tive electrons are precisely alike, from whatever form of matter they may be derived. Thus we are prepared to witness some of the transformations of the chemical elements, such as the spontaneous disintegration of radium and the production of helium from it.

These addresses on the fundamental structure of matter will prepare the way for succeeding lectures, which will deal with the various transformations of matter involved in the evolution of the earth and its inhabitants.

The second course in the Evolution Series will be given at the next autumn meeting of the Academy by Dr. William Wallace Campbell, director of the Lick Observatory, Mount Hamilton, California. Provided with his raw material, as it were, by Sir Ernest Rutherford, Dr. Campbell will sketch the various types of bodies which make up the universe, describe their connection in systems, and explain the principal theories of stellar evolution. His object will be to show how stars and stellar systems are gradually evolved from an earlier state and to afford a view of the earth in its first phases of development. In this way the intimate relationship of the earth with the moon and the other bodies of the solar system will be made apparent, as well as the continuity of the process which connects the present with the remote past. Dr. Campbell will introduce some of the results of his extensive researches with the powerful instruments of the Lick Observatory and will employ a large collection of astronomical photographs for illustration purposes.

A distinguished European geologist will be invited to give the third course of lectures at the annual meeting of the Academy in 1915. Taking the earth from the hands of the astronomer, he will show how its surface features have been altered in the process of time. Later lectures, preserving the continuity of the series, will then enter the field of organic evolution and illustrate the bearing of recent investigations in paleontology, zoology and botany on the evolution of plant and animal life. The evolution of man will form the subject of a subsequent course, and the series will close with an account of the rise of the earliest civilizations, coming into touch with modern times in the life of the Nile Valley.

In all cases the lectures will be given by leading European and American investigators, whose personal researches have contributed largely toward the development of the fields of science which they represent. Every effort will be made to secure continuity and homogeneity of treatment, in order that the published lectures may unite into an adequate and well-balanced description of evolution in the broadest sense. The lecturers chosen will be able to eliminate unessential technicalities and to present their subjects clearly and intelligibly to general audiences. The series on Evolution should therefore appeal to a large public, interested in the broader aspects of science, but not necessarily familiar with its special methods or technical details.

The lectures will be open to the public without charge, and a cordial invitation is extended to all who may wish to attend them.

ARTHUR L. DAY,
Home Secretary
SMITHSONIAN INSTITUTION,
WASHINGTON, D. C.

THE AMERICAN PHYSICAL SOCIETY

A REGULAR meeting of the Physical Society will be held at the Bureau of Standards, Washington, on April 24 and 25. Morning sessions will begin at 9:30.

Attention is directed to the following special features of the coming meeting:

1. The members of the Physical Society are invited by the National Academy of Sciences to attend the William Ellery Hale lectures by Sir Ernest Rutherford, F.R.S., upon "The Constitution of Matter and the Evolution of the Elements" (illustrated). The lectures are two in number, and are delivered in the auditorium of the National Museum on April 21, and April 23, at 4:00 P. M.

2. A special attraction will be the exhibit of apparatus arranged by a local committee of the Physical Society. Thus far entries have been received from more than thirty manufacturers, importers and industrial research estab-

lishments. University laboratories and federal scientific bureaus will be well represented, so that an eminently successful exhibit is assured.

3. A lecture by Sir Ernest Rutherford will be given Friday afternoon at 3:30, "On X-ray and Gamma-ray Spectra" (at the Bureau of Standards?).

4. The three sessions of the meeting for the reading of papers will be joint sessions with the Electrophysics section of the American Institute of Electrical Engineers. (The morning sessions will be in charge of the Physical Society and the Friday evening session in charge of the A. I. E. E.)

5. Another feature will be the opening of the newly-completed electrical building of the Bureau of Standards. The apparatus exhibit will be there installed.

6. Members of the Physical Society and others in attendance will be guests of the scientific staff of the Bureau of Standards at luncheon in the west laboratory, at 1:00 P. M., on the days of the meeting.

7. Saturday afternoon there will be an opportunity to visit points of interest in the city, under the guidance of local members of the A. I. E. E. It is possible also that another session will be provided for the reading of papers, in view of the unusual number of titles presented.

A. D. Cole,
Secretary

THE AMERICAN JOURNAL OF BOTANY

At the Atlanta meeting of the Botanical Society of America, in January, 1914, plans were perfected for the publication of a new journal, known as the *American Journal of Botany*. As stated in the introductory note to No. 1, the need of increased facilities for the prompt publication of the results of botanical investigation has been keenly felt for some time, and the promptness with which this new opportunity has been taken advantage of, as indicated by the receipt of copy for the new venture, shows that the establishment of a new publication is amply justified.

An agreement has been entered into between the Botanical Society of America and the Brooklyn Botanic Garden for cooperation in the publication of this *Journal*. By the terms of this agreement, which has been entered into for a period of three years, financial responsibility is assumed jointly by the Botanical Society of America and the Brooklyn Botanic Garden. The Garden names the business manager and one member of the editorial board, and the Botanical Society of America elects the editor-in-chief and four other members of the editorial board.

The *Journal* is the official publication of the Botanical Society of America, and business offices are maintained at the Brooklyn Botanic Garden and at 41 North Queen Street, Lancaster, Pa.

It is the plan for the present to include contributions to all branches of botanical science, and longer papers will be especially welcome. It is not the present plan to include reviews of literature. Each issue will consist of about fifty pages, and contributions will be welcome from all botanists. There will be ten numbers to a volume.

All correspondence with reference to prospectus, subscriptions, advertisements, and exchanges with other publications, should be addressed to American Journal of Botany, Brooklyn Botanic Garden, Brooklyn, N. Y., and correspondence concerning editorial matters and all manuscript submitted for publication should be addressed to the editor-in-chief, Professor F. C. Newcombe, Geddes Heights, Ann Arbor, Michigan. The other members of the editorial board for 1914 are C. Stuart Gager, business manager, Brooklyn Botanic Garden; Robert A. Harper, Columbia University; Duncan S. Johnson, Johns Hopkins University; L. R. Jones, University of Wisconsin; George T. Moore, Missouri Botanical Garden; and Edgar W. Oliver, Brooklyn Botanic Garden.

THE CANADIAN ENTOMOLOGICAL SERVICE

Thirty years ago, in 1884, the Canadian government appointed a Dominion entomologist to advise agriculturists and others regarding the control of insect pests. Two years