

History of the Federal Fisheries Laboratory at Beaufort, North Carolina

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The sandy strip of land which extends along the North Carolina coast, separating the Atlantic Ocean on one side from the extensive system of sounds on the other, is interrupted at intervals. One of these interruptions is the Beaufort Inlet located at Beaufort, N.C., and whose waters are home to a great variety of saltwater plants and animals. It is little wonder that Beaufort has developed through the years as one of the most important areas for marine science research in the United States.

Beaufort became a field station for persons interested in marine biology following the visits of zoologists Theodore Gill and William Stimpson in 1860. Elliott Coues and H. C. Yarrow, Army surgeons stationed at Fort Macon, compiled lists of mammals, birds, reptiles, fishes, and mollusks which were published in a series of articles in the 1870's. In the 1880's, professors and students from Johns Hopkins University maintained a station in a rented house and used the area as a summer teaching and research facility.

The Federal Government became interested in local fisheries when a joint resolution was passed by Congress in 1871 creating the Office of Commissioner of Fish and Fisheries. Spencer F. Baird was the first Commissioner, and he and others associated with the Bureau of Fisheries investigated the fishes of the Beaufort region during the next 10 years, mostly during the summer months.

It was not until 1899, however, that a fisheries laboratory was established in

a rented building in Beaufort. This was accomplished through the efforts of Henry Van Peters Wilson (Fig. 1), a professor at the University of North Carolina, who received \$300 from the U.S. Fish Commission to rent the Duncan house on Front Street (Fig. 2), and to obtain a couple of boats and employ local help during the summer. A former professor at the University, Joseph Austin Holmes, who became Director of Mines, suggested that the summer laboratory be converted into a permanent facility with space for guest investigators. The Deputy Commissioner of Fisheries, Hugh M. Smith, helped in the

task of securing a congressional appropriation.

By Act of Congress, signed 12 May 1900, provision was made for the establishment of a U.S. Fish Commission marine laboratory at Beaufort. Thus did the Beaufort Laboratory become the second Federal fisheries laboratory in the United States. Only the Woods Hole, Mass., laboratory established in 1885, is older. The funds appropriated proved to be inadequate, but were doubled in the next congressional session. Unfortunately, no provision appeared in the appropriation for land purchase. However, this was remedied when, through the efforts of Wilson and Holmes, five universities and a private donor made up \$400, the amount needed to purchase 3 acres of land, Pivers Island, located a short distance off the west end of Beaufort, and presented it to the Fish Commission. The purchasers and donor were Johns Hopkins University, the State Universities of Virginia, Georgia, South Carolina, and North Carolina, and Alonzo Thomas of Beaufort. Professor Wilson became the first laboratory director, and was responsible for planning the main building which served scientists and investigators for more than 50 years.

The facility was founded with a regional responsibility to learn the life histories of marine animals and plants, their relations to each other and the environment, their resource potential, the effects of man on their abundance, and methods for their scientific culture.

The new laboratory (Fig. 3, 4), while still not entirely completed, was occupied 26 May 1902 with the second director, Caswell Grave from Johns Hopkins University, in charge. The main building was a two-story wooden structure,



Figure 1.—Henry Van Peters Wilson, Director of the Biological Laboratory, 1899-1901.

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Figure 2.—U.S. Fishery Laboratory, Duncan House, Beaufort, N.C., 1899-1902.



Figure 3.—U.S. Fishery Laboratory, Pivers Island, Beaufort, N.C., 1902-1954.

