

historian of science who has devoted much of his long career to the work of Newton and who is therefore at home in the maze of contemporary sources. Behind the immense amount of concrete information and often subtle analysis of the material lies Cohen's confident sense of Newton the man and the thinker. He has already told us much about Newton; his *Introduction* carries the promise that he can tell us more. We can only hope he will soon do so.

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References and Notes

1. See Newton's own account in various letters of the work achieved during this period in Supplement I of Cohen's *Introduction*.
2. See "The *Annus Mirabilis* of Sir Isaac Newton: Tricentennial Celebration," *Texas Quarterly* 10, No. 3 (Autumn 1967), republished in 1970 by M.I.T. Press.
3. See Cohen's explanation of the term, *Introduction*, p. 3.
4. To be precise, they are: *M* (the manuscript printer's copy), *E₁* (the first edition), *E_{1a}* (Newton's annotated copy of *E₁*), *E_{1i}* (his interleaved copy of *E₁*), *E₂* (the second edition), *E_{2a}* (his annotated copy of *E₂*), *E_{2i}* (his interleaved copy of *E₂*), and *E₃* (the third edition).
5. A random spot check using the first edition revealed no discrepancies.
6. Cohen, *Introduction*, p. 231: "Prodded by Cotes, Newton enriched the *Principia* to a degree that would never have been achieved but for Cotes's intervention. It is clear, I believe, from a reading of the Newton-Cotes correspondence that Newton had originally intended a far less drastic revision of Books II and III than he eventually produced. The credit is Cotes's."
7. In particular, this absence of work sheets leaves unresolved the question of whether Newton employed his algebraic method of fluxions to derive the theorems presented in classical geometric form in the *Principia*.

Lepidoptera

Butterflies of the Australian Region. BERNARD D'ABRERA. Lansdowne, Melbourne, 1971 (U.S. distributor, Entomological Reprint Specialists, Los Angeles). 416 pp., illus. \$39.95.

Australian Butterflies. CHARLES MCCUBBIN. Nelson, Melbourne, 1971 (U.S. distributor, Entomological Reprint Specialists, Los Angeles). xxxii, 206 pp., illus. \$30.

The publication of these two books ends a long period during which there have been no major works on the Australian butterflies, although much new information about them has accumulated. Both books are large and sumptuously illustrated in color and cover their respective fields thoroughly and authoritatively. Diagnostic characters for identification are pointed out, larval food plants are listed, and basic information is given about geographic distribution, life histories, and habitats.

The books are, however, quite different from each other in other respects because of the particular interests and abilities of their authors.

Butterflies of the Australian Region covers not only Australia but the whole zoogeographic unit that includes New Zealand, New Guinea, eastern Indonesia, and such island groups as New Britain, New Caledonia, the Solomons, and Fiji. It will, therefore, be especially valuable to zoogeographers, as well as to taxonomists, in its treatment of such characteristic endemic groups as *Ornithoptera* and *Delias*. The author has done a very thorough job taxonomically, studying types when possible and illustrating many of these. The illustrations, which are of the highest quality, consist of more than 3000 color photographs made by the author. Most of these show specimens, but many are of early stages, environments, and habits. Only the true butterflies are covered. Short sections deal with such subjects as the butterflies' place in nature, mimicry and protective resemblance, and classification and nomenclature, and there is a very interesting short history of the collecting and study of the butterflies of the region. (This includes a photograph of the first specimen of the great high-flying *Ornithoptera*, collected in 1884 or 1885 with a shotgun!) A few new subspecies are named. There are also maps, a glossary, a good selected bibliography, and a general index. Unquestionably all taxonomists and other student of Australasian butterflies will find this book particularly valuable.

Australian Butterflies is illustrated by a vast number of paintings by the author, who is a scion of an Australian family distinguished in the arts. The paintings of specimens are excellent and accurate, and entirely adequate for identification. Only Australia is covered. Not only the true butterflies (Papilionoidea) but the very numerous skippers (Hesperioidae) are included. A great many food plants and the early stages of many species are illustrated. Many charming paintings of butterfly habitats and collecting localities and scenes are very attractive. Perhaps one of the most distinctive, and one of the most valuable, features is the large number of descriptions of butterfly habits and behavior, the majority from the personal observations of the author. These include accounts of courtships and mating behavior, flights, oviposition, larval activities, "hilltopping," and the relationships with ants for which so many Australian Lycaenidae are

famous. Detailed directions for collecting and caring for specimens will be very useful for the amateur. There are also a large bibliography, a map and key to localities, a glossary, and two indexes, one listing the plants separately. Though not based on such wide taxonomic and zoogeographic studies as D'Abrera's work, this is a very important book that will have special appeal to all naturalists and collectors.

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Various Groups of Viruses

Comparative Virology. A conference, Montreal, Sept. 1969. KARL MARAMOROSCH and EDOUARD KURSTAK, Eds. Academic Press, New York, 1971. xvi, 584 pp., illus. \$27.50.

This book arose out of the First International Conference on Comparative Virology. However, it is not a "symposium volume" but a series of long review articles on various groups of viruses written from a comparative point of view. As such it contains a good deal of new material, or at least new ways of looking at known data.

Moves over the last 20 years, initiated by Sir Christopher Andrewes, and brought to fruition by André Lwoff, have resulted in the establishment of an International Committee on Nomenclature of Viruses (ICNV), dedicated to the classification of viruses according to physicochemical criteria, irrespective of the nature of the host. *Comparative Virology*, therefore, comprises much more than just the comparison of viruses of different species of vertebrates or plants; it involves the consideration of physicochemical criteria of the classification of viruses of vertebrates, invertebrates, bacteria, and plants.

The volume opens with an essay on the classification of viruses, in which Lwoff and Tournier acclaim the virtues of their "system" and castigate the mistakes of those who do not yet accept it. Valuable though Lwoff's contributions have been, it is probably a mistake to hasten as rapidly as he would like in classification and nomenclature; however, the "committee" system of the ICNV will probably ensure that changes occur slowly.

In spite of the avowed intentions of the conference and the editors of the book, most of the articles that follow deal with viruses of vertebrates, of