

A METRICAL AND PICTORIAL RECORD OF
THE EARTH'S HISTORY.¹

THE author of this curious book tells us that it is an attempt to present a sketch of the evolution of the earth on the nebular hypothesis, to note also subsequent sea and land movements, and successive appearances of life as revealed by the geological strata. The geological record of past life remains very imperfect; still, many additions, notably from strata in Egypt and North America, have been made in recent years, and studied in the light of the doctrine of evolution its revelations have become more intelligible.

Why the author should imagine that to describe in rhyme the history of our planet and its inhabitants, from the earliest times to the present day, would render the subject simpler and more attractive to the general reader it is hard to imagine; but still, precedents are not wanting in such works as Dr. Darwin's "Temple of Nature," Pope's "Iliad," Henry's "Latin Grammar," and a poetic history of England, to justify the author's contention that it is an appropriate form in which to present a cosmical and palæozoological work to the public.

We fully agree with him that the theme is deserving of a much higher form of treatment, and that some day a great poetic genius may take it in hand. We cannot help feeling, however, that prose would have best befitted the aim of the present work. The author has had both an academic and geological training, and knows, from the study of text-books, museums, and extensive travel, a great deal about the subject on which he rhymes, and he has had the advice and assistance of a great number of learned scientific men whose names are duly recorded in prose in the preface. But the feature which renders this work of special interest is its fine series of illustrations, fourteen being executed in colour-processes by E. Bucknall, L. Speed, C. Whymper, and others, and seventy-seven by tint process reproduction. These give animation and attractiveness to the work, and will doubtless induce many purchasers by the beauty or the weirdness of the subjects portrayed.

Commencing with the astronomical aspect of the earth, there is a very fine plate of "the great Nebula of Orion" (from the Yerkes Observatory, Wisconsin, U.S.A.), and of "a Spiral Nebula in *Canes venatici*," from the Lick Observatory, California.

There is a charming Cambrian marine scene with crinoids, star-fish, trilobites, and medusæ, drawn by Alice B. Woodward, and an equally attractive Silurian (submarine) view by the same artist. No fewer than thirty plates have been executed by J. Smit, who illustrated two little books by the Rev. H. N. Hutchinson called "Extinct Monsters" and "Creatures of Other Days." But having become accustomed to the life-like restorations of Mr. Chas. R. Knight, made under the direction of Prof. H. F. Osborn, of the American

Museum of Natural History, New York, we feel that Mr. Smit's extinct animals are tamer and somewhat lacking in that high artistic merit which Mr. Knight's drawings possess. The coloured plates by E. Bucknall, L. Speed, and Charles Whymper are of a different order. E. Bucknall's cave-men carving on bones by firelight (p. 200), the "Neolithic Farmstead" (p. 214), the landscape in the Carboniferous period (p. 35), or his excellent conception of *Sivatherium*, a huge horned Pliocene giraffe, with a dappled hide like its long-necked modern descendant are most admirable. Lancelot Speed's primitive man and woman, although a clean shaven and washed, and intellectual looking couple, make a very good frontispiece. His Devonian, Triassic, and Eocene landscapes are also excellent and original. There is much merit and ability displayed in Chas. Whymper's Jurassic landscape with pterodactyls and a gavia hunting the duck-billed *Ornithorhynchus*, but we do not remember this monotreme occurring in any Jurassic rocks. The other novelties afforded by the book illustrations are from the facile pencil of Alice Woodward, as the

