the successive outflows of a series of "claystone" "clinkstone" and "porphyry" lavas, from subaqueous craters or fissures, belonging to the time of the Old Red Sandstone, was demonstrated by conclusive proofs. In the other, the combination of subterranean injection and superficial outflow from a crater of Lower Carboniferous age was clearly shown, together with evidence of alternations of basalt-lavas with volcanic tuffs, succeeded by prolonged denudation and a subsequent renewal of volcanic activity on the same site. The author, by appeals to the known behaviour of modern volcanoes, illustrated each main feature in the history of these ancient centres of eruption. His convincing and suggestive essay ought to have immediately stimulated the investigation of the subject in other parts of the same region, where innumerable examples of the phenomena, on even a more striking scale, remained still unknown or misunderstood. But Maclaren did not himself continue his volcanic researches, nor for nearly twenty years did any one arise to take up again the work which he had so well begun.

The Geological Survey in Wales developed with great detail the history of the igneous rocks which had been briefly noticed by Sedgwick and Murchison. Subsequently the extension of the Survey to Scotland in 1854 brought to light the remarkable fulness of the volcanic record in that kingdom. Gradually this record has been deciphered for the whole of the British Isles, which are now found to include a singularly varied and prolonged succession of volcanic rocks, extending through Palæozoic time