

Ocean. And it is worthy of being noted, as bearing on our question, that the Scottish Lias of the Atlantic holds — as at Broadford and Applecross — exactly the same relation to the Red Sandstone of the west coast that the Scottish Lias of the German Ocean does to the *Old Red Sandstone* of the east. Both Red Sandstone deposits may be equally described as resting on the gneiss and overlaid by the Lias. Further, I may be permitted to ask, to what system known to the geologist does the Red Sandstone of our north-western coasts belong, if not to the Old Red System? Quartz rock, in all its various modifications, from a purely mechanical to a purely crystalline stone, is of common occurrence in what are known as the primary districts; a bed of mica-schist is not unfrequently found to pass almost imperceptibly, by gradually dropping its mica, into a true quartz rock; nor are such transitions unfrequent in gneiss deposits; but the only true Red Sandstone I ever yet met in a so-called primary district is the Red Sandstone of the north-western coast of Scotland. It must represent, with the overlying quartzose and calcareous beds, an enormously extended period. Where, among the primary rocks of the southern Highlands, for instance, or of any other region, shall we look for the deposits representative of the same age? Regarded as primary, it forms an intercalated period in the geologic history of this north-western tract of country, which we find unrepresented in every other district. I may add, that the quartz-rock formation, which runs diagonally athwart the kingdom in detached patches, from Islay on the west to Banff and Aberdeen shires on the east, and which holds geologically a middle position between the gneiss and the mica-schist, is an altogether different deposit from the quartz-rock of Assynt.

Both Dr. M'Culloch and the late Mr. Cunningham of Edinburgh have stated, that a great formation of gneiss in the