catch its necessary victims."[21] By such considerations he has been able to reconstruct the whole of many animals of which parts only were given;—a positive result, which shows both the reality and the value of the truth on which he wrought.

Another great example, equally showing the immense importance of this principle in Cuvier's hands, is the reform which, by means of it, he introduced into the classification of animals. Here again we may quote the view he himself has given[22] of the character of his own improvements. In studying the physiology of the natural classes of vertebrate animals, he found, he says, "in the respective quantity of their respiration, the reason of the quantity of their motion, and consequently of the kind of locomotion. This, again, furnishes the reason for the forms of their skeletons and muscles; and the energy of their senses, and the force of their digestion, are in a necessary proportion to the same quantity. Thus a division which had till then been established, like that of vegetables, only upon observation, was found to rest upon causes appreciable, and applicable to other cases." Accordingly, he applied this view to invertebrates;—examined the modifications which take place in their organs of circulation, respiration, and sensation; and having calculated the necessary results of these modifications, he deduced from it a new division of those animals, in which they are arranged according to their true relations.

Such have been some of the results of the principle of the Conditions of Existence, as applied by its great assertor.

It is clear, indeed, that such a principle could acquire its practical value only in the hands of a person intimately acquainted with anatomical details, with the functions of the organs, and with their variety in different animals. It is only by means of such nutriment that the embryo truth could be developed into a vast tree of science. But it is not the less clear, that Cuvier's immense knowledge and great powers of thought led to their results, only by being employed under the guidance of this master-principle: and, therefore, we may justly consider it as the distinctive feature of his speculations, and follow it with a gratified eye, as the thread of gold which runs through, connects, and enriches his zoological researches:—gives them a deeper interest and a higher value than can belong to any view of the organical sciences, in which the very essence of organization is kept out of sight.

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[21] *Theory of the Earth*, p. 90. [22] *Hist. Sc. Nat.* i. 293.