

for the completion of their papers, such time will, within reasonable limits, be allowed; the speakers will then be saved from the disappointment of being interrupted before their conclusions are reached, and the officers will be relieved from the embarrassment of enforcing the rule regarding the time-limit.

3. It is particularly urged that diagrams and charts should be made on such a scale that they can be deciphered easily at a distance of 30 or 40 feet; and that lantern slides should be exhibited in moderate number, only such being chosen as directly illustrate the subject under discussion. Lantern slides should, if possible, be introduced as the points that they illustrate are reached, rather than after the conclusion of the paper.

By invitation of the fellows residing in Princeton the usual smoker or general social gathering will be held on Tuesday evening, the 30th, after the presidential address. The customary subscription dinner will take place Wednesday evening.

A valuable feature of the regular and social sessions of the annual meetings has always been the attendance of students and other junior workers in geological science, as visitors. The council desires to increase the number of such attendants, and with this object requests each fellow to send to the secretary, not later than December 10, the names and addresses of persons who, whether they can attend the meeting or not, are seriously interested in geology and deserving of recognition as visitors, although they have not yet reached such standing as to gain membership in the society. The council will then write to the persons thus nominated, inviting them to attend the Princeton meeting.

The Paleontological Society will hold its annual meeting in connection with the meeting of the Geological Society, the sessions beginning on Wednesday, December 31, 1913. Detailed information regarding this meeting may be obtained from Dr. R. S. Bassler, U. S. National Museum, Washington, D. C., Secretary of the Society.

EDMUND OTIS HOVEY,
Secretary

THE SOCIETY OF AMERICAN BACTERIOLOGISTS

THE annual meeting of the Society will be held in Montreal, December 31, 1913, and January 1 and 2, 1914 under the presidency of Professor C.-E. A. Winslow. The meetings of the society will be held in the new Medical Building of McGill University on December 31 and January 2. The society will meet at Macdonald College on January 1, leaving Montreal at 9:10 A.M., and returning at 5:42 P.M. Luncheon will be served to the members at Macdonald College.

The annual dinner will be held at the University Club on the evening of January 1. The president's address "The Characterization and Classification of Bacterial Types" will follow the dinner.

The program is divided into topics each of which will occupy one session of the meeting. Titles of papers should be in the hands of the Program Committee not later than November 20, 1913.

Soil Bacteriology—Otto Rahn, University of Illinois, Urbana, Illinois.

Sanitary Bacteriology—including Water and Dairy Bacteriology—H. W. Hill, Institute Public Health, London, Ontario, Canada.

Systematic Bacteriology—H. J. Conn, Geneva, New York.

Technic—L. A. Rogers, Department of Agriculture, Washington, D. C.

Immunity—Benjamin White, Director of Hoagland Laboratory, Brooklyn, New York.

Pathology—P. F. Clark, No. 1027 N. Caroline Street, Baltimore, Md.

Typewritten abstracts of papers (not more than 300 words) should be in the hands of the secretary not later than the last session. These abstracts last year were published in *SCIENCE* and *Cent. f. Bakt.*

A. PARKER HITCHENS,
Secretary

GLENOLDEN, PENNSYLVANIA

THE ATLANTA MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE sixty-fifth meeting of the American Association for the Advancement of Science,

and the twelfth of the "Convocation Week" meetings, will be held in Atlanta, Georgia, from December 29, 1913, to January 3, 1914.

The council will meet Monday morning, December 29, and each following morning, in the council room, at 9 o'clock. The opening general session of the association will be held at 8 o'clock on the evening of Monday, December 29. The meeting will be called to order by the retiring president, Dr. Edward C. Pickering, who will introduce the president of the meeting, Dr. Edmund B. Wilson. After addresses of welcome by Governor John M. Slaton and Mayor James G. Woodward and a reply by President Wilson, the annual address of the retiring president, Dr. Edward C. Pickering, will be given on "The Study of the Stars." After the address there will be a reception to members of the association and affiliated societies in Taft Hall.

The sections and the affiliated societies will meet daily at 10 A.M. and 2 P.M. Each section will offer a program of general interest at one or two sessions. The sections will arrange programs of special papers only when the corresponding national society does not meet at the same time and place.

The address of the retiring chairmen of the sections will be given as follows:

MONDAY AT 2 P.M.

Vice-president Loey, before the Section of Zoology. Title: "The Story of Human Lineage."

TUESDAY AT 2 P.M.

Vice-president Van Vleck, before the Section of Mathematics and Astronomy. Title: "The Influence of Fourier's Series upon the Development of Mathematics."

Vice-president Webster, before the Section of Physics. Title: "The Methods of Physical Science: to what do they Apply?"

Vice-president Johnson, before the Section of Botany. Title: "Some Botanical Contributions to the Solution of an important Biological Problem."

WEDNESDAY AT 2 P.M.

Vice-president Cattell, before the Section of Education. Title: "Science, Education and Democracy."

THURSDAY AT 2 P.M.

