or fluviatile deposits which would merge imperceptibly into those of the lake. Rapid movements would involve unconformities between the lacustrine and fluviatile deposits, but slow movements would involve just such transitions as actually exist. The structure and texture of the clays agree with the demands of the theory of warping.

The weakness of this theory is that it does not explain the difference between the red color of the fluviatile strata and the green of the lacustrine layers. The transition from red to green must mean that the grains of waste at the bottom of a red layer were exposed to different conditions of weathering from those of the green grains a few inches lower. An important and widespread change must have taken place in a short time. It is quite impossible that such a change should take place merely because the border of the lake has been shifted a few miles. Whether the lake shore is a mile or two this side or that of a given point, the deposits must have come from approximately the same mountains and must have been subjected to the same journey under precisely the same conditions, except for the last mile or two. If the pink grains have had time to become highly oxidized, it is inconceivable that the green grains, brought by the same stream, have scarcely had time to become weathered at all. This might indeed happen in the case of two individual grains, one of which was brought from the mountains in a single year by a flood, while the other spent many years upon the way, but it could not possibly happen with an infinite number of grains. The color of the clays seems to be an insurmountable obstacle to the acceptance of the theory of rhythmic warping.

(*d*) *Fluvial or Lacustral Theory.*—The theory which explains the phenomena of Sistan by a succession of fluvial and interfluvial epochs is an expansion of the principles which have become so well established in the study of the glacial phenomena of Europe and North America. During fluvial or lacustral epochs the increased rainfall or decreased evaporation would cause a large lake in the basin of Sistan; the streams from the surrounding mountains would become fuller and more perennial, vegetation would become more abundant, and the mountain slopes would tend to become graded. As a result of all this the load of the stream would be fine in texture and would be carried quickly to the lake, where it would be deposited without having an opportunity to become highly weathered. The lake bottom would be covered with unoxidized clays of fine texture and light color. On the advent of an interfluvial epoch, the lake would decrease in size, and marshes would encroach upon its edges; the rivers would dwindle and become intermittent, and at the same time would become subject to fiercer floods; vegetation would everywhere decrease; and the slopes would become ungraded. These changes would allow coarser materials, such as sand and even gravel, to be washed in over the exposed portions of the old lake bed. The total amount of material might be greater than during the moister period, for the flood torrents would be loaded to the utmost; but the journey of a given particle would be much slower, for the laden floods would quickly spread into a sheet and deposit their loads, and many short journeys separated by long periods of exposure would be required to bring the waste of the mountains to its final resting place. During this protracted journey the redness which characterizes the fluviatile