

Smalbraak devotes many pages to the pitfalls of urinary assay, especially the occurrence of negative tests in spite of the presence of tumor. However, a method of assay in which blood serum in immature (21 to 23-day) female rats is used has been available since 1941 [E. Delfs, *Endocrinology* 23, 196 (1941)]. Delfs has recently published the results of her studies [*Obstetrics and Gynecology*, 9, 1 (1957)], unfortunately, too late to have come to Smalbraak's attention. Since chorionic gonadotrophin levels in blood are much higher than in urine, Delfs' serum assay method produces no false negative results and is the most valuable single criterion for diagnosis and prognosis of hydatidiform mole and chorionepithelioma.

This book is the first modern monographic presentation of the subject. It is written in a clear, easy style, is reasonably exhaustive, and very beautifully illustrated. The case histories of the 74 hydatidiform moles and 17 chorionepitheliomas encountered at the Utrecht University Clinic, presented in every detail, provide a complete and fascinating picture of all the possible biologic variations of these tumors. American students of the subject may be surprised by the relative neglect of Arthur Hertig's early paper on the etiology of hydatidiform mole [A. T. Hertig and H. W. Edmonds, *Arch. Pathol.* 30, 260 (1940)] and the considerable emphasis on his later grading of hydatidiform mole according to relative malignancy [A. T. Hertig and W. H. Sheldon, *Am. J. Obstet. Gynecol.* 53, 1 (1947)], which has not been universally accepted. This, however, can scarcely detract from the extreme value of this book to everyone concerned with the biology of cancer.

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Principles of Stratigraphy. Carl O. Dunbar and John Rodgers. Wiley, New York; Chapman & Hall, London, 1957. 356 pp. Illus. \$10.

This pleasing volume fills a long-felt need in geological literature. While the primary objective in its preparation may have been to provide an adequate textbook for a graduate course in stratigraphy, it will accomplish not only this but will also undoubtedly find a very useful place in the bookshelves of all geologists who are interested in sedimentary rocks.

Part I (95 pages) deals principally with general processes of transportation and deposition of sediments and with the characteristic features of the deposits of various environments: fluvial, desert, lake, glacial, neritic, bathyal, abyssal, cliffed shore, beach, tidal flat, lagoon, estuary, delta, and organic reef.

Part II (60 pages) is concerned with the nature of stratification, unconformities and diastems, and facies changes.

Part III (97 pages) covers the nomenclature of sedimentary rocks in general and the description and genesis of individual lithologic types, classified under the chapter headings of "Rudites," "Terrigenous arenites," "Lutites," "Redbeds," "Carbonate rocks," and "Siliceous non-fragmental rocks."

Finally, part IV (61 pages) discusses stratigraphic classification; the nature of stratigraphic units, with discussion of usage and terminology, and principles of correlation; and broad patterns in the distribution of sedimentary rocks.

The text is illustrated with 123 figures consisting of well-chosen photographs and simple, clear diagrams and sketches. There are 20 pages of bibliography and 15 pages of subject index. The format of the book is excellent, and it is remarkably free from typographical errors.

I found the subject matter extremely interesting and stimulating. The scholarly background and broad experience of the authors is evident throughout in the richness of reference and example. Particularly to be commended is the fact that, in the discussion of sedimentary processes, environments of deposition, lithologic types, and stratigraphic principles, numerous specific illustrative examples are cited from various parts of the stratigraphic column and from various parts of the world.

Stratigraphy is a dynamic subject. We are far from having heard the last word on many of the topics touched upon in this book, and on many there still is spirited controversy. This is recognized by the authors, and, while they state their own views, they have in general taken an open-minded and broadly tolerant attitude toward the opinions of others. Not even the authors always agree, and doubtless most stratigraphers will find occasional passages in the book to which they will object. It seems to me that too much is made of the need for a special agent, "turbidity currents," to explain the common phenomenon of graded bedding. In addition, the definition of a desert as an area with interior drainage does not seem very adequate; the use of chemical methods in distinguishing marine from nonmarine sediments might have been mentioned; in the treatment of "facies changes" too much emphasis is placed on lateral as compared with vertical variations; there is little need for the terms *biotope* and *lithotope*. The statement that mud cracks are one of the best evidences of non-marine deposition also seems questionable; there is insufficient emphasis on the increasing importance of radioactive methods in the dating of sedimentary rocks; and the statement that a certain paper on stratigraphic terminology pub-

lished in 1941 has been the basis for all further thinking on the subject in America will undoubtedly be challenged.