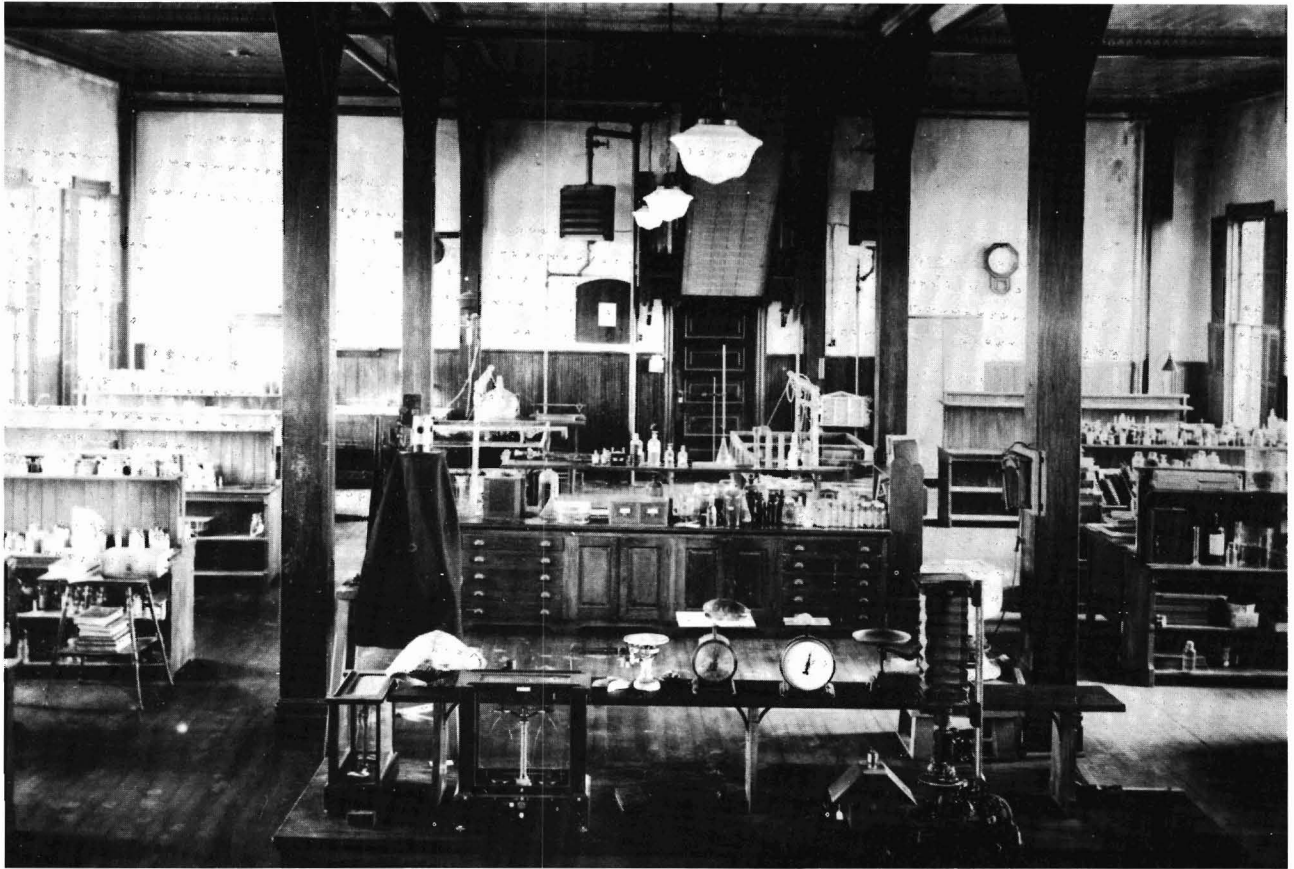


Figure 4.—Inside the main building of the old U.S. Fishery Laboratory, Pivers Island, Beaufort, N.C.

180 feet in length, containing a laboratory, aquarium, office, twelve bedrooms, halls, bathroom, and storerooms. In addition to the main building there was a mess hall, power house, boathouse, fuel shed, minor outbuildings, and a pier 80 feet long. An artesian well on the island supplied fresh water to the laboratory.

During the years 1902-08 the laboratory was open from May to September to accommodate visiting scientists. Researchers lived in the two wings of the laboratory building. The central portion of the main building was used for instruction and administration, with the laboratories occupying the entire second story, "removed from the distractions and noises inseparable from those parts of the buildings and grounds open to the general public." In 1909, "board cost each member of the mess five dollars per week." About fifteen investigators came each summer, and their studies

varied from the collection and identification of fishes and invertebrates to microscopic examination of tissues and organs. Visiting scientists were allowed to follow whatever studies they wished, although the Bureau of Fisheries personnel were concerned principally with the fishes collected by the Research Vessel *Fish Hawk* and the artificial rearing of oysters, clams, sponges, and algae.

In 1902, preliminary observations were made at Beaufort on the rearing of diamond-back terrapins. This work was discontinued in 1903 when the Bureau of Fisheries decided to conduct further studies on this species at Lloyds, Md. In 1909 these studies were transferred back to Beaufort. From then until the 1940's the propagation of terrapins was one of the principal activities of the station. During that period nearly a quarter of a million terrapins were raised. Most were released in the

marshes of Virginia, North and South Carolina, and Georgia.

Scientific activities at the laboratory were drastically cut back during World War I and the years immediately following. In 1918, the Navy took over the entire plant and did not return it to the Bureau of Fisheries until 1920. The Navy Department utilized the facilities for investigations relating to the fouling of ships' bottoms. Some experiments in terrapin culture were continued and some independent investigators were also accommodated. After the war, the Commissioner of Fisheries in his annual reports complained about the "impossibility of filling the vacant positions with competent men at the salaries available."

