

AUTHOR'S PREFACE.

NEARLY one third of the present volume appeared a few months ago in the form of a series of sketches in the *Witness* newspaper. A portion of the first chapter was submitted to the public a year or two earlier, in *Chambers's Edinburgh Journal*. The rest, amounting to about two thirds of the whole, appears for the first time.

Every such work has its defects. The faults of the present volume — faults all too obvious, I am afraid — would have been probably fewer had the writer enjoyed greater leisure. Some of them, however, seem scarce separable from the nature of the subject: there are others for which, from their opposite character, I shall have to apologize in turn to opposite classes of readers. My facts would, in most instances, have lain closer had I written for geologists exclusively, and there would have been less reference to familiar phenomena. And had I written for only general readers, my descriptions of hitherto undescribed organisms, and the deposits of little