

MODEL OF THE TWO MEDICINE VALLEY, GLACIER NATIONAL PARK, MONTANA

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The authors spent a large part of the summer of 1926 making a detailed study of the glaciation of the Two Medicine Valley, Glacier National Park, Montana. They were so much impressed by the number and perfection of the special topographic features developed by glaciation in this area that they decided to make a model which would show these features to a fine degree of accuracy.



Fig. 44.

The following plan was used. Two photographic copies, from the U. S. Topographic Map, of the drainage area to be mapped were secured, one for cutting and the other for checking. These enlargements were exactly four times the topographic map making a horizontal scale of one-half mile to the inch. Since

the model was to be built up of layers of cardboard, it was desirable to have one layer of cardboard for each contour interval of 100 feet. The exact thickness of paper for this purpose was computed mathematically in the same scale as the horizontal, namely one-half inch to the mile. A micrometer was set to the exact thickness computed and taken to a wholesale paper company where cardboard of the right number of ply to produce said thickness was secured. A special printers paste, negligible in thickness was used to insure no accumulation of errors in the vertical scale

The model was constructed by cutting along the lowest line on the topographic map, then marking around this on the cardboard, and then cutting that out and pasting it to a firm base. The map was cut along the next higher contour line, marked on the cardboard, and pasted on to the first layer. This process was continued until the entire model was built up. The completed model was shellaced, and lacquered white with all drainage put on in blue, roads and trails in black, and buildings represented by tiny wood carvings. Names, labels, bench marks, etc., are painted directly above the place in question on a glass cover held in place by the box frame.

Features of glacial topography especially well brought out by the model are: U-shaped valleys; cirque, single and cloverleaf cirque; hanging valleys; sharpened divides; pyramidal peaks, typical of a glaciated area in maturity; a rock bar across a valley, valley steps, rock basins mostly occupied by lakes. In addition to several interesting problems in diverted drainage due to glaciation, the area contains a post glacial stream and valley which furnishes an interesting contrast to the glaciated valleys and streams.