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ATOMIC ENERGY TO AID SHELLFISHERY RESEARCH

An agreement has been concluded between the U. S. Fish and Wildlife Service and the Atomic Energy Commission to conduct cooperative research on shellfish and other marine organisms using radioactive tracer methods, Dr. Clarence Cottam, acting director of the Service, announced today.

The new research project--a survey of radioactivity in marine invertebrate animals--will be conducted at the U. S. Fisheries Biological Laboratory at Beaufort, N. C. The leader of the project is Dr. Walter A. Chipman, for many years engaged in studies on the nutrition, feeding and growth of oysters on the Atlantic coast.

The agreement between the Service and the AEC provides for cooperative financing and supervision of the research project.

One main objective of the study is to learn more about the accumulation in marine life of radioactive material and its possible effects on shellfish.

Another objective is to learn more about the natural foods required by oysters for growth and fattening. Conditioning oysters for market has always been a problem of oyster growers.

It has long been known that oysters feed on one-celled plants and animals and other minute organisms or plant detritus normally abundant in sea water. These food materials are removed from the gallons of water per day which are filtered through the oyster's gills. Some food items are accepted by the oyster and passed into the mouth but not all are digested. Others are rejected. There is still disagreement among scientists because of insufficient information on the food organisms used by oysters. Consequently, no successful method of artificially feeding or conditioning oysters has ever been developed.

Dr. Chipman and his associates at the Beaufort Laboratory will attack this problem by using minute amounts of radioactive chemical substances furnished by the Atomic Energy Commission's Isotope Division at Oak Ridge, Tennessee.

The organisms supposed to be the food of oysters will be grown in water containing radioactive chemicals which they will absorb. The activated organisms will then be fed to experimental oysters in the laboratory and the nutrients which are digested and incorporated into the tissues will then be determined chemically and by radiation measurement.

This is the "tracer technique" made possible in the last three years by the use of radioisotopes produced and distributed by the AEC for widespread research throughout the nation and in other countries. Because of the sensitivity of the new instruments for measuring minute amounts of radiation, the analysis of the chemical composition of any substance containing radioactive tracer atoms, even to a millionth of one percent, is far more accurate than was possible by conventional chemical methods.

The Beaufort Laboratory, established in 1902, has been inactive in fishery research during and since the war but is being reopened under new supervision for study of the middle and south Atlantic fisheries in several of its branches, Dr. Cottam said. A building formerly used for hatching terrapin will be rebuilt and furnished with the most complete and up-to-date chemical and radiological equipment for the use of the five scientists who will be engaged in the new oyster research. Dr. Chipman was transferred to the Beaufort Laboratory from the Fishery Laboratory of the Service at the University of Maryland, College Park, on August 1st to make preparations for the new undertaking.

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