Vice-president Holmes, before the Section of Mechanical Science and Engineering. Title: "Safety and the Prevention of Waste in Mining and Metallurgical Operations."

Vice-president Todd, before the Section of Geology and Geography. Title: "Pleistocene History of the Missouri River."

AT 4 P.M.

Vice-president Hammond, before the Section of Social and Economic Science. Title: "The Development of Our Foreign Trade."

FRIDAY AT 4:30 P. M.

Vice-president Macleod, before the Section of Physiology and Experimental Medicine. Title: "The Physiological Instruction of Medical Students."

There will be two public lectures, complimentary to the citizens of Atlanta and vicinity, one on Tuesday evening by Dr. Charles Wardell Stiles, of the U. S. Public Health Service, on "The Health of the Mother in the South," and one on Wednesday evening by Professor Charles E. Munroe, of the George Washington University, on "The Explosive Resources of the Confederacy during the War and Now: A Chapter in Chemical History."

It is expected that there will be a number of joint meetings and the usual smokers and dinners. The Ladies' Reception Committee will arrange functions for the women members of the association and affiliated societies and for the women accompanying members. The hotel headquarters are the Piedmont. A railroad rate of one fare and three fifths for the round trip, on the certificate plan, conditioned upon the presentation at the meeting of not less than 200 certificates, has been granted by the Trunk Line Association.

The following societies have indicated their intention to meet in Atlanta during Convocation Week in affiliation with the association:

Astronomical and Astrophysical Society of America.—Will meet on dates to be announced, including joint session with Section A. Secretary, Professor Philip Fox, Dearborn Observatory, Evanston, Ill.

Botanical Society of America.—Will meet on

Tuesday, Wednesday, Thursday and Friday, December 30 to January 2. Will hold joint sessions with Section G and American Phytopathological Association on Tuesday and Friday, respectively. Secretary, Dr. George T. Moore, Missouri Botanical Garden, St. Louis, Mo.

American Association of Economic Entomologists.—Will meet on Thursday and Friday, January 1 and 2. Secretary, Albert F. Burgess, Gipsy Moth Parasite Laboratory, Melrose Highlands, Mass.

Entomological Society of America.—Will meet on Tuesday and Wednesday, December 30 and 31. Public address on Wednesday, December 31, at 8 P.M. Secretary, Professor Alex. D. McGillivray, 603 W. Michigan Avenue, Urbana, Ill.

American Federation of Teachers of the Mathematical and the Natural Sciences.—Will meet on Tuesday, December 30. Secretary, Dr. William A. Hedrick, McKinley Manual Training School, Washington, D. C.

American Association of Official Horticultural Inspectors.—Will meet on dates to be announced. Secretary, Professor J. G. Sanders, University of Wisconsin, Madison, Wis.

American Microscopical Society.—Will meet on Tuesday and Wednesday, December 30 and 31. Joint sessions with Sections F and G on dates to be announced. Secretary, Professor T. W. Gallo-way, James Millikin University, Decatur, Ill.

American Physical Society.—Will meet on Tuesday, Wednesday, Thursday and Friday, December 30 to January 2, in joint sessions with Section B. Secretary, Dr. Alfred D. Cole, Ohio State University, Columbus, Ohio.

American Phytopathological Association.—Will meet on dates to be announced. Will hold joint sessions with Section G on Tuesday, December 30, and with Botanical Society of America on Friday, January 2. Secretary, Dr. C. L. Shear, U. S. Department of Agriculture, Washington, D. C.

School Garden Association of America.—Will meet on Wednesday, December 31. Secretary, Edwin J. Brown, Dayton, Ohio.

Society of the Sigma Xi.—Will hold its convention on Tuesday, December 30. Corresponding Secretary, Professor H. B. Ward, University of Illinois, Urbana, Ill.

Southern Society for Philosophy and Psychology.—Will meet on dates to be announced, including joint sessions with Section H. Secretary, Dr. W. D. Ruediger, George Washington University, Washington, D. C.

The officers for the Atlanta meeting are as follows:

President

EDMUND B. WILSON, Columbia University, New York, N. Y.

Vice-presidents

A.—*Mathematics and Astronomy*—FRANK SCHLES-INGER, Allegheny Observatory, Allegheny, Pa.

B.—*Physics*—ALFRED D. COLE, Ohio State University, Columbus, Ohio.

C.—*Chemistry*—CARL L. ALSBERG, Bureau of Chemistry, U. S. Department of Agriculture, Washington, D. C.

D.—*Mechanical Science and Engineering*—O. P. HOOD, U. S. Bureau of Mines, Pittsburgh, Pa.

E.—*Geology and Geography*—J. S. DILLER, U. S. Geological Survey, Washington, D. C.

F.—*Zoology*—ALFRED G. MAYER, Carnegie Institution of Washington, Washington, D. C.

G.—*Botany*—HENRY C. COWLES, University of Chicago, Chicago, Ill.

H.—*Anthropology and Psychology*—WALTER B. PILLSBURY, University of Michigan, Ann Arbor, Mich.

