Book Reviews

Handbook of Turtles: The Turtles of the United States, Canada, and Baja California. Archie Carr. Ithaca, N. Y.: Comstock Pub., Cornell Univ. Press, 1952. 542 pp. $7.50.

This is another of the excellent *Handbooks of American Natural History* which are gradually furnishing reliable reference material to the animals of our continent. Carr deals with 79 species and subspecies in a faunal area that avoids tropical types in other parts of Mexico and southward. After a 46-page introduction, dealing with general problems of turtle respiration, reproduction, growth, adaptations, behavior, and mythology, comes the meat of the book—the detailed account of each species and subspecies. Maps indicate the range. Photographs and drawings emphasize description of each kind. Notes on habits, breeding, and economic importance often afford Carr opportunity for entertaining comment. Conservation is called for on frequent occasions. "There exists a curious lot of witless or psychopathic characters who love to run over the box turtles on the roads to hear them pop, and there is probably nothing much that can be done about these people except to hope they skid."

The 68-page bibliography, the references to turtle literature on a state-by-state basis, and the careful index, will be highly useful features of the book. Those with appreciation for keys to species will be happy to see that Carr's keys are numbered for use in either direction—forward to species, or backward to differences.

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Chemistry of Carbon Compounds: Aliphatic Compounds, Vol. I, Pt. A. E. H. Rodd, Ed. Amsterdam–Houston: Elsevier, 1951. 777 pp. $20.70; by subscription, $18.00.

One's first impression is that a group of first-rate British chemists have set out to make good their subtitle "A modern comprehensive treatise." This is more than confirmed by closer scrutiny. Dr. Rodd was for years the liaison officer between the Dyestuffs Division of I.C.I. and the British universities. His advisers, Cook, Haworth, Heilbron, Hirst, Robinson, and Todd, represent the finest organic chemical minds in Great Britain.

It is inevitable that this reference work will be compared to other widely used treatises on organic chemistry, such as those by Karrer, Fieser, Whitmore, Richter, and Gilman. Of these, the present work most resembles Richter but differs from it in being much more modern and more comprehensive. The degree to which the recent literature is incorporated is remarkable and gives great value to Rodd's treatise. The books by Whitmore and Karrer are more elementary than Richter and serve as textbooks, whereas this treatise is far too voluminous for this purpose.

As compared to Gilman's *Comprehensive Treatise*, there is a fundamental difference in approach. Except for the first 195 pages, which are concerned with general and historical topics, the arrangement is by classes and, within classes, by compounds, much in the style of Beilstein and Elsevier, which are, of course, still more voluminous and detailed. Gilman is arranged by topics such as "Unsaturation and Conjugation" with illustrations from the whole domain of organic chemistry.

This reviewer has long been impressed with the importance of more than one type of arrangement of scientific facts. All sorts of scientific and industrial progress are dependent upon viewing two or more new or old facts in a new relationship. This is equally true of a simple invention and of a fundamental advance in scientific theory. Dr. Rodd's "modern comprehensive treatise" is therefore welcomed as the successor to Richter and a work which should stand beside Gilman in the library of every serious organic chemist.

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The Theory of Atomic Spectra. Reissue. E. U. Condon and G. H. Shortley. New York: Cambridge Univ. Press, 1951. 441 pp. $11.00.

The present publication is essentially a reprint of the first edition, published in 1935. At that time, this book was the first complete theoretical treatment of atomic spectra based upon quantum mechanical principles. It has remained the only one and has served half a generation of atomic physicists as an indispensable source of information and as a guide in further detailed research.

It is regrettable that the authors were prevented by other duties from preparing a thoroughly revised and extended edition, but many physicists—and especially the younger generation—will welcome the decision of the authors and publishers to meet the great demand for this outstanding work by at least a revised reissue.

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The World of Learning 1952. 4th ed. London: Europa Pub., 1952. 952 pp. $14.00.

The World of Learning 1952 is an invaluable book of reference, well worth the price of $14.00 for this purpose alone. It is, however, one of those insidious books that will start its owner on diverse paths of investigation and make him reluctant to lay the volume down.

Presenting in a straightforward way the essential facts about the learned societies, research institutions,

libraries, museums, educational institutions, and other organizations related to the business of learning, the book provides basic information about practically every significant organization in 72 countries of the world, as well as in the overseas empires of France and Great Britain.

Inevitably, the performance is uneven, and the reader can readily understand why: The officers of some organizations fail to answer questions and questionnaires; some learned societies are so obscure as to be relatively unknown outside the confines of their own country or their own discipline; others are in the throes of political upheaval, as is the case with the "world of learning" in China.

The editors confess their inability to deal with the kind of problem confronting them in China, and they have virtually repeated the information contained in the third edition of 1950. They have added a few notes regarding recently formed societies and institutions of learning in Taiwan (Formosa), but it is evident that the information is fragmentary and must remain so for some time to come.

