

had not at my disposal the all-powerful trumpet; but I had the immutable laws prescribed to living beings as my guide; and at the voice of the anatomist each bone and each part of a bone took its place. I have not expressions with which to describe the pleasure I experienced in finding that, as soon as I discovered the character of a bone, all the consequences of the character, more or less foreseen, developed themselves in succession: the feet were found conformable to what the teeth announced; the teeth to that announced by the feet; the bones of the legs, of the thighs, all those which ought to reunite these two extreme parts, were found to agree as I expected; in a word, each species was reproduced, so to speak, from only one of its elements." *

While the Baron Cuvier was thus zealously prosecuting his inquiries in France, assisted by many eminent fellow-labourers, what was the state of geological science in the British Islands? About that same time, Dr. William Smith, better known as "the father of English geology," was preparing, unaided, the first geological map of this country. Dr. Smith was a native of Wiltshire, and a canal engineer in Somersetshire; his pursuits, therefore, brought him in the midst of these hieroglyphics of Nature. It was his practice, when travelling professionally, during many years to consult masons, miners, wagoners, and agriculturists. He examined the soil; and in the course of his inquiries he came to the conclusion that the earth was not all of the same age; that the rocks were arranged in layers, or strata, superimposed on each other in a certain definite order, and that the strata, when of the same age, could be identified by means of their organic remains. In 1794 he formed the plan of his geological map, showing the superposition of the various beds; for a quarter of a century did he pursue his self-allotted task, which was at last completed, and in 1801 was published, being the first attempt to construct a stratigraphical map.

Taking the men in the order of the objects of their investigation, rather than in chronological order, brings before us the patient and sagacious investigator to whom we are indebted for our knowledge of the Silurian system. For many years a vast assemblage of broken and contorted beds had been observed on the borders of North Wales, stretching away to the east as far as Worcestershire, and to the south into Gloucester, now rising into mountains, now sinking into valleys. The ablest geologists considered them as a mere labyrinth of ruins, whose order of succession and distinctive organic remains