

# Herring Fishery Figures Importantly In Economy of Albemarle Sound Area

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On a hundred farms lying close by the Albemarle Sound and its tributaries, the farmer-fisherman in a little while will be hauling out his nets to prepare them for the coming herring season. It is his tradition and his heritage. Formerly every farm near these waters had its nets; and many of them had their shore seines, for the herring was an important item to the dwellers of the Albemarle country, and far inland on the river bottom farms. Man depended upon the herring as a part meat supply for the year. The fish was eaten fresh when the run was on. Salted, they provided food for the long winter months.

Today the farmer does not seek them for his own table so much as he does for the packing houses which largely depend upon him for their supply.

The first herring appearing in the waters of the Albemarle are strays which come in scattered numbers during February and early March. The real run starts in late March and consists of what the fishermen call "branch," or "goggle-eye" herring and what the scientists call by the jaw-breaking name of *Pomolobus pseudoharengus*.

These "forerunners," so called because they come just before the shad run, come in large numbers but remain only a short time. They are followed by the so-called "glut," "blueback," or "school herring." This fish is really the backbone of the fishery and accounts for the larger percentage of the annual six and a half million pound catch.

While herring appear in numbers in most of the coastal rivers of the state, there is no regularly established fishery for them except in the Albemarle Sound and the rivers which empty into it. Formerly the Roanoke River contributed heavily to the annual catch, but in late years the fisheries on this river, except near the mouth, have supplied little of the commercial catch. Only one large seine at Jamesville now operates on this river. Albemarle Sound and the Chowan River supply the bulk of the commercial catch.

Before the turn of the century the Albemarle Sound and its rivers were the most important fishing waters of North Carolina. This well-earned reputation was due to the great shad and herring fisheries which have always existed there.

### Historian Reports

The earliest written records of the state speak of the herring of the Chowan region. Heriot, our earliest chronicler, tells of the great herds of herring and their huge size, reporting some of them to be 2 feet long.

While it is likely that he confused the herring with the shad, there is no question about the enormous numbers of herring which he found. Then, as now, they came in February, March, April and May.

The herring fishery is of short duration. While a few of the millions make their appearance in February, the real run does not start until March. By the middle of May, after great and feverish activity, the fishery is finished for another year.

The herring spends most of its life in the salt waters of the Atlantic ocean. In the spring, however, this beautiful little fish comes into brackish and fresh water in great herds. First into the brackish waters and then on up into the fresh waters of the rivers.

### Inland to Spawn

This mass movement of millions of fish is the spawning migration,

costly fish, such as shad and rock, he may average \$3,500 a year when the combined products of his spring herring fishery and fall fishery are considered. Some make more by fishing than by farming. (The fisheries of the Albemarle, somewhat shrunken in value so far as the state at large is concerned, are of great importance to the economy of those counties bordering the Albemarle and its feeder streams.)

There are two principal methods for catching herring, the seine and the pound net. About 94 per cent are taken by pound nets, the remainder by seines, gill nets, stake and fyke nets.

Formerly, practically all herring were taken by seine, skum nets or gill nets, the seine being most important. Seines of today are pygmies compared to the seines of yesterday.

Today the law limits a seine to 1,000 yards, but it was nothing unusual even in the early days of this century to find many seines operating in the Albemarle region which were a mile or more long and the famous Capehart seine is reputed to have been five miles long.

Only two hauls a day could be made with this seine, since it required so much time to set and haul it. The seine would be set at night and about 4 o'clock in the morning hauling would be started. By 6 o'clock that night the seine had been hauled, set and hauled again. The Greenfield seine, was another famous seine of the Albemarle section.

### Demand Great

There was a great demand for herring in the days of these huge seines. Some fish were sold fresh but most of the catch was salted. Wagon trains came in numbers to the Albemarle, taking loads of herring back into the interior to sell, to feed labor crews, plantation slaves and to supply the morning delicacy of a well-to-do table.

Large quantities were used on the farm and plantations which owned the seines, some were used for fertilizer as well as food for the slaves and the master's table. All classes of people ate herring in some form during the season. Today there is very little independent selling by the pound netter and small seine operator. The product is sold to the five or six packing plants on shore who processed herring for distribution to the markets. The plants also have their own nets and boats.

It is a hectic time for the farmer, since the herring run comes at the season of the year when farmland has to be prepared and seed has to be sown. It is double time for them. Early in the morning they fish their nets and take their catch to the packing house and then back for them to the farms for tilling the soil.

