

THE MOTHS OF THE WORLD.

A Synonymic Catalogue of Lepidoptera Heterocera (Moths). By W. F. Kirby, F.L.S., F.E.S., &c. Vol. I. Sphingides and Bombyces. (London: Gurney and Jackson, 1892.)

THE publication of the first volume of Mr. Kirby's Catalogue of Heterocera cannot fail to be regarded as a great event amongst students of exotic moths, and should mark an epoch from which is to commence the great work of reducing the vast amount of material they have to deal with to some kind of system and order, from the state of chaos produced by the greater number of those who have taken up the subject continuing to describe innumerable species, forms, and varieties, without any systematic study or attempt to define the limits of the families and genera they placed them in. So vast and scattered was the literature on the subject that it was almost hopeless to attempt to discover even how many species had been described in any given genus, or to say with any certainty that the forms to be dealt with had not been described by other authors; and if the subject in hand was the study of a local fauna, and not the monographing of a group, the only plan it was possible to adopt was to place the species in approximately the right genus and trust more or less to chance, according to the availability of large collections for consultation, that they had not been described elsewhere. Students will now have no such excuse for inexact work, and, up to the end of the numerous and very remotely connected groups of families known as the Bombyces, will have a complete and easily consulted catalogue of all described species, with the localities they come from, so that they will be able to see at a glance to which species the forms they are trying to identify are most likely to belong, and having full references to the books in which they are described their labours will be lightened by almost half, as students of the European fauna who have had Staudinger's catalogue to help them will fully appreciate. No one but Mr. Kirby who has lived his life among the books on the subject, and has been collecting his materials for the last twenty years, as he tells us in his preface, could have made the catalogue as complete as he has done, and though it is of course impossible that such a volume could have been put together without a few errors and omissions creeping in, yet some months of work with the advantage of being constantly able to borrow the proof sheets has shown how extremely few these are.

As the arrangement adopted is in the main that of the British Museum, or of some well known and approved works on special groups, and as there is also an index to the genera, there should be no real difficulty in finding the species required; and since the complete index to species and genera will take up one out of the five volumes required to complete the catalogue, it is obviously impossible that there should be a specific index to each volume. It is to be hoped that Mr. Kirby will be able to bring out the other volumes within the next two or three years, and will receive the support of all those interested in the subject. This, indeed, he can hardly fail to do, as they will find themselves quite unable to get on without his catalogue when once accustomed to the use of it. The marking of the type of each

genus by an asterisk is an addition of very great value, as compared to the catalogue of Rhopalocera by the same author; and the only serious fault to be found with the book is the upsetting of many well-known names by the adoption of Hübnerian genera, and in especial those of the "Tentamen," a mere hand-list of names for that author's private use, and never published or intended to be published, and in accepting which Mr. Kirby will find hardly a single lepidopterist to follow him. Hübner's "Verzicknitz" stands on rather different grounds; but even that work is merely a childish collection of names, the species being classified into very heterogeneous groups solely by colour and pattern, and since the divisions which subsequent authors have been pleased to term his genera, though that name might equally well be applied to other of his sections, are neither defined nor the types indicated, it is placed out of Court according to the British Association rules; then again a few well-known generic names, such as *Cossus*, are upset as having previously been used in a specific sense. If these principles were adopted and pushed to their logical conclusion every family of Rhopalocera would have to be re-named and innumerable other changes made, so that nomenclature would be vastly more confusing than it is even now, and the whole subject made unintelligible except to the few who had leisure to make a special study of it. The classification adopted is in the main admirable; the *Castniidæ*, however, should perhaps be placed much lower in the scale; the *Uraniidæ* are rightly disassociated from the *Geometridæ*, of which they have hitherto been placed as a sub-family, but a better arrangement would have been to have included in the family the genus *Micronia* and allies, and to have placed it next to the *Epiplemidæ* (*Erosiidæ* auctorum) and the *Geometridæ*; but these are facts of very recent recognition. The *Agaristidæ* again would come better next the *Noctuidæ*, from which they are hardly separable, and the *Syntomidæ*, which Mr. Kirby calls the *Zyganinæ*, are more usually separated from the *Zyganidæ*, of which the *Chalcosiinae* and *Thymarinæ* are considered sub-families. Then again the *Lithosiinae Nyctemerinae* and the *Nyctoolinae* (here called *Cymbidæ*) are at most sub-families of the *Arctiidæ*; and the *Sphingidæ*, which are very rightly placed next the *Notodontidæ*, should have been preceded by a family composed of the genus *Eupterote* and allies which are still confounded with the *Lasiocampidæ*, a family with which they have little or nothing in common. All these, however, are matters of very secondary importance, and the catalogue amply fulfils the one thing required of it that it should be as complete and the references as correct as possible.

G. F. H.

OUR BOOK SHELF.

Grasses. By C. H. Johns, M.A. 96 pp. (S.P.C.K.)

THIS is a separately published appendix to the late Rev. C. H. Johns's "Flowers of the Field." In its present form it will be acceptable to students who wish to study more minutely our common grasses.

The first three pages are devoted to general remarks on Order Gramineæ. On p. 3 a list of the best fodder grasses of Europe is given; *Alopecurus pratensis*, a very valuable and generally useful grass, is omitted, whilst