East Ohio Street, Rm. 526, Chicago, Illinois 60611.)