

will be formed to bring together in one society the workers in different fields on the various phases of physiological optics. In this way, better cooperation will be obtained between the physicist, physiologist, psychologist, and the artist. This year is the centenary of the birth of von Helmholtz and one session of the meeting will be devoted to commemorating his work in the fields of optics, sound, and electricity. An address on "Personal Recollections of von Helmholtz" will be given by Dr. M. I. Pupin. Visits have been arranged to the plants of the Bausch & Lomb Optical Company and the Eastman Kodak Company.

THE AMERICAN ASSOCIATION FOR THE  
ADVANCEMENT OF SCIENCE—  
SOUTHWESTERN DIVISION

THERE are being given this autumn under the auspices of the Southwestern Division of the American Association for the Advancement of Science a series of lectures on the history of the Southwest. They are being undertaken at the special request of the Frontier Scoutmasters' Association, with the approval and support of the El Paso Council of the Boy Scouts of America. The lectures are as follows:

- October 5—The Ancient History of the Southwest as represented by the geological formations of the region: Professor W. H. Seamon, Professor of Geology at the Texas School of Mines.
- October 12—The Ancient History of the Southwest as represented by ruins, stone implements, pottery and other remains: E. A. J. Seddon.
- October 19—The Spanish Exploration of the Southwest: Mrs. M. D. Sullivan.
- October 26—American Occupation of the Southwest: Dr. F. H. H. Roberts, principal of the El Paso High School and president of the Junior College.
- November 2—History of the Mining Industry of the Southwest, from the earliest days: Lew Davis, of the El Paso Times.
- November 9—History of Irrigation in the Southwest, from the earliest days on: T. H. Clausen, of the U. S. Reclamation Service.
- November 16—History of Transportation in the Southwest: G. A. Martin, of the El Paso Herald.

November 23—The Indian Wars in the Southwest: Alvin E. Null.

November 30—The Present and Future of the Southwest: H. D. Slater, of the El Paso Herald.

The second annual meeting of the Southwest Division will be held in Tucson in the latter part of next January. It is expected that the meeting will be largely attended. There will be four scientific sections, instead of three, as at the last meeting. The Stewart Astronomical Observatory will be completed by that time, and Dr. Douglass hopes to dedicate it then as a special feature of the meeting.

ELLIOTT C. PRENTISS,  
*Chairman Executive Committee*

THE TORONTO MEETING OF THE AMERICAN  
ASSOCIATION FOR THE ADVANCE-  
MENT OF SCIENCE

THE engineering section of the American Association is arranging an important program for the Toronto meeting which will occur from December 27 to 31, 1921. The arrangements for the engineering sessions are in charge of Mr. J. B. Tyrrell, mining engineer, of Toronto. The programs aim to present the application of science to the solution of engineering problems. Many of the addresses will deal especially with the recent accomplishments of scientific engineering in Canada. It will be shown how scientifically trained men have developed some of the natural resources of the Dominion and the means by which this has been accomplished. Addresses already arranged are on the work accomplished by the Hydro-Electric Power Commission of Ontario; on the mines and mining plants of Canada including an account of prospecting in the northern wildernesses; on the explorations for oil carried out in the valley of the McKenzie River by the Imperial Oil Company, and on the work of the Toronto Harbor Commission in improving the Toronto harbor for the accommodation of ships of ocean draft. All of them, and especially those dealing with exploration in the far north, will be of interest not only to engineers but also to geographers and to every one interested in the out-of-doors. These ad-

dresses will generally be accompanied by illustrations and in many cases by motion pictures. Other topics will be announced later.

AN exhibit of scientific apparatus will be a prominent feature of the forthcoming Toronto meeting of the American Association. Preparations for the exhibit are in charge of a special committee, resident in Toronto, consisting of Professor E. F. Burton, *chairman*, Mr. L. E. Westman, *secretary*, Professor F. B. Kenrick and Professor R. B. Thomson. The University of Toronto will provide space for the exhibits, and exhibits of non-commercial institutions and private individuals will be exempt from a small charge made to commercial organizations to cover expenses. Those who contemplate taking part in this feature of the Toronto meeting should communicate with the secretary of the special committee.

REDUCED RAILROAD FARES for those attending the annual meeting of the American Association for the Advancement of Science at Toronto have been granted by four of the large passenger associations, which offer a rate of a fare and one-half, on the certificate plan, for the round trip. The railroad associations that have granted the reduced rates are: The Canadian Passenger Association, which includes practically all of the Canadian railroads; The New England Passenger Association, which includes the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut; The Trunk Line Association, which includes the states of New York, Pennsylvania, Maryland, New Jersey, Delaware, Virginia (in part), West Virginia (in part) and the District of Columbia; and The Central Passenger Association, which includes the states of Ohio, Indiana, Michigan and Illinois. Effort is now being made to secure reduced rates from the other passenger associations. A complete list of railroads offering reduced rates will be given, together with instructions regarding the purchase of tickets on the certificate plan, in the preliminary announcement of the Toronto meeting.

#### SCIENTIFIC NOTES AND NEWS

DR. E. D. BALL has resigned as assistant secretary of agriculture. He will remain at the department as director of scientific work.

PROFESSOR MORTIMER ELWYN COOLEY, dean of the college of engineering and architecture of the University of Michigan, has been elected president of the American Engineering Council of the Federated American Engineering Societies.

SIR WILLIAM POPE has been elected an honorary fellow of the Canadian Institute of Chemistry.

DR. DWIGHT C. BARDWELL has left Berkeley, Cal., where he received his Ph.D. at the University of California, to accept a position as assistant physical chemist at the Rare and Precious Metals Station of the U. S. Bureau of Mines at Reno, Nevada. Dr. Bardwell will work under Dr. S. C. Lind on research problems presented by the radium at this station.

JAMES E. IVES has resigned his position as research associate and lecturer in physics at Clark University to become a physicist in the office of industrial hygiene and sanitation of the United States Public Health Service. His headquarters will be in Washington, D. C.

GLENN E. MATTHEWS has accepted a position as research chemist in the photographic department of the Eastman Kodak Co., Rochester, N. Y.

DIRECTOR H. FOSTER BAIN of the Bureau of Mines has appointed a board of engineers, consisting of Mr. M. H. Roberts, Dr. R. C. Tolman and Professor W. L. DeBaufre, to study the production of helium in Texas.

DR. LOUIS A. BAUER, director of the department of terrestrial magnetism of the Carnegie Institution of Washington, sailed from New York on October 5 to join the magnetic survey vessel, the *Carnegie*, at Balboa, Canal Zone. He will remain with her until the completion of the present cruise at Washington about the middle of November. Some special investigations are to be undertaken in the Caribbean Sea and Atlantic Ocean during the homeward trip.