On the whole, the author's aim seems to be realized, although it takes over 200 pages. The frequency polygon, as a whole, is properly declared to be the unit of comparison which its constants by no means fully replace. The methods of determining the average, standard derivation and probable error are fully set forth and the explanation of the method of calculating the coefficient of correlation is particularly good.

Great stress is laid—properly enough in a book intended for psychologists whose material is not always directly measurable—on measurement by position and the transmutation of position into units of amount. Such a transmutation is easily effected when the frequency distribution is approximately normal. A little table, based on the table of the normal probability integral, is given, showing the deviation from the mean (in units of the standard deviation) of each per cent. class from 1 to 50. A handy table is also given showing the average deviation of any number of consecutive percentage classes. Of course, there is nothing new in this, but it helps to have the importance of the measure by relative position insisted on in a popular treatise of this sort, because it is not popularly understood.

In treating the measure of differences emphasis is laid on the importance of comparing the entire distributions rather than the averages only. The degree of overlapping of the frequency polygons gives the best insight into the degree of difference.

Under 'Measurement of Relationships' the measurement of correlation is considered and the Pearsonian method of analysis is plainly and fully set forth. In the chapter on 'Reliability of Measures' the determination of the probable error of the average and of a difference between two averages is fully described.

The book abounds in tables giving various statistical data. There is appended a multiplication table up to 100×100; also a table of squares and square roots. A table of the normal probability integral (apparently copied without credit from the reviewer's 'Statistical Methods') is found on page 148. A feature of the work is a set of 'Problems' at the end of each chapter.

The reviewer has noted in passing several defects which are mentioned here in order that they may be guarded against in the second edition. Part of Fig. 12 seems to be inverted. The 'Mode' is repeatedly spoken of where empirical and not theoretical mode is meant. The distinction should always be clearly made. Also, the mode is not the 'apex of the slope' (p. 73), but the abscissa of the apex. The method suggested of finding the mode is unnecessarily clumsy. The mode is approximately equal to the mean less $3 \times$ (mean — median). Tables XXXI. and XXXII., the first value of σ would seem to be a misprint for 2.57.

On the whole, we believe the book will be found very useful, especially in making more familiar the frequency polygon and leading to its more frequent publication in statistics in place of the bare average. And so we trust that it will be widely studied and its recommendations followed. C. B. DAVENPORT.

American Hydroids. Part II. *The Sertularidæ.* With 41 plates. By C. C. NUTTING. Special Bulletin, U. S. National Museum. 1904.

The first part of this magnificent work, on the Plumularidæ, appeared in 1900, and was noticed at some length in our columns. Much of what was said about Part I. is equally applicable to Part II., and need not be repeated. Some idea of the value of the work may be gained from the fact that not more than 20 species of Sertularidæ from American waters have heretofore been discussed in any single publication, and now Professor Nutting presents us with complete descriptions and figures of no less than 130! These species, distributed by the author in ten genera, have been named by the following writers: Nutting, 37; Allman, 16; Linnæus, 12; S. F. Clark, 9; Kirchenpauer, 8; Hartlaub and Mereschkowsky, each 5; Ellis and Solander, Hincks, Trask, d'Orbigny and H. B. Torrey, each 3; Levinsen, Alder, Bale, Marktanner-Turneretscher, Murray and Lepechin, each 2; and J. E. Gray, McCready, Versluys, Poeppig, Stimpson, Sars,

Lamouroux, Meyen, Fewkes, Johnston, Busk and Verrill, one each. These figures show that although many able zoologists have studied these animals, Nutting has done far more to make known the American species than any of his predecessors.

In a few instances I find myself unable to agree with Professor Nutting's nomenclature, if I rightly understand the facts. Thus *Thuiaria dalli* is a new name for *Sertularia cupressoides,* Clark, 1876, because it is a *Thuiaria,* and conflicts with *T. cupressoides,* Kirchenpauer, 1884. The rule here followed is that recognized by many botanists, but is, I think, losing ground, while it is not usually considered valid in zoology. Surely it would be more in accordance with zoological custom (and, I think, common sense) to give priority to the older specific name, no matter what genus it was placed in, and consequently rename the species of Kirchenpauer, not that of Clark.

The natural history department of the British Museum is constantly referred to as the 'South Kensington Museum,' which is not exact, and would be understood by Londoners to refer to a different institution.

T. D. A. Cockerell.

SOCIETIES AND ACADEMIES.

THE CONVOCATION WEEK MEETINGS OF SCIENTIFIC SOCIETIES.

The American Association for the Advancement of Science, the American Society of Naturalists and the following societies will meet at Philadelphia, Pa., during the week beginning December 24, 1904:

The American Association for the Advancement of Science.—The week beginning on December 27, President, Professor W. G. Farlow; permanent secretary, Dr. L. O. Howard, Cosmos Club, Washington, D. C.; general secretary, President Charles S. Howe, Case School, Cleveland, Ohio; secretary of the council, Professor Clarence A. Waldo, Purdue University, Lafayette, Ind.

Local Executive Committee.—President, Provost Charles C. Harrison; vice-president, Professor Edgar F. Smith; secretary, Dr. Philip P. Calvert; treasurer, Dr. Samuel G. Dixon; chairman of the executive committee, Provost Charles C. Harrison; of the committee on reception and entertainment, Mrs. Charles C. Harrison; of the committee on hotels and boarding houses, Professor Amos P. Brown; of the committee on meeting places and equipment, Professor Edwin G. Conklin; of the committee on press and printing, Mr. George E. Nitzsche; of the committee on transportation, Mr. Walter Wood; of the committee on finance, Mr. S. F. Houston.

Section A, Mathematics and Astronomy.—Vice-president, Professor Alexander Ziwet, University of Michigan; Secretary, Professor L. G. Weld, University of Iowa, Iowa City, Iowa.

Section B, Physics.—Vice-president, Professor Wm. F. Magie, Princeton University; Secretary, Professor Dayton C. Miller, Case School of Applied Science, Cleveland, Ohio.

Section C, Chemistry.—Vice-president, Professor Leonard P. Kinnicutt, Polytechnic Institute, Worcester, Mass.; secretary, Professor Charles L. Parsons, New Hampshire College of Agriculture, Durham, N. H.

Section D, Mechanical Science and Engineering.—Vice-president, Professor David S. Jacobus, Stevens Institute, Hoboken, N. J.; secretary, Professor Wm. T. Magruder, Ohio State University, Columbus, Ohio.

Section E, Geology and Geography.—Vice-president, Professor Eugene A. Smith, University of Alabama; secretary, Dr. Edmund O. Hovey, American Museum of Natural History, New York, N. Y.

Section F, Zoology.—Vice-president, Dr. C. Hart Merriam, U. S. Dept. of Agriculture; secretary, Professor C. Judson Herrick, Denison University, Granville, Ohio.

Section G, Botany.—Vice-president, Professor B. L. Robinson, Harvard University; Secretary, Professor F. E. Lloyd, Teachers College, Columbia University, New York, N. Y.

Section H, Anthropology.—Vice-president, Dr. Walter Hough, U. S. National Museum; secretary, George H. Pepper, American Museum of Natural History.

Section I, Social and Economic Science.—Vice-president, Martin A. Knapp, U. S. Interstate Commerce Commission, Washington; Secretary, Dr. J. F. Crowell, Bureau of Statistics, Washington, D. C.

Section K, Physiology and Experimental Medicine.—Vice-president, Professor H. P. Bowditch, Harvard University.

The American Society of Naturalists.—December 27, 28. President, Professor E. L. Mark, Harvard University; secretary, Dr. Chas. B. Daven-