

These, in the succeeding ages, were at times enlarged, at times contracted, through the orographic movements taking place, and finally filled or drained (see Talks XVIII and XLIV). During the Miocene epoch a great lake covered the region of the Great Plains, as far as the Gulf of Mexico—a region which appears to have been mostly land during the Eocene. Meantime, vast volcanic eruptions were taking place along the Pacific border, burying thousands of square miles under lava, and supplying ashes which filled some of the western lakes four thousand feet deep.

The interior lake history continued of similar tenor till the close of the Pliocene, when the grand movements occurred which impressed on the broad Cordilleran region its present surface features. The rocky sheets of the Great Plains were tilted into a position which secured drainage of the great lake which had covered them. In the far west, the Sierra Nevada and the Wahsatch were rent longitudinally by great faults along their crests, and the continental mass between the faults sank down one or two thousand feet, forming the Great Basin, and returning it to the depressed condition which it had held through the whole of Palæozoic time. On its eastern and western borders, gathered two lakes, each as large as Huron, the eastern of which has shrunk to Great Salt Lake, Utah, and Sevier; while the western exists only in the remnants known as Pyramid, Winnemucca, Carson, Walker, and Humboldt Lakes. Later mountain ranges have risen here and there in the Basin, and volcanic outbursts have contributed to diversify the topography. These final disturbances, followed probably by some later ones—all embraced within the Quaternary period—shattered the Plateau Province to a destructive extent. Great fractures ran through it from end to end. On one side of each, the rocky sheet is generally upraised, and on the other, depressed. Volcanic mountains have been built up here and there, and earthquakes have shattered the blocks shaped by the meridional faults. Simultaneously, surface erosions have perpetually changed the configuration of the surface. Rivers have cut their way through mountains, through lava