

THE LEPIDOPTERA OF PENNSYLVANIA. A MANUAL. By Harrison M. Tietz. xii+194 pp., 2 figs. State College, Penna., [Autumn 1952]. [Price \$3.00; available from: School of Agriculture, Agricultural Experiment Station, Pennsylvania State College, State College, Penna., U. S. A.]

This is the first list known to me of the Lepidoptera of the entire state of Pennsylvania, and includes all the butterflies, the macroheterocera, and several families of the larger "micros." For each species listed are given: name; reference to original description; list of all synonyms, aberrations, forms and subspecies (no matter where they may occur), all with their original references; occasionally a brief commentary on the species; list of Pennsylvania localities for the species, arranged under life zones; list of foodplants of the species, as recorded in the literature or observed by Dr. TIETZ; references to life history studies. In addition to this, an introductory portion acknowledges records from various institutions; states that nomenclature follows the McDunnough 1938-1939 List (which it often does not — see below); provides a "Plan of the Work" and a list of supplementary references; gives under "List of Works Quoted" a list of periodicals (title only), list of separate works; then a list of "Authors' Names and Abbreviations" in which are also to be found names of several private collectors who have contributed records.

The appearance of the first account of Pennsylvania Lepidoptera should have been an occasion for rejoicing, especially for those of us who live in that state. Unfortunately it is not. Certainly it is a very extensive account, with a pleasingly large number of localities cited for most of the species. Furthermore, no attempt on this scale to gather the references to the original descriptions into one place has been made since Dyar's "List" of half a century ago. Again, one is often astounded at the large number of host plants cited for many of the species. These most happy points, however, soon fade before the consternation and exasperation one feels on examining the work a bit more closely. The references are to any and all forms of the species that Dr. TIETZ has been able to find, whether they were described and are known only from Arizona, California, or wherever. This extraneous material alone must have increased the bulk of the work by a dozen or more pages. The distribution records are often hard to trace — they are given under the admittedly frequently controversial life zones, rather than by counties. A gazetteer at the end of the book is supposed to rectify matters, but in addition to making constant reference to it necessary to locate places, one soon finds further that there are localities not listed in the gazetteer, or towns of the same name are given for two different counties (and under the species he does not distinguish between them). The list of foodplants is completely uncritical. Almost never is there indicated the one most favored plant that many species are well known to have. An exception is the list of plants under *Liparis dispar* Linn., the Gypsy Moth, in which a generalization of feeding preference is made at the beginning of the list, and throughout the list the plant species are marked with the degree of preference by *L. dispar*. He gives no source for these host records individually. (We gather that some, perhaps most, are taken from the works cited, but this is not always so, and Dr. TIETZ appears to have included many records from his own local studies — valuable information, rendered almost worthless by his failure to indicate the fact.)

In addition to these points, which affect those aspects of the work which strike one most favorably at first, there are a number of other errors, both of commission and omission. In the butterflies alone the following species, known to be Pennsylvanian, are omitted: *Euchloe olympia*; *Strymon acadica*; *S. caryævorus*; *Lycæna epixanthæ*; *Glaucoopsyche lygdamus*. The last, in fact, was described some years ago as ssp. *nittanyensis* Cherm., from material taken very near Dr. TIETZ'S home town of State College! Similarly, though *Papilio cresphontes* is mentioned, the name *pennsylvanicus* Cherm., proposed a number of years ago for the Pennsylvania subspecies and also based on a type series from State College, is omitted! Again only in the butterflies, the following incorrect nomenclature has been found: *Eurymus* (instead of *Colias*): *Cissia* (instead of *Euptychia*, or even *Megisto*); *Satyrodes canthus* (instead

of *Lethe eurydice*); *nycteis* under *Phyciodes* instead of *Melitæa*, where it belongs; *Strymon calanus* (instead of *S. falacer*); *Plebeius* (*sic*) *scudder*i (instead of *Plebeius* — or *Lycæides* — *melissa samuelis* Nab.).

The most unaccountable omissions of all are the several very important recent works on the eastern part of the continent which Dr. TIETZ has completely failed to cite, not to mention the majority of recent smaller studies. All references to Holland's *Butterfly Book* are to the early edition, despite the fact that the revised edition has been published now over twenty years! There appears to be no reference to Forbes' *Lepidoptera of New York State*, an indispensable publication. Klotz' magnificent *Field Guide to the Butterflies* is likewise omitted in its entirety, though this is so recent that omission may have been unavoidable. Had the author paid any attention to this latter, however, most of the nomenclatorial errors cited above would have been avoided. Indeed, had he followed the McDunnough list faithfully, as is claimed, he would have avoided the greater part of them by far.

One could fill many more pages with additional errors. It shall suffice, however to point out just one more: the habit of separating author's name and journal or separate work reference each in a much abbreviated list of its own has made almost impossible any check of literature covered, and makes all these lists useless. How much better, and infinitely more valuable, it would have been had Dr. TIETZ followed conventional practice of including a bibliography, giving author, date, title and full reference of each paper cited. Certainly it would have been long, but he would have shortened his text citations thereby; would have eliminated the worthless lists of authors, separate works and periodicals in the introduction; and would have provided a thoroughly usable list. I believe he would not only have gained utility, but would actually have saved space. Dr. TIETZ' curious manner of listing harks back to the days of W. F. KIRBY and others, when a proper bibliographic citation style had not been developed (nor was then particularly needed).

It is obvious that this book could have been written so as to include not only the information it already has, but much more, and the whole in much more accessible and convenient fashion, and further, at a great saving of space.

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GEROULD GENETICAL COLLECTION NOW AT YALE UNIVERSITY

Professor JOHN H. GEROULD, of Dartmouth College, Hanover, New Hampshire, has transferred his collection of *Colias* to Yale University. Included are the classic broods which allowed him to discover the heredity of the "alba" female form (*Amer. Nat.* 45: 257-283, 1911; *Genetics* 8: 495-551, 1923), the many hybrid broods between *C. philodice* and *C. eurytheme* and between eastern and western populations of *C. philodice* (*Proc. Amer. Philosophical Soc.* 86: 405-438, 1943), the "alba" gynandromorph (*Journ. Exper. Zool.* 42: 263-286, 1925), the "blue-green" and "olive-green" sets (*ibid.* 43: 413-425, 1926), the several Hanover population samples, and a number of other important series. The specimens are in Denton mounts or are spread but not pinned. Gradually, certain broods of this great collection will be mounted on pins and arranged with the large representation of *Colias* genetic materials in my laboratory. Already the GEROULD broods have been used in a study of hindwing discal spot genetics, published elsewhere (*Lepid. News* 8: 163-166), and the collection will be used for similar investigations in the future.

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