

tive inducement to valley-making, and the principal remaining lines of weakness are structural, lines of faulting and of repeated jointing. The main joint directions vary somewhat in different parts of the region, but there is always an important set with a direction approaching parallelism with that of the main faults, and many of the main valleys of the region have this trend, this being specially noteworthy in the eastern district where faulting has been most pronounced.

Because of the dome-shaped character of the uplift, the tendency has been to locate the main watershed of the region at its apex, with a radial arrangement of the main streams with respect to it. Moreover, since the sides of the dome have a slightly greater slope than the graded slope of the streams, the valleys are cut to greater depth in the heart of the region than on its flanks. The vertical distance between the old and new base levels is greatest there.

When we pass to the Paleozoic rocks which everywhere surround the region, dipping slightly away from it, the stream adjustments necessarily differ, owing to the different character and arrangements of the rocks, which lie with their exposed edges parallel to the border of the region. The original radial streams flowed across these beds, but the tributaries which developed to these radial streams flowed along them and would develop mainly on the softer belts. With successive uplifts of the region, these adjusted streams would be more advantageously situated than many of the radial streams, and would increase in size at their expense, converting them into tributaries. This process has had much to do with the production, on all sides of the region of main drainage valleys parallel with its sides, though by no means the only factor involved.

Glacial history

This long erosion period was terminated by the great change in conditions which ushered in the Glacial period. The long and complicated history of the region during Glacial times is but imperfectly known. It was well within the field of action of the