However, while exception may be taken to a few statements and omissions, the book as a whole is outstandingly comprehensive and authoritative, and it should become a standard text and reference work. More than that, the authors are to be congratulated on having produced a work which it is impossible to read without being inspired with renewed enthusiasm for the fascinating field of stratigraphy.

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Language: An Enquiry into Its Meaning and Function. Ruth Nanda Anshen, Ed. Harper, New York, 1957. xviii + 366 pp. Illus. \$6.

In the introduction to this volume, the editor suggests that the problem being discussed is "the mystery, the miracle, and the magic of language." This suggests a kind of mystical approach to linguistic phenomena which, unfortunately, recurs through many of the 19 essays which comprise the book. Surely, we must be at least a little skeptical about any theory of language which asks at the outset that we "concede that . . . language . . . must come from God" and which insists that language "is the proof of the existence of God." As a matter of fact, one criticism of this work is precisely that, in spite of the editor's claim of homogeneity, the book presents no coherent theory about language at all but is merely a collection of uncoordinated and often contradictory essays of varying merit, by contributors with a wide range of interests. Thus, whereas one author tells us that it is futile to search for the origin of language, another devotes his entire study (39 pages) to a not-too-convincing discussion of this very topic.

There is a very real need for a comprehensive treatment of language which will in some way illustrate the relative positions of such disciplines as linguistics, philosophy, logic, psychology, literary criticism, and so forth. Such a study presumably would indicate to what extent the findings of investigators in different fields are complementary and can be reconciled with one another and to what degree there is genuine disagreement. This book does not help satisfy the need. It is unfortunate that the few essays which do contain clear and stimulating ideas are not numerous enough to overcome the impression that the editor has created—namely, that language is a metaphysical phenomena that cannot be understood by the techniques and re-

sources of a scientific method. Much of current research in this area is dedicated to demonstrating precisely the opposite.

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Insect Life in the Tropics. T. W. Kirkpatrick. Longmans, Green, New York, 1957. xiv + 311 pp. Illus. \$7.

In the past century, science, and with it entomology, has become an area for the expert. The rigorous code of the latter, especially in the publication of results, has all but driven the amateur natural historian from the field. Yet, in the opinion of many scientists, the amateur is the primordium of the professional and, therefore, he should be attended. The large body of popular writings on science appearing under recognized names indicates that he is, and that popular works increasingly enjoy the regard of professionals.

Now this excellent little volume on tropical entomology joins the distinguished books of Hoyle, Gamow, and many others in its encouragement of the amateur. It may be too good for him. The opening chapters of the book are organized on the plan of a textbook on entomology; insect structure and classification are given—briefly, it is true, but with little sacrifice of technical accuracy to so-called popular appeal. The sections that follow comprise an entertaining potpourri of facts about tropical insects, in chapters rather loosely headed “Development,” “Reproduction,” “Food and feeding,” “Defense and protection,” and “Insect communities.” These make delightful reading, although the expert will be mildly irritated by the lack of specific citations to literature and of rigid subject categories, in which the author had to make some compromises for the sake of brevity. The many diagrams, photographs, and drawings are well done. This book is highly recommended.

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Thermodynamics and Statistical Mechanics. A. H. Wilson. Cambridge University Press, New York, 1957. xv + 495 pp. Illus. \$9.50.

The author states that his aim is to give a somewhat critical account of thermodynamics and statistical mechanics intended mainly for theoretical physicists. However, the lucidity, charm, and succinctness of his style will doubtless appeal to a wider audience. Many physical chemists, physical metallurgists, and ex-

perimental physicists or graduate students needing a review of these fields will be included.

