

to have contained only cone-bearing trees ; at least among the many thousand specimens of its fossil woods which have been examined, no tissue of the true dicotyledonous character has yet been found ; and, with the exception of the leaves just described, all those yet found in the system which could have belonged to true trees are of the acicular form common to the Coniferæ, and show in their dense ligneous structure that they were persistent, not deciduous. Nor is there evidence wanting that many of the Coniferæ of the period grew in so shallow a soil, that their tap-roots were flattened and bent backwards, and they were left to derive their sole support, like the trees of the New Zealand forests, from such of their roots as shot out horizontally. We even know the nature of the rock upon which they rested. As shown by fragments still locked up among the interstices of their petrified roots, it was an Old Red flagstone similar to that of Caithness in the neighbourhood of Wick and Thurso, and containing the same fossil remains. In the water-rolled pebbles of the Conglomerate of Helmsdale and Port Gower,—pebbles incrustated by Oolitic corals, and inclosed in a calcareous paste, containing Oolitic belemnites and astreæ,—I have found the well-marked fishes and fucoids of the Old Red Sandstone. As shown by the appearance of the rounded masses in which these lay, they must have presented as ancient an appearance in the times of the Lower Oolite as they do now ; and the glimpse which they lent of so remote an antiquity, through the medium of an antiquity which, save for the comparison which they furnished the means of instituting, might be well deemed superlatively remote, I have felt singularly awe-inspiring and impressive. Macaulay anticipates a time when the traveller from some distant land shall take his stand on a broken arch of London Bridge, to survey the ruins of St Paul's. In disinterring from amid the antique remains of the Oolite the immensely more antique remains of the Old Red Sandstone,