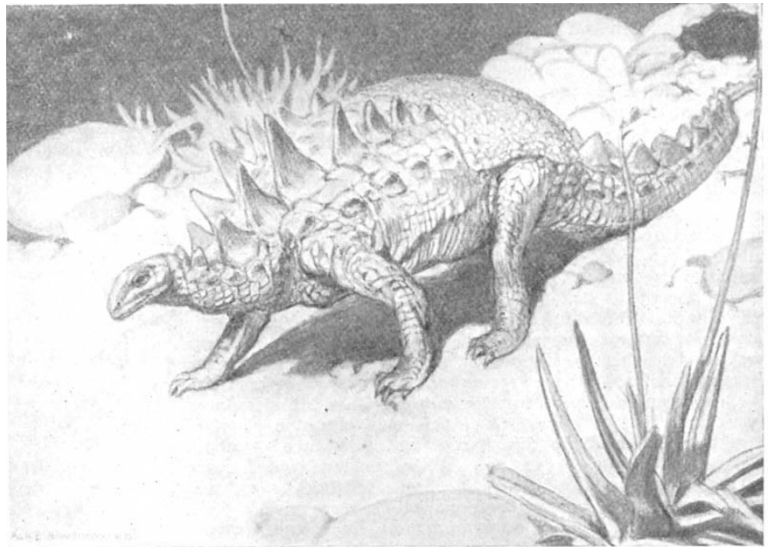


FIG. 1.—*Polacanthus* restored from skeleton found in the Isle of Wight, and now in the British Museum (Natural History). Total length probably about 25 feet. Reduced from "Nebula to Man."

Jurassic period (p. 62), with its ammonites and crustaceans; the restoration of *Diplodocus carnegiei* (p. 72); the Cretaceous sea-beasts (p. 83); *Polacanthus*, a reptile from the Isle of Wight reconstructed by Dr. Francis Baron Nopcsa (p. 88); restorations of various ancestral forms of elephants lately unearthed in Egypt; *Moeritherium* (p. 114); *Palæomastodon* (p. 114); and *Tetrabelodon* (p. 125); most remarkable of all those lately come from the land of the Sphinx is the *Arsinoitherium* (p. 120), a weird-looking herbivor, with quadricorn defences on its frontal bones and a full dentition of 44 teeth in its jaws—not, however, in the ancestral line of elephants, nor perhaps of any living group, but *sui generis*. This, and the ancestral forms of elephants, are about to be published by the Trustees of the British Museum, as a monograph on the fossil mammalia, &c., from the Fayûm, Egypt, prepared by Dr. C. W. Andrews.

The only other extremely novel restoration is that of the huge marsupial, *Diprotodon* (p. 172), the remains of which have been found in such profusion in the interior of South Australia by Dr. Stirling. The pic-

¹ "Nebula to Man." By Henry R. Knipe. With Illustrations by Ernest Bucknall, John Charlton, Joseph Smit, Lancelot Speed, Charles Whymper, Edward A. Wilson and Alice B. Woodward. Pp. xvi+252; with 16 coloured page illustrations and 57 tinted page illustrations. (London: M. Dent and Co.) Price 21s. net.

ture of Pliocene horses by J. Charlton should also be noticed as a very spirited and excellent composition (p. 167).

They are still confined to mammalian forms, and this being the case it would perhaps have been possible to give these volumes a more original title than that adopted by Waterton for his famous essays published in the first half of the last century. But Mr. Renshaw's essays are decidedly original in the treatment of the subject. They deal not merely with the natural history of animals, but also with the history of our knowledge of them. Thus the history of the Addax antelope, inhabiting the great desert, is traced from the time of the ancient Egyptians and of Pliny to its modern re-discovery early in the last century; and that of the extinct northern sea-cow in connection with the adventures of the searchers after the North-west Passage.

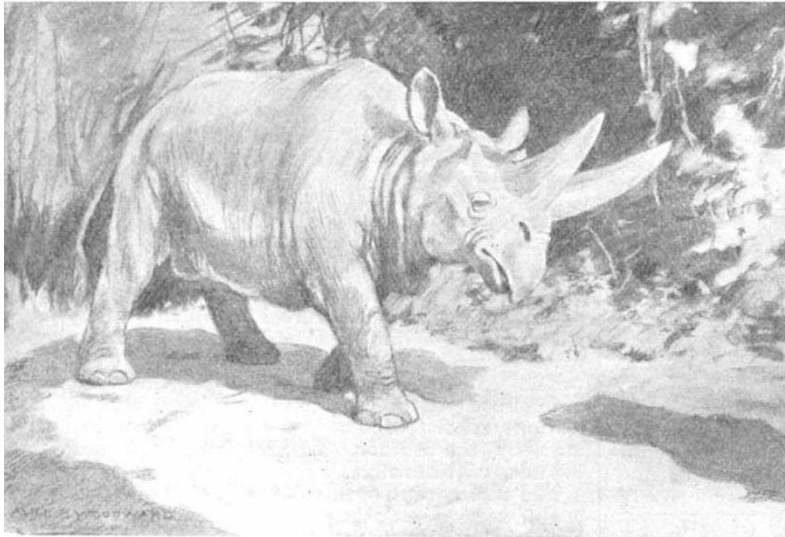


FIG. 2.—Arsinoitherium (probably from 8 to 9 feet in length). From remains found in the Upper Eocene of Egypt. Preserved in the British Museum (Natural History) and in the Survey Museum, Cairo. Reduced from "Nebula to Man."

