

no doubt through Smith's labours, before 1815. Greenough's map was published and taken over by the Geological Society, whose property it became. The second edition, much revised and improved, was published in 1839 and since then the map has from time to time been brought up to date, and is still on sale. But in its present form it differs much from its author's original version. The appearance of this map under the auspices of the Geological Society no doubt affected the sale of Smith's, which does not appear to have reached a second edition, though a much reduced version of it was published in 1820.

In the list of the cartographical achievements of the earlier decades of last century, a place must be found for the remarkable maps and descriptions of Scotland for which geology is indebted to the genius and strenuous labour of John Macculloch. As already stated (p. 261), his account of the structure of the Western Isles, and the excellent maps and sections which accompanied it, had a powerful influence in promoting the progress of the study of igneous rocks, and have long since taken their place as geological classics. The same indefatigable observer, after years of toil prepared a geological map of the whole of Scotland, on the scale of four miles to an inch ($\frac{1}{253440}$)—a most remarkable achievement to have been accomplished unaided by one observer, at a time when means of locomotion were as yet undeveloped over wide tracts of the country.¹

¹ *A Description of the Western Isles of Scotland*, 1819; *A Geological Map of Scotland*, 1840; and *Memoirs to His Majesty's Treasury respecting the Geological Map of Scotland*, by J. Macculloch, 1836.