

have found it still existing, though in diminished proportions, as a decided coal-seam, which it must have taken no small amount of vegetable matter to form. And almost on the other side of the world, nearly five thousand miles from the Sutherland beds, and more than eight thousand miles from the Carolina ones, the same Oolitic flora again appears, associated with beds of coal. At Nagpur in Central India the Oolitic Sandstones abound in simple fronded ferns, such as *Tæniopteris* and *Glossopteris*, and has its *Zamites*, its coniferous leaves, and its *Equisetaceæ*.

Compared with existing floras, that of our Scottish Oolite seems to have most nearly resembled the flora of New Zealand,—a flora remarkable for the great abundance of its ferns, and its vast forests of coniferous trees, that retain at all seasons their coverings of acicular spiky leaves. It is to this flora that *Dacrydium cupressinum*—so like a club-moss in its foliage—belongs; and *Podocarpus ferrugineus*,—a tree which more closely resembles in its foliage the Eathie conifer, save that its spiky leaves are somewhat narrower and longer than any other with which I am acquainted. About two-thirds of the plants which cover the plains, or rise on the hill-sides of that country, are cryptogamic, consisting mainly of ferns and their allies; and it is a curious circumstance,—which was, however, not without precedent in the merely physical conditions of the Oolitic flora of Scotland,—that so shallow is the soil even where its greatest forests have sprung up, and so immediately does the rock lie below, that the central axes of the trees do not elongate downwards into a tap, but throw out horizontally on every side a thick network of roots, which rises so high over the surface as to render walking through the woods a difficult and very fatiguing exercise. The flora of the Oolite, like that of New Zealand, seems to have been in large part cryptogamic, consisting of ferns and the allied horse-tail and club-moss families. Its forests seem