Herring, in good tradition, are paid for by number of fish, not by pounds, and a packing house will buy any number from one herring to 100,000. Herring is a small fish, averaging roughly a third of a pound, and naturally a good catch is too numerous to permit counting the individual fish so the number of fish is determined by the volume!

A standard measure or tub is filled to the brim with the herring to be sampled. The number of fish in the tub is counted. The tub is then repeatedly filled and emptied until a given fisherman's catch is measured. The number of tubs is then multiplied by the number of fish it was determined the tub would hold and the fisherman is paid off by number of fish.

Since herring vary in size from day to day and from catch to

catch, this process is repeated several times a day. It seems an involved method but it is long established in tradition, and neither the fisherman nor the dealer would have it any other way.

Herring are one of the few products of the waters of North Carolina which are processed before being sent on to the ultimate consumer, and the proper processing of herring is a tricky business. Although apparently simple, it is not engaged in by one who does not have the know-how.

From the boats the herring are taken in to a combination washer and scaler. This is ordinarily a revolving drum made of wire. The herring are then dressed for salting. The dressed herring are transported to large vats containing saturated salt solution, and are immersed for about eight days. After this curing, the herring are put in cold brine at about 38 to 40 degrees. They are held in this refrigerated brine until time to sell them.

### Salted in Baskets

Removed from the brine, they are loose-salted in apple baskets, tubs and barrels and more recently tin cans, the interior of which is coated with a salt resistant enamel. Lately, cured herrings have been put up in three-pound glass jars, four jars to the case.

The containers in which the herrings are packed for market vary in size. There are, for instance, 50-pound containers containing 250 fish. A 20-pound pack contains 120 fish. A 10-pound container carries 60 fish. The tin cans hold 250 fish, and the baskets hold the same number. The basket being the cheapest container of all, is the one which sells in greatest quantity.

From January to April almost one hundred per cent of the her-

ring put on the market are sold in baskets. In the warmer months the closed containers such as kegs, barrels and glass jars gain favor.

As the processor buys his fish in numbers, so the grocerman sells his cured product in numbers. Rarely does he sell cured herring by the pound, but by the piece, by the dozen or the half dozen lot.

Seventy five per cent of the cured herring produced in North Carolina are sold in North Carolina with about 25 per cent going into Virginia around the Danville area and into South Carolina. The heaviest sales are within 100 to 200 miles of the coast, which probably represents the distribution range established seventy five or a hundred years ago.

### Much Canned

Much of the herring caught in North Carolina is canned. The process of canning is identical with that for curing up to the brining stage. Instead, however, of being brined eight days in 100 per cent salt solution, the herring for canning are brined only for one hour in a one-half saturated salt solution. Removed from the brine, the herring are cut in lengths (by machinery) to fit the cans.

They are put in round 15-ounce cans to which is added a salt solution to fill up the can. They are then run through a steam exhaust box with live steam playing on them and on through a capping machine which automatically seals the can.

This operation is followed by the sterilization process in the retort. They are held under 15 pounds pressure at about 248 degrees for one hour.

The roe is also canned. All of the canned herring products command a market and are easily disposed of.

## Beaufort Laboratory

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fishery laboratory in a rented building in Beaufort. In 1900 Congress authorized the erection of a biological station. The land for the present station was donated to the Government by Alonzo and Nannie F. Thomas, parents of Alonzo F. Thomas, who until he retired in 1953, was an employee of the station.

On May 26, 1902, the new laboratory building was thrown open for research. Ample space was afforded for offices, laboratories, library, and dormitory rooms. A museum occupied most of the first floor and was open to the public.

Thousands of fascinated eyes viewed the fish, reptiles, and fishery equipment on display during the span of the museum's existence. It remained intact until 1950 when the present shad research investigation became headquartered here and additional office and library space became necessary.

After the station was opened in 1902 the "resort" atmosphere began to change. Academic problems were still being pursued in some measure and they will always have their place, but the primary endeavor of employees of the Bureau of Fisheries was, and is even more so at this time, to precede fishery conservation and development practices with scientific research and then to apply the resulting knowledge toward the proper management of our fishery resources.

