

that they were probably altered sediments, and he referred to them as Metamorphic. That portion of the series which includes thick bands of limestone he proposed to consider as a separate and overlying group. In the course of years, working with his associates Alexander Murray and T. Sterry Hunt, he was able to show the enormous extent of these primary rocks, covering as they do several hundred thousand square miles of the North American continent, and stretching northwards to the borders of the Arctic Ocean. He proposed for these most ancient mineral masses the general appellation of Laurentian, from their development among the Laurentide mountains. Afterwards he thought it possible to subdivide them into three separate groups, which he designated Upper, Middle and Lower. In the course of his progress, he came upon a series of hard slates and conglomerates, containing pebbles and boulders of the gneiss, and evidently of more recent origin, yet nowhere, so far as he could see, separable by an undoubted unconformability. These rocks, being extensively displayed along the northern shores of Lake Huron, he named Huronian. He afterwards described a second series of copper-bearing rocks lying unconformably on the Huronian rocks of Lake Superior. He thus recognised the existence of at least three vast systems older than the oldest fossiliferous formations. He may be said to have inaugurated the detailed study of Pre-Cambrian rocks. Subsequent investigation has shown the structure of the regions which he explored to be even more complicated and