Book Reviews

Faune de France. vol. 58, *Mollusques Opisthobranches.* Alice Pruvot-Fol. Lechevalier, Paris, 1954. 460 pp. Illus. + plate. Paper, F. 6500.

This is an exceedingly important study covering a subclass of mollusks that have been generally neglected in recent years. Many studies exist, of course, that cover certain groups, particularly the Nudibranchia, but treatment of the subclass as a whole has been almost nonexistent. France, bordering on both the open Atlantic and the Mediterranean, possesses two rather different faunistic areas. As a consequence, the scope of this work is large and in reality it covers most of the marine shores of Europe.

The figures are all line cuts and, with very few exceptions, are clear in their detail. These drawings show the shell as well as many anatomical structures. Shell-less forms have a drawing of the entire animal.

Unfortunately, and apparently to save space, the synonymies are reduced to only names and authors, with only an occasional date. This will necessitate much added labor for future students seeking original data. In addition, there is no bibliography.

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Grignard Reactions of Nonmetallic Substances. M. S. Kharasch and Otto Reinmuth. Prentice-Hall, New York, 1954. xxii + 1384 pp. $15.

The organic chemist heartily welcomes a volume that undertakes the gigantic task of summarizing and evaluating a half-century of research studies on the chemist's most prolific reagent, the Grignard reagent. The research chemist now possesses, in this one volume, a truly research-wise approach to the literature of the Grignard reactions of nonmetallic substances. Its value is strengthened by the unquestioned authoritative qualifications of the authors.

Chapter I presents the significant historical facts that led to Grignard's discovery, supplemented by important bibliographic material on the life of Grignard and Grignard reagent chemistry. Chapter II discusses in detail the preparation of Grignard reagents. It not only includes the many important factors concerned in their preparation but also presents a number of "illustrative preparations in the classical manner." Chapters III–V present, respectively, the estimation and detection of Grignard reagents, the constitution and dissociation of Grignard reagents, and some radical reactions of Grignard reagents. Chapters VI–XVI and XIX–XXIII discuss the reactions of the Grignard reagents with: (i) the important classes of organic compounds; (ii) the nonmetals—oxygen, sulfur, selenium, and tellurium; (iii) certain miscellaneous compounds of sulfur, selenium, and tellurium; (iv) silicon compounds; and (v) miscellaneous nonmetallic substances, such as halogens and compounds of boron and phosphorus. Chapter 17 deals with allylic rearrangements, and chapter 18 discusses the method for the determination of "active" hydrogen. The method of presenting each chapter, although varying with the nature of its content, follows a definite pattern that includes a brief historical résumé, a definition of the so-called "normal" reaction, a consideration of mechanisms, descriptions of exemplary preparative procedures, a consideration of "abnormal" reactions, and a tabulation (or tabulations) of literature data.

The authors have increased the value of the work by including details that are of especial value to the research worker. For example, the table of contents includes subtopics under the main headings, together with page references. The table of contents is followed by a list of the titles of 87 tables of data with page references. Furthermore, an unusually helpful list of individual Grignard reagents according to empirical formulas is presented in a special index. This index also includes answers to questions relating to the literature listing of a given reagent, its preparation, properties, and the types of coreactants with which it has been treated. A general index of more than 20 pages, with a listing of approximately 1500 items, appears complete.

The value of this contribution to the literature of organic chemistry is nothing short of tremendous, since the Grignard reagent has established itself firmly in every area of this field. It is a "must" for every library of chemistry—industrial or academic—and the individual research chemist in the field of organometallic compounds will find it indispensable.

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Liver Injury. Transactions of the twelfth conference, 21–23 Sept. 1953. F. W. Hoffbauer, Ed. Josiah Macy, Jr. Foundation, New York, 1954. 231 pp. Illus. $4.25.

This conference was devoted to the role of the liver in the metabolism of fat, protein, and carbohydrate. The book presents a lively and helpful review of some of the newer concepts (and controversies) that have evolved from recent work. The discussions repeatedly draw attention to the interweaving relationship of the metabolism of these three major foodstuffs—a relationship that stems from the fact that certain important metabolic intermediates are common to the biochemical cycles of all three. This commonage has aggravated the difficulties that always plague experimentalists when they turn from studies on the whole animal to analyzing separate functions by means of isolated systems.

