Book Reviews

The Biology of the Amphibia. Unabridged republication of ed. 1. G. Kingsley Noble. Dover Publ., New York, 1955. 577 pp. Illus. $4.95.

Through the interest of and training with that patron of science, Thomas Barbour, the thorough doctoral training of the master scientist, W. K. Gregory, and the sympathetic opportunity given by Mary C. Dickerson, Gladwyn Kingsley Noble began an illustrious career of research, giving his chief attention to amphibians. Being essentially a laboratory scientist in a museum environment, the museum yielded him rich materials and a wonderful library of exceptional bibliographic value, whose staff and his own youthful assistants rendered much help.

By 1906 when Samuel J. Holmes brought out his *Biology of the Frog* the literature had become considerable but in 1931 (the first edition of this work) it was immense. In my opinion the references at the end of each chapter are one of its greatest merits. So much ink has not been expended on any vertebrate form outside man or has been used so extensively in biological classes as on the frog or amphibians. From 1906 to 1931 the work by Holmes in several editions served this purpose either as a textbook or as collateral reading. The coming of Noble's wider text, including salamanders, largely displaced this splendid work of Holmes.

I am glad to see a reissue of Noble's very useful work. In the immediate past several people have asked where they could secure a copy of the original text. I shall not review the various chapter topics, which are much the same as those of Holmes but far more extended. We have no comparable text for turtles, snakes, or lizards.

Fifty years ago I used Ecker and Wiedersheim, G. A. Boulenger's *Tailless Batrachia of Europe,* Gadow's *Cambridge Natural History* volume, and several more, but few emphasized the salamanders as Noble does. By 1931 a simply written, comprehensive volume was much needed, and this work supplied the need. Few could have done this review of the literature without the peculiar American Museum setup of efficient help. No work has appeared to replace it, and a reprint is in order. If after a quarter of a century it is to be reissued it must be a useful book of exceptional merit.

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Actions of Radiations on Living Cells. D. E. Lea. Cambridge Univ. Press, New York, ed. 2, 1955. 430 pp. Illus. + plates. $5.50.

This book, a classic in its field, has been out of print for some time, and those who must refer to it will be glad to know that it is once again available. The revisions consist of some minor textual changes, together with 11 pages of notes and 32 additional references, that the author, before his untimely death, had made as annotations in his personal copy. The work has therefore in no real sense been brought up to date, and workers who want a more recent and extensive treatment of the subject should refer instead to the two parts of *Radiation Biology,* volume I, edited by A. Hollaender (McGraw-Hill, 1954).—B.G.

Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) Described by Edward Meyrick. vols. I and II. J. F. Gates Clarke. British Museum of Natural History, London, 1955. Illus. vii + 332 pp. and 531 pp. £3 and £6.

Most of us dream at times of bringing order into whole vast fields of human knowledge, but few of us have the energy, persistence, or even the proper circumstances actually to do any such thing. We can only admire, envy, or marvel at those who do. Gates Clarke, in the projected six volumes of Meyrick's type specimens, comes close to reorganizing the entire field of the taxonomy of the microlepidoptera. Of this work two volumes are at hand, the third is partially in press, and the remaining three are expected to appear during the next 5 years.

Edward Meyrick (1854–1938), in a publishing lifetime of 64 years, described the incredible total of well over 14,200 species of moths. One wonders if he ever slept! As might be expected with such an output, the work was not always as careful as might have been desired. The basic scheme of classification adopted by him was inadequate and artificial, and many of the characters of great taxonomic value to modern students of these moths were not even described by Meyrick. Consequently, microlepidopterists have been faced for years with the enormous task of combing through this immense mass of literature and these innumerable specimens to bring them into accord with present-day ideas and to organize them so that a modern worker would at least know which of Meyrick's species belonged to a group that he might have under consideration. Even to bring together the bibliographic citations for upward of 14,000 names would be a many-years' task for most ordinary people. Clarke has done this as a mere introductory list in the present work. It occupies the greater part of volume 1 of the series, along with discussions of Meyrick's specimens, labeling, and classification. These latter discussions might well be made required reading for students of taxonomy, both plant and animal.

Volume 2, treating the families Stenomidae, Xyloryctidae, and Copromorphidae, may be taken as an example of the five main volumes of the *Catalogue.* This volume consists of 531 large octavo pages of which 263 are fine halftone plates illustrating the wings and genitalia of generally four species each. The remaining pages are text for each species, giving Clarke's disposition of them, sometimes with brief excerpts from the original publication, synonymy, designation of the type, and explanation of the figures in the accompanying plates. Glancing over plate after plate of these moths, one is at the same time impressed by both the monotonous similarity and the infinite variability of these delicate creatures. After seeing the variation that occurs in the pattern of even a single genus, one ceases to be surprised that the Lepidoptera are the second largest group of living organisms in number of species. These illustrations are made from enlarged photographs of expanded wings and microphotographs of genitalia, usually in two views. Each of these represents a careful dissection done by Clarke himself.

In the text are many hundreds of new combinations, needed to bring the greater number of the insects treated into line with modern taxonomic arrangements. An interesting difference between zoological and botanical practice in nomencla-