
The Luminescence of Biological Systems. *Frank H. Johnson*, Editor. American Association for the Advancement of Science, Washington, D. C. 1955. xiv+452 pp. \$7.00 (\$6.00 to AAAS members).

Any biologist who can recall the excitement and wonder of his first childish experience with the fascinating flashing light of the firefly can look forward to an equally exciting experience in following the development of the quantitative investigation of this and other bioluminescent phenomena.

This book consists of the seventeen papers presented by the members of the Conference on "The Luminescence of Biological Systems" held at Asilomar, California, 1954. The Conference was planned by the Committee on Photobiology of the National Academy of Sciences—National Research Council and supported by the National Science Foundation.

The first paper by E. Newton Harvey summarizes the present knowledge of bioluminescence in the plant and animal kingdoms. Most biologists will find the paper on the kinetics of chemiluminescence rather heavy going but they should take comfort from the fact that the problem is attracting such competent assistance. The two papers on the physiological control of luminescence are of unusual interest and point up nicely a large area where much further research is needed.

J. E. VARNER.

The Preservation of Natural History Specimens. Part I. Invertebrates. *R. Wagstaffe and J. H. Fidler*. Philosophical Library, Riverside Press, Edinburgh, England. 1955. xiii+205 pp. 139 Figs. \$10.00.

New books on biological techniques are usually very helpful, especially if they restrict the subject matter to a limited area. The new book entitled "The Preservation of Natural History Specimens" by Wagstaffe and Fidler does this very thing. It presents various techniques used in killing, cleaning, staining, preserving, mounting, etc. of all phyla among the invertebrates, with particular emphasis on those found in Great Britain.

The first portion of the book, pages 1 to 144, presents preservation techniques associated with some to many representatives of all invertebrate phyla. Techniques associated with arthropoda occupy more than 50 per cent of the space, especially insects which cover some 70 pages. Some of the techniques are different from those practiced in the United States among investigators or curators. It is very probable that zoologists and entomologists will profit by the information presented.

The second portion of the book, pages 147 to 200, entitled Appendix I to V gives detailed facts on apparatus and instruments, reagents, labels and labelling, storage and microscopy.

The book is well illustrated throughout with many excellent line drawings. These are very helpful in clarifying given techniques.

Since the reviewer is an entomologist he is particularly interested in the section on Arthropoda. He has learned from reading this portion several methods which he will try out in the near future. It should also be said that there are various new and modified techniques that entomologists in North America are using today which have been omitted in this volume. This is not too serious for the reviewer has prepared publications on techniques and he knows how difficult it is to be up-to-date on all techniques.

All told this book should be very useful especially for investigators, teachers and curators.

ALVAH PETERSON.