

MENHADEN

The Atlantic's Miracle Fish

Its phenomenal gifts of health have always
nourished America—yet no one ever eats it

by George S. Fichter

DID YOU KNOW that a menhaden fisherman's luck in the mid-Atlantic can determine how much a man pays for a dozen eggs in Chicago? Or the price of a fat frying hen in Kansas City? Or that it might help to lengthen a man's life in Denver, sparing him a middle-age heart attack?

There are, in fact, some 165 uses for the menhaden, a fat and oily little fish that abounds in coastal waters of the Atlantic. Although nobody hears much about it, it is the hemisphere's most heavily harvested fish. The menhaden catch approaches two billion pounds annually and exceeds \$40 million in value to the commercial fishermen who make the catch.

The Indians called them munna-whatteaug, meaning "that which manures." They used menhaden for fertilizer and taught the colonists to plant a fish with each seed put into the ground. By all rights, we should honor the menhaden rather than the turkey at Thanksgiving, for the menhaden really contributed most toward making that commemorated autumn harvest so

bountiful. In those early days the fish were used whole and raw and were spread over the fields in quantities up to 10,000 fish per acre.

Shortly, however, Yankee ingenuity recognized that the oils were more valuable for fertilizer than the whole fish. The oil served the same purpose as whale oil, but was less costly. Its extraction commenced somewhere along the New England coast, in Maine or Rhode Island, and soon became a flourishing industry.

At the outset, the menhaden were simply "rotted" in casks, then the oil ladled from the surface. Then processors began cooking the fish in giant kettles and weighting them down with heavy boulders to squeeze out the oils. Finally, mechanical screw pressure was put to use to increase the efficiency and speed of the operation, for there was also a surging demand for the oil as a lubricant in the paint industry and in the tanneries. Residues were used for fertilizer, generally in fields in the immediate vicinity of the processing plants.

Nowadays the center of the men-

haden industry has shifted southward to Chesapeake Bay and the North Carolina coast. Nearly one-fourth of the catch is taken from North Carolina's offshore waters, and processing plants are located wherever the fleets put in.

The silvery menhaden is quite run-of-the-net. It rarely measures more than 18 inches in length and weighs about two-thirds of a pound. One five-year-old giant, however, weighed three-and-a-half pounds and was 20 inches long. Plaster casts of it decorate the plants in North Carolina near the waters from which it was taken. Menhaden resemble most closely their near relatives, the shad, herring and alewives. They can be identified by a black spot on each side of the body just behind their gills. As the fish grow older, they get more of these dark spots, although less distinct, along the sides of their bodies. And in some waters they get a yellowish or greenish cast around their fins and tails. Because of this they are sometimes called yellow-tailed shad, but they have numerous names, each a standard of its own locale.

Traveling along the coast you may hear them referred to as porgy, fat-back, bugfish, chebog, mossbunker, bonyfish or any number of equally descriptive names. To scientists, the common menhaden is *Brevoortia tyrannus*, one of four species found in the Atlantic.

ONE SIGNIFICANT factor contributes to the almost unbelievable abundance of menhaden: they eat their environment's most basic food—plankton, those microscopic plants and animals which live in profusion in the ocean. These the menhaden scoop up almost automatically in their conveniently oversized, low-slung mouths. Then they sift the tiny organisms from the sea water through an elaborate system of strainers on their gills. After a summer of feeding, menhaden are thick-through with oily fat and are ready for the harvest.

Once, in years past, menhaden were thought of as a potential food fish for man. They were even reported to be more flavorful than shad and far better, while fresh, than most common surf fish. In Washington, D. C., menhaden brought as high a price at the market as did the now-popular striped bass, or rock fish. Salted and smoked, they were sold throughout the United States and even abroad. One enterprising packer put them up in spices and vinegar and sold them under the trade label of "shadines."

Nowadays, menhaden don't rate table space, but in other ways their contribution to human welfare is even greater. Modern-day processing plants in this greatest of all fisheries are completely mechanized. Conveyor belts carry the fish from the ship's holds to giant steam cookers; oils are separated from the

solids by fast-whirling centrifuges; huge kilns dry the residue which is then pulverized by grinders. There are three basic yields: meal, oil, and condensed solubles.

Menhaden oil is far more versatile than vegetable oils or other fish oils. It is a priority item for use in soaps, in cosmetics and pharmaceuticals, in the manufacture of linoleum, in the drying ingredients of paints and varnishes, and in the tempering process for steel.

MENHADEN MEAL, for its richness in certain proteins and vitamins, ranks near the very top. For a few years it was questioned whether fish meals could survive the competition of somewhat less expensive synthetic meals. But recent findings of the U. S. Department of Agriculture show that there is definitely an unknown growth factor in fish meals which stimulates better growth and production in both poultry and livestock.

After the oil is extracted the residue in the centrifuges is known as "stickwater." Further concen-

trated, this stickwater becomes known as a "condensed fish soluble." Now used as a supplement in the foods of various domestic animals, current research points to a greater potential. Fish solubles are high in proteins, amino acids and minerals, low in fat content. This makes them ideal for reducing diets and also for an ingredient of baby foods. Refined and deodorized, they taste much like beef broth.

Further, medical research now indicates that the consumption of large quantities of unsaturated fat may lower the cholesterol level in the blood (excessive cholesterol is associated with various arterial diseases). Menhaden oil is notably high in unsaturated fat content and may be recommended soon as an important element of diet to help eliminate the incidence of coronary ailments. In Europe, menhaden oil is already used extensively for cooking.

So is it any wonder the menhaden fishermen break into a lively chantey every time they pull their nets tight around a churning school?

Unfair Competition

Nearly two and one-half million Americans are employed by the federal government, not including those in the military services. The government payroll has grown so big that some persons despair of ever reducing it. But it could be done. The government is at present running more than 700 corporations in direct competition with private industry. About 40 per cent of the civilian employees of the federal government work for these corporations. If the federal corporations were liquidated or sold back to the American people, the federal payroll could be reduced by a million people!—*Life Line Quotes.*

Four Corners, U.S.A.

IN NEW YORK, thieves held up two Fifth Avenue Coach Lines employees, snatched a cardboard box containing the \$3,000 payroll and fled. Pursuing police snagged them, pistol play crackled, and at the height of the ruckus, the 'box flopped open and out fell not cash but a custard pie.

IN COLUMBIA, MISSOURI, a sign on a newly planted church lawn suggests:
Keep on the Righteous Path.

IN HOLLYWOOD, a waitress finally lost patience with the turnover of managers (30 in 11 years) at the restaurant where she worked, so she bought the place for \$50,000.

IN NIAGARA FALLS, NEW YORK, an auto repair shop's sign blinks:
May I Have The Next Dents?

IN NEW HAVEN, CONNECTICUT, the Yale Center of Alcoholic Studies advises:

Pouring black coffee into an intoxicated person, or making him jog around the block won't sober him up. All that happens is that you have a wide awake drunk on your hands.

IN LAS VEGAS, a little boy enrolling in school was asked how old he was.
"Six—the hard way," he responded.

IN LINCOLN, NEBRASKA, one of 85 persons who recently had drivers' licenses suspended because of repeated traffic violations, was a Mr. Woodrow G. Respects Nothing.

IN TIOGA COUNTY, PENNSYLVANIA, the epitaph on a soldier's grave reads:
Waiting For Further Orders

AT MOUNT RUSHMORE, SOUTH DAKOTA, Sculptor Gutzon Borglum was asked how long his huge heads of the presidents would endure.

"When I learned that this granite erodes perhaps an inch in 100,000 years," he replied, "I added a foot to Washington's nose. It'll give him another million years."