

this process of diagonal lining, if I may so speak the south-eastern portion of England comes to be cut off from the secondary formations altogether, and, but for the denudation of the valley of the Weald, would have exhibited only tertiary depositions. In all these lines, whether of mountains, lakes, friths, or formations, there is an approximation to parallelism with the line of the great Caledonian valley — proofs that the upheaving agency from beneath must have acted in this direction from some unknown cause, during all the immensely extended term of its operations, and along the entire length of the island. It is a fact not unworthy of remark, that the profound depths of Loch Ness undulated in strange sympathy with the reeling towers and crashing walls of Lisbon, during the great earthquake of 1755; and that the impulse, true to its ancient direction, sent the waves in huge furrows to the north-east and the south-west.

The north-eastern portion of this rectilinear wall or chain runs, for about thirty miles, through an Old Red Sandstone district. The materials which compose it are as unlike those of the plain out of which it arises, as the materials of a stone dike, running half-way into a field, are unlike the vegetable mould which forms the field's surface. The ridge itself is of a granitic texture—a true gneiss. At its base we find only conglomerates, sandstones, shales, and stratified clays, and these lying against it in very high angles. Hence the geological interest of this lower portion of the wall. As has been shrewdly remarked by Mr. Murchison,\* in one of his earlier papers, the gneiss seems to have been forced through the sandstone from beneath, in a solid, not a fluid form; and as the ridge a-top is a narrow one, and the sides

---

\* See *Transactions of the London Geological Society* for 1828 p. 354