

BOOK NOTICES.

BUTTERFLIES; THEIR STRUCTURE, CHANGES, AND LIFE HISTORIES, with special reference to American forms; being an application of the Doctrine of Descent to the study of Butterflies. With an Appendix of Practical Instructions, by SAMUEL H. SCUDDER. New York, Henry Holt & Co., 1881.

This book will be read by every Lepidopterist with mingled interest and disappointment; many highly important facts are given, and ingenious and probable deductions made from them; on the other hand, exploded fallacies are gravely used as proved facts, and from them necessarily erroneous general laws deduced. It is sufficient to mention the alleged fact that individuals of *Danais Archippus* develop and lay their eggs one after another for a year and a half, and to refer to the alleged parallel generations of *Argynnis Myrina*. Mr. W. H. Edwards, years ago had shown the errors of observation and deduction involved in both of these cases, but here they appear in their original guise without note or comment.

Very few authors later than 1850 are quoted; the note on p. 204 fixes the date of the book as before 1877, when indeed the whole of it was delivered as a series of Lowell Lectures at Cambridge several years before 1877; however, different portions of this book had appeared in various magazines, as the story of *Myrina* in 1872, of *Archippus* in 1876 and other sections in 1877. This would be no disadvantage if the work had been properly revised with reference to the advances made in the last decade, but unfortunately this has not been done. The works of Weismann—since 1874 the best author on color pattern and seasonal dimorphism—are ignored, although twenty pages are devoted to the first of these subjects and nearly as many to the other. So are those of Paul Mayer—the only authority at present on the ancestry of insects—and *Hatscheck's Embryology of Lepidoptera* published several years ago, which singularly contradicts the statement on p. 10, that “very little is known * * of the formation of the embryonic caterpillar.”

The drawings in the “Butterflies” are generally good, but some are very bad; for example the eggs of *Hypophlæas*, p. 7, *Philodice* and *Thoe*, p. 8. The latter looks something like a *Parnassius* egg, but in neither shape nor marking bears any resemblance to that of *C. Thoe*, which is very much flattened and studded with large starry projections. The drawings from Harris are inserted without any correction, or even mention of the very noticeable error which is pointed out in Harris' preface—the artist having provided four footed butterflies with a superfluous front pair of legs in thirteen instances. In spite of such matters of detail the work is valuable for any beginner bold enough to try to untangle such a Chinese puzzle as the author's nomenclature, which is entirely original and adopted by himself only, either here or abroad. As a reviewer in *Nature* points out, the recognized standard works of systematic nomenclature should be followed in a book intended for beginners and such innovations relegated to technical papers. The genera are those of Mr. Scudder's “Systematic Revision and were shown to be valueless by Messrs. Peabody and Mead in the *Canadian Entomologist*; if anyone cares for more information as to this matter, the last number of that journal (December 1881) may be referred to.

Particular attention is called to the introduction of English names as an improvement in the system of Linnæus. Open where you please and you meet such names as the Banded Purple, the Viceroy, the Monarch, the Blue-eyed Grayling, The Tiger Swallow-tail, etc., and usually without reference in the text by which the student may know what insect is meant, though this information may be obtained by reference to a glossary in the appendix.

Let us analyze one of the expressions, for example the Red Spotted Purple. *Basilarchia Astyanax*, meaning *Limenitis Ursula*. In the first place it is not red-spotted, in the next place it is not purple, in the next place there is no such genus as *Basilarchia*, and in the last place *Astyanax* is a resurrected name un-

known for a hundred years until recently disinterred by Mr. Scudder. The author speaks of "a continuous stream of Blue-eyed Graylings, p. 1, referring to *Satyrus Alope* called by Mr. Scudder *Cercyonis Alope*, and classed under the Meadow Browns in the appendix. In the text he calls it a Grayling, but as the color is not gray, why not a Brownling? and moreover a Grayling is a fish, (*vide* Izaak Walton), and the name must be regarded as preoccupied in ichthyology. We find *Xanthidia Nicippe*, the Black-bordered Yellow. The butterfly is orange not yellow, and the name might apply to *Colias Philodice* but not *Nicippe*; it is a misfit. *Philodice*, however, appears as the Clouded Sulphur, though it is not clouded, and on one page (189), this is called the Sulphur Yellow, creating perplexity. Indeed these instances and the reference on p. 287 to the Fireweed as having a blue flower, suggests that the author may have perceptions of color different from those which are usually considered the normal standard. Besides this misapprehension there is a constant effort to deduce general principles from too few facts, or even supposed facts; for example, the philosophical discussion upon the alleged fact that caterpillars in hatching, always devour their eggshells; in point of fact they frequently leave the shells almost intact. So with the incorrect statement that albino females of *C. Philodice* never appear in the first brood of the season, illustrating the law given by the author that "since melanism is a southern and albinism a Northern peculiarity, we should anticipate melanism in the hot and albinism in the cool season." Another instance is shown in the assumption that the polymorphic forms of *Lycaena Pseudargiolus* must be related as are the polymorphic forms of *Papilio Ajax*, and the philosophical discussions following this assumption.

The Appendix of practical instructions is admirable, and will be read with interest and profit by both the tyro and the specialist.

If the demerits of the book have been more touched upon than they merit it is because we all know that we may expect good results from Mr. Scudder, and the shortcomings of his work need to be pointed out all the more on that very account.



Scudder, Samuel Hubbard. 1882. "Butterflies: their structure changes and life-history [Review]." *Papilio* 2(1), 16–17.

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