The reader may wonder why the complete membership lists of the Royal Society, the National Academy of Sciences, and l'Institut de France are given; or why a complete roster of the professors at Universidad Nacional del Litoral (Santa Fé, Argentina) or at Amherst or at Harvard is given, whereas comparable information about Wellesley and Syracuse University is missing—to pick random examples. Or why the Rockefeller Foundation rates 21 lines, whereas the Brookings Institution gets three, and the American Philosophical Society five. Yet even with these discrepancies in treatment, essential information is given regarding the existence, the location, and the officers of virtually every important organization related to learning, although the reviewer's impression is that the sciences fare somewhat better than the humanities.

A most intriguing feature of the book is the opportunity it affords for the comparison of culture and learning from one country to another. One wonders, for example, whether the half-page devoted to Haiti is a measure of the degree of culture attained in that republic as compared with the 86 pages devoted to the United Kingdom, the 147 devoted to the United States, and the 24 used to list the learned institutions in the Union of Soviet Socialist Republics. It is equally interesting to study the organization of learning in the countries behind the Iron Curtain, all of which are given space and reasonably good coverage. A few countries are missing. Liberia is one of them, and Ethiopia is another, although it does not necessarily follow that these countries are completely devoid of learning and culture; they may merely lack the degree of organization, and perhaps the press-agentry, that may have been responsible for the inclusion of complete faculty lists for some U. S. colleges and universities that play a relatively minor role in American learning.

The critical remarks that have been made here are not to be taken as reflections upon this significant volume. On the contrary, anyone who is at all concerned with organized learning, whether it be in the United States or in the world at large, will find this an indispensable book, and, as this review illustrates, it is likely to lead its possessor into unexpected byways of inquiry and speculation.

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Scientific Book Register

An Explorer-Scientist's Pilgrimage: The Autobiography of William Herbert Hobbs. Ann Arbor, Mich: Edwards, 1952. 222 pp. $3.75.

Heterocyclic Compounds. Vol. 3, ***Polycyclic Derivatives of Pyrrole; Polycyclic Systems with One Nitrogen Common to Both Rings; Pyrindine and Related Compounds.*** Vol. 4, ***Quinoline, Isoquinoline, and Their Benzo Derivatives.*** Robert C. Elderfield, Ed. New York: Wiley; London: Chapman & Hall, 1952. Vol. 3, 442 pp., $12.00; Vol. 4, 674 pp., $17.00.

Adrenal Cortex. Transactions of the third conference, November 15–16, 1951, New York. Elaine P. Ralli, Ed. New York: Josiah Macy Jr. Fdn., 1952. 204 pp. $3.25.

Excavations at Nebaj, Guatemala, Pub. 594. A. Ledyard Smith and Alfred V. Kidder, with notes on skeletal material by T. D. Stewart. Washington, D. C.: Carnegie Institution of Washington, 1951. 90 pp. and 90 figs. $6.00; $5.25, paper.

The Physical Principles of Thermodynamics: A Treatise for Students of Theoretical and Experimental Physics. R. A. Smith. London: Chapman & Hall, 1952. 280 pp. 30s.

Vinyl and Related Polymers. Their preparations, properties, and applications in rubbers, plastics, fibers, and in medical and industrial arts. Calvin E. Schildknecht. New York: Wiley; London: Chapman & Hall, 1952. 723 pp. $12.50.

Allgemeine Pflanzenkaryologie. Vol. II, 2nd half, ***Kernteilung und Kernverschmelzung,*** Sections 1–3. 2nd ed. Georg Tischler. Berlin-Nikolassee: Naturwissenschaftlicher Verlag, 1951. Sec. 1, 384 pp., DM 58; Sec. 2, 336 pp., DM 48; Sec. 3, 320 pp., DM 32. Illus.

Cosmology. H. Bondi. New York: Cambridge Univ. Press, 1952. 179 pp. $4.50.

New Means of Studying Color Blindness and Normal Foveal Color Vision: With Some Results and Their Genetical Implications. Publications in Psychology, Vol. 7, No. 1. Gordon L. Walls and Ravenna W. Mathews. Berkeley: Univ. California Press, 1952. 172 pp. $2.50.

Proceedings of the Pan-African Congress on Prehistory, 1947. L. S. B. Leakey, Ed. New York: Philosophical Library, 1952. 239 pp. $8.75.

The Chemistry of Heterocyclic Compounds: Five-Membered Heterocyclic Compounds with Nitrogen and Sulfur or Nitrogen, Sulfur, and Oxygen (except Thiazole). L. L. Bambas; Arnold Weissberger, Consulting Ed. New York–London: Interscience, 1952. 403 pp. $14.00; $12.60 by subscription.

Biochemical Preparations, Vol. 2. Eric G. Ball, Ed. New York: Wiley; London: Chapman & Hall, 1952. 109 pp. $3.00.

Practical Psychology. Rev. ed. F. K. Berrien. New York: Macmillan, 1952. 640 pp. $5.00.