

it should also be noted, that admitting even a larger percentage of error than Dr. Curtis admits for the decay time of Potassium (plus/minus 5%), the earth, and the various strata, are older than ordinarily conceived to be. To review: A. Holmes. using radioactive methods, dated the beginning of the Cambrian (in round numbers) 500,000,000 years ago. An error of 5% could bring that figure down to 475,000,000. An error of 50% could bring it down to 250,000,000 years. Even an error of 2 would still date the beginning of the Cambrian at 5,000,000 years ago. And 5,000,000 years is quite a bit longer than a few thousand years!

Uniformitarianism versus Catastrophism

James Hutton, called by many the founder of modern geology, published his *Theory of the Earth* in 1788. in this work he recognized that the earth had undergone great changes, and that these changes were evident in the rocks of the earth's crust. He stated the principle that geologic phenomena should be explained in terms of everyday processes of nature:

"in examining things present we have data from which to reason with regard to what has been; and, from what has actually been, we have data for concluding with regard to that which is to happen hereafter. Therefore, upon the supposition that the operations of nature are equable and steady, we find in natural appearances, means for concluding a certain portion of time to have necessarily elapsed, in the production of those events of which we see the effects."

In general, Hutton said, three kinds of agencies determined jointly the aspect of nature on the globe. First, regular strata were formed by gradual deposition in the ocean, second, these strata were consolidated, elevated, and altered by subterranean heat and pressure; third, the face of the earth was worn away by wind, water, and organic decay. These three types of processes, viewed in relation to each other, formed a self-regulating and self-preserving system of matter in motion. From the present state of the system its previous states could be inferred and its future states conjectured. This concept of the surface of the globe as a law-bound system of matter in motion Hutton regarded as his great achievement.

But what about the origin and purpose of the earth? Hutton declared that the perfect equilibrium and regularity of the terrestrial system proved that it was divinely created as a means for perpetually maintaining the surface of earth as a fit habitation for living beings. But why this perpetual destruction and creation of land masses? Because the dissolution of rock formations was essential to prepare soil for the growth of plants. Plants provided food for animals, and both plants and animals served the needs of man. Thus all the processes of the globe were related to each other and to the end for which they had been contrived. The harmony of the whole ministered to man's intellectual