

he is within 10 yards, and walking steadily on. There lies a stone, on which you had laid your caross and other things, when making ready to enter your shooting-screen; the beast has come to it, he sniffs the taint of them, tosses his head up wind, and turns his huge bulk full broadside on to you. Not a second is to be lost. Bang! and the bullet lies well home under his shoulder. Then follows a plunge and a rush, and the animal charges madly about, making wide sweeps to right and left with his huge horn, as you crouch down still and almost breathless, and with every nerve on the stretch.

"He is off; you hear his deep blowing in the calm night; now his gallop ceases. The occasional rattling of a stone alone indicates that he is yet a-foot; for a moment all is still, and then a scarcely audible 'sough' informs you that the great beast has sunk to the ground, and that his pains of death are over."

The author has long since been so well known as a gold medallist and leading member of the Royal Geographical Society, and for his important contributions to anthropology and other departments of science, that it would be superfluous at this time to dwell on the value of his explorations, compared with those of the ordinary and less-gifted traveller. His exceptional aptitude for what may be called professional travel is well exemplified at pp. 180-82 of the volume now republished, in which, among other useful hints, he gives plain and practical instructions for selecting the best sort of travelling compass and checking distances and directions. His manual on the "Art of Travel" has for many years been a standard work of reference; while no one who reads, in the "Narrative of an Explorer," his amusing record of "a series of observations" taken by sextant upon the figure of a Hottentot lady—with results worked out "by trigonometry and logarithms"—can affirm that his sense of humour has been blunted by scientific pursuits.

A republication of "Vacation Tours in 1860 and 1861"—papers by Sir George Grove and the late Mr. W. G. Clark, added to one by Mr. Galton—enhances the value of this new accession to the Minerva Library.

#### OUR BOOK SHELF.

*Practical Photometry: a Guide to the Study of the Measurement of Light.* By W. J. Dibdin. (London: Walter King, 1889.)

THIS work forms a good practical text-book on the art of photometry, which, both scientifically and commercially, is becoming more and more important. It contains a comprehensive account of the various methods in daily use, so that the student, when he finds that he is dealing with instruments and methods unfamiliar to him, may turn to this book as a guide to the many precautions necessary to insure accurate results. The first few chapters deal with the history and principles of photometry, together with horizontal, radial, and jet photometers, and diagrams are given of the determinations of the quantity of light afforded in all directions horizontally by three classes of flames tested at every 10°, and also of Dr. Pole's method of expressing the illuminating power and rates of consumption per hour of fifteen-candle gas. In chapters vi. and vii. we have a discussion on the various standards of light which have been and are still in use, followed by the numerous proposed substitutes, such as Harcourt's pentane, Sugg's sixteen-candle argand, Methuen's screen, &c. The apparatus necessary to check and measure the flow of gas to the standard burner is given in chapter viii., with detailed

descriptions. Chapters ix. and x. treat of "The Examination and Adjustment of a Gas-testing Photometer" and "Colour Photometry," the latter dealing with methods of estimating the colour and intensity of the illumination of fabrics, &c. Lastly, in chapter xi., on "Stellar Photometry," the author gives an account of the methods employed by Sir John Herschel, Zöllner, and others, concluding with a description of a method proposed by himself.

The appendix contains some useful pieces of miscellaneous information, and tables of illuminating power of sperm candles, candle corrections, &c. The work is well illustrated with numerous woodcuts of the various instruments employed.

#### LETTERS TO THE EDITOR.

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##### The Testing of Colour-Blindness.

THE important article in NATURE of September 5 (p. 438) will have been read by all friends of education with deep and melancholy interest.

I desire to point out that the real remedy ought not to be dealt with by an Act of Parliament, partly because this is a makeshift, and partly because the sudden dismissal of a trained seaman for a constitutional defect is so cruel that human nature would get very much in the way of such an Act of Parliament.

What is wanted is that the colour sight and other measurable faculties of youths should be tested before they go out into life. It is a detail of practical anthropometry. Just as no parent would think of encouraging his son to become a barrister when he knew that he stammered or was deaf, so no parent would waste money in training his son to be an engine-driver or a sailor when he knew—as he ought to know—that the lad was colour-blind.

I protest against a defect of our educational system being treated as a defect of legislation or of administration, and I trust that the friends who seek that scientific education should have its due place will move in this direction, and thus prevent the cruelty to seamen and their families as well as the deaths of their fellow-creatures which are at present possible from the causes indicated in your article.

I desire to ask if some of your readers will kindly furnish information, through your columns, as to where the colour-tests can be obtained, their cost, and the literature respecting them.

9 King Street, Oxford, September 19.

J. F. HEYES.

##### Mites.

IN the grounds of the Leicester Museum there are some half-dozen young lime trees, about fifteen years old, of which the trunks and under sides of the main branches are covered with an extremely thin glistening film. It seems to consist of a similar material to that of which spider's web is made, but spread out into a film instead of being spun into thread. When rubbed up it has all the appearance of spider's web similarly treated. But there are no spiders visible, except here and there an Epeira, who has fixed his geometric web to some protuberances on the trunk.

The bark, however, is thickly dotted over with small yellowish mites, very similar to cheese mites in size, form, and colour. Some of these mites are creeping on the outside of the film also, and a few of them are captured in the webs of the Epeira. No other trees appear to be affected except the limes, and only one particular row of these. I have found a few of the mites, but no film, on other limes in the grounds, but none on horse-chestnuts or laburnums which stand nearer to the affected trees.

How has this film been produced? and are the mites connected with it as cause or effect?

F. T. MOTT.

Leicester, September 23.