

crude notions formerly in vogue as to Titanic convulsions that shaped the land into its present form. It is based, as far as possible, on actual ascertained fact and measurement, and on what is known to be the order of nature now, rather than upon speculation as to what it may have been. The brief recorded experience of man cannot, it is true, be taken as a standard by which past time is in everything to be measured. But it is vain to feign causes which cannot be shown to have existed except by the evidence which they are invented to explain. It is not only safer, but it seems the only philosophical course, to interpret the past changes of the earth's history by constant reference to what experience shows us to be the actual mode of nature's working. And that the various processes now engaged in altering the surface of the globe are enough to have given rise to all the varieties of scenery in these islands must, I believe, be admitted by every one who has realised what they are busy doing, and the rate at which they work. But while it appears to me certain that our scenery has been carved out by the same agencies of denudation that are still carrying on the task to-day, there is no proof that the rate of waste has always been the same. There may have been periods when the activity of rain and frost, for instance, was greater than now, and when, in consequence, the general waste of the land was more rapid. Hence, to take the present rate of waste as the standard for all past time may be to fix the estimate too low.

But, even with this limitation, we cannot contemplate the present landscapes of our country as the result of a slow and unequal decay without being impressed with a sense of the vastness of the time which is demanded. Even though the geologist has learnt from modern physics that he has no longer the unlimited bank of time at his command, on