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## INSTITUTE FOR FISHERIES RESEARCH UNIVERSITY MUSEUMS UNIVERSITY OF MICHIGAN ANN ARBOR, MICHIGAN

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FISH DIVISION

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Report No. 32

## CAUSE OF DEATH OF WHITEFISH FROM CHICAGOAN LAKE

Three preserved specimens of whitefish from Chicagoan Lake were received October 7, 1930. Fish Pathologist W. H. Krull examined these and reports:

"Average length of specimens 290 mm.

"Condition or state of preservation excellent.

"Examination of specimens gives no evidence of cause of death due to parasites. No abnormal conditions were observed and the fish appeared to be in a solendid physical condition".

Several letters concerning the loss of fish in Chicagoan Lake late this summer indicate the whitefish was most seriously affected. This is a cold water fish and it is entirely possible that they were fatally affected by the fall "turnover" which in its simplest explanation means a mixing of cold and warm water in the fall. As a usual thing lake water is stratified in the summer, cold water underlying warm water. This stratification is destroyed at least twice a year and occasionally apparently by storms. If this condition is prolonged any length of time by storms, or possibly other causes the fish are forced into warm water or into cold water without oxygen. They can survive neither of these conditions any length of time.

Chicagoan lake is apparently a relatively shallow lake in the deep lake class, in which such a condition could easily prevail and, no coubt, epidemics of a similar nature have been reported before.

It is unfortunate that more specimens could not be had in order to make our conclusions more convincing.

The death of these fishes in Chicagoan Lake was obviously due to natural causes, and no treatment would have been practical.

INSTITUTE FOR FISHERIES RESEARCH

Carl L. Hubbs

Director