

of control brings a greater responsibility on the pilot, and in case of the engine stopping the machine has no means of gliding safely to earth." Mr. Porter deserves great credit for the clear and concise way he has analysed the most important experiments with lifting-screws, and his book, which at present stands as the only English work on the subject, should find a place in every student's library.

*Secrets of the Hills, and How Ronald Read Them.*

By Sterling Craig. Pp. 320. (London: George G. Harrap and Co., n.d.) Price 3s. 6d. net.

VERY early in the nineteenth century, the Rev. Isaac Taylor showed how a certain James and his father, Mr. Thompson, visited a series of British mines and compared them sagaciously with those of other lands. The little book, called "The Mine," in which the didactic Thompson and the preternaturally patient James were made to record their impressions, ran through three editions by 1831. At that date the Wicklow nugget of 22 ounces was the largest mass of native gold on record, while the mineral zircon was regarded as beyond the reach of an ambitious collector. Mr. Craig now comes forward with a similar book, published bravely in the twentieth-century manner in a very excellent type, and beautifully illustrated by photographs in place of the romantic old copper plates. Of course, when we were boys we loved Taylor's "Train of Mules bearing Copper Ore" in Cornwall, and the tufted Indians "Diamond washing at Golconda"; and our successors may equally delight in the realistic pictures of "Holing the Coal" (p. 202) and of the fossil bones at Pikermi (p. 306), which are so well provided by Mr. Craig. Mr. Craig's boy, Ronald, goes to stay with a well-informed doctor in the Leadhills, and receives even more instruction, in return for his judicious questions, than did the late lamented James.

Dr. Thomson—the name is, of course, a pure coincidence—keeps himself well abreast of geological literature, though we may not agree with him about the entirely mythical crystallised sea-sand so neatly figured on p. 30. His lucid but lengthy manner of discourse has proved contagious in the district, and is successfully imitated by Jim, a working miner, and by Mr. Holloway, of Dollar. But boy readers, to whom all this is new, will probably not regard such friends as tiresome. It is quite incorrect to think that young minds have no thirst for information, and even the adventurous will enjoy the graphic account of Ronald's work in a lead-mine underground. Mountain-building and river-erosion are described with the aid of sections, and the line-drawings in the book are for the most part as effective as the photographs. There are a few misprints, as "Unita" for "Uinta," and "Cornish" for "Coruisk," and some rather definite statements on matters that are a good deal in dispute. But the 320 pages contain a large range of information, and it is interesting to find that the Thompsonian (or Thomsonian) manner is still so much in favour.

G. A. J. C.

*A Laboratory Text-book of Embryology.* By Prof. C. S. Minot. Second edition, revised. Pp. xii+402. (London: J. and A. Churchill, 1911.) Price 16s. net.

LABORATORY text-books are apt to be limited in their use, due, no doubt, to the fact that the teaching in two different laboratories is never identical. Their use will be the more extensive as the illustrations and text are made general in application.

The illustrations in this work are well executed, and in the new edition their number has been in-

creased from 218 to 262. They are mainly taken from special sections and figures, but the sections and figures have been well selected as typical. Their value is much enhanced by the fact that they are faithfully drawn, and give, as much as is possible in black and white, the appearance of sections as seen under the microscope; too diagrammatic a section is apt to mislead a student. The reconstructions illustrated are valuable aids in giving a student a general idea of the anatomy of the embryo; they also help by showing where the sections illustrated are cut.

Besides additions to the illustrations, Prof. Minot has in this second edition entirely recast several chapters so as to make the study of development chronological throughout. The text is chiefly descriptive of the sections and figures, but short comparisons are drawn between the various stages. The introductory chapter deals with too much in too short a space to be of any real use. Heredity, for instance, when treated in a page leads one to believe that Darwin's theory of "Pangenesis" is the only theory worthy of consideration. Again, Prof. Minot's classification of glands, when proposed so shortly, is liable to confuse.

As in the old edition, the pig is the basis of study, since in America pig embryos above the length of 6 mm. can readily be obtained from abattoirs. For the early stages the rabbit is used. Human embryology is treated at some length, well-known figures being used for the purposes of illustration. The chicken is only allowed forty-four pages out of a total of 402, so that the work treats almost entirely of mammalian anatomy.

The practical directions at the end of the book supply the details of formulæ and give methods for staining and reconstruction.

*Photograms of the Year 1911-1912.* Edited by H. Snowden Ward. Pp. 154. (London: George Routledge and Sons, Ltd.; Dawbarn and Ward, Ltd.; New York: Tennant and Ward; Melbourne: Kodak (Australasia), Ltd.; Toronto: The Musson Book Co., Ltd., n.d.) Price 2s. 6d. net.

THIS annual deals chiefly with descriptions and criticisms of the "pictorial" photographs exhibited in the various exhibitions, and brief summaries of the state of pictorial photography in other countries. Mr. Robert Demachy speaks for France, and concludes that there is sounder work going on there. South African progress is recorded by Mr. George E. Whiting, and he deplores the ending of the *Journal of Photography* published there, but rejoices at the formation of two new societies. The work in Germany is taken in hand by Mr. F. Matthies-Masuren, while Mr. Walter Burke's remarks are devoted to Australia. The main portion of the book is, however, from the pen of the editor, who, as was announced in *NATURE* of December 14, died early in that month in New York. Mr. Snowden Ward's contribution consists in the main in describing the special features of the very large collection of the works exhibited at various places during the past year, and this will be found very useful to those who take up this, the pictorial, side of photography.

The book, as usual, is profusely illustrated, and the fact that many of the pictures have not been seen in this country before adds a special feature to them. There is no doubt that pains have not been spared to reproduce well the pictures contained in the volume, but there are some, notably that entitled "When all the snowy hill and the bare trees are still," which seemed scarcely worth the trouble taken. Many readers will find in the book much that is both amusing and useful.