I.—*Social and Economic Science*—JUDSON G. WALL, Tax Commissioner, New York, N. Y.

K.—*Physiology and Experimental Medicine*—THEODORE HOUGH, University of Virginia, Charlottesville, Va.

L.—*Education*—PHILANDER P. CLAXTON, Commissioner of Education, Washington, D. C.

Permanent Secretary

L. O. HOWARD, Smithsonian Institution, Washington, D. C.

General Secretary

HARRY W. SPRINGSTEEN, Western Reserve University, Cleveland, Ohio.

Secretary of the Council

WILLIAM A. WORSHAM, JR., State College of Agriculture, Athens, Ga.

Secretaries of the Sections

A.—*Mathematics and Astronomy*—FOREST R. MOULTON, University of Chicago, Chicago, Ill.

B.—*Physics*—WILLIAM J. HUMPHREYS, U. S. Weather Bureau, Washington, D. C.

C.—*Chemistry*—JOHN JOHNSTON, Geophysical Laboratory, Carnegie Institution of Washington, Washington, D. C.

D.—*Mechanical Science and Engineering*—ARTHUR H. BLANCHARD, Columbia University, New York, N. Y.

- E.—*Geology and Geography*—GEORGE F. KAY, State University of Iowa, Iowa City, Iowa.
 F.—*Zoology*—HERBERT V. NEAL, Tufts College, Mass.
 G.—*Botany*—W. J. V. OSTERHOUT, Harvard University, Cambridge, Mass.
 H.—*Anthropology and Psychology*—(*Acting Secretary*), E. K. STRONG, JR., Columbia University, New York, N. Y.
 I.—*Social and Economic Science*—SEYMOUR C. LOOMIS, 69 Church Street, New Haven, Conn.
 K.—*Physiology and Experimental Medicine*—DONALD R. HOOKER, Johns Hopkins Medical School, Baltimore, Md.
 L.—*Education*—STUART A. COURTIS, Liggett School, Detroit, Mich.

Treasurer

R. S. WOODWARD, Carnegie Institution of Washington, Washington, D. C.

Assistant Secretary

F. S. HAZARD, Office of the American Association for the Advancement of Science, Smithsonian Institution, Washington, D. C.

SCIENTIFIC NOTES AND NEWS

THE medals of the Royal Society have been awarded as follows: The Copley medal to Sir Ray Lankester, on the ground of the high scientific value of the researches in zoology carried out by him, and of the researches inspired and suggested by him and carried out by his pupils; a Royal medal to Professor H. B. Dixon, F.R.S., for his researches in physical chemistry, especially in connection with explosions in gases; a Royal medal to Professor E. H. Starling, F.R.S., for his contributions to the advancement of physiology; the Davy medal to Professor R. Meldola, F.R.S., for his work in synthetic chemistry; the Hughes medal to Dr. Alexander Graham Bell, on the ground of his share in the invention of the telephone and more especially the construction of the telephone receiver; the Sylvester medal to Dr. J. W. L. Glaisher, F.R.S., for his mathematical researches.

THE former pupils of Sir Henry Roscoe during the long period he occupied the chair of chemistry at Owens College, now the University of Manchester, decided some time back to

commemorate the celebration of his eightieth birthday in January, 1913, by presenting his bust to the Chemical Society of London, and the formal presentation took place on November 21 at the society's rooms. Sir Edward Thorpe first presented to Sir Henry Roscoe an address signed by some 140 of his former students. He then unveiled the bust, and, on behalf of the subscribers, asked the president of the Chemical Society to accept it as a permanent memorial. He extended to Mr. Albert Drury, R.A., the thanks of the committee for the excellent and striking likeness that he had secured. He also asked Sir Henry Roscoe to accept as a further memento a replica of the bust for himself and the members of his family. The gift to the Chemical Society was accepted by the president, Professor W. H. Perkin. Sir Henry Roscoe then acknowledged the gifts, both to himself personally and to the Chemical Society.

PROFESSOR F. LOEFFLER, who since 1888 has occupied the chair of hygiene in the University of Greifswald, has been appointed director of the Koch Institute of Infectious Diseases at Berlin in succession to Professor Gaffky.

DR. J. N. LANGLEY, professor of physiology in the University of Cambridge, has been elected a corresponding member of the Munich Academy of Sciences.

THE Mary Kingsley medal of the Liverpool School of Tropical Medicine has been presented to Professor F. V. Theobald, vice-principal and zoologist of the Southeastern Agricultural College, Wye.

THE Bessemer gold medal of the British Iron and Steel Institute for 1914 will be awarded to Dr. Edward Riley, F.C.S., F.I.C.

AN appropriation from the Shaler Memorial Fund of Harvard University has been granted to Professor P. E. Raymond and Professor W. H. Twenhofel for an investigation into the correlation of the Ordovician and Silurian strata of the Baltic region with those of North America.

DR. L. W. STEPHENSON has been granted leave of absence by the U. S. Geological Survey, to occupy a chair of paleontology in the