January 11 he passed away he left a memory of human character and of unselfish devotion to professional ideals which we who were privileged to know him shall long cherish.

WALTER B. CANNON,
HENRY A. CHRISTIAN,
RICHARD P. STRONG,
Committee

SCIENTIFIC EVENTS

BRITISH SOLAR ECLIPSE EXPEDITIONS[1]

THERE will be a total eclipse of the sun on May 9, at 6 o'clock in the morning by Greenwich time, invisible in any phase in England, but to be seen as a total eclipse from a track that lies in the Indian Ocean south of Madagascar, in the west, and crosses Sumatra, the Malay States, Siam, Cambodia and the Philippines, in the east. In these eastern regions the sun will be high in the sky and the duration of totality on the central line will be about five minutes. This long duration justifies the effort of making much preparation and a long journey for observation of the eclipse, and at the end of next week expeditions made up of observers from Greenwich and Cambridge will set out for that purpose.

Dr. John Jackson, chief assistant of the Royal Observatory, and Dr. Carroll, assistant director of the Solar Physics Observatory at Cambridge, will proceed to Alor Star, in Kedah, in the Malay Peninsula, where they will be joined later by Dr. Aston, of Cambridge. Professor F. J. M. Stratton, lately called to the chair of astrophysics in the University of Cambridge, who was the leader of an expedition to Sumatra to observe the solar eclipse of January 14, 1926, when the duration was about four minutes, will, accompanied by Mr. P. J. Melotte, of the Royal Observatory, Greenwich, occupy a station at Pattani, on the east coast of southern Siam, where they hope to have the help of Dr. Royds, director of the Observatory at Kodaikanal, southern India, and Colonel J. Waley Cohen, who took part with Professor Stratton in the eclipse of 1926.

At both places the experiment will be made to detect the Einstein effect of the bending of rays of light by the attraction of a massive body that they pass. In other words, the endeavor is made to find whether the relative positions of the individuals of a group of stars are precisely the same when the sun lies among them as when it does not, since by theory the supposed Einstein attraction is not the same for all of them. The answer to the question is looked for by photographing the stars that may be seen round the sun when the sky is darkened by eclipse, and comparing the result with a photograph taken some months later when they are seen in the night sky. To do this Dr. Jackson will take with him a telescope of comparatively small diameter, 7-inch, but of 21 feet focal length, to be used with a cœlostat, or rotating mirror, that will feed it with light from the celestial scene, the telescope itself remaining horizontal and stationary during the exposure of the plates.

At Pattani the instrument to be used for the same purpose is the Greenwich Astrographic telescope of 13-inch aperture and 11 feet focal length on an ordinary equatorial mounting. It is necessary in measuring the photographs when taken that their linear scale shall be accurately known, and to ensure this a program has been arranged for photographing not only the stars immediately round the eclipsed sun, but also a field a little distance away alternately, and several times during the precious five minutes—a task which will necessitate deft handling by the operators.

The combined program includes other tasks no less important, dealing with problems in solar physics—a study of the relative intensities of the lines H and K and the triplet X of ionized calcium in the infra-red, to test Professor Milne's theory of the calcium chromosphere; spectrophotometry of the chromosphere with a four-prism quartz spectrograph, formerly the property of the late Colonel Grove-Hills; determination of wave-lengths of lines in the corona and of its rotation and of the state of polarization of its light. It need scarcely be said that direct photographs of the corona with varying length of exposure and on varying scale will be taken if the weather permits, to continue the comparatively long series of these records that already exists.

[1] From the London *Times*.

THE FORESTRY PRIZE

A FRIEND of forestry, who wishes to remain anonymous, has given the Society of American Foresters (headquarters, Lenox Building, Washington, D. C.) $1,250 to be awarded as prizes of $1,000 and $250 for the best essays describing the present forestry situation in the United States and proposing a nation-wide remedy for its solution. The purpose of the donor is to stimulate the study of the national problem of forestry and to bring out constructive suggestions for meeting it in an effective way.