One of the earliest reports issued concerning investigations designed to promote the oyster industry of North Carolina. Attention was called to the ways in which natural oyster reefs were formed under the conditions prevailing in this region; to the factors which one engaging in "oyster gardening" must consider; to the misfortunes and success of some who had attempted oyster farming; and by experimental oyster planting, to the fitness or unfitness of certain bottoms to oyster culture.

### Worked with Terrapin

A few years ago there was a hearty demand for the meat of diamondback terrapin and it became increasingly difficult to maintain a natural supply. Work was done at the station to determine efficient methods of cultivation of the species so that the commercial culturist could increase the supply and thereby reduce the cost of the product to the consumer.

Some of the most renowned biologists and fishery technicians in the world have visited, studied, and written technical reports at Pivers Island. The old building which had served as a temporary home and laboratory for so many eminent scientists was torn down early this year after the completion of the new laboratory.

It had a life span of 53 years, not a particularly long period as buildings go, yet because of its tremendous weight and the somewhat inadequate foundation yielding to the sandy soil upon which it rested, it had become warped, rickety, and costly to maintain.

A survey of scientific data and publications turned out by the men who have worked here shows that the building's life was packed full of worthwhile activity and that its cost to the taxpayer has been re-

turned manifold through increased biological knowledge and its application toward the advancement of conservation measures.

Through use of modern methods and the newly-acquired facilities of the U. S. Fishery Laboratory we may look forward to a great deal of productive research which will lend an invaluable service to our fishing industry during the years to come.

## General Assemblyman Looks After Fisheries Interests

T. J. Collier is neither a fisherman, a seafood wholesaler, nor a boat-owner, yet he may be classified as one of the best friends the industry can claim.

A man who has spent 15 years in the field of education, serving as both classroom teacher and principal, Mr. Collier is now engaged in the building supply business in Bayboro.

His closeness to and interest in the problems of the fishing industry result from his first-hand knowledge of its economic importance to his section and his state. In virtually all of coastal Carolina, including Mr. Collier's Pamlico County, fishing ranks second only to agriculture.

Mr. Collier has represented Pamlico, the second-largest fish producing county in the state, in the last four sessions of the North Carolina General Assembly. The 1955 assembly passed a bill authorizing the governor to appoint a seven-man advisory board to guide the policies of the Board of Conservation and Development in matters concerning commercial fishing.

### Introduces Bill

The bill was introduced by Mr. Collier and is the culmination of extensive effort on his part to increase representation of the commercial fisheries in the activities of the Board which so rigidly controls it.

Mr. Collier's concern with the fishing industry began back in 1930 when, fresh out of the University of North Carolina, he went to Arapahoe to teach. It was in the small town on the Neuse River that he met another young teacher, Mildred Muse of Oriental, who later became Mrs. Collier.

During his three years as teacher and two as principal, the young native of Wayne County came in to close contact with the fisherman and the fishing industry of Pamlico County. An additional seven years as principal of the school in Oriental served to further indoctrinate him in the needs and problems of the industry.

### Starts Business

Three years as principal at Creswell in Washington County took him to another fishing area of the state for still further learning.

Leaving the teaching profession in 1945, Mr. Collier returned to Arapahoe to live, establishing himself in the lumber business in nearby Grapetown. Then in 1946, the same year, he was first elected to the state legislature, he moved

to Bayboro and established a builders' supply business on the main street.

As a freshman legislator, Mr. Collier was appointed to the two committees in which he was most interested, education and commercial fishing.

### Heads Committee

During his second term in the House, serving as chairman of the commercial fisheries committee, he first introduced the bill which was finally passed this year. In its first attempt at passage, the bill passed the House but never was brought up in the Senate.

In 1953, when he served as vice-chairman of the same committee,

if relations between the industry and its governing body did not improve, he would support legislation to separate them. The appointment of Cecil Morris of Atlantic and Eric Rodgers, Scotland Neck, to the board fulfilled the Governor's promise. Both were recommended by the fisheries industry. According to Mr. Collier, relationships have improved, both as a result of these appointments and the appointment of Gehrmann Holland as fisheries commissioner.

### Confidence Improves

The men in the industry, says Mr. Collier, seem to have more confidence in the state government and in the regulations governing their industry than they did two years ago.

However, the lawmaker goes on, even as he reiterates his confidence in the executive group of the C&D, there is no guarantee that the makeup of the board will continue to be such that it will be able to serve the best interests of the industry. Resignation or death of members can change the personnel quickly.

