

**ELEMENTS OF PHYSICAL
AND CLASSICAL
GEOGRAPHY**

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Elements of physical and classical geography by James Pillans

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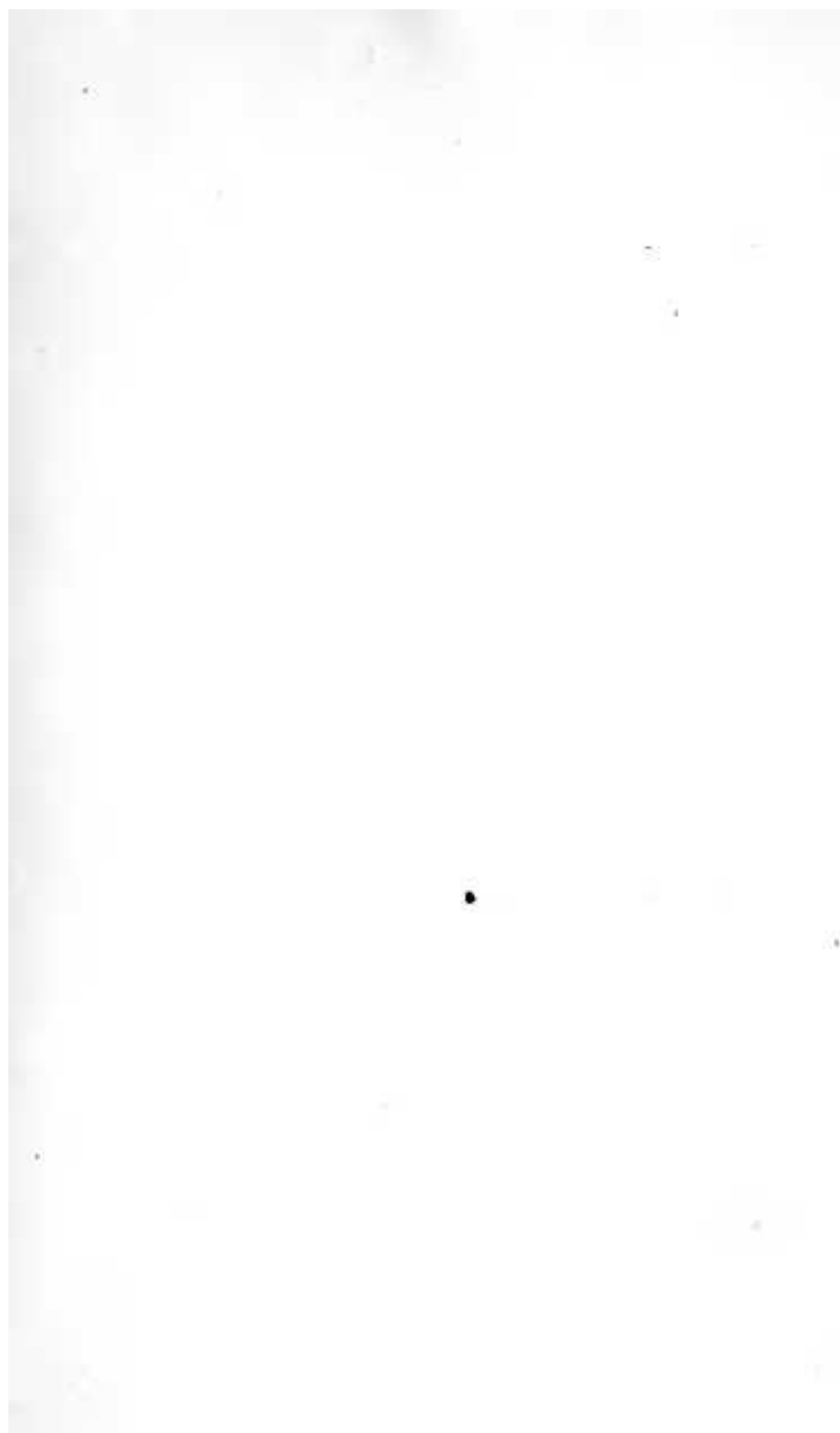
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PREFACE TO THE INTRODUCTION.

THE principal object aimed at in this Volume is, to communicate, to those who have been engaged for some time in a course of liberal study, such information as shall not only facilitate the acquisition and cultivation of ancient learning, but connect the writings of the Classics with impressions and associations that will add to the profit and pleasure of perusing them.

But before entering upon those physical descriptions and geographical details of the 'orbis veteribus notus,' by which it is proposed to accomplish this object, there are certain views to be presented, and certain principles to be laid down, which, at the time of life and stage of progress contemplated in the composition of the book, will, it is hoped, be found no inappropriate introduction to a minuter acquaintance with the world we live in.