The conditions of the prize are as follows:

(1) Essays submitted in the contest shall cover: *First*, the actual forestry situation in the United States to-day; *second*, a nation-wide remedy which (a) will, if applied, solve the problem of a permanent and sufficient supply of forest products and secure other benefits of forests essen-

tial to the public welfare; (b) will be applicable in actual practice, and (c) can be applied in time to meet the nation's needs. The essays must be based not on hypothetical assumptions, but on the actual situation in the United States to-day.

(2) The essays must be typed and must not exceed 3,000 words, exclusive of a summary of conclusions which should be presented at the beginning of the paper.

(3) The contest is open to any individual who desires to compete.

(4) Essays should not be signed by the author's real name but by a pseudonym. This pseudonym should be placed on the outside of an envelope containing the author's real name and transmitted with the essay.

(5) The winning essays shall be published in the *Journal of Forestry*. The Committee of Award shall have the right to select from the other essays those which it deems worthy of publication and they will be published also in the *Journal of Forestry*. The remainder of the essays will be returned to the authors if they request their return and provide postage.

(6) The Committee of Award reserves the right to withhold the prize providing no essays which are in its judgment worthy of the award are received.

(7) All essays submitted in the contest should be forwarded to either of the two members of the Committee of Award, namely, S. T. Dana, School of Forestry and Conservation, University of Michigan, Ann Arbor, and Raphael Zon, Lake States Forest Experiment Station, University Farm, St. Paul, Minnesota, in time to reach them not later than September 30. The awards will be announced at the annual meeting of the Society of American Foresters in December, 1929.

P. G. REDINGTON,
President of the Society of American Foresters

WALTER RATHBONE BACON SCHOLARSHIP

UNDER the terms of the will of the late Virginia Purdy Bacon, of New York, the Smithsonian Institution some years since was bequeathed the sum of $50,000 to establish a traveling scholarship as a memorial to her husband, Walter Rathbone Bacon, for the study of the fauna of countries other than the United States. The amount available is the interest on the capital invested (about $3,000 a year), the incumbent to hold the scholarship not less than two years.

The institution has decided to offer an additional scholarship in 1929.

Applications for this scholarship, addressed to the secretary of the Smithsonian Institution, should be submitted not later than April 15. The application should contain a detailed plan for the proposed study, including a statement as to the faunal problems involved; the reasons why it should be undertaken; the benefits that are expected to accrue; the length of time considered necessary for the carrying out of the project; the estimated cost, and the scientific and physical qualifications of the applicant to undertake the project.

The scholarship will be awarded for a term of two years. If at the expiration of the term it is desired to extend the time, the incumbent shall make application a sufficient time in advance, accompanied by a statement as to the necessity for such extension.

All collections, photographs, records and equipment become the property of the institution.

The incumbent shall not engage in work for remuneration or receive salary from other sources than the institution or its branches during the period of occupancy of the scholarship.

C. G. ABBOT,
Secretary

RESEARCH ON THE ALLOYS OF IRON

AN extended research in alloys of iron is planned by the Engineering Foundation in cooperation with the American Institute of Mining and Metallurgical Engineers.

The industries, universities and technical schools, bureaus of the United States government, scientific organizations and foreign agencies will aid. Practically all industries are affected. The initial task is a critical five-year review of all available literature in English and other languages, resulting in a series of monographs and manuals, which will be published at a cost of $150,000.

Following a conference of representatives of makers and users of irons and steels, technical societies, government bureaus and universities, headed by J. V. W. Reynders, a committee on alloys of iron research has been appointed. The chairman is Dr. John Johnston, director of research and technology of the United States Steel Corporation. Other members of the committee are: F. M. Becker, president of the Union Carbide and Carbon Research Laboratories; H. W. Gillett, chief of the division of metallurgy, U. S. Bureau of Standards; James T. MacKenzie, metallurgist and chief chemist of the American Cast Iron Pipe Company; A. J. Wadhams, manager of research and development of the International Nickel Company.

Mr. Alfred D. Flinn, of the Foundation, has issued a statement in which he points out that "the future progress of the American iron and steel industry will be greatly affected by its ability to maintain a strong position in alloy irons and steels. It has taken forty or fifty years to develop the present state of the art for carbon steels through contributions from time to time by those engaged in iron and steel manufactures. The world is moving too fast to await a similar deliberate development for alloy irons and steels. The time appears opportune for cooperative research to be