strata necessarily determined the order of their creation ; and the next error arose from blindly rushing to rash conclusions, and hasty generalisation from a very limited number of facts, and the most imperfect investigations. There were also (and, indeed, are still) some wild dogmatisms as to the time necessary to produce certain geologic formations ; but the absurdities of science culminated when it adopted from Laplace the irrational and unintelligible theory of a *natural* origin for the world from a nebula of gaseous granite, intensely hot, and supposed to be gradually cooled while gyrating senselessly in space."

In this paper the writer does not attempt to deal with the various phenomena of volcanoes, earthquakes, hot springs, and other matters which are usually considered as proofs of great internal heat. Mr. Evan Hopkins, C.E., F.G.S., is more precise if less eloquent. He shows that, in tropical countries, plains of gravel may in a day be converted into lagoons and marshes ; that by the fall of an avalanche rivers have been blocked up, which, bursting their banks, have covered many square miles of fertile country with several feet of mud, sand, and gravel. "Two thousand four hundred years ago," he says, "Nineveh flourished in all its grandeur, yet it is now buried in oblivion, and its site overwhelmed with sand. Look at old Tyre, once the queen of cities and mistress of the sea. She was in all her pride two thousand four hundred and forty years ago. We now see but a bare rock in the sea, on which fishermen spread their nets ! A thousand years ago, according to Icelandic histories, Greenland was a fertile land in the south, and supported a large population. Iceland at that period was covered with forests of birch and fir, and the inhabitants cultivated barley and other grain. We may, therefore, conclude, with these facts before us, that there is no necessity to assign myriads of ages to terrestrial changes, as assumed by geologists, as they can be accounted for by means of alterations effected during a few thousand years, for the surface of the earth is ever changing.

"Grant geological speculators," Mr. Hopkins continues, "a few millions of centuries, with a command over the agencies of Nature to be brought into operation when and how they please, and they think they can form a world with every variety of rock and vegetation, and even transform a worm into a man ! Yet the wisest of our philosophers would be puzzled if called upon to explain why fluids become spheres, as dew-drops ; why carbonate of lime acquires in solidifying from a liquid the figure of an obtuse rhomboihedron, silica of a six-sided prism ; and why oxygen and hydrogen gases produce both *fire* and *water*. And what do they gain," he proceeds to ask, "by carrying