

AN INTRODUCTION TO GEOLOGY

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An Introduction to Geology by J. E. Marr

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J. E. MARR

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TO GEOLOGY**

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BY

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PREFACE.

IN the present volume an attempt is made to explain the scope and methods of Geology, without taxing the reader's memory with excess of detail, and avoiding so far as possible the use of technical terms.

It is hoped that it may be found useful to those general readers who wish to obtain some idea of the science but do not desire to pursue its study far, but especially as an introduction for those who will subsequently proceed to the perusal of more advanced treatises.

I am indebted to several friends for the use of photographs reproduced in the work. The figure of the pot-hole facing p. 39 is from a photograph by Mr Welch, of Belfast; the photograph of the glacier facing p. 51 was supplied by Prof. E. J. Garwood; that of the ice-worn rocks and perched stones by Prof. S. H. Reynolds; and that of the old Triassic landscape facing p. 174 was taken by Prof. H. E. Armstrong, F.R.S., and the print supplied by Prof. W. W. Watts, F.R.S. The photographs of the fossils and of the flint implements were kindly taken by W. G. Fearnside, M.A., Fellow of Sidney Sussex College, Cambridge.

I have also to thank R. H. Rastall, B.A., of Christ's College, Cambridge, for reading through the proofs.

J. E. M.

CAMBRIDGE,
August 1905.

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CHAPTER I.

INTRODUCTORY.

GEOLOGY is the science which has for its aim the knowledge of the past history of the earth. Much light is thrown upon this history by students of other sciences, but he who follows the pursuit of geology is above all beholden to the records which are stored in the rocks forming the crust of the earth, and in the present work we shall try to obtain from these rocks some insight into the story of our globe, leaving to others the question as to how that globe came into being.

We may get some idea of the methods by which the geologist pursues his studies, if we regard the things needful to the proper understanding of the history of mankind; for the studies of man and of the earth on which he dwells have much in common.

A book dealing with the history of England attempts to give an outline of the progress of the English people from the earliest times of which we possess any knowledge to the present day. No sudden break marks any period of that history, and the historian, in dividing his book into chapters, chooses the record of certain events as suitable for closing one chapter and beginning another; it is not needful that two historians writing of the same