



# NEWSLETTER

WOODS HOLE OCEANOGRAPHIC INSTITUTION

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## 35,000 FISH TAGGED BY FRANK MATHER

Frank Mather's one-man project has tagged 35,000 gamefish through the cooperative efforts of sportsmen and commercial fishermen. This project has been in operation for several years and in the last two or three years the results are beginning to give an indication of the migration of gamefish.

Results in 1968, while less numerous than in the two preceding years, were interesting and important. A total of 2,631 fish were tagged in the Atlantic Ocean this year using Frank's tags, comprising representation in giant bluefin tuna, white marlin, blue marlin, Atlantic sailfish, greater amberjack blue shark, and over 100 fish of other species. Approximately 10 per cent of these tags have already been returned to Woods Hole. In addition 177 of Frank's were used in the Pacific.

## WHAT IS IT?

A large brown floating mass has been observed in the Sound between Nobska Point and Falmouth Harbor that extends out from the shore for some distance. This caused mild interest in some of the Institution's scientists especially with the sewer study being conducted in Falmouth.

Ralph Vaccaro and Carl Lorenzen are both involved in this study, in which the Institution is assisting. This mass is not sewage, but a winter bloom of phytoplankton, especially two species of diatoms.

Ralph and Carl have collected bucket samples to analyze and have found that the concentration of diatoms is 1000 times normal and that the chlorophyll content of these samples is 10 times higher than is normal. Both men have studied the upwelling areas of southwest Africa and in the Peru Current. They find that the Sound conditions are more productive than either of the other.

Just why such a bloom occurred is not clear. It is not influenced by any sewage. The water in the Sound is 3 to 5° warmer than the last few years and the air temperature is also warmer. A winter bloom is always present but not of such magnitude.

W.H.O.I. scientists, Carl Lorenzen, Ralph Vaccaro, David Menzel, and Mac Hulburt are very interested in this to help establish guidelines for future reference for the Sound. This study goes along with their interest in the sewer study for the Town of Falmouth.

this survey, comparisons will be made from aircraft, buoys, towers and ships at the same time.

Andy plans to conduct flights in the area in May and again in July.

NOTICE FROM THE  
PROPERTY OFFICE

It has been brought to the attention of the property office that the electric typewriters in various offices have been getting what the maintenance contractor terms unnecessary abuse. This is caused, for the most part, by personnel other than those employed as typists attempting to use them. As a result, we are being billed extra for the repairs by the maintenance contractor. There are over 100 good manual typewriters distributed throughout the various departments which are available for the use of non-typist employees. We must INSIST that the electric typewriters be used only by personnel employed to use them.

WARNING

Be advised that anyone who has in their possession MUFAX Electrosensitive Recording Paper made by Mulrhead Instruments Inc., Mountainside, N.J., should be extremely careful.

ONCE STARTED, IT BURNS WITH EXTREME SPEED AND PRODUCES A VERY ACRID SMOKE AND COULD EASILY BE OUT OF CONTROL IN A FEW SECONDS.--Bill Dunkle

LORAN C DEMONSTRATION  
SCHEDULED

The demonstration of Loran C-Manpack equipment by personnel of LFE, Inc, is on March 3 at 1:30 p.m. in LMS 204. Contact Eli Katz at Ext. 268.

LOST AND FOUND

Found: A men's wool scarf in the LMS. Contact Anita Gunning on Ext. 321 to claim.

From this effort, four additional transatlantic returns have been received providing more information on the immigration of young bluefin from the northwestern Atlantic. Three of these fish were tagged in 1966 and the fourth tagged in 1967.

Frank Mather, a graduate of M.I.T., has always been interested in the sea and especially sportfishing. It was only natural that he combine this interest with a scientific story. Financial support has come from small government funds, but primarily from the Sport Fishing Institute and individual sporting organizations. One of the big problems has been to interest sportsmen and commercial fishermen in the project and to enlist their help in the tagging of fish. Today sportsmen from South America to Nova Scotia and Europe are involved in the project.

Frank was named the Convenor of a working party for Atlantic Tuna Stock Assessment this year under the direction of the Food and Agriculture Organization of the United Nations. The efforts of this group may be influential in the decision of the commercial fisherman to fish different areas of the Atlantic for tuna.

This year 253 giant tuna were marked by sportsmen, a new record. Most of these were marked in the Newfoundland waters. However, the Bahamas still provide an excellent working ground.

The returns for the year show that fish migrate over a greater area than had previously been known. One white marlin tag was returned from 1,800 miles east of Cape Hatteras. This one helps to fill in the largest gap in the mid Atlantic. As more tags are returned, a better understanding of the total migration of large gamefish will be obtained.

### AEROSPACE OCEANOGRAPHY MOVES FORWARD

For many years the Institution's aircrafts were used on a limited basis. This has certainly changed with the new Aerospace Oceanography programs. This change stems from a meeting held by the National Academy of Sciences in Woods Hole a few years ago.

The Institution's C-54Q aircraft is now competing with the ships in the time at sea with all the planned projects this year. In addition to the MEDOC 69 and the Peru Current studies, is a new project entitled the Barbados Oceanographic and Meteorological Experiment (BOMEX).

Andy Bunker has received a grant from the National Science Foundation to conduct a meteorological study between Barbados and the west coast of Africa.

BOMEX is designed to observe the wind, temperature, humidity, clouds, turbulence and turbulent fluxes using aircraft to take simultaneous oceanographic data with surface ships. This study area is the birthplace of many of the tropical storms that influence the northern hemisphere. To complete