

The Knowledge Bank at The Ohio State University
Ohio State Engineer

Title: Relief Map of Ohio

Creators: Sherman, C. E. (Christopher Elias), 1869-1940

Issue Date: Jan-1923

Publisher: Ohio State University, College of Engineering


Citation: Ohio State Engineer, vol. 6, no. 2 (January/February, 1923), 14.

URI: <http://hdl.handle.net/1811/34219>

Appears in Collections: [Ohio State Engineer: Volume 6, no. 2 \(January-February, 1923\)](#)

RELIEF MAP OF OHIO

By C. E. SHERMAN, *Head of Civil Engineering Department*

 THE U. S. Geological Survey, as is well known, is engaged in making a contour topographic map of the United States for general utility purposes. Experienced engineers are familiar with the great variety of uses to which such maps may be put, and need not be told of the wonders that can be worked by using accurate maps showing contour lines—a wonderful invention indeed. (All wonderful inventions, like the alphabet and others, seem simple after long continued use.)

Civil engineers use such maps for water-power, navigation, irrigation, flood control, drainage, highway and railway location, and many other projects; while mining engineers, geologists, and State and National officials use such maps for a still greater variety of purposes, both technical and administrative.

For the automobile tourist, there is no better or more interesting information than that contained on these Government maps, but aside from all these uses there is one use which is the subject of this article; that is, the use of these detailed topographic sheets to the educators—the school teachers of the state.

Every educator knows that one danger in using printed matter for instructional purposes is **the constant tendency of the human mind to confuse the symbol with the reality.** Thus, historical characters are “lay-figures” in the minds of most people, and geography for many is somewhat as it was to Tom Sawyer and Huckleberry Finn—floating down the Mississippi—they knew they had not passed the bounds of their native state because the color had not changed from green to red as shown in the geography.

If the study of geography—like charity—should begin at home, why are not the topographic sheets of the U. S. Geological Survey the finest text book at hand? Everything around the school in the neighborhood for miles (everything big enough to show on the scale of a mile to an inch) can be pointed out from the school house door, to the beginner and **he can at once see the reality from the symbol.**

It is the great merit of the topographic maps that they show the **relief** (that is, the ups and downs, the hills and hollows, the elevations and depressions) of the ground. No other maps of our state have ever done this before; and yet the relief **is about the only feature shown on any map that is practically unchanging.**

This relief is best and most simply shown by contour lines, and yet it is astonishing to find that

they are not understood by not only teachers in the grammar schools, but even by some professors in the universities—simply because contour lines have never been explained to and used by them.

What better then than for our public school teachers to begin with the simple device of contour topographic maps, which are of such inestimable use and pleasure to an educated person. It is the most fruitful direction in which to improve the teaching of geography today, if improvement is to be made in teaching this subject, as has been done in teaching reading and arithmetic.

Models of plaster showing the relief of the State as a whole might be used to supplement the topographic sheets of the smaller regions, but the U. S. Geological Survey has now obviated the necessity of these plaster models by publishing a **Relief Map of Ohio** which was made from the detailed topographic sheets and which gives a very graphic impression of the relative roughness of the whole State. This map is about four feet square and shows the hills and hollows by a brown color made to vary in depth of tone as the surface of the land rises up or down.

By this means the hills and valleys, lakes and ponds, highlands and lowlands stand out very clearly, and one with very little knowledge of geology sees startling facts. For example, it can readily be seen that nearly the whole Maumee basin was at one time the bed of Lake Erie—or what was then “Lake Maumee.” It can readily be seen that the Ohio River at places formerly flowed in entirely different directions from those at present—in fact it flowed north through the middle of the State at one time.

Closer examination of the Relief Map of Ohio suggests (and field examination with the detailed topographic sheets confirms the impression) that half of the Scioto River water, above Columbus, formerly flowed down the Sandusky River into Sandusky Bay. This is only another one of the many startling facts disclosed by the map to the trained observer.

The foregoing illustrations are meant to emphasize briefly only one use of the topographic maps—the educational use. In the hands of a person modernly educated, the topographic map of the United States when completed, will be an inexhaustible mine of knowledge. From them can be prepared for school purposes relief maps similar to the Relief Map of Ohio. Because Ohio is the first large State in the Union to be completely contoured, a relief map has been made of it by the National Government to illustrate this educational use.