

ing of the Bronze Age, he considers the crescent-shaped earthenware articles rising from a flat base, found in several of the villages, to be "suggestive of religious ideas" instead of being head rests. The latter and more popular view seems to me to be most probable. Again, our author says that "the lake-dwellings of the Bronze Age are built in deeper water, and consequently further from the shore, than those of the Stone Age" (p. 538). Surely they were built further from the shore for purposes of defence against the better weapons, and consequently in deeper water. These, however, are minor points of criticism in a work which will be of great service to archæologists. Dr. Munro is to be congratulated on his success in completing a most difficult task.

W. BOYD DAWKINS.

OUR BOOK SHELF.

Colour in Woven Design. By Roberts Beaumont, Professor and Director of the Textile Department in the Yorkshire College. Pp. xxiv. and 440. (London: Whittaker and Co., 1890.)

AMONGST the merits which this book may possess (and we do not deny that they are considerable), elegance and accuracy of diction cannot be reckoned. This criticism is justified by the occurrence of countless phrases, such as these—"Non-luminous bodies are incompetent of emitting undulations that convey any coloured appearance to the mind"; "linear and curvilinear lines"; and "in the rose there is displayed in perfection all the various modifications in tint and shade to which this important colour (red) is susceptible." And we cannot endorse in all particulars the exposition of the theories of colour given by Prof. Beaumont. For instance, he contrasts what he calls the "light theory of colours" with the "pigment theory," and then, speaking of the latter, says: "Scientifically, it is no more a correct scheme than the light theory is applicable to the industries or to the mixing of paints." But surely the theory of Young, Maxwell, and Helmholtz is as applicable to the results obtained by mixing pigments or coloured fibres, as it is to the results of mingling coloured lights. Yet, while the author writes, on p. 20, "many of the mixtures obtained by this system (that adopted by Chevreul and Brewster) are diametrically opposed to the laws of physics," he proceeds to explain the chromatic phenomena of textiles by its aid. It is needless to urge how deeply Prof. Beaumont's acceptance of the red-yellow-blue triad of primaries vitiates his reasoning as to the effects of contrast, as to the question of the existence of tertiary hues, and as to the true complementaries.

When, however, we turn to the practical or technical sections of this hand-book, we find much information of sterling value. Here Prof. Beaumont is evidently at home. The numerous diagrams and photographs of checks, stripes, weaves, yarns, twists, twills, and diagonals, illustrate the descriptions in the text most satisfactorily. The analysis and synthesis of the various "weaves" are particularly well carried out, and constitute the largest and most important part of the volume before us. A scientific journal is, however, not the place for the discussion of such details of manufacture.

A few of the coloured plates are satisfactory; in others the garish hues and harsh associations may, we hope, be attributed to the failure of the chromolithographs to realize the intentions of the author. But some of the coloured figures are deplorably poor, or even thoroughly debased, in design; note particularly Plate xviii.; Plate xxviii., Fig. 2; and Plate xxxi., Fig. 2.

A. H. C.

NO. 1111, VOL. 43]

Constance Naden: a Memoir. By William R. Hughes. (London: Bickers and Son. Birmingham: Cornish Brothers. 1890.)

MISS NADEN was a writer of considerable freshness and ability, and all who knew her agree that she was also a woman of great charm of character. She did not, however, live long enough to produce anything of first-rate importance, and it was hardly advisable to make her the subject of a special memoir. Mr. Hughes appreciates thoroughly all that was most characteristic of his friend's intellectual and moral nature, but he does not possess the secret of presenting brightly and vividly facts in which he himself happens to be interested. Consequently, he does not succeed in conveying any adequate conception even of qualities which he is never tired of praising. The volume contains, besides Mr. Hughes's sketch, an introduction by Prof. Lapworth, and "additions" by Prof. Tilden and Dr. Lewins. The latter gentleman, who delights in the use of an extraordinary philosophical jargon, thinks it would be impossible to be satisfied with any memoir of Miss Naden "which should ignore the scientific hylo-ideal, or automorphic principle, or synthesis underlying and suffusing her whole intellectual and ethical architectonic." He proceeds to supply the necessary exposition, his chief difficulty being "the elementary *naïveté* and simplicity of the concept, or ideal, involved."

Euclid's Elements of Geometry. Arranged by A. G. Layng. (London: Blackie and Son, Ltd., 1890.)

IN this work, Euclid's Books I.-IV., VI., and portions of V. and XI., are dealt with. The enunciations and axioms are the same as those in Simson's edition, but the propositions have received many minor alterations. Only the more common symbols are employed, and some of the propositions have been considerably shortened by the adoption of other proofs based on Euclid's methods. Each proposition is accompanied with examples and in many cases with notes.

An excellent plan adopted throughout is that by which the student can see at a glance the enunciations, propositions, and figures, without the necessity of turning over a page. The appendix contains some simple theorems of modern geometry, a few alternative proofs of the propositions based on other methods than those of Euclid, and a collection of miscellaneous examples and examination papers. Beginners will find the book rather troublesome at first, owing to the use of the symbols; but after these are understood little difficulty ought to be experienced.

LETTERS TO THE EDITOR.

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Hermaphroditism of the Apodidæ.

THE reproduction of *Apus caneriformis* has been a much discussed subject. Although the animal has been well known since the middle of last century, it was not till 1833 that a male was reported to have been found, and not till 1856 that the occasional presence of males in small numbers was certainly established by Kozubowski. On the other hand, the fact that several generations of "females" could be produced without the presence of a male, was established as long ago as 1755 by Schaeffer, who concluded that the animals were hermaphrodite. Since that time authors have been divided in opinion between hermaphroditism and parthenogenesis (not to mention v. Siebold's theory of Thelytoky); the latter view has lately prevailed.¹

¹ For the history of this subject see Bronn's "Classen und Ordnungen des Thierreichs," vol. v. On p. 810 the following words occur:—"Untersuchungen über die Gattungen Apus und Daphnia welche offenbar in dem bis zu voller Evidenz geführten Nachweis der Parthenogenetischen Fortpflanzung beider gifteln." See also Lang's "Lehrbuch der Vergleichende Anatomie," p. 393.