B. Scott, M. E. Wadsworth, W. S. Davis, J. A. Holmes.

The following nominees were elected Fellows: A. R. Crook, Evanston, Ill.; N. F. Drake, Tientsin, China; A. H. Elftman, Grand Marais, Minn.; M. L. Fuller, Boston, Mass.; A. W. Grabau, Cambridge, Mass.; J. H. Pratt, Chapel Hill, N. C.; F. C. Smith, Deadwood, S. D.; F. B. Van Horn, Cleveland, Ohio; T. G. White, New York; S. W. Williston, Lawrence, Kansas.

J. F. KEMP.

COLUMBIA UNIVERSITY.

WINTER MEETING OF THE ANTHROPOLOGICAL SECTION OF THE AMERICAN ASSOCIATION.

THE third winter meeting of the Anthropological Section of the American Association for the Advancement of Science was held in New York on December 27th and 28th. The sessions, which were three in number, and were immediately followed by the meeting of the American Folk-lore Society, took place in the buildings of Columbia University. The attendance was materially greater than at Ithaca last winter, and in general the meeting was successful and enjoyable. The chairman, Professor Cattell, presided, and Dr. M. H. Saville was Secretary.

Eleven papers were presented, two read in abstract, and several read by title. A commendable feature of the program was its grouping of related papers. Thus the first session was devoted to physical anthropology, the second to archæology and the third was generally ethnological. It was found impracticable to follow this scheme rigidly, but it was observed sufficiently to give the discussions more distinct tendencies and greater coherence.

The first paper read—one of more than ordinary value and interest on account of its dealing with aims and methods rather than material—was by Dr. Franz Boas, and was entitled 'Some Recent Criticisms of Physical Anthropology.' The first objection considered was the assertion that any classification of mankind by physical anthropology must be valueless because it has been found impossible to identify positively an individual, at least from his skeleton, as belonging to a group. The answer to this criticism was found in the fact that the physical anthropologist studies not individuals, but geographical or social groups. He does not concern himself with assigning individuals to groups, but with marking the differences and relationships of groups as such. That is to say, physical anthropology deals with types, not persons, and the types can be clearly distinguished and classified. Of course, the significance of the type or group depends largely on its stability, and whether there is such stability depends upon the question whether heredity or environment influences anatomical changes to a greater degree, and this question can be finally solved only by an exhaustive statistical study of several generations. Meanwhile, however, heredity would seem to be the more potent, as various evidence instanced appears to show. Hence it is concluded that the types studied by the physical anthropologist are permanent and not fortuitous or meaningless, and, therefore, allow of classification. The rest of the paper was devoted to a consideration of objections to the metrical method. The values of this method, especially in giving information obtainable in no other way, were insisted upon. But the necessity of all measurements made having some biological significance was strenuously urged. Especially useless, even harmful, were sweeping classifications by merely one arbitrarily-chosen measurement, such as those based upon the cephalic index alone.

Dr. Ales Hrdlicka followed with a paper upon the 'Negro Problem.' Dr. Hrdlicka analyzed and refuted the common belief

that, relatively to the white, the negro is decreasing. The greater increase among whites is due in large part to immigration. Without this factor, which has generally been overlooked, white increase is smaller than negro. This is borne out by the higher birth-rate among negroes. The present compensation of a higher infant mortality will tend to disappear as the negro is raised. Consequently we shall soon be confronted with the circumstance of an ever greater proportion of negro population. The author reviewed various methods of dealing with the negro problem, finally advocating that of dispersion.

Dr. Thomas Wilson presented a paper upon modes of lighting museums, embodying the results of investigations made by him upon the transparency of kinds of glass, illustrated by photographs. A paper by Mr. Roland B. Dixon upon 'Color Symbolism of the Cardinal Points' concluded the morning's session. The paper was devoted largely to a discussion of the various bases of association of colors with directions, such as light, climate, geographical position, religion; with the conclusion, reached also in the ensuing discussion, that there is no such principle of association that is universal.

The afternoon session was devoted to archæology, and it is perhaps a significant fact that all the papers dealt with the extreme western portion of the continent. Dr. M. H. Saville presented a brief paper upon the 'Mexican Stone Yoke,' which he concluded to be a symbol of death. The other papers on the program were: 'Contents of a Room Excavated in the Ruins of Pueblo Bonito, showing a Specialized Form of Pottery,' by Mr. J. H. Pepper; 'Archæological Investigations on the North Pacific Coast of America,' by Mr. H. I. Smith; 'The California Indians,' by Professor McGee; and 'Archæological Problems of California,' by Professor Holmes, the last mentioned being postponed to the following session. Professor McGee's extremely interesting paper opened a discussion as to the causes of the linguistic diversity of certain regions, such as California; and Professor Holmes demonstrated very clearly the great improbability of the remains in California auriferous gravels, including the Calaveras skull, dating back, as has been claimed, to Middle Tertiary times. Owing to the specialized and generally miscellaneous character of all these papers, it is impossible even to attempt a summary of them. But one point which they all made and emphasized in common seems to deserve mention: the complete, or at least great, resemblance of the archæological finds to articles of culture of the present time in the same localities.

