

in one respect these trees seem to have more nearly resembled those of the recent pine-forests of our country than the trees of the coniferous forests of the remote Carboniferous era. For while we scarce ever find a cone associated with the coniferous woods of the Coal Measures,—Lindley and Hutton never saw but one from all the English coal-fields, and Mr Alexander Bryson of Edinburgh only one from all the coal-fields of Scotland,—tree-cones of at least four different species, more probably of five, are not rare in our Scottish deposits of the Lias and Oolite. It seems not improbable that in the Carboniferous genera *Pinites*, *Pitus*, and *Anabathra*, which approach but remotely to aught that now exists, the place of the ligneous scaly cone may have been taken, as in the junipers and the yews, by a perishable berry ; while the Pines and Araucarians of the Oolite were, like their cogeners in recent times, in reality coniferous, *i. e.* cone-bearing trees. It is another characteristic of these Secondary conifers, that while the woods of the Palæozoic periods exhibit often, like those of the tropics, none of the dense concentric lines of annual growth which mark the reign of winter, these annual lines are scarce less strongly impressed on the Oolitic woods than on those of Norway or of our own country in the present day. In some of the fossil-trees these yearly rings are

sisted of fragments of coniferous wood washed out of the shale beds by the surf, and the remainder of a massive *Isastrea*. And only two years ago, after many kilnfuls had been gathered and burnt, his Grace the Duke of Argyll found that fossil-wood could still be collected by cart-loads along the shore of Helmsdale. The same woods also occur at Port-Gower, Kintradwell, Shandwick, and Eathie. In the island of Eigg, too, in an Oolite deposit, locked up in trap, and whose stratigraphical relations cannot in consequence be exactly traced, great fragments of *Pinites Eiggensis* are so abundant, that, armed with a mattock, I have dug out of the rock in a few minutes, specimens enough to supply a dozen of museums. In short, judging from its fossiliferous remains, it seems not improbable that old Oolitic Scotland was as densely covered with coniferous trees as the Scotland of Roman times, when the great Caledonian forest stretched northwards from the wall of Antoninus to the farthest Thule.