much more extensive than the chapter on microtitration methods in the second volume of the series.

Each monograph has a selected bibliography; the largest, on olefinic unsaturation, contains 698 references. All the authors covered the literature through 1955, and some 1956 publications are also reviewed. There is a general subject index to the three volumes of the series. There were few typographic errors. The only one I found that might cause confusion was the substitution of *nitrate* for *nitrite* in the first paragraph on page 109, and this was corrected in the procedural directions that followed.

The book should prove valuable, not only to analysts, but to all serious students of organic chemistry.

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Psychological Research. Benton J. Underwood. Appleton-Century-Crofts, New York, 1957. 298 pp. Illus. $4.

The title *Psychological Research* will suggest many different things to different readers. If summed, these suggestions would include most of the science of psychology. Any attempt to attack such a subject matter in 292 pages will necessarily involve a large amount of selection and gross summarizing, and it will leave some distinctive marks of the author in the process.

Benton J. Underwood has restricted his coverage to what might be labeled the methodological problems of psychological research. Some indication of the coverage is given by the chapter headings. These, in addition to an "Introduction," are "Analysis of the research situation," "Operational definitions," "Research design I and II," "An overview of explanation in psychology," "Some characteristics of concepts," "The nature of some explanatory attempts," and "Potpourri."

Within the framework outlined by the chapter headings, this book is somewhat author-centered. This characteristic is partially anticipated in the introduction by the statement, "I wish merely to discuss critically some of the problems of research in psychology as I see them." The book is perhaps most tersely described by the word *essay,* for it is a personalized and editorialized account of psychological research. This is shown partly in the style of writing, which has a generous sprinkling of first-person-singular pronouns, autobiographical statements, and brief editorial excursions into such matters as journal publication policy, and so forth. It is also shown by the intermittent insertion of experimental materials that seem to bear little relevance to the outline, while the discussion of some widespread and important problems (stimulus and response definition, scaling, and so forth) falls far short of what is possible at the present stage of psychological development. Since the author's aim is to discuss research topics as he sees them, however, he must be judged as having succeeded. It is probably also true that, in approaching the problem in this way, he has achieved readability and added a human quality to the book.

As the chapter headings suggest, the book addresses itself to many interesting methodological problems—problems that must be attacked by psychologists who have a firsthand familiarity with the concepts, as they work in an experimental program, as well as by philosophers of science who may analyze the formal properties of the concept as these are eventually revealed in articles and secondary sources. As an analysis by an experimental psychologist, the book will broaden the spectrum of material available for the undergraduate and graduate in psychology, while it leaves ample room for a more analytic book, which will present a more specific account of some of the subtleties of these methodological questions and give the psychology student a broader base of information from which he can form his own opinion.

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Osteology of the Reptiles. Alfred S. Romer. University of Chicago Press, Chicago, 1957. 772 pp. Illus. $20.

As initially conceived, this book was to be a revision of S. W. Williston's *Osteology of the Reptiles,* which was published in 1925. In the early stages of the project, however, it became evident that a single revision would not do justice to the many advances in reptilian osteology and classification that have been made in the intervening years. The name and the general plan of organization have been retained, but otherwise the book is completely new. Williston's work was prepared by W. K. Gregory on the basis of a partial draft that was left by Williston, on his death in 1918. It is an excellent, but brief, survey of reptilian osteology and classification. The present volume is detailed and comprehensive.

Alfred Romer's *Osteology of the Reptiles* comprises two major sections. The first presents a structure-by-structure analysis of the reptilian skeleton, and the second, a classification based on skeletal characteristics. The section on structure is introduced by a rather brief account of nonskeletal systems and reptilian embryology. A general discussion of the skeleton follows. The succeeding eight chapters give detailed accounts of the subdivisions of the skeleton, with both living and extinct reptiles as source material. The text is accompanied by 166 figures that portray the structures under consideration. The illustrations are excellent in quality and are based, in large part, on data published over the years in a wide range of zoological and paleontological studies. Text and figures complement each other to provide a coherent and comprehensive survey of reptilian osteology.

The second section is introduced by an account of the history of classification of the reptiles. This is followed by a systematic treatment of the subclasses and subordinate taxonomic categories to the level of family, and, in some cases, subfamily. Descriptions and diagnoses for each categorical rank are presented, and, under the familial listings, there is a comprehensive list of genera, with synonyms. It was, of course, impossible to include a study of even a small part of the nomenclatural problems. Even had this been feasible, it would have seriously detracted from the continuity and general usefulness of the book.

The classification is based on a primary division of the class Reptilia into six subclasses, with one order, Mesosauria, unassigned. The orders that are included under the subclasses are recognized as pertaining either to "Sauropsida" (subclass Anapsida, excluding the cotylosaurs, subclass Lepidosauria, subclass Archosauria, and order Mesosauria) or to "Theropsida" (subclass Ichthyopterygia, subclass Euryapsia, and subclass Synapsida), following Goodrich and, more recently, Watson. The classification is relatively conservative throughout, and well-established names are used for the various groups. Specialists in various fields will undoubtedly find arrangements with which they disagree, for there is no general consensus on the placement of many reptilian genera. The descriptions and diagnoses of the categorical levels, however, are brief and factual and show clearly the reasons for assignments. Illustrations in this section consist of figures of complete skeletons of characteristic genera. Since materials for valid reconstructions are not available for many groups, the pictorial representation is inevitably somewhat irregular.

A short bibliography follows the section on classification. It lists only the major sources of information that were used in compilation of the book. These are presented under headings that relate them to the sections to which they are most pertinent. References to more complete bibliographies are given.

This book is a truly monumental contribution that cannot fail to stand as a