E. Lundsgaard challenges prevailing views in stat-

ing that: (i) insulin does not promote glycogen storage in liver through a direct effect on liver tissue, and (ii) in the liver, the extent of carbohydrate metabolism has no influence on the rate of ketone body formation.

J. P. Hoet describes how the diabetogenic effect of pregnancy taxed the pancreas of a potentially diabetic woman, producing overt diabetes in mother and child, albeit years later. Transient hyperglycemia of pregnancy is a forerunner of clinical diabetes and should be treated early if the disease is to be prevented in mother and offspring.

S. Gurin shows that the liver oxidizes fatty acids to acetyl-coenzyme A by a process essentially similar to that postulated in the beta-oxidation theory, except that all the intermediates are present in the activated state (attached to coenzyme A). He also suggests that the process is probably reversible. This points up the importance of glycosis in fatty acid synthesis since pyruvate can be synthesized to fat through the common intermediate, acetyl-coenzyme A.

H. W. Kosterlitz discusses the effects of dietary protein on the liver. Since kwashiorkor, a human disease associated with protein deficiency, has not yet been reproduced in animals, the basic metabolic faults remain unclarified.

Two short subjects of special interest to pathologists are "Cardiovascular lesions in choline-deficient rats," by W. S. Hartroft, and "Hepatic lesions produced in rats with ethionine," by H. Popper.

One regrets that this conference must be the last, especially when confronted by the impressive list of unsolved problems in human liver disease that were compiled at the end of the conference. The last sentence of the proceedings epitomized the situation: "Shall we agree that there are still many fascinating clinical and experimental problems?"

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Oral Pathology. A histological, roentgenological, and clinical study of the diseases of the teeth, jaws, and mouth. Kurt H. Thoma. Mosby, St. Louis, Mo., ed. 4, 1954. xviii + 1536 pp. Illus. + plates. $22.50.

The fourth edition of Thoma's *Oral Pathology* is another encyclopedic work. It has been revised and expanded since publication of the last edition 4 years ago. Most chapters have been thoroughly revised. The chapter on dental caries has been completely rewritten, and Goldman's chapter on periodontal disease has been revised and new illustrations added. Many excellent black-and-white illustrations and several new color illustrations have been added.

It is difficult to find a subject within the field of oral pathology that is not adequately discussed in this textbook. Not only are prevailing views presented but, in instances where the discussion type of references are available, these are included.

Although opinions on order of presentation may vary, I feel that the new arrangement has somewhat detracted from its usefulness as a textbook. Diseases of the teeth are discussed first, then diseases of the head and jaws, abnormalities of the temporo-mandibular joint, diseases of nerves and muscles, mouth diseases, diseases of salivary and mucous glands, and finally tumors. This arrangement leads to frequent repetition. For example, actinomycosis is rather completely discussed in three chapters, and gingivitis is presented in three chapters, in each case with frequent repetition. However, this arrangement and these repetitions detract only slightly from the total value of the book. The only severe criticism, that of the size of the book, is valid only in considering it as a textbook for undergraduates. Its 1536 pages are devoted to the special pathology of one region. The references occupy more than 116 pages. The work is exhaustive and up to date.

Thoma's *Oral Pathology* is the most complete and authoritative book on the subject. It should be considered as an essential reference book for all pathologists and practicing dentists. As a textbook, it presents the difficulty of great length, but no better one is available. The capable instructor may teach his students to use it for a reference book as well as for a textbook.

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The Foundations of Statistics. Leonard J. Savage. Wiley, New York; Chapman & Hall, London, 1954. xv + 294 pp. $6.

Any treatise on the foundations of statistics must of necessity be concerned in large measure with probability. Savage's book is essentially his exposition of probability as it relates to statistical problems. Since the postulates of probability are highly controversial, this book will also be highly controversial.

The first half is concerned with the development of the author's concept of personal (subjective) probability, especially with reference to the decision-making problem. He suggests that this problem can be more effectively dealt with through his concept of personal probability than through the concepts of mathematical probability. He bases this view on the contention that mathematical probability cannot cope with personalistic evaluations of risk since these are conditioned by the mental state of the individual.

This may appear to be a strange basis for the science of statistics. However, cast in the framework of the decision-making problem, it becomes more reasonable. The problem of the individual confronted with uncertainty is also shown to be related to the modern theory of utility as developed by von Neumann and Morgenstern.

The remainder of the book is devoted to a discussion of the major problems of statistics (such as minimax theory, estimation, and testing) in the light of personal probability. In the discussion of minimax