The advisory board, composed as it is of men who are thoroughly familiar with the commercial fishing interests, could, if it is used correctly, guarantee that the interests of the industry will be understood by the Board.

But, says Mr. Collier, unless the advisory group is used to fullest advantage, he would still be in favor of removing the fishing industry from the jurisdiction of the Board of Conservation and Development.

Mr. Collier's wife and two children see little of the busy head of their family during legislative sessions, and often remark that they believe he works harder for the interests of the fishermen than for himself and his business.

Busy as he is, Mr. Collier finds time for varied civic activity. The organizer and first president of the Pamlico County Chamber of Commerce, he is also a member of the Lions Club and a Mason. The Methodist Church has found him a capable member of the board of trustees and treasurer of Camp Don-Lee, the Methodist young people's camp at Arapahoe.

However involved he may be in his own business activities or in any other field of interest, it's a safe bet that dynamic T. J. Collier will always find time to help the fisherman.



T. J. Collier  
... adopted coastland

the earnest Pamlico County businessman considered introducing a bill to separate the commercial fisheries from the Department of Conservation and Development.

Mr. Collier felt then, and still feels, that it is impossible for the 15 conservation board members, however capable and sincere, to be sufficiently informed on all issues within the jurisdiction of the board—those issues include fishing.

Since the only industry regulated by the board is commercial fishing, Mr. Collier felt that placing the industry under a separate department would insure more realistic regulation.

Governor Umstead disagreed, but promised the House committee that he would give commercial fisheries at least one qualified representative on the conservation board. He further promised that



Photo by Jerry Schumacher

## Son of Marshallberg Boat Builder Operates Seafood Firm in Morehead

It was entirely natural that young Gordon C. Willis, son of Marshallberg boat builder Benjamin Tyler Willis, should find some sort of work connected with the sea.

The owner and manager of the Gordon C. Willis Co., Morehead City, attended public school and Graham's academy in Marshallberg. Later he was a student at the Washington Collegiate Institute, Washington, N. C. Having completed his studies there, he began work with the Norfolk-Southern railway in Norfolk. Then came his period of Naval service.

Mr. Willis came to Morehead City as a young man after serving with the Navy during World War I. He first worked with the Woodland Company, wholesale seafood dealers, as a bookkeeper. In 1928, when that firm ceased operation, Mr. Willis opened his own business on the same spot at the foot of S. 10th Street. The Gordon C. Willis Co., a large, red frame building, has become a landmark on Morehead's waterfront.

Civic-minded Gordon is not the only member of the family to earn a living from the sea. His brother Milton and two sons still carry on the boat-building business in Marshallberg, producing mostly

pleasure craft but building some fishing boats. Milton's father built sailing skiffs in his day.

Another brother, Darcy, is the skipper of a partyboat, Joy II.

The fresh SEA-LECT seafoods shipped by the Willis firm are caught in the waters of eastern Carolina, in the bays, sounds, and the ocean. The company operates beach fisheries in season and has its own boats which bring a fresh supply of food from the deep direct to its docks. Also the company buys from many independent fishermen and dealers.

The seafoods, which include fish, soft crabs, shrimp, clams, and scallops, are shipped to customers by truck and railway express. Shipping points include the entire Atlantic seaboard and places as far west as Chicago. Special orders for such delicacies as soft crabs have been filled by air express to places as far away as California.

Associated with the firm in an executive capacity is Ethan Davis Jr., who has been with the company since 1933 except for three years' service with the Army during the war.

Mr. Willis married the former Miss Fannie Wade. Their only child, Gordon Caryal Jr., entered the University of North Carolina this fall.

Mr. Willis is a member of the First Methodist church, where he has served as a member of the official board for several years. He is also general secretary of the church school.

Mrs. Willis and young Gordon are members of the First Baptist church. Gordon Jr. is an Eagle Scout and is the only Scout in the county who has won the God and Country Award.

His dad is active in Scout work, serving on the organization and extension committee of the Carteret District and on the executive board of the East Carolina council, which covers 21 counties.

Active in many community organizations, Mr. Willis is a member and past president of the Morehead City Rotary club, and a member of the Masonic order and the American Legion. He serves on the board of trustees of the Morehead City hospital and on the transportation and communications committee of the Morehead City Chamber of Commerce. Twice he was appointed to serve two-year terms on the advisory board of the Institute of Fisheries Research.

His firm holds membership in the North Carolina Fisheries Association.

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