# SCIENTIFIC EVENTS

## THE BRITISH NON-MAGNETIC ROYAL RESEARCH SHIP

FURTHER particulars of the royal research ship, to be called *The Research,* which is now being built at Dartmouth by Philip and Son, Limited, to the designs of Sir Stanley Goodall, director of naval construction, have been released by the British Admiralty. According to a report in the London *Times,* this vessel is to carry on the international work of investigation performed by *The Carnegie,* of the Carnegie Institution of Washington, which was destroyed by fire at Samoa about nine years ago. The report calls attention to the generous help afforded by the Carnegie Institution in the loan of personnel and the specifications of *The Carnegie* and the instruments used in her.

Although authorized over three years ago, *The Research* is of such an unusual design that her construction has taken much longer than that of a normal ship. She is to cost about £188,500. The principal object in building her is to investigate the problems of the variation of the earth's magnetic field and atmospheric electricity. It is therefore essential that she should be virtually a non-magnetic ship, and the greatest care is being taken to eliminate, as far as possible, all ferrous material from the hull, machinery and stores.

Much research work was carried out by Messrs. Petters at their Yeovil works in order to reduce the quantity of steel in the Diesel engines. A bronze alloy is being used extensively, and the crankshaft is of special non-magnetic steel. Consideration is also being given to such matters as iron nails in packing cases, tin containers for food and cigarettes, cooking utensils, cutlery, razor blades, drums for paint and oil, and even the ship's typewriter, all of which must be non-magnetic.

The hull is being constructed of teak planks on brass frames, subdivided by eight watertight bulkheads. The keel, stem and stern posts are of teak and Canadian rock elm, copper sheathed. Anchors and cables and wire for the rigging will be of aluminum bronze. The ship will have a loaded displacement of 770 tons, and will be rigged as a brigantine, with a full sail area of about 12,000 square feet. The propelling machinery consists of a Petter atomic Diesel engine of 160 B.H.P., driving a two-bladed feathering propeller, and the auxiliary machinery for the dynamos, refrigerator, air compressor and winch includes one 18 h.p. and two 9 h.p. Diesel engines.

The speed will be 6½ knots, and with capacity for 14 tons of Diesel oil the ship will have an endurance of 3,000 miles. Over 20 special scientific instruments will be carried, for while the principal work will be in connection with terrestrial magnetism and atmospheric electricity, the ship will also undertake meteorological work and oceanographical work, for which purposes she will have both observatories and laboratories.

*The Research* will probably be launched next February and will be ready for her first cruise in October, 1939. The scientific men of the expedition will visit the Carnegie Institution at Washington and, after calling at South American ports, will examine an area in the South Atlantic between Tristan da Cunha and Capetown. When this work is completed *The Research* will make a circuit of the Indian Ocean, probably calling at Perth, Cocos Island, Colombo, Seychelles, Mauritius and Durban, where she should arrive about November, 1940. Her complement will include six officers, four scientific men and twenty-two petty officers and men.

## THE FOURTEENTH INTERNATIONAL CONFERENCE ON DOCUMENTATION

THE International Federation for Documentation will hold its fourteenth International Conference on Documentation under the presidency of Sir William Bragg, president of the Royal Society, at Lady Margaret Hall, University of Oxford, from Wednesday morning, September 21, until Sunday, September 25. Afterwards on Monday, September 26, members of the conference will visit the Science Museum, London. Advantage will be taken of the meeting being in England to hold joint sessions on the mornings of Saturday and Sunday with the Association of Special Libraries and Information Bureaus. All those who appreciate the vital importance of the organization of knowledge will realize that the visit of this International Conference to England is an occasion of exceptional moment.

Papers will be read by leading authorities from all countries upon aspects of the following, and other, subjects: Theories of Classification, Cataloguing and Indexing; Methods and Apparatus used in the Organization of Libraries, Archive Repositories, Registering and Filing Centers; Photographic and other Copying Processes in the Application to Bibliographical Problems; The Making of Abstracts from Periodical Literature; possibilities of cooperation—Directories of Information; Exchanges between Publishing Bodies, National and International; The Loan of Books and Documents; principles and possibilities—The Practical Application and Use of Bibliographies. In particular an effort will be made to obtain adequate representation of the varying points of view of workers in diverse fields. At a recent international congress the view was expressed that it was desirable to widen the bases of international bibliography and documentation. At

the forthcoming conference a special attempt will be made to secure authoritative reports upon the present state of bibliographical work in such fields of learning as archeology, archive work, economics, history and linguistic studies, in addition to the natural sciences and their applications.

