

the text of Scripture; that I believe most firmly all therein related about the creation, both as to order of time and matter of fact; and *I abandon everything in my book respecting the formation of the earth*, and, generally, all which may be contrary to the narration of Moses.*

The grand principle which Buffon was called upon to renounce was simply this,—“that the present mountains and valleys of the earth are due to secondary causes, and that the same causes will in time destroy all the continents, hills, and valleys, and reproduce others like them.” Now, whatever may be the defects of many of his views, it is no longer controverted that the present continents are of secondary origin. The doctrine is as firmly established as the earth’s rotation on its axis; and that the land now elevated above the level of the sea will not endure for ever, is an opinion which gains ground daily, in proportion as we enlarge our experience of the changes now in progress.

Targioni, 1751.—Targioni, in his voluminous “Travels in Tuscany, 1751 and 1754,” laboured to fill up the sketch of the geology of that region left by Steno sixty years before. Notwithstanding a want of arrangement and condensation in his memoirs, they contained a rich store of faithful observations. He has not indulged in many general views, but in regard to the origin of valleys, he was opposed to the theory of Buffon, who attributed them principally to submarine currents. The Tuscan naturalist laboured to show that both the larger and smaller valleys of the Apennines were excavated by rivers and floods, caused by the bursting of the barriers of lakes, after the retreat of the ocean. He also maintained that the elephants and other quadrupeds, so frequent in the lacustrine and alluvial deposits of Italy, had inhabited that peninsula; and had not been transported thither, as some had conceived, by Hannibal or the Romans, nor by what they were pleased to term “a catastrophe of nature.”

Lehman, 1756.—In the year 1756 the treatise of Lehman, a German mineralogist, and director of the Prussian mines, appeared, who also divided mountains into three classes: the first, those formed with the world, and prior to the creation of animals, and which contained no fragments of other rocks; the second class, those which resulted from the partial destruction of the primary rocks by a general revolution; and a third class, resulting from local revolutions, and in part from the deluge of Noah.

A French translation of this work appeared in 1759, in the preface of which, the translator displays very enlightened views respecting the operations of earthquakes, as well as of the aqueous causes.†

Gesner, 1758.—In this year Gesner, the botanist, of Zurich, published an excellent treatise on petrifications, and the changes of the earth which they testify.‡ After a detailed enumeration of the

* Hist. Nat. tom. v. éd. de l’Imp. de la Terre, 1759.
Royale, Paris, 1769.

† Essai d’une Hist. Nat. des Couches in Latin.
‡ John Gesner, published at Leyden,