The initial four chapters (90 pages) are devoted to thermodynamics, starting with two on the classical development of the first and second laws of thermodynamics from first principles. The presentation is so clear and easy to follow that superior undergraduates could use it for collateral reading, even in a first course. Thermodynamic functions and the myriad equations in which they appear are neatly treated next, and Caratheodory's axiomatic foundation of thermodynamics is clearly presented in the fourth chapter.

Chapters five and six (88 pages) discuss statistical mechanics and some of its simple applications (general principles, connection with thermodynamics, fluctuations, quantum statistics, perfect gases, crystalline solids, radiation). In library copies, these pages will probably be particularly well worn by generations of graduate students. The next chapter, on the third law of thermodynamics, rounds out the discussion of general laws and their most immediate applications.

The last four-sevenths of the book (280 pages) comprise seven chapters, on applications to imperfect gases, heterogeneous equilibrium, electric and magnetic phenomena (mostly solid state), gas mixtures and chemical reactions, solutions, electrochemical systems, and some additional topics in solids (rubber and order-disorder). They are all fine graduate-level introductions, but as the book is a text rather than a reference work, those particularly interested in special topics may want to consult the references at the ends of the chapters. These are fairly current, and though far from exhaustive, include many important papers, texts, and reviews. Topics traditionally in the field of physical chemistry are treated in sufficient detail to satisfy most physicists, but chemists would probably want to go further. Though many topics in solid-state physics are treated (besides those cited, there are discussions of ferroelectricity, paramagnetic substances, ferromagnetism, antiferromagnetism, and superconductivity in the chapter on electric and magnetic phenomena), the theory of lattice defects, semiconductors, and thermionic emission is omitted, and theory of metals (treated by the author in another book) is barely touched. While cooperative phenomena might perhaps be treated most elegantly together, four such cases are discussed in the chapter on electric and magnetic phenomena, one in the chapter on additional topics in solids, and one (superfluidity) in the chapter on heterogeneous equilibrium, with a bit on rotational transitions tucked away in the chapter on the third law. But this

is a minor matter when balanced against the eminent success of the author's attempt to achieve his stated aims.

A number of misprints were found: “constant-value” appears where “constant-volume” should be (second paragraph, page 70); a subscript “II” should be “I” on page 27b, equation 9.42.2; summation over i should be indicated in the second term on the right of equation 11.321.1 on page 366; the reference to “fig. 8.9 of page 226” above table 11.1 on page 370 should be to figure 8.8 on page 224; on page 436, line 2, “grounds” should be changed to “groups,” and on page 448 the “lo” has disappeared from paralleloiped.

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Induced Delusions. The psychopathy of Freudism. Coyne H. Campbell. Regent House, Chicago, 1957. xx + 189 pp. \$4.

This book is an attempt to “expose” psychoanalysis and to eject psychoanalytic theory from medical school curricula. The author believed that analytic concepts and theories were fantasies and hypnotically conditioned delusions of no scientific or therapeutic value. The entire volume is replete with strongly emotional statements which are frequently confused, contradictory, and inaccurate. It is much too revealing in ways that were not intended. It cannot be recommended for any serious reader.

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Dangerous Properties of Industrial Materials. A completely revised and enlarged edition of *Handbook of Dangerous Materials*. N. Irving Sax. Reinhold, New York; Chapman & Hall, London, ed. 2, 1957. vii + 1467 pp. \$22.50.

In this encyclopedic reference volume the author and his assistants have presented a rewritten and enlarged version of Sax' *Handbook of Dangerous Materials* (1951). This volume discusses 8500 materials in approximately 1500 pages, whereas the earlier volume devoted 850 pages to 5000 materials.

The objective of the earlier volume was to provide a conveniently arranged reference work on the hazardous properties of chemical compounds and other industrial materials with emphasis on what precautionary measures should be taken to handle them safely.

The 12 sections comprising the enlarged edition are conveniently thumb-