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-