BOOK NOTICES.

A NATURAL HISTORY OF THE BRITISH LEPIDOPTERA.—By J. W. Tutt, F.E.S.; Vol. I. Swan, Sonnenschein & Co., London, 1899.

In this excellent work of 560 pages the first twelve chapters are devoted to the origin of the Lepidoptera ; the ovum or egg ; the embryology of a lepidopterous larva ; parthenogenesis, external and internal structure of a lepidopterous larva ; variation of the imagines ; protective coloration and defensive structures of lepidopterous larvæ and classification of the Lepidoptera, with a plate on which is given a phylogenetic tree, illustrating the development of the lepidopter from a hypothetical base. Part II. is devoted to the Sphingo-micropterygid stirps, the Micropterygids, the Nepticulides, the Cochlidides and the Anthrocerides.

This first volume on the British Lepidoptera is a model in its way, and gives promise that when the entire work is completed little will be left to be desired. One would have expected a chapter on the pupal stage following that on the larva, but probably this will appear in a future volume, as well as the anatomical structure of the imago. The subjects in the first part are dealt with very fully, and it would almost appear that every writer of importance had been culled from, yet the work is not entirely a compilation, for the author's own observations and conclusions are everywhere in evidence.

The subjects of the second part are even more exhaustively treated than those in the first, which is very proper in a work of this character. Six pages and a half are devoted to the first insect dealt with, *Micropteryx calthella*, L., under the headings : synonymy, original description, imago, sexual dimorphism, variation, comparison with other species, egg-laying, ovum, habits of larva, larva, cocoon, pupa, food-plant, habitat, time of appearance, localities and distribution. It is rather discouraging to the student of North American micros to see how full and complete a history is given of these insects in England, while our knowledge of the species in this country stands in comparison to what remains to be learned like small and remote oases in the great desert. It is impossible to do justice to a work of this character in the short space that can be allowed, but no worker on the Lepidoptera should be without it.

C. H. FERNALD.

CATALOGUE OF THE LEPIDOPTERA PHALAENAE IN THE
BRITISH MUSEUM, Vol. 1., Syntomidæ.—By Sir George F. Hampson,
Bart., London. Printed by order of the Trustees, 1898.

This work, on the general plan of the old British Museum catalogues, avoids all the objections that have been urged against that work. The British Museum authorities are especially fortunate in possessing the services of so thorough and accurate a worker as Sir George Hampson. The volumes are really monographs of the families treated, all species that have been described being included, and not only those represented in the British Museum. In this respect the title fails to do the work justice. A set of plates accompanies the volume, but under a separate cover, which is explained on page vii, of the preface. A synoptic table of the genera is given and of the species in each genus, a description of each species with bibliography and the larvæ when known. An introduction of fifteen pages deals with the general characters of the Lepidoptera in all stages. The author recognizes fifty-two families of Lepidoptera, and he has arranged them in the form of genealogical tree. It would take altogether too much space to discuss this tree in full, but it may be said that it presents many good points, as well as others against which objections can be urged. A key to the families follows.

The Syntomidæ of the world are made to comprise one hundred and sixty-eight genera, and eleven hundred and eighty-four species, of which by far the greater portion are from the tropics of South America. The family runs into the Arctiidæ, it being stated (page 20) that no very exact lines can be drawn between them. Under these conditions it is not surprising that certain genera are included, which, in the opinion of the reviewer, are Arctiidæ. A large table showing the phylogeny of the genera is given, necessarily without reference to the larval characters, as only about one and one-half per cent. of the larvæ of this family have ever been described. The table is without explanation, except the short discussion on page 21, which refers indirectly to it. The few North American species of the Syntomidæ are arranged as follows:

477 *Cosmosoma auge*, Linn.

569 *Pseudomya minima*, Grt.

It is gratifying to have this species at last placed correctly.

679 *Syntomeida ipomeæ*, Harr.

My partial description of the larva of this species is not referred to.
(Boston Soc. Nat. Hist., XXVII., 138.)

- 680 *Syntomeida epilais*, Walk.
- 797 *Didasys balœ*, Grt.
The larva is unknown.
- 923 *Lymire Edwardsi*, Grt.
This is the *Scepsis Edwardsii*, at times so destructive to the rubber banyan tree of Florida; transferred to one of Walker's genera.
- 928 *Horama texana*, Grt.
The larva is unknown.
- 1117 *Eucereon confine*, H. S.
Nelphe carolina, Hy. Edw., is made a synonym of this, the larva being unknown.
- 1148 *Scepsis fulvicollis*, Hubn.
Under this heading *Packardii*, Grt., is recognized as a variety only.
The larva is not referred to, though it has been described by Coquillett. (Can. Ent., XII., 44)
- 1149 *Scepsis Wrightii*, Str.
Coquillett's notes on the pupa (Journ. N. Y. Ent. Soc., VI., 249) were published too late for insertion.
- 1150 *Propyria Schausi*, Dyar.
This is referred from the United States under a misapprehension, unless the British Museum possesses specimens from our country.
The types are two specimens in the Edwards collection from Jalapa, Mexico, and I do not know of the occurrence of this species further north.
- 1152 *Lycomorpha Grotei*, Pack.
The larva is unknown.
- 1153 *Lycomorpha fulgens*, Hy. Edw.
The larva is unknown.
- 1154 *Lycomorpha pholus*, Dru.
- 1165 *Ctenucha venosa*, Walk.
Cressonana, Grt., is made a synonym, certainly erroneously, as it is larger, broader winged, the fringe of both wings continuously white outwardly, the wing markings narrower and paler yellow; the palpi are red on the sides except the terminal joint, not on the under side only as in *venosa*. The larva is unknown. Dr. Packard has published notes on a supposed larva of *Cressonana* (Ann. N. Y. Acad. Sci., VIII., 89).

1166 *Ctenucha sanguinaria*, Strk.

Wrongly credited to Stretch instead of Strecker. This is much more likely to be a variety of *Cressonona* than the latter to be related to *venosa* at all closely. The larva is unknown.

1168 *Ctenucha brunnea*, Str.

The larva is unknown.

1169 *Ctenucha multifaria*, Walk.

The larva is unknown.

1170 *Ctenucha rubroscapus*, Mén.

The larva is unknown.

1171 *Ctenucha virginica*, Charp.1174 *Dahana atripennis*, Grt.

The larva is unknown.

Erruca pertyi is shown to be a Brazilian insect.

The larvæ of the North American species are known in 43 per cent.

Finally, when it is remembered that the genera of the Syntomidae were heretofore in almost inextricable confusion, the great value of this publication to working entomologists may be appreciated. The undertaking of a series of monographs of the families of the Lepidoptera of the world, by a competent author, is one of the most important aids to entomology that has ever been produced, and it is entirely fitting that these should emanate from the British Museum. HARRISON G. DYAR.

Mr. Arthur Gibson, who has been for three years Secretary and is now President of the Toronto branch and a Director of the Entomological Society of Ontario, has recently been appointed assistant to Dr. James Fletcher, Entomologist and Botanist of the Experimental Farms of the Dominion.

It is with much regret that we record the death of Edward Winslow Cross, youngest son of Judge and Mrs. David Cross, which took place at his home in Manchester, N. H., on the 23rd of April. He was a young man of great promise, being only in his 24th year, and was studying law with earnest application at the Harvard Law School up to a fortnight before his death. Two years ago he graduated from Amherst College, Mass. He was an ardent entomologist and had formed a remarkably fine collection of Geometridæ. To his parents and family we beg to offer our respectful sympathy.

Mailed June 2nd, 1899.