

abraded materials, even hundreds of miles from their original beds. The grooves and polished surfaces thus produced still remain in such countries as the northern parts of the United States, Scotland, and Scandinavia, wherever the rock has not been decomposed, and the huge boulders lie every where strewn along the course of these ancient icebergs.

As the continents rose, lakes and rivers would be formed, whose currents would bring together and accumulate those large deposits of sand and gravel, which in our country show themselves in the form of old beaches, ridges, and terraces, which can be found at least two thousand feet above the present ocean, and which attest unequivocally the former presence of the ocean, and the gradual drainage of the land.

The amount of abrasion by these various causes has been very great. In Great Britain, — in South Wales, for instance, — nearly ten thousand feet in thickness have been worn away. Indeed, it is a moderate estimate to say that more matter has been swept into the ocean from England and Scotland than now remains above the waters. The same is doubtless true in this country, although the observations here have not been so accurately made.

How deeply interesting to every ingenuous mind must it be to trace out on the earth's surface the marks of these stupendous and wonderful changes! They lie scattered along every man's path; yet how few have an eye open to see them! How many would prefer the baseless visions of romance to these mementos of the earth's wonderful history!

But geology has other wonders. Wherever on the globe the temperature of deep excavations has been ascertained, — and the experiment has been made at hundreds of places in Europe and America, both in mines and Artesian wells, to the depth of two thousand feet, — the heat has been found to