Never before, indeed, has the history of mammalian forms been more attractively presented to the public. The history of the discovery of some of these grand forms of life is often a true romance of natural history, which, appealing strongly to the author, is graphically re-told by him; and his enthusiasm enables him to

The following is Mr. Knipe's dedication of his work:—

TO NATURE.

How fair, O Nature, are thy looks
 In these thy matron days:
 And with what light a heart thou seem'st
 To tread thy thorny ways.
 Man sees thee joying in thy life,
 So full, so fresh, so free,
 As if thy toil in ages past
 Had nothing been to thee.
 And well may he beneath thy spell,
 Forget thy inner life,
 The waste and suffering in thy breast,
 And never ceasing strife.
 Or if so be he needs must think
 Of all the tumult there,
 He knows at least one end it has,—
 To make thee grow more fair.

carry the reader with him to see in his mind's eye the country inhabited by the beasts he describes, and to feel some of the keen delight experienced by the hunter-naturalist when some such beautiful trophy as the sable antelope rewarded him for all his toil. He excels in describing the natural scenery—the setting—of the subjects of his essays; and writing of the Malay tapir, of "antediluvian appearance," conjures up a most realistic mental picture of the home of the Palæotheres, their ancient representatives, when in far-off days they roamed over swamps covering the present site of Paris.

It is not so much a matter of serious importance whether one reads patiently the carefully executed text in verse or turns with a disdainful smile from such lines as:—

"The whale-like Zeuglodonts that off these coasts,
 In Eocene times pursued the finny hosts,
 Are seen no more: but forms in tooth allied,
 Though skulled more as the Dolphin, swim the tide."
 * * * * *

The misconceptions which hang about the vampire bat in the popular mind are here cleared away, and the statement that it is difficult to stop the bleeding set up by it suggests a search of the salivary glands for any ferment that might hinder the coagulation

Suffice it to say that the book, as a whole, is admirably illustrated and must have cost the author a very large sum to produce. The pictures alone form an excellent guinea's worth, and will prove a real joy to the younger generation as well as to some of the elder, and there is no single picture in the book which has not been drawn expressly for the present work.

SOME MAMMALIAN TYPES.¹

MR. RENSHAW, whose pleasant essays on African mammals are fresh in our memories, has in his new volume taken a wider field, and selected his types from the fauna of the whole world.

¹ "More Natural History Essays." By Graham Renshaw, M.B., F.Z.S. Pp. 243; illustrated. (London and Manchester: Sherratt and Hughes 1905.) Price 6s. net.

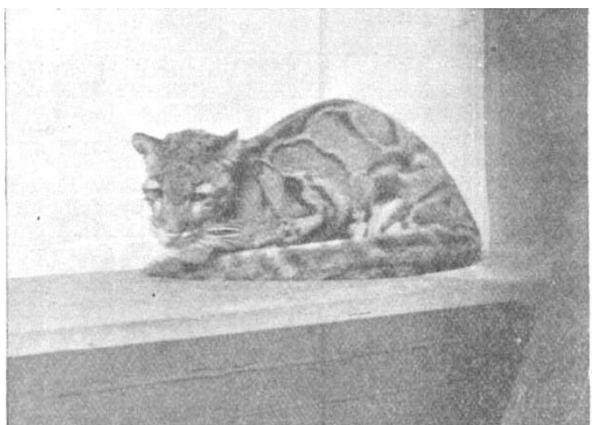


FIG. 1.—The Clouded Tiger. From "More Natural History Essays."

of blood, and some interesting remarks thereon. Although it was discovered by Columbus, few people perhaps realise that a seal inhabits the warm waters