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FISH DIVISION

INSTITUTE FOR FISHERIES RESEARCH
UNIVERSITY OF MICHIGAN

Report 215

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FISH MORTALITY IN SUGARLOAF LAKE, WASHTENAW COUNTY

On May 23, 1933 a report came to the Institute for Fisheries Research from Mr. Carl Stoll of Ann Arbor that, for some reason or other, fish were dying in Sugarloaf Lake. The matter was investigated on the same day that the report was received.

Four dead fish (large-mouthed bass, and black crappie) were found along about 2000 feet of shore line. These four had been dead for several days and were unsatisfactory for examination. Several resorters who were asked about conditions stated that the fish had been dying during the week or two preceding the investigation but that none had been seen sick or dying during the last few days.

It was stated that, two years previously, a similar condition occurred here and that at that time the weather had been similar to weather during the several past weeks. In both cases the deaths occurred during prolonged cloudy weather.

That a considerable number of fish have died recently in Sugarloaf Lake is apparent. It is doubtful, however, that enough have died to seriously affect the total fish supply. It was stated that fishing was good. Apparently the deaths two years ago had no noticeable effect on fishing conditions. At any rate the recent loss was not severe enough to be of much consequence to the fish resources there.

A definite reason for the recent loss cannot be given. Oxygen tests, taken during the time that fish were actually dying might have been significant. The following statement is not to be definitely regarded as explaining the death of these fish but, is given as a possible hypothesis:

This lake apparently has considerable decay. It is relatively rich in vegetation and other organic matter. Over long periods of cloudy weather it is possible that decay may have continued at a fairly rapid rate while photosynthesis (production of oxygen by plants) is retarded. This condition may have reduced the oxygen supply to a point below that needed by some of the fish. This may also be only indirectly responsible in that it might weaken the fish and, in so doing, might make them more susceptible to disease. With the return of clear weather no more deaths occurred according to reports. The fact that (according to resorters) weather conditions were similar in both cases, and that no more deaths occurred after a day or two of bright sunshine indicates that weather conditions may have had something to do with the matter.

It would be desirable to examine the oxygen supply in case further deaths occur.

Since the amount of dissolved oxygen is subject to rapid fluctuations with changes in aeration by wind and photosynthesis on the one hand and de-oxygenation by decay of organic materials on the other, oxygen deficiency ~~is~~ could not be detected unless tests were run at the time that low oxygen temporarily exists. While oxygen determinations were not made on this lake, since fish were not noted freshly dead at the time of the visit, examination by the lake survey of various Michigan lakes have frequently made note of low oxygen tests in the deeper water.

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