

tried to make out their structure and history. Afterwards A. C. Ramsay (1814-1891) and his associates claimed these schists as metamorphosed parts of the Cambrian system. To this day their true position has not been settled further than that they are known to be pre-Cambrian.

The vast and varied series of rocks, which have now been ascertained to underlie the oldest Cambrian strata, have undergone much scrutiny during the last half century, and their true nature and sequence are beginning to be understood. The first memorable onward step in this investigation was taken in North America by William Edmond Logan (1798-1875). Many years before his time, the existence of ancient gneisses and schists had been recognised both in the United States and in Canada. At the very beginning of the century, the wide extent of these rocks had been noted by W. Maclure, whose general geological sketch-map of a large part of the United States will be referred to on a later page. In 1824 and afterwards, Dr. J. J. Bigsby (1792-1881) spent much time among these rocks to the north of Lake Superior. Subsequently the gneisses of the Adirondack Hills were described by Amos Eaton. At the very beginning of his connection with the Geological Survey of Canada in 1843, Logan confirmed the observation that the oldest fossiliferous formations of North America lie unconformably on a vast series of gneisses and other crystalline rocks, to which he continued at first to apply the old term Primary. By degrees, as he saw more evidence of parallel structures in these masses, he thought