

arrangements.* But as the discussion of these and other topics relating to the plans and designs of nature in the formation of organic beings requires a previous acquaintance with the details of comparative anatomy and physiology, I shall defer all farther observations respecting them till I have finished the review I propose to take of the several structures and functions of the animal and vegetable economy. There are, however, some views that have been entertained respecting the procedure of nature in the formation of the different races of animals, which it will be proper to notice in this place, as they will occasionally be referred to when the facts that more particularly illustrate and support them come to be noticed.

An hypothesis has been advanced that the original creation of species has been successive, and took place in the order of their relative complexity of structure; that the standard types have arisen the one from the other; that each succeeding form was an improvement upon the preceding, and followed in a certain order of development, according to a regular plan traced by the great Author of the universe for bestowing perfection on his works. This gradation of structure was necessarily accompanied by a gradation of faculties: the object of each change of type being to attain higher objects, and to advance a farther step towards the ultimate ends of the animal creation. Many apparent anomalies, which are inexplicable upon any other supposition, are easily reconcilable to this theory. The developments of structure belonging to a particular type being always prospective, are not completed in the inferior orders of the group formed upon that model, but remain more or less imperfect, although each organ always fully answers the particular purpose of the individual animal. But it sometimes happens that the imperfection of an organ is so great, in consequence of its development having proceeded to a very small

* Mr. McLeay is the author of this ingenious theory, which he has developed in his "*Horæ Entomologicæ*," and which appears to be verified to a great extent by the modern discoveries in comparative anatomy.