

Book Reviews

High polymers. Vol. VII: *Phenoplasts: their structure, properties, and chemical technology.* T. S. Carswell. New York-London: Interscience, 1947. Pp. xii + 267. (Illustrated.) \$5.50.

The purpose of this book is to describe the chemistry and physical structure of phenoplasts (resins obtained by the condensation of aldehydes with phenols) and to show the relation between their structures and their mechanical and chemical properties.

The major part of the description of the chemical structure is contained in the first 50 pages of the book. Here the works of Zinke, Hultzsich, and von Euler serve as the main basis for the development of the concept that now exists of the chemical structure of the phenoplasts. This section is followed by 18 pages of discussion devoted to an elucidation of the physical structure. The rest of the book furnishes quantitative data and other useful information on fillers for phenoplast molding powders and laminates; the effect of variables on the mechanical, electrical, and thermal properties; the chemical resistance and solubility of phenoplasts; and the manufacture, modern molding practices, and technical applications of these materials.

The literature of the last 10 years supplies the principal source material for this survey. The subject matter is presented in a very readable manner. Those who work with phenoplasts will no doubt be properly grateful to Mr. Carswell for an excellent reference book, and beginners will find the study of this book one of the best introductions to the field.

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An introduction to vertebrate anatomy. (Rev. ed.) Harold M. Messer. New York: Macmillan, 1947. Pp. xx + 475. (Illustrated.) \$4.75.

This book is designed for a one-semester course in vertebrate anatomy. It is the author's avowed purpose to present "a minimum amount of material," this material to be supplemented in any manner that the instructor wishes.

Approximately one-quarter of the book is devoted to (1) Introductory Remarks, (2) Taxonomy of the Chordates, in which is included the anatomy and general and specific characteristics of the protochordates, also general and specific characteristics of the vertebrates, and (3) a section on Early Vertebrate Development. The remainder of the text proper consists of a presentation and discussion of the systems of the vertebrate body, each presentation being concluded by a short summary. There is a short bibliography of suggested readings, an adequate glossary of biological and taxonomic terms, and a good index. The taxonomy has been revised. Textual material has been brought up to date and is accurate and singularly free from misprints. With few exceptions, the book is very well illustrated.

The reviewer, although having taught a one-semester course in vertebrate anatomy for a number of years, would prefer having a more comprehensive text than the one here reviewed.

Taxonomy and embryology are indispensable adjuncts to the teaching of vertebrate anatomy; however, it seems that the amount of space devoted to these subjects is more than ample when compared with the rest of the book. Certain sections of the text proper have suffered because of generalizations and omissions due to brevity. Summaries might well have been omitted. It might be helpful to the student to give the actual derivations of the taxonomic terms and the derivation of some of the biological terms. Although the bibliography is short and more or less on the elementary level, additional well-known reference books in English and German might have been included—to name only one, the 2nd edition of Romer's *Vertebrate paleontology* (1945).

In spite of the above personal preferences, the text can be satisfactorily used in the course, or in a course similar to the one for which it was designed. The book should serve to "whet the appetite" of any student genuinely interested in vertebrate anatomy.

ROY P. ASH

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The work book of fundamental organic chemistry. (Rev. ed.) Ed. F. Degering and collaborators. Ypsilanti, Mich.: Univ. Lithoprinters, 1947. Pp. 256. (Illustrated.) \$1.75.

This book, according to the preface, was produced in response to an urgent need to stimulate more active and less passive activity on the part of the student. It follows the plan of the author's *Outline of organic chemistry* and *Fundamental organic chemistry*. Each chapter contains (a) a review summary, (b) a genetic chart emphasizing the more important reactions, (c) nomenclature, pronunciation, and formula tables, (d) a composite review summary, (e) review questions of the fill-in type, and (f) one or more objective tests.

Every teacher of organic chemistry should examine this book, for it illustrates many excellent teaching and testing devices. The emphasis on nomenclature and pronunciation is especially commendable. This feature alone is of sufficient merit to recommend the book to anyone who wants to speak like a literate organic chemist.

Prof. Degering must find this book exceedingly valuable for use in his own classes. Teachers who use his text or outline and are in agreement with him as to course content and order of presentation will likewise find it of great usefulness. Other teachers who are masters of their field will find some parts of value but may prefer to design their own review questions and aid their students to develop their own devices for learning.

The chapter summaries are of less value than the other features of the book. In this reviewer's opinion students should prepare their own outlines and other summaries of textbook material. In spite of this criticism, however, the book is recommended as a valuable contribution to the art of teaching organic chemistry.

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