Recollecting the exhibition of a Planetarium in the Rector's Class-room of the High School and Dr. Adam's exposition of its uses and movements, as the occasion on which my mind was first awa-

kened to a conception, however inadequate, of the thing signified, I thought it a duty no less than I found it a pleasure, when I became myself the instructor of others in the same class-room, to introduce the subject of Ancient Geography with similar explanations. I am aware that much has been done, in the course of the present century (for the occasion I allude to goes back into the last), to simplify the apprehension of celestial phenomena. Innumerable treatises have been published, professing to make these matters intelligible to the tenderest age and the meanest capacity. Artificial globes and solar systems have been multiplied to infinity, and so reduced in size and price, and at the same time so neatly executed, that they find their way among other toys and play-things into the nursery.

It is no doubt easy enough, and very much the fashion in the present day, to burden the memories of young people with the names of all the Planets and all the Constellations, and with many particulars concerning both. But this is a premature and unprofitable employment of the young intellect. Taking the average of human minds, it is not till a certain period of mental development,—ranging from fourteen to sixteen or seventeen years of age, and coinciding generally in this country with the last days of a boy's school life and the first of his college course,—that he begins to look abroad into nature, and to realize in conception the ideas, of which he now finds that

he had scarcely yet learned any thing beyond the names and visible representations. It is at this period of life, and not till then, that

— *animo majora espaci*

*Concipit, et quae sit rerum natura requirit.*¹

Such enlarged views, when they first break in upon the youthful mind in all their freshness and grandeur, have an elevating and ennobling effect: and it is well worth the attention of an intelligent teacher, to watch the time when the impression can be made most deeply and lastingly. Supposing that the previous drill and discipline of school have equipped the student with the necessary implements, and given him the habit of using them adroitly, this is the fit moment, in the campaigning service of human life, for breaking ground in different directions, that it may be seen to which of them his genius inclines; so that, while he pushes his advanced posts a certain length in them all, he may concentrate his efforts in that line of operation where he feels they are most likely to be crowned with success.

The process described is tentative and experimental, having for its aim, not the accumulation of facts or the mastery of minute details, but the expanding of the mind to general views in more than one branch of human knowledge; and it is a process not less improving than it is delightful to incipient manhood.

¹ Ovid, *Metam.* B. xv. l. 4.

Influenced by these considerations, I have endeavoured, in the following Introduction, to open up glimpses, as it were, into one or two subjects which are very much akin to the main purpose of the work.

The first of these *aperçus* refers to the globe which we inhabit, considered in its relations, both to the other members of the system it belongs to, and to the universe at large, of which that system itself is but a portion. In this part of the Introduction nothing more is aimed at than a lucid, intelligible statement of acknowledged facts and elementary truths:—such a statement as, to those to whom the subject is not new, may be no unpleasing reminiscence, while to the uninitiated it can hardly fail, on such a theme, to be both interesting and instructive.

To this elementary exposition I have the pleasure of being able to append a series of Tabular Formulæ, which will furnish information and materials for thinking to the most advanced student of Astronomy. For these the reader is indebted to my esteemed colleague Professor Piazzì Smyth. They have the advantage of containing the latest intelligence from the remote regions of infinite space, and an account of celestial phenomena, and of the various relations which the heavenly bodies stand in to one another, so full and so minutely particular, that ordinary readers, who are not aware of the resources of science, will be apt to feel their astonishment not unmingled with incredulity. And it cannot but give a

high value to these Tables to know, that they are not copied from former works on the subject, but are mostly the results of original calculations instituted for this Work.

My own brief account of the heavens is followed by an exposition of the principles on which I conceive that all geographical knowledge ought to be both acquired and communicated, and in accordance with which the descriptive details in the body of the work have been arranged and classified.

Attached to the Introduction will also be found a contribution from the pen of my valued friend Mr Charles Maclaren. It gives a popular, and every reader will agree with me in thinking, a clear and masterly outline of the truths recently unfolded by the science of Geology respecting the physical structure of the globe, the revolutions it has undergone, and the extinct races of animals that dwelt upon it before it was rendered fit for the habitation of man.

These different aspects of creation, whether as it exists above us, or around us, or beneath our feet, cannot be regarded as foreign to the ends proposed in a liberal education. They ought all, on the contrary, to be more or less familiar to every one who has a wish to raise himself above the mere drudgery of mechanical manipulation, or to escape the cramping influences of official routine.