The second day's session, at which Professor McGee presided, was opened by Major Powell, with a paper on the 'Science of Estheology.' Major Powell's entire paper was schematic, as well as exhaustive, and this, together with the fact that the system he presented is but part of a larger systematization, renders it impossible to do it justice by reference to one or two of its points. Mr. James Mooney discussed the Indian Congress at Omaha. He spoke of the growing recognition which this method of ethnologic exhibition was gaining, and dwelt upon the especial opportunities at expositions. The Omaha Congress deserved high praise for the general arrangement of the exhibits and the ingenuity of many of the plans. The unrepresentativeness of the tribes collected, however, was a serious, and on the whole, avoidable defect.

Papers by Miss Cornelia Horsford, on 'Cairus in Southwestern Norway,' which reveal great likeness to those found on the Massachusetts coast, and by A. S. Gatchet, devoted to showing the radical identity, in various American languages, of the terms for real and true, and male, were read in

abstract. The following papers were read by title: 'The Structural Peculiarities of the Eskimo of Smith Sound,' by Dr. G. S. Huntington; 'On the Names Glooscap and Illa Tichi Uira Cocha,' by Mr. Stansbury Hagar; and 'Belief in Will-Power Among the Pawnees,' by Miss Alice C. Fletcher. Dr. Boas represented the anthropologists in the discussion before the Society of Naturalists, and the Section took part in the other exercises and entertainments provided for the affiliated societies.

A. L. KROEBER.

SCIENTIFIC BOOKS.

Revised Text-Book of Geology. By JAMES D. DANA. Edited by WM. NORTH RICE. American Book Company.

It is now more than sixty years since the late Professor Dana produced, in 1837, his first important work, a System of Mineralogy. During subsequent years, down almost to the day of his death, in 1895, he was engaged at frequent intervals in writing or revising the several important text-books of geology and mineralogy that have done so much during the last half century to arouse among English-speaking students an intelligent interest in those subjects.

The first edition of 'A Manual of Geology' was published in 1862, the more elementary work, 'The Text-Book of Geology,' following in 1864. So great has been the popularity of the briefer work that extensive revisions were made by the author in 1874 and 1883, while the final revision, begun by him just before his death, has been admirably carried to completion, in the spirit of his old master, by Professor Wm. North Rice, of Wesleyan University.

Professor Rice started out with the plan of retaining the distinctive characteristics of the book, bringing it down to the present time as regards its facts, but still expressing Professor Dana's well-known opinions. Although the general plan of arrangement has been kept unaltered in the main, some radical changes have been made in the interpretation of geological phenomena. Especially is this shown in the treatment of the subject of metamorphism, where the editor takes a very different view from that held by Professor Dana, and one in harmony with modern thought, when he states that the crystalline schists are 'undoubtedly derived in some cases from granites and other plutonic rocks, a schistose structure being developed by pressure and shearing.'

Another change less radical in its character, but affecting the whole work, is the fuller recognition given to evolution as a factor in geological history. The editor states that from this standpoint he has entirely rewritten the closing chapter, in which the general bearing of paleontology upon evolution is discussed.

The zoological and botanical classifications are much modernized, although the anglicized terminology used by Professor Dana in earlier editions is for the most part followed. Professor Dana's plan of terminating names of rocks in *yte* in distinction from the names of minerals which terminate in *ite* is abandoned on the ground that the innovation in nomenclature has not been adopted by other writers.

In general, however, Professor Rice has faithfully reproduced the well-known opinions of Professor Dana in his revision, but has introduced enough in the way of modern views to make the book a most acceptable addition to our list of elementary text-books of geology. It is not an easy task to revise the work of another, and it often involves much more labor than writing the entire book anew. Professor Rice is to be congratulated on the success of his labor of love in revising 'The Text-Book of Geology,' which, from the earlier relations of teacher and student, he states was entered upon with something like a feeling of filial obligation.

W. B. CLARK.

JOHNS HOPKINS UNIVERSITY.

The Groundwork of Science. A Study of Epistemology. By ST. GEORGE MIVART, M.D., PH.D., F. R. S. New York, G. P. Putnam's Sons; London, Bliss, Sands & Co. 1898. Pp. xviii + 328.

This book forms the second volume of 'The Science Series,' which is now appearing under the editorial supervision of Professor Cattell and Mr. F. E. Beddard. "Each volume of this series," the prospectus sets forth, "will