

bit of dead furze stem. As he was bending over it, the supposed withered stem moved slightly, and gave him the impression that he was looking at the back of a large viper that had half buried itself in the furze. A still closer scrutiny showed that the semblance of a crooked piece of furze was two fern-owls about three days old.

We have read the book from cover to cover, and have been interested throughout. The author has looked to animate nature for his facts; hence his work possesses the sterling ring which every student of science delights to hear.

*Pitt Press Euclid, V.-VI.* By H. M. Taylor, M.A. (Cambridge: Univ. Press, 1893.)

WE have previously had occasion to refer to the earlier issues of this series of books on the elements of Euclidian geometry. The present publication is quite up to the standard of the former ones, and contains some important variations from the usual mode of treatment. In dealing with the fifth Book, Mr. Taylor rejects altogether the use of figures, since, as he rightly says, the book is not essentially geometrical. With a general knowledge of proportion as derived from treatises on algebra, a student is sufficiently equipped to follow its applications in Book vi. The numbering of the propositions is somewhat altered owing to the omission of some of the propositions in the Greek text. With regard to Book vi. Mr. Taylor has made some modifications in the treatment of similar figures, and many theorems are more briefly proved by adopting the definition of similar polygons there enumerated. The additional theorems which are inserted have been arranged in series—one, for instance, giving the student a sketch of the theory of transversals, harmonic and anharmonic ranges and pencils, leading up to Pascal's theorem; another of nine propositions, concluding with Gergonne's neat solution of the problem to describe a circle to touch three given circles. The method of inversion, Casey's extension of Ptolemy's theorem, properties of coaxial circles, and some porismatic problems follow next in order, the book concluding with a capital set of exercises and an index for the first six books.

*The Out-door World, or Young Collector's Handbook.* By W. Furneaux, F.R.G.S. (London: Longmans, 1893.)

A GREAT deal of information useful to the young collector, for whom Mr. Furneaux has prepared this handbook, is to be found in its four hundred pages. There are sixteen coloured plates, some of which are excellent and none bad, and more than five hundred illustrations in the text. Those of birds are somewhat unequal; some indication of relative size would have been helpful. The linnet and the cuckoo are placed side by side, and the former is apparently the larger of the two, while on the opposite page the great tit is considerably bigger than the lark, and rivals the cuckoo in apparent proportions. If the length of the bird had been given in brackets after the name under each figure, it would have prevented misapprehension. We have dipped here and there into the letterpress, and found the information accurate and clearly put.

*Worked Examples in Co-ordinate Geometry.* (Univ. Corr. Coll. Tutorial Series.) By William Briggs and G. H. Bryan. (London: W. B. Clive and Co., 1893.)

THE examples which are here brought together are intended to serve as a graduated course on the right line and circle, forming thus a useful companion to the book on Co-ordinate Geometry already published by the same authors. The work line is specially designed for the private student, and this is why the problems have been dealt with in such detail, every step in their solution

being clearly explained. The examination papers may fairly be taken as good test papers, for the questions seem to have been carefully selected, and the more important ones on book work are not lacking. For those teaching themselves this subject by working out the problems given, a good insight should be obtained, while the references to the author's work on co-ordinate geometry, above referred to, will be found very useful to those possessing that book.

#### LETTERS TO THE EDITOR.

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#### Sir Henry H. Howorth on "Geology in Nubibus."

HAVING given my views on glacial geology in the current issue of the *Fortnightly Review*, to be followed by one dealing at some length with the ice-origin of lake-basins, I should not have thought any reply to Sir Henry Howorth's "Appeal" necessary except for the consideration that my articles may not be seen by many readers of NATURE. And first, I would remark, that the mental attitude which Sir H. Howorth imputes to extreme glacialists I have myself been unable to detect in their writings. In fact, I was under the impression that the "scoffing" and "jeering" was chiefly from the other side; but it seems I was mistaken, and I must apologise for my ignorance. Those who read my articles will see that I make no appeal to "transcendental ice," but judge of its powers and properties by its admitted effects. Sir H. Howorth says that "ice is known to crush under moderate pressure," implying that a glacier a mile or perhaps half a mile thick is impossible. But will he or anyone else tell us what happens to the ice after it is crushed, and the pressure that crushed it is continued and slowly increased? Will it not suffer re-gelation and become denser ice; and if by sudden increase of pressure it is again crushed, will it not by still further pressure again suffer re-gelation? He stops at the first "crushing," as if that were the end of all things so far as a glacier is concerned. All this, however, is beside the question from my point of view. The work of ice on the rocks is as clear as that of palæolithic man on the flints; all the difficulties that may be suggested as to how he lived, or how he shaped the flints do not in the slightest degree affect our conclusion that the palæolithic flint implements are the work of man; and there is equally clear evidence that ice *did* march a hundred miles, mostly uphill, from the head of Lake Geneva to Soleure, whatever transcendental qualities it must have possessed to do so.

As to "perhaps the largest and most remarkable collection of rock-basins in the world"—the largest being of 50 acres and the deepest 30 feet deep—I must really decline to occupy your space in showing how simply these may have been produced by ordinary denuding agencies, or in denying that any glacialist, even of "the most extreme and aggressive school," would claim them as proofs of glaciation. As regards the question of Tasmanian glaciation, my last communication to NATURE (Nov. 2) seems to me to render any further observations unnecessary. No doubt the conclusions of the various writers will be fully harmonised by a more complete study of the whole region.

The last point touched on by Sir H. Howorth—whether the advocates of the ice-origin of certain groups of lakes are "extravagant" in their views, following the methods of Aristotle rather than those of Bacon, and founding their beliefs on "purely hypothetical properties of matter and forces of nature"—I will leave to the judgment of those who do me the honour of reading my forthcoming article in the *Fortnightly Review*.

ALFRED R. WALLACE.

#### The Erosion of Rock-Basins.

MR. T. D. LATOUCHE's letter (page 39) is very interesting as a more than usually independent contribution (for the reason given therein) to the interesting question of glacial