

Book Review

A Compendium of the Biographical Literature on Deceased Entomologists Pamela Gilbert. 1977. 452 pages, frontispiece and 27 small portraits. British Museum (Natural History), Cromwell Road, London SW75BD, England. Price: 25 British Pounds (ca. \$60 U.S.)

This book is a very useful expansion of M. M. Carpenter's "Bibliography of Biographies of Entomologists" *Amer. Midl. Nat.* 33: 1-116, 1945 and 50: 257-348, 1953). Gilbert's compendium contains references to biographical information on some 7,500 deceased entomologists. References up to the end of 1975 are included. An entomologist is considered to be anyone who has published on insects (although some others, such as early collectors, are included). The names are arranged in a neat and easy to use format. The book is a must for anyone interested in historical information on entomologists.

The compendium appears quite complete, and major entomological journals are well covered. The following are among the few omitted references to lepidopterist: **T. D. A. Cockerell** (by W. A. Webber, 1965, *Univ. Colo. Studies, Ser. Bibliog.* 1: 1-124), **J. A. Comstock** (1963, *J. Res. Lepid.* 2: 204 and by L. M. Martin, 1972 *Bull. So. Calif. Acad. Sci.* 71: 57-60), **R. M. Fox** (1965, *J. Res. Lepid.* 4: 251), **F. Grinnel, Jr.** (by J. A. Comstock, 1975, *J. Res. Lepid.* 14: 90-91), **E. Piazza** (by E. P. Van Duzee, 1926, *Pan-Pac. Ent.* 2: 160 and by J. A. Comstock, 1975, *J. Res. Lepid.* 14: 90), **J. J. Rivers** (by F. Grinnel, Jr., 1914, *Bull. So. Calif. Acad. Sci.* 13: 16-17 and *Pom. Coll. J. Ent. & Zool.* 6: 98-1100), **W. Schrader** (1933, *Bull. So. Calif. Acad. Sci.* 32: 39-40), **W. G. Wright** (by J. A. Comstock, 1975, *J. Res. Lepid.* 14: 92 and by F. Grinnel, Jr., 1913, *Bull. So. Calif. Acad. Sci.* 12: 19-21), and **W. S. Wright** (1933, *Bull. So. Calif. Acad. Sci.* 32: 129 and by J. A. Comstock, 1975, *J. Res. Lepid.* 14: 91-92). Also not included are the many references to lepidopterists in J. Ewan's "San Francisco as a mecca for nineteenth century naturalista" (pages 1-63 in *A Century of Progress in the Natural Sciences*, California Academy of Sciences, 1955). Additional omitted biographies (of non-lepidopterists) are noted in a review of the compendium by A. B. Gurney (*Bull. Ent. Soc. Amer.* 24: 443, 1978). For lepidopterists, an important supplement to the compendium is *The Lepidopterists' Society Commemorative Volume*, compiled by R. O. Kendall and published in 1977 by the Lepidopterists' Society.

Gilbert's compendium is a major contribution to the study of the history of entomology and entomologists. It is unfortunate though, that the high price (especially considering that the illustrations are limited to four pages of black and white photographs) will limit its availability.

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Artificial Diets for Insects, Mites, and Spiders

Pritam Singh. 1977. 595 pages. IFI/Plenum, New York, Washington, & London. Price: \$75.00

In recent years many research programs devoted to insect physiology, ecology and genetics have made use of artificial diets for rearing insects, and such procedures

are used routinely to develop insect control techniques. The literature on this subject is, therefore, voluminous and Singh has performed a great service to workers by bringing together some 2000 references into one readily accessible volume.

The introduction contains a useful section on formulation of diets which outlines the importance of texture, water content and shape as well as nutrient balance and phagostimulants. There is also a brief note concerning evaluation of diets, containing examples of data sheets employed in the author's laboratory which can be readily adapted to meet most requirements.

The bulk of the work consists of abstracts of publications on artificial diets taken from over 100 journals and periodicals covering the period from 1900 to the beginning of 1976. Where possible, the format used for each abstract consists of the reference, composition of diet, methods of preparation, details of rearing conditions and data on development. Singh's approach has served to emphasize the inadequate nature of many of the original publications, since often data for one or more of these categories are incomplete or missing. It would be helpful if Singh's format could be kept in mind by those publishing in this field, since the success of a diet often depends on techniques and procedures used in the preparation and methods of handling the insects. The author does, however, warn that some details may have been lost in condensing the paper and it is therefore advisable to refer to the original publication before making a diet.

In addition to some general purpose and commercial formulations, the groups covered are: Coleoptera, Dictyoptera, Diptera, Hemiptera, Isoptera, Lepidoptera, Neuroptera, Orthoptera, Siphonaptera, Acarina and Araneida. The work concludes with an Appendix, containing the composition of commonly used salt and vitamin mixtures, and an extensive bibliography.

Although Singh has succeeded in his aim to give complete, but concise, coverage of existing knowledge of insect dietetics, it is perhaps a little disappointing that he deliberately made no attempt to explain, criticize or otherwise evaluate the performances of the diets listed. A brief examination will show that many diets have been improved and the retention of the original in a volume of this type is only of historical interest unless comparison with the later forms shows which factors have produced the improvements. However, the data are herein readily available to enable other workers to perform such evaluations.

The volume will be appreciated by professional workers as a valuable summary, although most probably already have, or have access to, many of the original publications to which Singh refers. Those just embarking on projects using artificial diet techniques will also find the work useful, but would benefit from more detailed section on evaluation and preparation of diets and rearing techniques. The book may also be of great value to amateur entomologists who wish to rear insects as part of their general interest in the field or as part of experimental programs. Unfortunately, many are likely to find the price prohibitive, particularly as it does not reflect the quality of type or binding.

Singh has produced a valuable compendium of diets. It would now be an even greater contribution if he would consider producing a smaller, cheaper volume containing only the most successful diets together with evaluations and general comment about the principles of formulation of artificial diets. He is clearly well qualified to do so.

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