

*The Ancient Life-History of the Earth: a Comprehensive Outline of the Principles and Leading Facts of Palæontological Science.* By H. ALLEYNE NICHOLSON, M.D., etc., Professor of Natural History in the University of St Andrews. Edinburgh and London: W. Blackwood and Sons: 1877.

THE appearance of the volume before us must have excited some degree of surprise amongst various groups of readers, and most of all amongst those who are acquainted with Dr Nicholson's work on "Palæontology," published some five years ago. The present manual appears to consist of an extension of the section devoted to "Historical Palæontology" in the previous volume; and according to the most natural of developmental laws—operating within a limited period after the origin of the former work—as might be expected, a very close similarity exists between the two books. The woodcuts which appeared in the Palæontology, supplemented by several new figures, are used in the illustration of the work before us; and in the descriptions of the various extinct fauna, the author in many cases repeats much of his former writing. The work is, as we learn from the preface, principally intended for the use of geological students; the author, however, stating "that the method of treatment adopted has been so far untechnical as not to render the work useless to the general reader who may desire to acquire some knowledge of a subject of such vast and universal interest." We confess to being rather sceptical of the interest of that anomalous person, the "general reader," in a work of this kind. A reader, to take any interest worthy the name in a work which bristles page by page with scientific terms, must, in our opinion, possess aims which cannot, by any stretch of the imagination, be named "general," but which must rather be accounted of the most special kind. Hence we may again express the opinion that with the author's "Palæontology" still in the market, the advent of the present work might afford a text whereon a literary Malthus might aptly inveigh against over-fertility in the department of ancient life-science. The only portion of the "Ancient Life-History of the Earth" which claims special attention from the reviewer as presenting him with, in a sense, new material, is that comprised within the first sixty-one pages of the manual. These pages are devoted to a short *resumé* of the "Principles of Palæontology;" and whilst they contain nothing novel or very original, present a readable account of the relations of geology proper to the geology and botany of the past. The doctrine of "Catastrophism" is well placed in contrast to "Uniformitarianism;" but the *questio vexata* of geological time is briefly dismissed, without special and required reference being made to its relativity. In the author's descriptions of the process of fossilization we meet with a repetition of the ideas which have been ventilated over and over again in geological text-

books. Even the simile given in page 14, whereby a form of fossilization is compared to the rebuilding of a house brick by brick, is by no means novel; the process being similarly described in Jukes' "Students' Manual of Geology" (third edition, p. 477). Chapter II. is devoted to the consideration of the "Fossiliferous Rocks." Here, again, Dr Nicholson is simply reiterating information to be found in every text-book of geology pure and simple; and if, as he states in the preface, he has been forced to make the work "very limited in its scope," we might suggest that the space devoted to many of the preliminary geological details could have been aptly occupied by other and more appropriate matter. Only, as Dr Nicholson was bound to vary the present work as much as possible from his "Palæontology," the omission of these details would have had the effect of engendering a yet closer resemblance than actually exists between his—we had almost called them twin—literary offspring. If any evidence were wanting regarding the identity of the Palæontology and the present manual, such would be found when the reader, who had perused the former work, arrived at Chapter V. of the present volume. This chapter (V.) consists simply of the similarly numbered chapter from the "Palæontology," which has been bodily transported therefrom to do duty in the present instance, and which is given word for word in the "Ancient Life-History of the Earth," with a new concluding paragraph of some twenty lines or so. This process of bookmaking is hardly to be compared with that of perfect fossilization, inasmuch as the particles in the latter case are replaced each by a particle of different kind. In Dr Nicholson's work the particles of the new work represent in many cases simply the same old particles without a touch of the "metamorphism."

The great bulk of the book, devoted to a review of the fauna of the rocks as arranged in chronological or historical order, may be described as a simple manual of Palæontology, through which purely geological facts are copiously scattered. Throughout the entire range of the work we have been unable to distinguish any features differing from those already familiar to readers of geological and palæontological works; and a cursory glance at the details presented in various parts of the volume shows that the author must have had paste-pot and scissors, and an unbound copy of his "Palæontology," in tolerably frequent requisition,—*e.g.*, the description of Labyrinthoden (p. 215 of the present work), or that of Plesiosaurus (p. 244), or Pterodactyle (p. 245), whilst the description of the Mammoth (pp. 358, 359) is simply derived in greater part from a cutting taken from the author's former work. We must enter a strong protest against this method of making books, especially when readers are led to believe that an entirely new book has been brought under their notice. There is not, as far as we can ascertain, the slightest acknowledgment in this work of its indebtedness to the author's former treatise; and we entertain very decided views as to

the duty of an author to clearly state to the public, in such a case as the present, that his book is a *rechauffée* of a previous work. A reader possessing the Palæontology, and who purchases Dr Nicholson's present work for a new volume, will not, we fancy, be pleased or gratified to find that he already possesses the work in embryo-form.

The concluding chapter of the work deals with "The Succession of Life upon the Globe," Dr Nicholson appearing as a supporter of "some orderly and constantly acting law of modification and evolution," although what that law may be according to the author we are not told. Evolution, as supported and as believed in by other observers, does not appear to contain any phase in strict agreement with the author's notions; and we must demur to the unqualified assertion, contained in the last sentence of his work, namely, that to palæontology alone we must look for the solution of the problem dealing with the origin of living beings. Palæontological evidence is of the most valuable kind, but that admission does not imply that it forms the only kind of evidence to be relied upon. The extent and limits of variation in living species, for example, form a subject of as vital import to the support or denial of evolution as the generalizations of palæontology.

The work, it should be mentioned, is copiously illustrated; the illustrations derived from D'Orbigny's "Cours Élémentaire de Paléontologie," used, as already mentioned, in the author's former treatise, being again employed in the present instance. Some of the "original" woodcuts (*e.g.*, figs. 9, 11, 15, and 16) strike us as being rather roughly executed, and as failing to convey an adequate idea of the beauty and delicacy of microscopic organisms especially.

We cannot lay down Dr Nicholson's work without expressing regret that time and labour have been thrown away on the republication of details which are not likely to appeal to general readers from their technical nature. The present work, being a kind of hybrid production, cannot be ranked either with pure geological text-books on the one hand, or with those dealing with palæontology proper on the other. Whilst considering the existence of important and reliable works on each of these departments, we are unable to see that the "Ancient Life History of the Earth" will supply any vacant place, or occupy any prominent niche in our scientific literature.—A. W.

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*Traité de Thérapeutique et de Matière Médicale.* Par TROUSSEAU et PIDOUX. *Neuvième édition, revue et augmentée avec la collaboration de Constantin Paul.* Deux tomes. Pp. 971 et pp. 1265. P. Asselin: Paris, 1875.

THIS is the ninth edition of a justly appreciated treatise on therapeutics, containing a practical digest of information regarding medicines, their properties, and their uses.