

areas to a height of 6,600 feet above the present sea-level. But his genius was averse to controversy; and the philosopher of Ferney himself put an end to a discussion in which, perhaps, he would not have had the best of the argument. "I have no wish," he wrote, "to embroil myself with Monsieur Buffon about shells."

It was reserved for the genius of George Cuvier to draw from the study of fossils the most wonderful results: it is the study of these remains, in short, which, in conjunction with mineralogy, constitutes in these days positive geology. "It is to fossils," says the great Cuvier, "that we owe the discovery of the true theory of the earth; without them we should not have dreamed, perhaps, that the globe was formed at successive epochs, and by a series of different operations. They alone, in short, tell us with certainty that the globe has not always had the same envelope; we cannot resist the conviction that they must have lived on the surface of the earth before being buried in its depths. It is only by analogy that we have extended to the primary formations the direct conclusions which fossils furnish us with in respect to the secondary formations; and if we had only unfossiliferous rocks to examine, no one could maintain that the earth was not formed all at once."*

The method adopted by Cuvier for the reconstruction and restoration of the fossil animals found in the plaster-quarries of Montmartre, at the gates of Paris, has served as a model for all succeeding naturalists; let us listen, then, to his exposition of the vast problem whose solution he proposed to himself. "In my work on fossil bones," he says, "I propose to ascertain to what animals the osseous fragments belong; it is seeking to traverse a road on which we have as yet only ventured a few steps. An antiquary of a new kind, it seemed to me necessary to learn both to restore these monuments of past revolutions, and to decipher their meaning. I had to gather and bring together in their primitive order the fragments of which they are composed; to reconstruct the ancient beings to which these fragments belonged; to reproduce them in their proportions and with their characteristics; to compare them, finally, with others now living on the surface of the globe: an art at present little known, and which supposes a science scarcely touched upon as yet, namely, that of the laws which preside over the co-existence of the forms of the several parts in organised beings. I must, then, prepare myself for these researches by others, still more extended, upon existing animals. A general review of actual creation could alone give a character of