—as honour, love, obedience, troops of friends.” With the public of Glasgow he exercised a personal influence such as few medical men, however successful, ever possess; while the profession has lost in him one who was courteous and kind in his demeanour towards all, and especially helpful and friendly to those who were young and just beginning life. In this he set an example which we shall all do well “not to leave out of the lesson of our lives.”

Much of his kind and happy mode of maintaining intercourse with others arose from his invariably cheerful and sanguine disposition. Even when, late in life and in the contemplation of early and well earned rest and retirement, he suddenly and unexpectedly found himself “out of suits with fortune,” he appeared to forego none of his wonted cheerfulness. His most intimate friends saw no change in the spirits or the activity of the man. Those, moreover, who knew him best knew well that this was due to no affectation, still less to any callousness in his feelings. It was rather due to a power of rightly and heroically adjusting them.

A life like this, full of manifold activities, touching the lives of others at numberless points, respected and depended upon by many for advice and helpful services, is the sort of life which leaves behind it always the greatest sense of missing, of loss, and of consciousness of absence. We can hardly believe that he is gone, and with him so much of hearty service and willing co-operation. Yet this is the true gauge of the valuable influence his life exercised upon others. To his widow, family, and intimate friends such feelings, however painful at first, will make up in the end much of their surest solace. None need be ashamed of or desire to check the expression of them. *Quis desiderio sit pudor aut modus tam cari capitis?*

REVIEWS.

An Introduction to the Study of Embryology. By ALFRED C. HADDON, M.A. (Cantab); M.R.I.A.; Professor of Biology in the Royal College of Science, Dublin. London: Charles Griffin & Co. 1887.

THIS is a work which shows very considerable ability, and is obviously written by an enthusiastic student of embryology. As a book of reference, it will be found full of hints, contain-

ing more or less distinct allusion to important matters of great variety, together with painstaking accounts of many views and allegations which, we cannot think, have at all a sufficient claim to be put forward as facts. In the preface, the author states that, although there are at the present time two students' manuals in the English language solely devoted to the study of embryology, it has appeared to him that a relatively small work, giving a general review of the subject, might prove of use to students. He proceeds to say that "a knowledge of the main facts of comparative anatomy and systematic zoology has been assumed for the reader, the book being specially designed for medical students." Now, if it is imagined from this and from the title, "Introduction," that in this work the student who has started in biology from the study from man and vertebrata generally, and wishes to add to his knowledge of adult forms and textures an acquaintance with what is thoroughly ascertained in embryology, by studying a shorter and simpler work than either of the two with which the name of the late F. M. Balfour, to whose memory this book is dedicated, was associated—if it is imagined that such an one will find in this handsome and clearly printed volume what he desiderates, a great mistake will be made. This is rather a supplementary volume, in which things well ascertained are hurried over, an acquaintance with the terminology being, even to some extent, apparently assumed, as, for example, in the description of the amnion and allantois; while, on the other hand, it is full of things which might, in an introduction, be missed out. Farther on, in the preface, we are told that "the facts of development have been largely supplemented by hypotheses;" and that is a description which is thoroughly true, in the largest sense. But when we are told that "the beginner is advised to pay attention only to the large type in the first reading, as purely theoretical subjects or matters of detail are printed in the smaller type," we hardly expect to find in the large print the facts and hypotheses inextricably mingled, particularly when we are informed that "an endeavour has been made so to present the latter that the student could not mistake them for the former. The following passage, beginning on the first page, is worthy of attention:—

"The second, or comparative aspect (of embryology), compares the development of animals, and taking those phases which are common to all or to many, attempts to reduce or reconstruct the evolution of the animal kingdom. This study is known as phylogeny. The chief result of all embryological inquiry has been to demonstrate

that the history of the individual recapitulates, in its main features, the evolution of the race, and thereby to give positive evidence in favour of the theory of evolution, in the general acceptance of the term."

We object, first, that comparative embryology ought to be as free from hypotheses as any other observational study. Its province is simply to compare, and when the comparison is not obvious, a provisional hypothesis of the relationship of different facts has to be made, which further observation will remove from the region of hypothesis either by confirming or refuting. What zoologists have got into the habit of calling phylogeny is a very good thing in its way, but it is not comparative embryology. It is necessarily highly theoretical, and its theories ought to be founded on a great deal more than embryology. Neither is the second statement which we have quoted strictly correct. The doctrine that the history of the individual recapitulates the evolution of the race originated with Serres a long time ago; and whatever truth there is in it he deserves credit for. But, in point of fact, we are not entitled to go further than to say that many things found in adults of lower form are represented in a measure in the embryo in higher animals, and that this might be expected on the supposition of common ancestry.

The first chapter is devoted to "Maturation and Fertilisation of the Ovum," which is done well; the second to "Segmentation and Gastrotation;" the third to "The Formation of the Mesoblast;" and the fourth to "General Formation of the Body and Development of the Embryonic Appendages." Then follow three chapters on organs derived from the epiblast, hypoblast, and mesoblast respectively, much the longest chapters; and lastly, comes an eighth chapter, devoted to general considerations. The arrangement might be improved. So many organs belong to more than one layer of the embryo that awkwardness results from using the layers in classifying organs. Among the things that might have been, with advantage, missed out, may be mentioned the assertion of Professor Huxley, supported by Miss Munn, that the enamel is mesoblastic. Those who remember the grounds of the assertion will recollect how groundless it is, while it obscures the meaning of one of the most curious developments of the elongated deep cells of the cuticle. The figure given from Wiedersheim leaves nothing to be desired in the way of proof of the epidermal origin of enamel. The account of the development of the eye is poor. We do not understand why Mr. Haddon only acknowledges, with seeming reluctance, the

development of the bacillary layers in continuity with the epithelial lining of the ventricles, and omits to mention that the hexagonal epithelium is the similar lining of the posterior half of the primary optic vesicle. But he has plenty room to dilate on the epiphysial eyes of lizards, a structure which consists entirely of the altered lining of the ventricles, and justly excites attention, but which is not yet sufficiently demonstrated to be an eye at all. The bibliography at the end of the book refers to a number of very valuable memoirs, and also to a variety of more or less trashy performances, some of them with no pretence to being original, and others not in the least embryological. We shall not be sorry to see this book reach a second edition, and when that edition comes, we hope it will be much improved.

Health Resorts at Home and Abroad. By M. CHARTERIS, M.D. Second Edition. London: J. & A. Churchill. 1887.

THIS work contains a large amount of most interesting material in a very readable form. Dr. Charteris' style is always pleasant, and we have in addition an occasional passage of great descriptive power and eloquence such as we seldom meet with in a medical work. As an example of this we may cite the account of the pump-room at Carlsbad, in which a highly descriptive picture is presented to the reader in a few sentences:—

“In the centre of the room a big round cauldron is observed, from which, propelled by subterraneous force, a stream of water is thrown up, four or five feet high, with a convulsive thrilling throb. This stream descends in scattered spray, and a cloud of steam hovers over the cauldron and rises to the roof of the building in which it is enclosed. The continuous restlessness of this subterranean pump, the hot sensation imparted by its vapours, the peculiar hissing and throbbing of the upheaved waters, fill the mind, even in the nineteenth century, with wonder and awe, and one can still fancy how centuries ago its origin was considered divine.”

The book begins with a classification of the various kinds of mineral waters and of health resorts. While very brief these descriptions are admirably clear and sufficiently full for ordinary purposes. This portion of the work only occupies about eight pages, and we are immediately introduced to the various health resorts *seriatim*. Beginning with Bath, we have several pages devoted to the subject of massage, which