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## Devil's Lake - short report. 1940

Thwaites, F. T. (Fredrik Turville), 1883-1961

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## Devils Lake

From the  
Thwaites Estate  
July, 1980

The origin of this famous lake although less romantic than that ascribed by certain persons who hold that it is a volcanic crater is very interesting. Although it is true that ancient volcanic rocks do occur in the region, they are in no way associated with the present lake. Running water and ice are the more prosaic agencies concerned in its formation.

Ages ago, we cannot attempt to say how many years but certainly well over a half a billion, the region of Devils Lake was a shallow sea in which accumulated, as in the seas today, a great thickness, probably some thousands of feet of sand. In the course of time, this sea deposit was lifted above water, tilted to the north and cemented due to seepage of water. This resulted in the present hard glassy reddish quartzite which betrays its origin not only to the microscope but also by its regular layer, lines of pebbles and ripple marks, identical to those now to be seen on the sandy bottoms of our lakes. As this formation was brought above the sea, streams began to work on the new land, stripped away whatever lay above it and cut valleys into the hard quartzite. This must have been a very slow process, to be sure, but the hardest rock cannot resist the long continued and never-ceasing work of a swift stream. Thus the bluffs were thus wrought into very much their present shape.

Once more the sea advanced over the land making islands of the bluffs which then stood close on to 1400 feet above the surrounding country. The waves beat against them breaking off the huge boulders and forming the pebbles now seen in the conglomerate or "pudding stone" above the old cliff house and on the Messenger shore. Sandstone and limestone accumulated around the quartzite islands until they were entirely buried for fragments of limestone are still found on top of the bluffs.

When the waters again withdrew, streams similar to those of the present time, began to cut valleys and wear away these softer formations.

The Wisconsin River then flowed straight south from Stevens Point to Merrimac while the Baraboo followed much its present course from the west until united. As by gradual erosion these streams lowered their courses they encountered the buried quartzite bluffs across their paths. They cut new narrow cliffed gorges through the hard quartzite and in places reopened and enlarged the older valleys which had become filled with sandstone and conglomerate. The Wisconsin then passed through the present Baraboo valley in by what is now the lower narrows of the Baraboo river, and out by the Devils Lake gorge joining its present course at Merrimac. Whether or not the Wisconsin river continued to follow this course until the coming of the glacier is not certain. It is known, from deep borings that the Devils Lake valley was worn down to a level at least 350 feet below the present lake and that the Baraboo river continued to flow out that course until diverted by the glacier. Aside from its greater depth this valley must then have looked as it does today with long slopes or "taluses" of blocks of stone detached from the cliffs above by the action of the frost and roots of trees.

When for a time, some few tens of thousands of years ago, the climate was too cold to melt all the winter snows, and the great ice sheet spread out from Labrador, its edge lay across the Baraboo bluffs near the present lake. In the valleys to the north and south, it advanced several miles farther west than were split by the high bluffs near the present lake. At this edge was deposited a ridge or moraine such as everywhere marks the edge of the ice sheet; while into the basin thus formed the valley from the melting of the ice washed much sand and gravel and clay. The deep railroad cut south of the lake shows the cross section of one of these ridges which consist of clay, sand, gravel and boulders deposited by the ice which had by its slow creep brought much material from distances of hundreds of miles to the northeast. The basin between these two ridges which dammed the old valley was not quite filled with sediment

and thus it was left, a little pocket in which Devils Lake now lies. In the time which has elapsed since the ice melted away, its bottom has been raised somewhat by wash from the creeks as well as the deposit and growth of vegetable matter.

Such is the history of Devils Lake. As read by geologists, it is not the result of a volcanic outburst (there were volcanoes in Wisconsin over a half billion years ago) but the results of the never tiring, age-long work of the waves of the sea, the rise and fall of the coast-line, running water and ice --perhaps more complicated but nevertheless more impressive.

F. T. Thwaites 1908  
Revised in 1940