

First, all my arrangements of species have been made on the bones themselves, or on good figures; it is necessary, on the other hand, that I should have observed myself all the places where these bones have been discovered. Very often I have been compelled to have recourse to vague and ambiguous resemblances, made by persons who do not know themselves what peculiar observations are necessary; and more frequently still, I have not found any hints at all.

Secondly, there must be in this respect infinitely more doubt than with regard to the bones themselves. The same deposit may appear recent in places where it is superficial, and ancient in those where it is covered over by the banks which have succeeded it. Ancient layers may have been transported by partial inundations, and have covered recent bones; they may have been buried beneath them, and have enveloped and mingled them with the productions of the ancient seas which they before contained; ancient bones may have been washed by the waters, and then taken up by recent alluvial deposits; and recent bones may have fallen into the clefts and caverns of the ancient rocks, and then have been enveloped by stalactites or other incrustations. It would be necessary, in every case, to analyze and justly determine on all these circumstances, which may veil from the sight the real origin of the fossils; and persons who have collected bones have very seldom doubted this necessity; whence it follows, that the real circumstances of their geological position have nearly always been neglected or misunderstood.

Thirdly, there are some doubtful species, which would more or less alter the certainty of these results, just as long as clear distinctions with regard