

THE AMERICAN ASSOCIATION.

THE preliminary programme of the fiftieth meeting of the American Association for the Advancement of Science, to be held at Boston August 22-27, has just been issued by the local committee.

Some changes have been made in the officers of the Association by death and resignation. The revised list is:—President: Frederick W. Putnam. Vice-Presidents: Section A (Mathematics and Astronomy): Edward E. Barnard. Section B (Physics): Frank P. Whitman. Section C (Chemistry): Edgar F. Smith. Section D (Mechanical Science and Engineering): Mortimer E. Cooley. Section E (Geology and Geography): Horace L. Fairchild. Section F (Zoology): Alpheus S. Packard. Section G (Botany): W. G. Farlow. Section H (Anthropology): James M. Cattell. Section I (Social and Economic Science): Archibald Blue. Permanent Secretary: Leland D. Howard. General Secretary: James McMahon, to fill vacancy caused by the death of David S. Kellcott. Secretary of the Council: Frederick Bedell.

The meetings will be held at the Massachusetts Institute of Technology, the Harvard University Medical School, and the Boston Society of Natural History. Association headquarters will be at the Rogers Building of the Institute of Technology (named after Prof. Wm. B. Rogers, last president of the Society of American Geologists and Naturalists, from which the American Association was organised fifty years ago). The hotel headquarters will be at the Copley Square Hotel.

The general programme begins with the meeting of the Council on August 20. The first general session of the Association will be held on Monday, August 22, at 10 a.m., at Huntington Hall in the Rogers Building. The retiring president, Prof. Wolcott Gibbs, will introduce the president-elect, Prof. F. W. Putnam, of Harvard University. Addresses of welcome will be delivered by Governor Roger Wolcott, of Massachusetts; Mayor Josiah Quincy, of Boston; and President James M. Crafts, of the Massachusetts Institute of Technology. President Putnam will reply. The several sections will then commence their sittings.

The addresses of the several vice-presidents will be given on Monday afternoon as follows:—

At half-past two o'clock: Vice-President Whitman, before the section of physics, "On the Perception of Light and Colour"; Vice-President Cattell, before section of anthropology, on "The Advance of Psychology"; Vice-President Farlow, before section of botany, on "The Conception of Species as affected by Recent Investigations on Fungi."

At half-past three o'clock: Vice-President Barnard, before section of mathematics and astronomy, on "Development of Astronomical Photography"; Vice-President Blue, before section of social and economic science, on "The Historic Method in Economics"; Vice-President Packard, before section of zoology, on "A Half-century of Evolution with Special Reference to the Effects of Geological Changes on Animal Life."

At half-past four o'clock: Vice-President Smith, before section of chemistry (subject to be announced); Vice-President Fairchild, before section of geology and geography, on "Glacial Geology in America"; Vice-President Cooley, before section of mechanical science and engineering (subject to be announced).

The address of the retiring president, Prof. Wolcott Gibbs, on Monday evening, will be "On some Points in Theoretical Chemistry," after which will be a reception to the Association and invited guests.

The meetings of the several sections for the reading of papers will be held on Tuesday and Thursday, morning and afternoon; and some sections will also hold meetings at Cambridge on Friday. Sections F and H will meet on Tuesday evening at the Harvard Medical School, when Dr. Thomas Dwight will lecture on "Variations in Human Bones."

Wednesday will be "Salem Day," and will be devoted to an excursion to Salem, where the museum of the Association is located. On the return, in the evening, lectures will be given in Huntington Hall on the Boston Park System and the Metropolitan Water Supply and Sewerage System.

Friday, Cambridge Day, will be spent at Harvard University, and an address will be made in the evening at Sanders Theatre by President Charles W. Eliot.

The general closing session will be held on Saturday morning at 10 o'clock; and the concluding meetings and adjournment of the sections in the evening.

Besides the excursions to Salem and Cambridge, an excursion will be made on Tuesday afternoon, under the auspices of the American Forestry Association, to Middlesex Fells; on Thursday afternoon to the Arnold Arboretum and the Blue Hill Meteorological Observatory; and on Saturday a choice between (a) Wellesley College, (b) Concord and Lexington.

On the following Monday, August 29, excursions will start to the following places:—White Mountains, Plymouth, Provincetown (ocean excursion to Cape Cod), Wood's Hole (the Marine Biological Laboratory and the United States Fish Commission), Newport, Clinton (the new Metropolitan Water Supply), Lawrence Experiment Station (of special interest to chemists, biologists and students of public hygiene).

The foreign guests at the Boston meeting will be entertained by the City of Boston. The officers of the committee on foreign invitations are Dr. Henry P. Bowditch, chairman; Mr. A. Lawrence Rotch, secretary.

The local secretary for the Boston meeting is Prof. H. W. Tyler, of the Massachusetts Institute of Technology, to whom all correspondence should be addressed.

Meetings of affiliated societies will begin on August 18, including American Forestry Association, Geological Society of America, American Chemical Society, Society for the Promotion of Agricultural Science, Association of Economic Entomologists, Botanical Club of the Association, American Mathematical Society, Society for the Promotion of Engineering Education, American Folk-Lore Society, National Geographic Society, Botanical Society of America, and conference of Astronomers and Physicists.

FOLK-MEDICINE IN ANCIENT INDIA.

"THE most primitive witchcraft," says Sir Alfred Lyall, "looks very like medicine in the embryonic state." This is pre-eminently the case in ancient India, where it is not difficult to trace the history of medical science—such as we find it in scientific works on medicine, like the *Charaka* or *Susruta*—back to its early beginnings in the charms and witchcraft practices of the *Atharva-veda*, the most ancient compendium of sorcery.

In India, as elsewhere, the general doctrine of disease prevails that all abnormal and morbid states of body and mind are caused by *demons*, who are conceived either as attacking the body from without, or as temporarily entering the body of man. The consequence is that primitive medicine consists chiefly in chasing away or exorcising these hostile spirits. This is done, in the first instance, by *charms*. The spirit of disease is addressed with coaxing words and implored to leave the body of the patient, or fierce imprecations are pronounced against him, to frighten him away. But these charms, powerful as they are (in fact, there is nothing more powerful to the primitive mind than the human *word*, the solemn blessing or curse), are yet not the only resource of the ancient physicians or magicians.

From the earliest times people had become aware of the curative power of certain substances in nature, especially of herbs. This knowledge was first gained by experience, and, after it had once been obtained, people began to ascribe similar curative power to plants, as well as to animal and mineral substances for various other reasons. Analogy or association of ideas serves to explain not only many of the practices of primitive medicine, but also accounts in many cases for the belief in the curative power of certain substances. The principle that *similia similibus curantur* prevails throughout the whole range of folk-medicine. Thus dropsy is cured by water. A spear-amulet is used to cure colic, which is supposed to be caused by the spear of the god Rudra. The *colour* of a substance is of no small importance in determining its use as a medicine. Thus turmeric is used to cure jaundice. Red, the colour of life-blood and health, is the natural colour of many amulets used to secure long life and health. A black plant is recommended for the cure of white leprosy. But even the *name* of a substance was frequently a reason for ascribing to it healing power. One of the most powerful medicinal or magical plants is called in Sanskrit *apamarga* (*Achyronthes aspera*), and it owes its supposed power essentially to its etymological connection with the verb "apamarj," meaning "to wipe away," and in Hindu charms the plant is constantly implored to wipe away disease, to wipe out demons and wizards, to wipe off sins and evils of all kinds.

To wipe a disease away, is a very common and a very natural