studied and illustrated by its best-known specimens, wherever these happened to be. Specialists in particular groups, Drs. G. L. Jepsen and A. E. Wood, collaborated. Now after more than seven years the project is completed and is before us for appraisal and for use.

Since Leidy, the number of families of mammals known from the White River has more than doubled (it is now 40) and the number of genera has more than quadrupled (now 101). This increase in breadth of knowledge is accompanied by comparable increase in depth. Leidy had fair skulls of a dozen genera but virtually no skeletal material. Now good skulls are known for almost all genera, including so many that Leidy did not know at all, and the complete skeleton is known for more than twenty. Bringing together a sufficient summary of all these discoveries would, in itself, make this monograph an outstanding success and one of the most useful of recent publications.

Even within the span of a thousand pages, rigid limitation is necessary with so large a subject. The plan of this monograph stresses the type morphology and the taxonomy of genera. Higher taxonomic categories are designated but not, as a rule, defined and only briefly discussed. Selected specimens are measured, but the descriptions are mainly on a qualitative generic level. As for species, Professor Scott recognizes that these "would be much the more important category . . . were the necessary information available," but the imperfections of present data are such that "the significant unit is rather the genus." Although there is much that is wholly new in this great volume, the point of view is that of bringing together and holding fast the most secure results of past and recent research. Species are listed and summarized on the basis of existing data and for completeness of record, but the authors repeatedly emphasize that many of these "species" are invalid and most of them are ill-defined. No serious attempt to revise them is made.

The super-specific classification is for the most part a happy expression of the most recent and best-informed opinions. This reviewer objects to a few points of nomenclature (such as Cynoidea, Oreodontoidea, Hippoidea and some others as names for superfamilies), but such matters are nominal and of secondary importance. The major taxonomic novelty is placing the hypertraguloids and oreodonts in the Tylopoda, a return to Professor Scott's opinion of 1899, which had been generally rejected, even by its proposer. As regards the hypertraguloids, new evidence is adduced which does not quite settle the problem but which at least puts it on a new unsettled basis by showing that tylopod affinities can not be dismissed. Evidence bearing on the oreodonts is less explicit. The crux of the whole matter lies before the White River, in the Eocene, as Professor Scott notes. With characteristic energy he has already begun a similar revision of the Uinta (late Eocene) faunas, and here this difficult taxonomic question may be more fully treated.

As regards the morphological sections, it suffices to say that they are up to Professor Scott's standard, in other words, they are excellent. Necessarily compendious, they are yet adequate for any ordinary purpose and do not sacrifice either style or accuracy to brevity. Few will need ever again to go back of this monograph to the scattered older literature. The few specialists who must still seek the sources will find here a powerful aid in their search, and in the comprehension of their problems.

No study of the White River fauna will ever be final, but it is probable that this remarkable monograph is definitive. It is unlikely that future discoveries will necessitate repetition of the particular task here completed, and the end of an era of White River studies is thus marked. As Professor Scott implies, however, this is at the same time the beginning of another era of study, one that will, as far as prediction is possible, be as long and laborious as all that has gone before. The general composition and character of the faunas, the major morphological characters of the included animals and the intermediate levels of their taxonomy are fairly in hand. All this basic information is gathered together in this work, a work classic in scope and style and clearly destined to become historically classic. Now the ground is cleared and the foundation laid for the paleontology of the future: detailed descriptive and functional morphology (for instance of the internal ear structures), the study of variation, of growth and of paleogenetics, the recognition of species as natural populations by group methods, the extension of taxonomic revision to higher and to lower levels, the paleoecological study of the extinct animal associations, the tracing of specific lineages and of larger populations through more exactly recorded time sequences, the integration of these still remote results with general evolutionary theory. It is the greatest tribute to this monograph and to its senior author that its value is not alone that of major research well completed but also that of a signpost and a stimulant for still more arduous work now barely begun.

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PHYSICS

Vacuum Tube Voltmeters. By JOHN F. RIDER. xi + 179 pp. New York: John F. Rider, Publisher, Inc. 1941. $1.50.

As stated in the author's foreword, "This book on the Vacuum-Tube Voltmeter is intended as a practical exposition of the numerous types of such measuring devices, with the direct intention of providing a source of information for the engineer, student and serviceman, so that if he desires to compare different types, establish their principles of operation or construct them, all the facts are available from one source."

The book provides a very valuable contribution for the aforesaid purpose. It is simple in language and direct in attack, so that the instrument to be discussed is presented with the minimum of preamble. The book is practically free from mathematical equations, and in that sense is very elementary. Nevertheless, a certain amount of previous knowledge is necessary if the reader is to get the maximum of value from the work, since the significance of many of the features rests largely upon such knowledge. While the author has done what is reasonably possible within the wide scope of instruments discussed to point out pitfalls, and to state why certain situations must be avoided in certain cases, the subject of high frequency oscillations in particular is a field in which it is frequently necessary and always desirable for the investigator to have intimate knowledge of the characteristics of his circuits before assuming what will happen when any additional measuring device is incorporated with them.

While the book is intended in part for one who has no great knowledge of circuit theory, the present reviewer feels that one of its greatest uses will be for the investigator in physics who, while well equipped in a knowledge of handling circuits, is nevertheless unfamiliar with the special technical devices employed. Such a physicist will find in the book a wealth of information which may save him the labor of redevising circuits for his special needs. He can pick out what he wants, and his theoretical knowledge will then permit him to examine the instrument in all details relevant to his own particular problem.

The contents of the book may be gauged by the chapter titles, as follows:

Chapters I–VIII inclusive each contains descriptions of several different types of instruments adapted to various needs, with a general review of the underlying principles. Chapter IX, as its name implies, contains a special discussion of the elements which demand consideration in order to produce an instrument which will record what it is intended to record. Chapter X deals with a variety of matters concerned with the necessity for and means of carrying out continual checks on the instruments, and Chapter XI contains several examples of typical fields for the use of the instruments.

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REPORTS

STATEMENT BY THE BOARD OF DIRECTORS OF THE AMERICAN CHEMICAL SOCIETY

BECAUSE of efforts to compel chemists and chemical engineers to join labor organizations in order to obtain or retain employment in certain plants, the board of directors of the American Chemical Society has given consideration to the broad problems of employment in the field of chemistry.

So that the position of the society may not be misunderstood, the board of directors issues the following statement for the more complete information of our membership:

The society has taken no stand against "collective bargaining" for professional men when such bargaining is not controlled by non-professional groups and where the bargaining unit is composed exclusively of professional men.

The society condemns no one of its members for joining any non-coercive labor union so long as he does so voluntarily.

The society, however, is unalterably opposed to the forcible inclusion of professional men in bargaining units dominated and controlled by non-professional employes, whether that inclusion be brought about by economic pressure upon an employer, by intimidation of the professional employe or by operation of either state or federal law.

The society will bend every effort to maintain for all its members the "right to work" and the "right to