

the Norian rocks to be younger than the Lower Laurentian, and that, as Logan supposed, considerable earth movements had occurred between the two, implying lapse of time, while it is also evident that the folding and crumpling of the Lower Laurentian had led to great outbursts of igneous matter from below the crust, or from its under part.

Next to the Laurentian, but probably after an interval, the rocks of which are yet scarcely known, we have the Huronian of Logan, a series much less crystalline and more fragmentary, and affording more evidence of land elevation and atmospheric and aqueous erosion than those preceding it. It has extensive beds of volcanic rock, great conglomerates, some of them made up of rounded fragments of Laurentian rocks, and others of quartz pebbles, which must have been the remains of rocks subjected to very perfect decay. The pure quartz-rocks tell the same tale, while slates and limestones speak also of chemical separation of the materials of older rocks. The Huronian evidently tells of previous movements in the Laurentian, and changes which allowed the Huronian to be deposited along its shores and on the edges of its beds. Yet the Huronian itself is older than the Palæozoic series, and affected by powerful earth movements at an earlier date. Life existed in the waters in Huronian times. We have spicules of sponges in the limestone, and organic markings on the slaty beds; but they are few, and their nature is uncertain.

Succeeding the Huronian, and made up of its *débris* and that of the Laurentian, we have the great Cambrian series, that in which we first find undoubted evidence of abundant marine life, and which thus forms the first chapter in the great Palæozoic book of the early history of the world. Here let it be observed we have at least two wide gaps in our history, marked by the crumpling up, first, of the Laurentian, and then of the Huronian beds.

After what has been said, the reader will perhaps not be