

Collections of the Minnesota Historical Society, Volume XVII. Minnesota Geographic Names, Their Origin and Significance. By WARREN UPHAM, Archaeologist of the Society, Saint Paul, 1920, pp. VIII + 735.

In the preface of the volume Mr. Upham discusses at some length the sources of his information and throughout the book additional information is given as to these sources. The first main division of the volume entitled "General Features" deals with the origin of the name Minnesota and other outstanding physical features such as lakes and rivers. In regard to the origin of the name "Minnesota" as first applied to the river, the author says, "An illustration of the meaning of the words was told to the present writer by Mrs. Moses N. Adams, the widow of the well known missionary of the Dakotas. She stated that at various times the Dakota women explained it to her by dropping a little milk into the water and calling the whitishly clouded water Minne Sota."

Following the general features are divisions dealing with the counties alphabetically arranged and following each brief sketch of the origin of the name of the county is an alphabetical list of the names of its townships and villages with their origins. The volume closes with three interesting chapters dealing with the three cities of Minneapolis, St. Paul and Duluth, respectively.

The volume shows the result of much travel, inquiry and investigation.

HARRY A. CONDON

Lake Maxinkuckee: A Physical and Biological Survey. Vols. 1 and 2, large octavo, 1172 pages, 38 colored plates, 15 halftones, 23 text-figures and one map. By WARREN EVERMANN and HOWARD WALTON CLARK, Department of Conservation, State of Indiana, Indianapolis, 1920; \$3.50 in Indiana, \$5.25 without the state.

In the summer of 1899, Dr. Evermann, with several specialists, began a physical and biological survey of Lake Maxinkuckee.

Lake Maxinkuckee was selected chiefly because the physical and biological conditions were so bunched as to enable the studies to be carried on with economy of time and effort. Field work was begun in July, 1899 and continued for longer

or shorter periods every year until November, 1913. From July 1, 1900, to July 11, 1901, the observations were carried on daily.

A physical survey of the lake and its catchment basin was made, so that the topography of the lake bottom as well as that of the surrounding country was definitely determined. More than 2,000 soundings were made, and the depths indicated by contour lines on the map which accompanies the report.

More than 20,000 temperature observations were recorded, and chapters are devoted to the temperature of the air and the water, also to winds, rain, frost, fog, dew, snow, and ice. It was found that, in the late summer and early fall, there is no absorbed oxygen in the water of the lake below a depth of 45 feet. This absence of oxygen disappears, however, some time in the fall when the lake "turns over," or when the fall storms disturb the lake, causing a mixing of the water of the various depths. This, of course, means that deep-water fishes such as whitefish and lake trout can not live in Lake Maxinkuckee.

Very naturally, most attention was given to the biology of the lake. Both the fauna and the flora of the lake are very rich in species. There are in and about the lake more than 130 species of mollusks, and 37 species of reptiles and amphibians. There are in the lake 64 species of fishes.

Much attention was given to the habits of the fishes, particularly those of interest to the angler, of which there are more than a dozen important species. The abundance and habits of each and the various methods of capture, seasons, baits and lures are fully presented. Over 200 pages of text are devoted to the fishes. There are 36 excellent colored plates of fishes, also nine halftones and 23 text-figures.

The flora of the region is equally rich and 400 pages of the monograph are devoted to it. The total number of species is 838, of which more than 50 are aquatics. The two volumes of this monograph make an excellent appearance. A good quality of paper has been used and the type in which the text is set makes the page easy to read. The colored plates and halftones are unusually fine.