

describe the apparatus and the methods he employs with sufficient detail; his acquaintance with the psychology of æsthetics is defective; the analogies which he presses between tones and colours are unsound. Yet, despite these manifest shortcomings, the book is to be welcomed as the sincere attempt of an enthusiast, who has spent much time and money on his hobby, to give the world some idea of its interest and of its value. No doubt, seeing is here verily believing; but it is easily imaginable, as Sir Hubert von Herkomer states, that to sit at the author's "instrument and improvise for half an hour whilst watching the ever-varying combinations of colour on the screen produced by the playing is not only an unspeakable delight, but of real health-giving effect on the sense of colour." Apart from his absurd division of spectral colours on the basis of our musical scale, "the main advantages of colour-music as an art" would, as the author rightly says, "remain unaffected, and the force of the chief arguments, which can be advanced in support of it as a separate and distinct art, would not be weakened in the least." It is, as we have said, impossible to describe such æsthetic enjoyment; one must experience it. C. S. M.

*Annals of the Royal Botanic Garden, Calcutta.* Vol. xii., Part i.:—"Asiatic Palms—Lepidocaryæ." By Dr. Odoardo Beccari. Part ii.:—"The Species of Dæmonorops." Vol. i., Letterpress. Pp. vii+237. Price Rs. 8 or 12s. Vol. ii., Plates. Pp. vii+109 plates. Price Rs. 39 or 2l. 18s. (Calcutta: Printed at the Bengal Secretariat Press, 1911.)

THE appearance of the first portion of Dr. Beccari's monographic account of the Asiatic Lepidocaryæ, devoted to the genus *Calamus*, was recorded in NATURE of August 12, 1909. It affords us pleasure to announce now the appearance of a second instalment of this great work, dealing with the genus *Dæmonorops*, which, like *Calamus* itself, consists of "Rotangs," and, among the genera of *Palmeæ*, is only less important than *Calamus* because it includes a smaller number of recognisable forms.

The methods and the style adopted in the treatment of the previous genus have been followed in the case of *Dæmonorops*. These have already been noticed in detail, and, therefore, do not require further discussion. The ample descriptions and excellent illustrations are equal in merit to those in the earlier contribution, and this further instalment of the author's monograph places systematic students once more under a great obligation to him and to the Calcutta Botanic Garden, of the "Annals" of which it forms part. All who are interested in palms will look forward with interest to the conclusion of the task on which Dr. Beccari is engaged, and to which, as the two contributions already at our disposal testify, he has devoted himself with such patient enthusiasm and so great a fund of accurate knowledge.

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#### LETTERS TO THE EDITOR.

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#### The Principle of Reflection in Spectroscopes.

THE application of a reflector to pass light back through a prism, or prisms, is usually ascribed to Littrow. Thus Kayser writes ("Handbuch der Spectroscopie," Bd. I., p. 513), "Der Erste, der Rückkehr der Strahlen zur Steigerung der Dispersion verwandte, war Littrow" (O. v. Littrow, *Wien Ber.*, 47, ii., pp. 26-32, 1863). But this was certainly not the first use of the method. I learned it myself from Maxwell (Phil. Trans., vol. 150, p. 78, 1860), who says, "The principle of reflecting light, so as to pass twice through the same prism, was employed by me in an instrument for combining colours made in 1856, and a reflecting instrument for observing the spectrum has been constructed by M. Porro."

I have not been able to find the reference to Porro; but it would seem that both Maxwell and Porro antedated Littrow. As to the advantages of the method there can be no doubt. RAYLEIGH.

#### Acquired Characters and Stimuli.

IN my letter in NATURE of March 21, I pointed out the fact that Dr. Archdall Reid does harm by declaring that the term "acquired characters" as ordinarily used by biologists is not intelligible (is, in fact, nonsensical), giving as his reason that all characters are acquired. That is a "quibble," because the term used by Lamarck (which has been translated as "acquired characters") is "changements acquis," and it is abundantly clear that the *change* spoken of by Lamarck is a change from the normal characters of a wild species. Such normal characters may be, of course, described as "acquired" when considered in comparison with those of the germ from which an individual develops. But that is not the comparison made by Lamarck or by anyone else who uses his term or the English modification of it, and it is a perversion of fact to pretend that it is. It is the plain fact that the *acquired changes* indicated by Lamarck are *changes* as compared with the *normal characters* of the species. There was no allusion in my letter to the terms "innate characters" or "congenital characters." They, of course (as Dr. Reid says), do not mean the same thing as "congenital variation." Dr. Reid in condemning them is beating a mannikin dragged in by himself, diverting attention from the matter in hand. The "acquired changes" or "acquired characters" of Lamarck are properly contrasted with normal characters and not with Dr. Reid's imaginary congenital characters. Considerations as to whether the blacksmith's arm or that of an ordinary man is "normal" are not to the point, since Lamarck was concerned with wild species of plants and animals, of which the "normal specific form" and the "normal specific environment" are understood and known in some detail.

Nor is Dr. Reid justified in attempting to limit the influences under which "acquired changes" or departures from normal specific form are developed to "use and injury." A variety of factors of the en-