

by friends in the course of last year. They bring out indirectly all the qualities of Emin's character, and no one can read them without being filled with admiration for his sustained enthusiasm, his inexhaustible energy, and his unaffected simplicity and modesty. He has been too much occupied with official duty to devote as much time as he would have liked to scientific investigation; but he is an ardent student of zoology, botany, and ethnography, and he says enough to show that we may expect from him hereafter very important contributions to our knowledge of all these subjects. So far as the present volume is concerned, the most valuable of the letters, from a scientific point of view, are those relating to the various tribes whose habits and customs he depicts. His descriptions are remarkably vivid, and are evidently the result of much careful observation. His description of the Wanyoro, for instance, is a model of what such a piece of work ought to be. The writer omits no characteristic that is likely to be suggestive to anthropologists, while he has taken care not to spoil the general effect of his sketch by the intrusion of unnecessary details. Dr. Felkin's introduction is written with perfect tact and judgment, and Mrs. Felkin has done her work as a translator admirably. An excellent map has been prepared by Mr. Ravenstein, who has also done good service by marking the latitude and longitude of every place mentioned in the index and glossary.

Colour. By A. H. Church, M.A. (London: Cassell and Co., 1887.)

IN a work which has been limited to somewhat less than 200 pages, there has of necessity been a good deal omitted which would have been found in a larger work. In the part devoted to the production of the spectrum, the details are almost absent in some particulars and perhaps are rather too full in others. The subject of polarized light is also dismissed too briefly. There are one or two statements to which exception can be taken. The first is where the author states (p. 44) that "calorescence may be regarded as a variety of fluorescence." The introduction of the term calorescence at all is a mistake; but it is a greater mistake to mix it up with what is a really distinctive phenomenon.

Another is at p. 78, where the author says, when speaking of a person who is "red" colour-blind, that "the nerve fibrils which in the normal retina receive the sensation of red are not, indeed, wanting, but transmit to the brain the same sensation as that transmitted by the second set of fibrils, the green." This doctrine is rather against facts: the fibrils are either wanting or else are paralyzed, as the total amount of light perceived by the red colour-blind person in white light is less than that perceived by the normal-eyed person. The sensations of the green and blue primary colours are on the average equal in both, but the normal-eyed person has in addition the red sensation. If the fibrils which in the normal-eyed person respond to the red respond to the green in the red colour-blind person, this would not be the case.

With these and one or two minor exceptions the work is to be recommended for accuracy; and the author may claim to have accomplished what he states in his preface he has endeavoured to do, viz. "to present and to explain in a concise yet popular form many of the chief facts connected with the origin, the phenomena, and the employment of colour."

Astronomy for Amateurs. By J. A. Westwood Oliver. (London: Longmans, Green, and Co., 1888.)

THIS volume, to quote the preface, "is intended to afford the amateur astronomer, possessed of limited instrumental means, but yet anxious to devote his labours to the furtherance of astronomical science, such hints and suggestions as will help him to direct his efforts into the channels

which experience has indicated as best fitted to his qualifications and equipment." Its pages are accordingly entirely devoted to practical astronomy, theories of every description being disregarded. The different branches of the subject are dealt with by well-known specialists, Mr. Oliver's share in the work being chiefly editorial. The fundamental chapter on the telescope and observatory, which is full of practical information, is appropriately contributed by Sir Howard Grubb. Mr. Maunder contributes an instructive chapter on the sun; Mr. Gore deals with variable stars, of which an admirable list is given; and Mr. Denning gives directions to those who are anxious to distinguish themselves as comet-discoverers. The chapter on the moon is very detailed, and, with the index map, will be of great service to observers of our satellite. Special stress is in all cases laid upon the importance of adapting the ends to the means. The book is thoroughly practical throughout, and Mr. Oliver deserves the thanks of all who are interested in the progress of astronomy, for bringing together such an excellent series of papers. Celestial spectroscopy and photography are reserved for a forthcoming volume, which we sincerely hope will not be behind the one already issued.

LETTERS TO THE EDITOR.

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The Micromillimetre.

PROF. RÜCKER's note in NATURE, of February 23 (p. 388) induces me to ventilate a suggestion in nomenclature which, among other advantages, might reconcile the practice of botanists and biologists with the C.G.S. system by leading to the disuse of the prefixes *mega-* and *micro-* in favour of *self-significant* prefixes.

It is not improbable that, in spite of Prof. Rücker's protest, the arbitrary definition of the prefixes *mega-* and *micro-*, laid down in the C.G.S. system may come, or continue, to be disregarded in different departments of science, until the ambiguity thence arising necessitates their disuse, as the disuse of the words *billion*, *trillion*, &c., is necessitated by their different senses in English and French. Be this as it may, it is certainly desirable that those who are not in the daily habit of speaking of *megohms*, *megadynes*, *micromètres*, &c., should be saved the necessity of recalling, or hesitation in realizing, the precise meaning of the prefixes.

Instead of denoting *decimal multiples* by Greek, and *decimal parts* by Latin, prefixes to the name of the unit, let the multiples be denoted by the addition of a termination *-n* (say), with a suitable vowel, and the parts by that of a termination *-t* (say), and let the *order* of multiples and parts alike be denoted by numeral prefixes indicating the *power* of ten by which the unit is multiplied or divided, or, what is the same thing, the distance of the digit denoting it from the units digit.

Thus, starting from the *mètre*, instead of the scale—

metre { decametre, hectometre, kilomètre, &c.,
decimetre, centimetre, millimetre, &c.,

we might adopt the following:—

metre { metron (or monometron), dimetron, trimetron, tetra-
metron, &c.,
metret (or monometret), dimetret, trimetret, tetra-
metret, &c.

Then the *micromètre* (the botanists' *micromillimetre*), would become the *hexametret*; the *megohm*, the *hexohmen*; the *megadyne*, the *hexadyne*, &c.

As an aid to the memory, such a system would be valuable, reinforcing the *visua!* memory, which has (I think) in many cases to be relied on, by a corresponding *oral* reading. Thus, the unit of attraction of gravitation in the C.G.S. system is about $6\frac{1}{2} \times 10^{-8}$ dynes, that is, in the proposed language, $6\frac{1}{2}$