

moderate-sized volume. The author deals with the production and cause of colour, phenomena of colour, the eye, effects of contrast, and colour measurement. He quotes largely from the standard works of Chevreul, Rood, and, to a smaller extent, from others. Many useful tables are given with regard to the effects of juxtaposed colours on each other, the illumination of coloured objects by coloured lights, and concerning the colour and luminosity of the solar spectrum. The absorption spectra of about forty of the commonest pigments, dyes, and coloured glasses are shown as curves. There are eleven full-sized coloured plates which illustrate in a striking manner the effects of colour combinations and similar matters, though when the student of colour sees the fourteen absorption spectra that are represented in full colour he will wish that it were possible to get such clean-cut absorptions as the diagrams exhibit.

Although this is a revised edition, there is still room for revision. For example, the reader would imagine from the statement at p. 79 that Thomas Young followed Brewster and Maxwell and criticised their theories. If the starch granules in a Lumiere colour plate were of the size that they are stated to be, the grain would be far too fine to be visible by any microscopical methods; and in this process one does not obtain a negative, and then from this prepare a positive which is "viewed in conjunction with a similar screen." In three-colour printing the negatives are not taken through "red, blue, and yellow screens respectively."

Icones Plantarum Formosanarum nec non et Contributiones ad Floram Formosanam. By Bunzo Hayata. Vol. v., pp. vi+358+xvii plates. (Taihoku: Government of Formosa, 1915.)

THIS fifth volume of the *Icones of the Plants of Formosa* is devoted especially to new material collected in Formosa since 1912. It is a worthy successor to the previous handsome volumes, and contains studies on 385 species and eight varieties of flowering plants and ferns. The studies are illustrated by seventeen quarto plates and numerous text figures. Two hundred and three of the species are new to science, and twenty-three genera hitherto unrecorded for the island are added to the flora. At present the flora is known to comprise 160 families with 914 genera and 3325 species. One particularly interesting discovery is that of a new species of the ancient fern *Archangiopteris*, the genus first found by Henry in Yunnan in 1899. The addition of the families *Burmanniaceae* and *Xyrideae* to the flora of Formosa is also noteworthy. A large number of ferns are dealt with in this volume, the majority belonging to the *Polypodiaceae*; one plant called *Polypodium urceolare* may not belong to this genus, as it is considered by some pteridologists to be a subgenus of *Davallia*. A long discussion of the points at issue is given in the text.

The volume is very well printed and the illustrations are remarkably clear and good.

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LETTERS TO THE EDITOR.

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Science and the State.

IN view of the efforts that are now being made in many quarters to bring about better relations between science and the State, it is interesting to recall Sir David Brewster's dedication of his "Memoirs of Sir Isaac Newton." It is addressed to the Prince Consort, and dated from St. Andrews sixty-one years ago, and yet it is sufficiently suggestive of the circumstances of the present day to be reproduced in full.

To

His Royal Highness

PRINCE ALBERT, K.G.,

Chancellor of the University of Cambridge.

SIR,—In dedicating this Work to your Royal Highness, I seek for it the protection of a name indissolubly associated with the Sciences and the Arts. An account of the Life, Writings, and Discoveries of Sir Isaac Newton might have been appropriately inscribed to the Chancellor of the University of Cambridge, the birth-place of Newton's genius, and the scene of his intellectual achievements; but that illustrious name is more honourably placed beside that of a Prince who has given such an impulse to the Arts and Sciences of England, and whose views, were they seconded by Statesmen willing to extend Education and advance Science, would raise our country to a higher rank than it now holds, among the nations of Europe, in the Arts of Peace and of War. It is from the trenches of Science alone that war can be successfully waged; and it is in its patronage and liberal endowment that nations will find their best and cheapest defence.

That your Royal Highness may be enabled to realise those noble and patriotic views respecting the national encouragement of Science, and the consolidation of our Scientific Institutions, which you have so much at heart, and that you may long live to enjoy the reputation which you have so justly earned, is the ardent wish of

Sir,

Your Royal Highness's

Humble and obedient Servant,

DAVID BREWSTER.

St. Leonard's College,
St. Andrews, May 12, 1855.

The relation of science to the State is referred to on various occasions in the memoirs; and the financial worry, to which the unfortunate illness of the great philosopher in 1692 is attributed, is held up as a black example of national neglect. The project which Brewster favoured was State support for men of science on the lines of the French Academy, and to the lack of such support Brewster attributed the neglect of the Newtonian philosophy in England, while it was being successfully developed in France by Laplace, d'Alembert, Clairaut, and others.

A perusal of the memoirs at the present time carries other lessons. The fierce controversies among the contemporary men of science about priority and plagiarism, which led Newton, time after time, to abjure the society of philosophers, and the factious criticism which they employed, make it clear that, unless they have changed in character, the fullest recognition of men of science by the State will not be exactly the beginning of the millennium; and they change their