

serling and Lieutenant Koksharov, they proceeded to explore the Ural Mountains, the southern provinces of the empire, and the coal districts between the Dnieper and the Don. In order to render his great work on Eastern Europe as perfect as possible, our author alone travelled, in 1842, through several parts of Germany, Poland, and the Carpathian Mountains; and with the same objects in view, he explored successfully, in the summer of 1844, the Palaeozoic formations of Sweden and Norway. He afterwards re-visited St. Petersburg, and after communicating with Count Keyserling on the subject of the Petchora and Timan country, which had been explored by that geologist, and examining some newly-discovered natural relations of the strata, not very distant from the capital, he returned to England, and completed in 1845, in conjunction with M. de Verneuil, that magnificent work on the geology of Russia and the Ural Mountains, of which we have given a full account in a preceding article.

Before quitting our enumeration of the geological works of Sir Roderick Murchison which preceded the one now under review, we must notice his remarkable treatise on the Alps, Apennines, and Carpathians, published by the Geographical Society, in which, after visiting the Alps for the sixth time, he clearly separated the great Nummulite formation from the chalk and other cretaceous deposits with which it had been confounded. This treatise was translated and published in Professor Savi and Menegheiri's work entitled *Le Alpi et gli Appennini*, in which they adopt the general views of the English geologists, and append to it the details of their own observations on the geology of Tuscany. In addition to the works we have enumerated, Mr. Murchison has published upwards of a hundred memoirs, a list of which will be found in the *Bibliographia* of Agassiz, published by the late Mr. Hugh Strickland.

But it is not merely by his geological discoveries and writings that Sir Roderick Murchison has earned the gratitude of his country and his reputation in the world of science. After having for five years discharged the arduous duties of secretary to the Geological Society, he filled the office of president in the years 1831 and 1832, and 1842 and 1843. When the British Association assembled at York for the first time in 1831, he was one of the few geologists that responded to the invitation of its founder, and fully appreciating the value of such an institution, he discharged the arduous duties of general secretary for several years, and was president of the Southampton Meeting in 1846. In the important discussions which took place in the geological section he took an active part; he communicated many important papers to its different meetings, and at Ipswich in 1851 he succeeded in establishing the new section of physical geography, ethnology, and philology, thus removing geography from the geological section, in which it was overborne by more popular topics of discussion.

Not less important have been the services of Sir Roderick to the Royal Geographical Society, now one of the most popular and flourishing institutions in the kingdom. When the Society was not in its most active state, he was raised to its presidency in 1844, and was re-elected in 1845; and the energy and talent which he displayed in promoting the objects of the Society are sufficiently shewn in the two printed annual addresses which it is the duty of the president to deliver. At that time the Society had no house of their own, no suitable apartments for the reception of their numerous collections of maps and charts; and hence during the year of the Great Exhibition, in 1851, when the Emperor of Austria presented to

it the valuable framed maps which were exhibited in the Crystal Palace, no other place could be found for them than the walls of the staircase which led to their small meeting room.— This was not the proper condition of a society which bore the name of *Royal*, and adjudged annually two royal medals; and the indifference of British Ministers to the interests of science, even when the nation derives from it the most palpable advantages, is well displayed in their treatment of this most useful institution. Sir Roderick Murchison had in 1844 and 1845, failed in obtaining from Sir Robert Peel any pecuniary aid, and when, during his second presidency in 1852, he made a new appeal to the nation, he might have equally failed, had he not proposed that the Society should repay any obligation conferred upon it by the Government, by "rendering one of its rooms a *map office* of the British nation, in which all persons might have access to maps, charts, and plans, many thousands in number." This appeal to the utilitarian conscience succeeded, and we believe that it was chiefly through the exertions of Mr. Joseph Hume that the sum of £500 was wrested from the national purse, never closed but against science, to enable the Geographical Society to receive presents from foreign sovereigns, and carry on researches honorable to the nation, and subservient to the highest interests of its trade and commerce. We have reason to believe that Sir Robert Peel was ashamed of his illiberality to the Geographical Society. We know at least that after he had associated, as he did in the latter part of his life, with many of our most distinguished men of science, he did more to promote its interests than all the ministers that preceded him, and all those, too, that have followed him as advisers of the Crown. Had his valuable life been spared, the science of England would have wanted neither money from the Treasury to advance its interests, nor honours from the Crown to reward and stimulate its cultivators. His successors have yet to learn as he did, the national value of education and knowledge, and require to be taught that if they have not the liberality to foster and extend the educational institutions of the country, it is at least their duty to maintain them, and especially those of Scotland, of which her Majesty is the visitor, in the possession of their original endowments.

Among the other services to his country, and one for which his native Scotland owes him peculiar obligations, we must not omit the great and successful exertions which he made to promote the Ordnance Survey of Scotland. While £850,000 was expended on the Ordnance Survey of Ireland, in procuring for that country a magnificent map on the scale of *six inches to a mile*, almost nothing was done for the map of Scotland, though the survey of the country commenced in the last century. Humiliated by the reflection that Scotland stands almost alone in Europe as a kingdom without a good general map, and experiencing how much geologists and engineers were perplexed by the want of such an auxiliary in their researches, Sir Roderick roused the public attention to the fact in 1834.— The British association in 1834 presented to Government a memorial on the subject, which was printed in 1835 by order of the House of Commons; and the Royal Highland Society and other public bodies, seconded their exertions. The apathy of the Government, however, to everything like science, and especially to Scottish interests, was not overcome even by their powerful influence; and a fresh agitation in 1850 was required to awaken the Scottish members to a due sense of the interests which they had unwarrantably neglected and obtained from a reluctant Legislature the necessary means for carrying on and completing the survey of Scotland.* A grant of £25,000, and

* See *North British Review*, Edinburgh edition, vol