appealed to by geologists, ever since Cuvier published his examination of the fossil inhabitants of the Paris basin. Without attempting a history of such labors, I may notice a few circumstances connected with them.

Sect. 4.—*Advances in Palæontology.*—*Cuvier.*

So long as the organic fossils which were found in the strata of the earth were the remains of marine animals, it was very difficult for geologists to be assured that the animals were such as did not exist in any part or clime of the existing ocean. But when large land and river animals were discovered, different from any known species, the persuasion that they were of extinct races was forced upon the naturalist. Yet this opinion was not taken up slightly, nor acquiesced in without many struggles.

Bones supposed to belong to fossil elephants, were some of the first with regard to which this conclusion was established. Such remains occur in vast numbers in the soil and gravel of almost every part of the world; especially in Siberia, where they are called the bones of the *mammoth*. They had been noticed by the ancients, as we learn from Pliny;[24] and had been ascribed to human giants, to elephants imported by the Romans, and to many other origins. But in 1796, Cuvier had examined these opinions with a more profound knowledge than his predecessors; and he thus stated the result of his researches.[25] "With regard to what have been called the fossil remains of elephants, from Tentzelius to Pallas, I believe that I am in the condition to prove, that they belong to animals which were very clearly different in species from our existing elephants, although they resembled them sufficiently to be considered as belonging to the same genera." He had founded this conclusion principally on the structure of the teeth, which he found to differ in the Asiatic and African elephant; while, in the fossil animal, it was different from both. But he also reasoned in part on the form of the skull, of which the best-known example had been described in the *Philosophical Transactions* as early as 1737.[26] "As soon," says Cuvier, at a later period, "as I became acquainted with Messerschmidt's drawing, and joined to the differences which it presented, those which I had myself observed in the inferior jaw and the

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[24] *Hist. Nat.* lib. xxxvi. 18. [25] *Mém. Inst. Math. et Phys.* tom. ii. p. 4.

[26] Described by Breyne from a specimen found in Siberia by Messerschmidt in 1722. *Phil. Trans.* xl. 446.