

CHAPTER XX.

THEORIES OF PROGRESSION AND TRANSMUTATION.

ANTIQUITY AND PERSISTENCY IN CHARACTER OF THE EXISTING RACES OF MANKIND—THEORY OF THEIR UNITY OF ORIGIN CONSIDERED—BEARING OF THE DIVERSITY OF RACES ON THE DOCTRINE OF TRANSMUTATION—DIFFICULTY OF DEFINING THE TERMS 'SPECIES' AND 'RACE'—LAMARCK'S INTRODUCTION OF THE ELEMENT OF TIME INTO THE DEFINITION OF A SPECIES—HIS THEORY OF VARIATION AND PROGRESSION—OBJECTIONS TO HIS THEORY, HOW FAR ANSWERED—ARGUMENTS OF MODERN WRITERS IN FAVOUR OF PROGRESSION IN THE ANIMAL AND VEGETABLE WORLD—THE OLD LANDMARKS SUPPOSED TO INDICATE THE FIRST APPEARANCE OF MAN, AND OF DIFFERENT CLASSES OF ANIMALS, FOUND TO BE ERRONEOUS—YET THE THEORY OF AN ADVANCING SERIES OF ORGANIC BEINGS NOT INCONSISTENT WITH FACTS—EARLIEST KNOWN FOSSIL MAMMALIA OF LOW GRADE—NO VERTERRATA AS YET DISCOVERED IN THE OLDEST FOSSILIFEROUS ROCKS—OBJECTIONS TO THE THEORY OF PROGRESSION CONSIDERED—CAUSES OF THE POPULARITY OF THE DOCTRINE OF PROGRESSION AS COMPARED WITH THAT OF TRANSMUTATION.

WHEN speaking in a former work of the distinct races of mankind,* I remarked that, 'if all the leading varieties of the human family sprang originally from a single pair,' (a doctrine, to which then, as now, I could see no valid objection,) 'a much greater lapse of time was required for the slow and gradual formation of such races as the Caucasian, Mongolian, and Negro, than was embraced in any of the popular systems of chronology.'

In confirmation of the high antiquity of two of these, I referred to pictures on the walls of ancient temples in Egypt, in which, a thousand years or more before the Christian era,

* Principles of Geology, 7th ed., p. 637, 1847; see also 9th ed., p. 660.