The laboratory was severely damaged by a hurricane on 16 September 1933. With funds provided by the Public Works Administration, the buildings and equipment were restored and the first bridge



Figure 5.—Samuel F. Hildebrand, Director of the Biological Laboratory, 1914-1918; 1925-1931.

to the island, a one-lane wooden structure, was built. Prior to that time, transportation to the island was possible only by boat.

During the 1940's and early 1950's, the beach and the immaculately kept, park-like grounds at the laboratory were a source of pride for county residents and an attraction to tourists. Families would often spend weekend days and holidays, spreading picnic lunches on the mowed lawn beneath the large live oak and cedar trees and viewing the museum, aquarium, and fish collection at the laboratory. Children would play games on the lawns and swim the protected waters of the small sandy beach. During the summer months when visitors were numerous, some live animals generally were exhibited also.

Noted scientists visited and worked at the Beaufort Laboratory, as they do to the present time. Rachel Carson, for whom the Marine Sanctuary near Beaufort is named, and author of the book, "Silent Spring" (Carson, 1962), spent time at the laboratory. Samuel F. Hildebrand (Fig. 5) served as its director from 1914 to 1918 and again from 1926 to 1931.



Figure 6.—U.S. Fishery Laboratory, Pivers Island, Beaufort, N.C., 1954-present.

Since 1950 there have been many changes in the laboratory's buildings and grounds. Construction of the present laboratory (Fig. 6) was begun in 1954 and completed the following year as the beautiful, old two-story frame building was razed after more than 50 years of service. In 1957 a twelve-office wing was added, and in 1964 the two-story Radiobiological Laboratory wing was built. A new residence for the laboratory director was constructed in 1961 to replace the original residence built in 1928. The 1928 residence is the only

wood-face building left standing today. In 1963, the newer residence was converted into a laboratory annex to meet the growing need for space. Other buildings, including the shop and service buildings, physiology laboratory, computer center, and high-level radiation building were also erected during the most recent phase of laboratory construction. A new two-lane concrete bridge, badly needed for years, was completed in October 1968.

During the 1950's and 1960's, the laboratory maintained its international

prominence in fisheries, ecological, and physiological research. Major emphasis during this time was placed on life histories, population dynamics, and man's influence on American shad, striped bass, Atlantic menhaden, and blue crab, as well as the uptake, accumulation, and loss of radionuclides by marine organisms. Research on menhaden stocks, along the entire east coast of the United States and in the Gulf of Mexico, continues today.

The laboratory and town are located in a picturesque setting facing the Beaufort Inlet, which is protected by the Outer Banks. Abundant and productive salt marshes flourish along the lower extremes of the North and Newport Rivers that border Beaufort and Pivers Island to the east and west. Beaufort, founded in 1713, is the third oldest town in North Carolina and serves as the county seat of Carteret County. It is a town little changed by progress and retains the charm of its early days with homes of sea captains, shippers, and merchants still standing on the elm-shaded, waterfront streets. In addition to the Federal laboratory, one may tour the Maritime Museum in Beaufort, the Duke University Marine Laboratory, also located on Pivers Island, the North Carolina Aquarium at nearby Atlantic Beach, and the

N.C. Division of Marine Fisheries, N.C. State University Seafood Laboratory, and the University of North Carolina Institute of Marine Sciences, all located in Morehead City, Beaufort's more modern neighbor.

The NMFS Beaufort Laboratory has functioned under various Departments of the Federal Government from its beginning as part of the U.S. Commission of Fish and Fisheries. It has been a part of the Bureau of Fisheries, the Department of Commerce, the U.S. Fish and Wildlife Service of the Department of the Interior, and again the Department of Commerce, where it is today. At one time, from 1961 to 1969, it operated as two laboratories, the Biological Laboratory and the Radiobiological Laboratory, each with its own director. It was reunited into a single laboratory in 1970 under the leadership of T. R. Rice, who served as director until his retirement in 1985. Presently, the laboratory is a unit of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, under Ford A. Cross, laboratory director.

Today, 89 years since its beginning, the Beaufort Laboratory continues to serve fisheries interests in the region and nation. As part of the National Marine Fisheries Service's Southeast Fisheries

Center, the laboratory consists of two divisions: Ecology and Fisheries. More than 80 people are employed at the laboratory and direct their research efforts in the areas of ecology, population dynamics, fishery management, resource development, environmental quality, and aquaculture.

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