

midal hills, rising sometimes to more than 3000 feet above the sea, and presenting alike in their form and coloring a striking contrast to the rest of the scenery of that region. They are built up of nearly horizontal or gently inclined strata of reddish-brown or chocolate-colored sandstones and conglomerates, which lie with a violent unconformability on the gneisses above described, and are in turn covered unconformably by the quartzites which form the base of the Cambrian system. Where most fully developed, in the southwest of Ross-shire, these strata are between 8000 and 10,000 feet thick. They have doubtless been derived from the waste of the Lewisian rocks, though pebbles occur in them which have not been identified with any material in the older formation. Some of the conglomerates are so coarse as to deserve the name of boulder-beds. Sometimes, indeed, where the component blocks are large and angular, as at Gairloch, they remind the observer of the stones in a moraine or in boulder-clay.³¹ Some of the sandstones are in large measure composed of pink felspar derived from such rocks as the pegmatites of the surrounding gneiss. An occasional thin band may be found among them consisting largely of grains of magnetite and zircon, whence we learn at what an ancient epoch in geological history heavy and durable grains were separated out from the more ordinary sediment (see p. 227). In the highest visible portion of these sandstones a group of shales occurs, and another more important group with thin bands of impure limestone forms a prominent feature near the base of the series in the west of Ross-shire. These strata may yet yield recognizable fossils, but hitherto except some tracks and other obscure markings no trace of organic forms has been met with in them.

Messrs. Peach and Horne have detected near Loch Inver a band of fine volcanic tuff among the red sandstones, showing the contemporaneous activity of some volcanic vent in that district. Small vesicular pebbles of porphyrite found among the contents of the conglomerates may perhaps indicate the outflow of lavas.

The strata now under consideration are abundantly displayed among the mountains that surround Loch Torridon, one of the most picturesque inlets in the northwest of Scotland. Hence they were called by Nicol the Torridon Sand-

³¹ Nature xxii. 1880, p. 402.