



DEPARTMENT OF THE INTERIOR
INFORMATION SERVICE

Office
sent
10/24/52

FISH AND WILDLIFE SERVICE

For Immediate Release OCTOBER 23, 1952

FWS CONDUCTS EXPERIMENTS ON SOUND DEVICES
FOR LOCATING COMMERCIAL SCHOOLS OF FISH

First phases in a research project to investigate possibilities of locating schools of fish by listening for them on underwater sound detecting devices were carried out this past summer in the Gulf of Maine and adjacent waters, according to an announcement made today by Albert M. Day, Director, Fish and Wildlife Service.

The work was done aboard the 88-foot auxiliary schooner, Bowdoin, a vessel well known for her many arctic exploratory voyages. The Bowdoin was chartered from her owner, Captain Donald B. MacMillan of Provincetown, Massachusetts, and outfitted with special electronic equipment for listening to, amplifying and recording underwater sounds in a frequency range from 10 cycles per second to 100,000 cycles per second. Some echo ranging and echo sounding equipment was also carried.

During August and September, numerous cruises were made from Gloucester, Boston, and other New England ports to locate schools of commercially valuable fish, such as tuna and mackerel. When such schools were found, the hydrophones were put over the side and the sounds picked up in the water were amplified and recorded on magnetic tape recorders installed within the vessel. It is well known that certain marine animals make characteristic identifying noises. If this is found to be true of commercial species of fish, it may offer an efficient means of locating them.

A number of recordings were made near schools of fish, primarily bluefin tuna and mackerel. Unfortunately only a few schools of tuna were sighted due to the fact that apparently this species did not show up in New England waters this year in as large numbers as have been reported during previous years. This was a serious handicap to the experiments. Recordings were made at night in Massachusetts Bay on schools of mackerel which were found by the phosphorescent glow which they produced in the water.

The recordings will be analyzed in the laboratory to determine if they contain sounds made by the fish. If the analysis shows that there are characteristic noises associated with a school of tuna or mackerel, additional work will be undertaken to develop special devices that will be particularly sensitive to these sounds. The ultimate aim is the development of such a device for commercially locating fish. Experiments will continue at the Service's field station at the University of Miami Marine Laboratory in Coral Gables, Florida.

The project was directed by Virgil E. Harris, electronics scientist with the Service's Branch of Commercial Fisheries, and was carried out under a contract between the Fish and Wildlife Service and The Old Dominion Research and Development Corporation of Erica, Virginia. The Corporation furnished technical personnel, the vessel and crew, and designed and built some of the equipment used. Mr. Carl Holm, president of Old Dominion, acted as master of the Bowdoin in addition to his professional duties.

X X X

P.N. 29780