

large a number that the visitor is simply bewildered and but little interested or instructed. And this point is well made, for there is not the slightest doubt that a limited number of specimens, well installed and properly labeled, is in every way better than the large series so often shown. The arrangement of natural history collections on a geographical basis is also dwelt on in various places, and this has always seemed to the present writer the best method by far. The prediction is here ventured that the successful museum of the future will, so far as the exhibition of biological material is concerned, consist of a central synoptic or index collection, supplemented by series displaying the geographical and geological distribution of plants and animals, and various features in their life histories. This by no means precludes the display of systematic series wherever this may be thought desirable, but this feature of museums is commonly made far too much of. The exhibition series of a museum is for the public, and the average visitor does not go to the museum for study, and the advanced student does not, as a rule, seek for information in the material on exhibition, although there are notable exceptions to this rule in anthropological collections.

In the department of anthropology, by the way, Dr. Meyer does not favor a geographical arrangement, but advocates bringing together all objects of a kind in order that their development and variation may be seen. Where space and material admit, however, he considers that there should also be geographical series to illustrate the customs of different races. In respect to installation, the Pitt-Rivers Museum at Oxford is awarded the first place among English ethnological museums and the scheme of its arrangement is given in full.

A detail of installation, shown in many of the illustrations, is the large number of skeletons on exhibition with no protection whatever from dust or visitors, and one can but think that either the attendants are more vigilant abroad than here or the visitors more conscientious. Specimens so recklessly displayed in this country would run great chance

of being ruined by dust, or of being broken by relic-seeking visitors; no specimen that can possibly be put in a case should be exposed.

Some of the shortcomings of museums are, however, unavoidable, while others, as Dr. Meyer is careful to say in his introductory remarks are 'to a greater extent the fault of the establishment than of the persons in charge, for one individual has little control of the many circumstances on which the historical development of museums and other institutions depends.' It is to be hoped that Dr. Meyer may soon be able to embody his views regarding museums in the construction of a new museum in Dresden, but we trust he will not wait until that time to give us a summary of these views, and possibly he may present them in his next paper.

F. A. L.

#### SCIENTIFIC JOURNALS AND ARTICLES.

In *The American Naturalist* for November Bashford Dean presents the 'Biometric Evidence in the Problem of the Paired Limbs of the Vertebrates,' concluding that it is in favor of the fold theory and against the hypothesis that the limbs are modified gill arches. C. R. Eastman gives a 'Notice of Interesting Forms of Carboniferous Fish Remains,' and Lætitia M. Snow considers 'The Microcosm of the Drift Line,' being a discussion of the life relations of the insects found along the shores of Lake Michigan. Joseph A. Cushman gives 'Studies of Localized Stages of Growth in Some Common New England Plants' and H. S. Pratt under 'Synopsis of North American Invertebrates,' continues the treatment of the Trematodes, the first part of which appeared in the *Naturalist* for August, 1900. The number contains the 'Quarterly Record of Gifts, Appointments and Deaths.'

*The Popular Science Monthly* for December opens with an article by David Starr Jordan on 'The Higher Education of Women,' which concludes with the statement that co-education is never a question where it has been tried. W. P. Pycraft tells of 'The Significance of the Condition of Young Birds

at Birth,' considering that the facts justify the belief that early birds were arboreal and nidifugous. C. K. Edmunds discusses 'The Motive Power of Heat.' There is a reprint of Francis Bacon's 'Solomon's House,' and J. G. Lipman writes of 'Nitrogen-fixing Bacteria,' indispensable factors in the production of the world's food. S. C. Cronwright Schreiner describes 'Some Arachnids at Hanover, Cape Colony,' giving many interesting details of their habits; and in 'Zoology in America' T. D. A. Cockerell gives a brief résumé, based on titles in the *Zoological Record* of the scientific work being done here. He concludes that if we are not doing what we might and ought, we are not so seriously behind. In the fourth of his articles on 'Mental and Moral Heredity in Royalty,' Frederick A. Woods considers the rulers of Spain and, lastly George B. Hollister has an article on 'The Size of Alaska.'

MESSRS. BORNTAEGER, Berlin, announce the publication, beginning with January 1, of a bi-weekly *Biochemische Centralblatt* under the charge of leading German students of biochemistry.

#### SOCIETIES AND ACADEMIES.

##### THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE fifty-second annual meeting of the American Association for the Advancement of Science, and the first of the Convocation Week meetings, will be held in Washington, D. C., December 27, 1902, to January 3, 1903. The retiring president is Professor Asaph Hall, U.S.N., and the president elect, President Ira Remsen, Johns Hopkins University. The permanent secretary is Dr. L. O. Howard, Cosmos Club, Washington, D. C., and the local secretary, Dr. Marcus Benjamin, Columbian University, Washington, D. C. President Roosevelt is honorary president of the local committee. The preliminary program with information in regard to hotel headquarters, railway rates, etc., will be found in the issue of SCIENCE for November 21. The following scientific societies will meet at Washington in affiliation with the Association:

*The American Anthropological Association* will hold its first regular meeting during Convocation Week in affiliation with Section H of the A. A. A. S. President, W. J. McGee; secretary, George A. Dorsey, Field Columbian Museum, Chicago, Ill.

*The American Chemical Society* will meet on December 29 and 30. President, Ira Remsen; secretary, A. C. Hale, 352A Hancock street, Brooklyn, N. Y.

*The American Folk-lore Society* will meet in affiliation with Section H of the A. A. A. S. President, George A. Dorsey; vice-presidents, J. Walter Fewkes, James Mooney; secretary, W. W. Newell, Cambridge, Mass.

*The American Microscopical Society* will probably hold a business meeting on December 29. President, E. A. Birge, Madison, Wis.; secretary, H. B. Ward, University of Nebraska, Lincoln, Nebr.

*The American Morphological Society* will meet on December 30 and 31. President, H. C. Bumpus; vice-president, G. H. Parker; secretary and treasurer, M. M. Metcalf, Woman's College, Baltimore, Md.

*The American Philosophical Association* will meet on December 30 and 31 and January 1. Secretary, H. N. Gardiner, Northampton, Mass.

*The American Physical Society* will meet in affiliation with Section B of the A. A. A. S. President, Albert A. Michelson; secretary, Ernest Merritt, Cornell University, Ithaca, N. Y.

*The American Physiological Society* will meet on December 30 and 31. President, R. H. Chittenden; secretary, F. S. Lee, Columbia University, New York, N. Y.

*The American Psychological Association* will meet on December 30 and 31 and January 1. President, E. A. Sanford; secretary and treasurer, Livingston Farrand, Columbia University, New York, N. Y.

*The American Society of Naturalists* will meet on December 30 and 31. President, J. McK. Cattell; vice-presidents, C. D. Walcott, L. O. Howard, D. P. Penhallow; secretary, R. G. Harrison, Johns Hopkins University, Baltimore, Md.

*The Association of American Anatomists* will meet on December 30 and 31. President, G. S. Huntington; vice-president, D. S. Lamb; secretary and treasurer, G. Carl Huber, University of Michigan, Ann Arbor, Mich.

*The Association of Economic Entomologists* will meet on December 26 and 27. President, E. P. Felt; secretary, A. L. Quaintance, College Park, Md.