

It is thus not safe to put forward any assumptions, based either upon chemical relationship or similarity of general properties, concerning the behaviour of colouring matters in this respect; and therefore, recognising the value of a systematic examination, the author gives, at considerable length, the results obtained in recent years by Hummel.

When discussing certain experiments in which arc lamps have been employed as the source of illumination, it is stated that the electric light behaves similarly, but less energetically, than sunlight; the average bleaching action of sunlight having been estimated at 30 per cent. of its total luminosity, while that of the electric arc is only about 6 per cent.

The third section of the first volume deals with operations subsequent to dyeing, such as soaping, milling, steaming, &c. It is very short, extending only to four pages. Two appendices, the first dealing with theories of dyeing, and the second with the elements of chromatics, are added, and the volume ends with a very complete bibliography of the works on dyeing published during the last 100 years.

The second volume is devoted to a description of the machinery used in dyeing and allied processes, a very large space, equal in fact to the whole of the first volume, being occupied by the subject of water purification; which, although of great importance to the dyer, certainly receives undue prominence. The great fault of the work, as a whole, is indeed a certain lack of proportion; many essential points receiving scant attention, while valuable space is occupied to smaller advantage by long descriptions of less important subjects—such, for instance, as the Westinghouse air-pump. Nevertheless, the book should prove a valuable reference work for managers of works, or students of dyeing, to whom it can be heartily recommended.

WALTER M. GARDNER.

OUR BOOK SHELF.

The Fauna of British India, including Ceylon and Burma. Published under the authority of the Secretary of State for India in Council. Edited by W. T. Blanford. "Moths," Vol. iii. By G. F. Hampson. (London: Taylor and Francis, 1895.)

WE have already noticed the two preceding volumes of this work in some detail; and it is therefore unnecessary to say more respecting the general execution of this volume than that the letterpress is arranged in a similar manner, and that the execution of the woodcuts is equally good. The present volume includes the last two sub-families of the *Noctuidæ*, the *Focillinæ*, and the *Deltoidinæ*, and one or two small families of the *Geometridæ*. Respecting the *Deltoidinæ*, Mr. Hampson remarks: "It exhibits a gradual development from forms with straight palpi fringed with hairs above, such as *Hypenæ*, which is closely allied to the *Sarrothripinæ*, and to the ancestors of the *Noctuidæ* and *Nolinæ*, through forms with oblique palpi, to a group possessing palpi of an extremely curved sickle-shaped type; from this group arose the stouter-built, more typically noctuiform and nocturnal *Focillinæ* and *Quadripinæ*." We seriously doubt the advisability of speaking in such a positive manner on questions which cannot, in the present state of our knowledge, be anything more than very doubtful inductions, at the best.

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After the *Noctuidæ*, Mr. Hampson places the families *Epicopiidæ*, *Uraniidæ*, *Epiplemidæ*, and *Geometridæ*, for the last of which he has followed Mr. Meyrick's classification. Under the *Uraniidæ* he includes a considerable number of genera, most of which, except *Nyctalemon*, were included by previous authors in the *Microniidæ*, and other families of *Geometridæ*. A fourth volume is to conclude the Indian *Macro-Lepidoptera*, and to contain the *Pyrallidæ* and a supplement; and we are glad to learn that Lord Walsingham is working at the *Micro-Lepidoptera* of India.

Mr. Hampson speaks of the difficulty of the sub-family *Boarmiinæ* in the *Geometridæ*; and under the genus *Boarmia* itself he includes no less than eighty-five species, divided into several sections, to some of which sub-generic names are applied. As, however, no less than twenty-eight generic names are included as synonyms of *Boarmia*, we think it would have been better to have treated some, at least, as provisionally entitled to generic rank. And this leads us to a consideration of the most serious defect in all Mr. Hampson's work, which has already been pointed out in more than one quarter. He is too much inclined to place forms together as varieties, and then to treat them as actual synonyms. It is true that in a few instances in the present volume he discriminates between named varieties; but far more frequently he gives a description of a species in a few lines, preceded by a string of half-a-dozen or more names, without any hint of how far these names represent distinct forms, or which names represent his idea of the species he is describing, even when he notices that the species is variable. While making allowance for exigencies of space, this is hardly fair to those who will use his books; for even if we assume that Mr. Hampson is always correct in his views as to which forms are entitled to specific rank, and which are only to be regarded as varieties, it is not to be supposed that every one will take exactly the same view of a doubtful case; and we greatly fear that if an entomologist meets with an insect which does not correspond with the description of a species given by Mr. Hampson, he will at once describe it as new, and, in many cases, redescribe one of the forms which Mr. Hampson has rejected, with a light heart, as a mere synonym.

Apart from this serious defect, we can recommend the book as a most useful and, indeed, quite indispensable manual for all who are interested in East Indian Moths.

W. F. KIRBY.

LETTERS TO THE EDITOR.

The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.

The Origin of the Cultivated Cineraria.

RETURNING from abroad, I have just seen Mr. Dyer's letter in *NATURE*, March 14. Of the matters there treated I ask leave now to deal with one only, that numbered (18). This is a point of fact—the origin of the cultivated Cineraria. At a meeting of the Royal Society, on February 28, Mr. Dyer exhibited a specimen of *Cineraria cruenta* from the Canaries, side by side with a plant of the common cultivated form. With the object of minimising the value of "sports" in evolution, this exhibition was made to illustrate what can be done "by the gradual accumulation of small variations." Mr. Dyer stated, if I rightly understood him, first, that of the two forms exhibited, the one had been produced from the other; secondly, that, as far as is known, this process of evolution had been accomplished by the gradual accumulation of small variations, and not by the selection of "sports" or seedlings presenting notable and striking variations. That in the case of a plant much modified by gardeners in recent times such a history would be highly unusual, Mr. Dyer will, I think, admit.