

coating of ice in the same way that the north of Greenland is at present ; and that by the long-continued grinding power of a great glacier, or set of glaciers nearly universal over the northern half of our country, and the high ground of Wales, the whole surface became moulded by ice."

Whoever traverses England, observing its features with attention, will remark in certain places traces of the action of ice in this era. Some of the mountains present on one side a naked rock, and on the other a gentle slope, smiling and verdant, giving a character more or less abrupt, bold, and striking, to the landscape. Considerable portions of dry land were formerly covered by a bluish clay, which contained many fragments of rock or "boulders" torn from the old Cumbrian mountains ; from the Pennine chain ; from the moraines of the north of England ; and from the Chalk hills—hence called "boulder" clay—present themselves here and there, broken, worn, and ground up by the action of water and ice. These erratic blocks or "boulders" have clearly been detached from the parent rock by violence, and often transported to considerable distances. They have been carried, not only across plains, but over the tops of mountains ; some of them being found 130 miles from the parent rocks. We even find, as already hinted, some rocks of which no prototypes have been found nearer than Norway. There is, then, little room for doubting the fact of an extensive system of glaciers having covered the land, although the proofs have only been gathered laboriously and by slow degrees in a long series of years. In 1840 Agassiz visited Scotland, and his eye, accustomed to glaciers in his native mountains, speedily detected their signs. Dr. Buckland became a zealous advocate of the same views. North Wales was soon recognised as an independent centre of a system which radiated from lofty Snowdon, through seven valleys, carrying with them large stones and grooving the rocks in their passage. In the pass of Llanberis there are all the common proofs of the valley having been filled with glacier ice. "When the country was under water," says Professor Ramsay, "the drift was deposited which more or less filled up many of the Welsh valleys. When the land had risen again to a considerable height, the glaciers increased in size : although they never reached the immense magnitude which they attained in the earlier portion of the icy epoch. Still they became so large that such a valley as the Pass of Llanberis was a second time occupied by ice, which ploughed out the drift that more or less covered the valley. By degrees, however, as we approach nearer our own days, the climate slowly ameliorated, and the glaciers began to decline, till, growing less and less, they crept up and up ; and here