The program will include visits to some of the many interesting places in the neighborhood, together with other social functions. The total cost, exclusive of reports and visits, will not exceed £1 a day.

## THE LEVERHULME FELLOWSHIPS

THE Advisory Committee for the Leverhulme Research Fellowships have recommended, and the trustees have approved, the following awards in scientific subjects tenable for varying periods up to two years:

W. Cule Davies, Ph.D., D.Sc., lecturer in chemistry, University College, Cardiff.—Studies of the organic compounds of nitrogen, phosphorus and arsenic.

Mrs. K. A. Esdaile, research worker, London.—A dictionary of English sculptors.

S. Goldstein, M.A., Ph.D., Stokes lecturer in mathematics, University of Cambridge.—The turbulent motion of fluids.

F. C. Happold, Ph.D., D.Sc., senior lecturer in biochemistry, University of Leeds.—The nutrition of the three types of *C. diphtheriae* in its relation to toxin production.

Miss M. W. Jepps, M.A., D.Sc., lecturer in zoology, University of Glasgow.—Studies in the structure and life cycles of certain marine protozoa.

A. King, M.Sc., D.I.C., assistant lecturer, Imperial College of Science and Technology, London.—Leader of expedition to carry out a biological, geological and physical examination of Jan Mayen Island in the Greenland Sea.

D. A. O'Duffy, B.Sc., research and development assistant, Bahrein Petroleum Company.—Lubrication problems at high pressures and temperatures.

O. A. Oeser, M.Sc., D.Phil., Ph.D., lecturer (head of department) in experimental psychology, St. Andrews University.—The "Combined" method in the social sciences.

G. B. B. M. Sutherland, M.A., Ph.D., fellow, lecturer and director of studies in natural sciences, Pembroke College, Cambridge.—The application of infra-red spectra to structural problems in chemistry and physics.

W. Taylor, D.Sc., lecturer in chemistry, the Polytechnic, London.—Substitution mechanisms in aliphatic compounds.

W. H. Thorpe, M.A., Ph.D., fellow and tutor, Jesus College, Cambridge.—The physiology of African Tropical Homoptera.

R. Wilson, M.A., senior lecturer in pure and applied mathematics, University College, Swansea.—The nature and position of the singularities of a function in relation to the coefficient theory of its Taylor series.

## SIR RICHARD GREGORY'S LECTURE BEFORE THE CARNEGIE INSTITUTION OF WASHINGTON

THE Carnegie Institution of Washington announces that Sir Richard Gregory, distinguished English scientist, has accepted an invitation to deliver the next Elihu Root lecture at the institution's auditorium, Washington, D. C., on the evening of December 8.

The Elihu Root lecture series, of which this will be the fifth, was established by Carnegie Institution in honor of Mr. Root, who from the founding of the institution to his death in 1937 was a member of the board of trustees and its chairman during the last twenty-four years of his life.

Dedicated as these lectures are to a distinguished scholar widely known for his support of research, they focus attention on the influence of science upon human thought and in shaping attitudes towards life. The most eminent thinkers of the present day, particularly in fields of science, wherever situated, are invited, as opportunity presents, to take place on the roster of speakers.

Sir Richard Gregory has come into position of prominence and of great influence through the books he has written, the addresses he has delivered, and most of all through his brilliant editorship of *Nature*, an English journal which has become an international clearing house for preliminary announcement of scientific researches and results. For forty-five years he has served this journal, first, as assistant editor and, since 1919, as editor. During the period he has contributed to the journal literally thousands of columns of vigorous editorial comment and observation.

In recognition of his public and scientific services Sir Richard was knighted in 1919; in 1931 the hereditary rank of baronet was bestowed upon him. Among the many academic honors accorded him, he was elected a fellow of the Royal Society of London, in 1933, under a special statute reserved for those who "either have rendered conspicuous services to the cause of science, or are such that their election would be of benefit to the Society." Only ten other living fellows of the Royal Society, including Prime Ministers and peers of the realm, have been elected under this provision.

In the forthcoming institution lecture, Sir Richard will discuss "Cultural Contacts of Science." In this address he expects to deal chiefly with the influence that science exerts upon cultural values rather than with the services rendered to modern communities by the utilitarian uses to which scientific knowledge is put.

In the promotion of closer relationship between science and social problems and the progress and use of scientific knowledge in the service of the world of man, Sir Richard sees such contacts contributing not only to the development of social ethics but also to the evolving of spiritual convictions. He regrets that, in general, art and literature have not had their emotions aroused by the achievements of science which represent, he holds, the most wonderful works of man.