

which the great Cuvier won his laurels, Scotland is one of the poorest of European countries. Save for the comparatively recent discovery of Tertiary beds in the island of Mull by a nobleman fitted by nature either to adorn the literature or extend the science of his country, the geological historian would have to pass direct from the Pleistocene beds, with their grooved and polished pebbles and their semi-arctic shells, to the Chalk fossils of Banff and Aberdeen. But the discovery of his Grace the Duke of Argyll furnishes us with an interesting glimpse of a middle period widely different in its character from either the Cretaceous system or the boulder-clay. In the island of Mull, in a headland that rises about 130 feet over the sea, there occur, interposed between thick beds of trap, three comparatively thin beds of a grey arenaceous shale, charged with fossil leaves, as beautifully spread out, and with their ribs and veins as distinctly visible, as if they had been preserved in the herbarium of a botanist. Most of them belong to extinct species of existing families of dicotyledonous trees, such as the plane and the buckthorn, mingled, however, with narrow linear leaves of cone-bearing trees, which are supposed to belong, in this instance, to a species of yew, and with what seem the fronds of fern and the stems of equisetaceæ. Some of the beds of coal which have been long known to occur among the traps of the island of Mull are regarded by the Duke of Argyll as prolongations of these Tertiary leaf-beds, so mineralized by some metamorphic action as to have lost the organic structure. There must have been vast accumulations of leaves ere they could have yielded beds of coal. The middle or second bed of the three his Grace describes as peculiarly rich in the leafy impressions of this ancient period; and I need scarce say how suggestive the glimpse is which is furnished us by these buried layers of the foliage of Tertiary forests in Scotland, of which no other known memorial remains. You all remember Coleridge's fine comparison of the sorely-worn sails