

chocolate-coloured sandstones, micaceous flags, dark shales and calcareous bands. The total thickness of this great pile of sedimentary deposits must be not less than 10,000 feet.

The Torridonian strata can be traced from the precipitous headlands of Cape Wrath to Applecross, where they form pyramidal mountains of great height. They reappear to the east of this undisturbed area, among the displaced masses affected by the post-Cambrian movements, notably in Assynt, in the area extending from Kishorn to Loch Alsh, in Sleat, and in Rum.

CAMBRIAN

The Torridon Sandstone is overlain unconformably by an important series of fossiliferous strata comprising quartzites, fucoid shales, *Salterella* grit, dolomites, and limestones. The age of these sediments has been definitely fixed by the discovery in the fucoid beds of trilobites belonging to the *Olenellus* zone—the lowest division of the Cambrian system. In the neighbourhood of Durness these dolomites and limestones reach their greatest development, and are there divisible into zones, some of which have yielded cephalopods, gasteropods, lamellibranchs, brachiopods, and sponges. It seems probable that the greater part of the Durness limestone represents the middle and upper divisions of the Cambrian system, and possibly the base of the Lower Silurian rocks of North America.

An interesting series of plutonic igneous rocks, ranging in composition from quartz-syenite to nepheline-syenite and borolanite, appear in the Cambrian strata of Assynt, which are accompanied by numerous sills and dykes comprising felsites, porphyrites, and vogesites. These intrusions are later than all the Cambrian rocks of the region, and older than the post-Cambrian movements.

The fossiliferous Cambrian strata are followed eastwards, and in certain sections are visibly overlain by a great development of crystalline schists, which Murchison regarded as conformable with the underlying sediments. But this theory of natural sequence was not accepted by Professor Nicol, who contended that the superposition of the Eastern schists on the Cambrian rocks was due to earth-movements. The detailed examination of the region by Bonney, Lapworth, Callaway, and the Geological Survey has confirmed the accuracy of Nicol's main conclusions. For, by means of lateral compression or earth-creep the strata have been thrown into a series of inverted folds which culminate in reversed faults or thrusts, the effect of which is to bring lower over higher beds. This reduplication of the strata by inverted folds and reversed faults is an accompaniment of the great horizontal displacements by which thick slices of Lewisian Gneiss, Torridon Sandstone, Cambrian rocks, and the Eastern Schists