

SECTION XV.

PERMANENCY OF SPECIFIC PECULIARITIES IN ALL ORGANIZED BEINGS.

It was a great step in the progress of science when it was ascertained that species have fixed characters, and that they do not change in the course of time. But this fact, for which we are indebted to Cuvier,¹ has acquired a still greater importance since it has also been established, that even the most extraordinary changes in the mode of existence and in the conditions under which animals may be placed, have no more influence upon their essential characters than the lapse of time.

The facts bearing upon these two subjects are too well known now to require special illustration. I will, therefore, allude only to a few points, to avoid even the possibility of a misapprehension of my statements. That animals of different geological periods differ specifically, *en masse*, from those of preceding or following formations, is a fact satisfactorily ascertained. Between two successive geological periods, then, changes have taken place among animals and plants. But none of those primordial forms of life, which naturalists call species, are known to have changed during any of these periods. It cannot be denied, that the species of different successive periods are supposed by some naturalists to derive their distinguishing features from changes which have taken place in those of preceding ages; but this is a mere supposition, supported neither by physiological nor by geological evidence, and the assumption that animals and plants may change in a similar manner during one and the same period, is equally gratuitous. On the contrary, it is known by the evidence furnished by the Egyptian monuments, and by the most careful comparison between animals found in the tombs of Egypt with living specimens of the same species obtained in the same country, that there is not the shadow of a difference between them, for a period of about five thousand years. These comparisons, first instituted by Cuvier, have proved, that as far as it has been possible to carry back the investigation, it does not afford the beginning of an evidence that species change in the course of time, if the comparisons be limited to the same great cosmic epoch. Geology only shows that at different periods² there have existed

¹ CUVIER, (G.) Recherches sur les ossements fossiles, etc., Nouv. édit. Paris, 1821, 5 vols., 4to., fig., vol. i., sur l'Ibis. p. cxli.

² I trust no reader will be so ignorant of the facts here alluded to, as to infer from the use of the word "period" for different eras and epochs of

great length, each of which is characterized by different animals, that the differences these animals exhibit, is in itself evidence of a change in the species. The question is, whether any changes take place during one or any of these periods. It is almost incredible how loosely some people will argue upon