awarded to Sir Thomas Lewis at the anniversary meeting of the society held on December 1. In presenting the medal Sir Henry Dale said:

Lewis's life work, still in vigorous progress but for interruption by war duties and war conditions, has been the application of precise and controlled methods of experimental research to problems of clinical medicine. This has enabled him to achieve a detailed analysis of abnormalities of function produced by disease, injury or hereditary defect; and so far his attention has been centered upon the circulation of the blood and its disorders. Being attracted through the work of the late Sir James Mackenzie to the study of abnormal rhythms of the human heart-beat, Lewis recognized, about 1908, the great opportunity for a closer investigation of them offered by the then recent introduction of the string galvanometer by Einthoven. With its aid Lewis had soon made a number of clinical and laboratory studies, such as those in which he finally identified auricular fibrillation as the cause of a particular kind of complete irregularity. He was thus led to undertake, and to extend, with a succession of collaborators from many countries, the remarkable series of investigations, carried through in logical sequence between 1910 and 1923, in which he passed from the laboratory to the clinic and back again as the occasion demanded. It is fitting that special mention should here be made of the series of experimental studies published in our own *Philosophical Transactions* from 1914 to 1916, and presented in brilliant summary by Lewis in his Croonian Lecture to the society in 1917. In these were traced, with an astonishing precision of measurement and timing, the point of origin and exact course of the rhythmical waves of excitation and contraction in the normally beating heart of the dog, and, finally, for comparison, in the hearts of other classes of vertebrate animals. Considered by itself, this work ranks as one of the outstanding achievements of experimental physiology in our times, and it has given to physiology a large part of its present detailed knowledge of the nature of the heart-beat. For Lewis, however, its greater importance lay in giving to clinical medicine the background for an accurate picture of disturbances of the normal mechanism, therewith a new security of diagnosis and prognosis in dealing with disordered actions of the heart, and ultimately a rational basis for their treatment. A new phase of cardiological thought and practice spread rapidly from Lewis's clinic round the world.

Meanwhile he had begun in 1917, and was to maintain with a series of collaborators for more than another decade, a separate series of investigations, dealing by direct experiment with the blood vessels of the human skin. Thus were elucidated the means by which the resistance of these vessels to the flow of blood is maintained and varied, including their complex reactions to chemical substances akin to histamine, which he proved to be released from the cells of the epidermis by injurious or irritant stimuli. These methods of investigation were later developed and extended to vascular disorders of the limbs, and the experiments of still more recent series have dealt with pain and functional defects in muscles and nerves, due to interruption of the blood supply. Apart from the separate accounts of items and stages of these lines of research, as completed, in papers which have issued from his department in steady sequence, Lewis has assembled and discussed the results, in their appropriate connections, in a succession of comprehensive monographs. He has been the inspiring leader of a group of younger workers in clinical research as an experimental science, has founded a society for such studies and has devoted to their use a journal which he had founded with a more limited scope.

The work of Thomas Lewis, which we honor to-day with the highest recognition in the gift of the Royal Society, is renewing and carrying forward, with a special directness, the great tradition which William Harvey created, before this society was founded.

SCIENTIFIC NOTES AND NEWS

EUGENE GIFFORD GRACE, president of the Bethlehem Steel Corporation, has been awarded the Bessemer Gold Medal for 1942 by the British Iron and Steel Institute.

MAJOR HARRY G. ARMSTRONG, in charge of research at the U. S. Army School of Aviation Medicine at Randolph Field, Texas, has been given the John Jeffries award of the Institute of the Aeronautical Sciences in recognition of his researches in the physiological and psychological effects of flying at high altitude and in high-speed maneuvers.

IT is reported in *Nature* that the Symons Gold Medal for 1942 of the Royal Meteorological Society has been awarded to Dr. J. S. Owens, whose death occurred on December 6. This medal is awarded biennially for distinguished work in connection with meteorological science. The presentation was made at the annual general meeting of the society on January 21.

DR. JULIAN C. MILLER, professor and head of the department of horticulture at the Louisiana State University, has been elected president of the American Horticultural Society.

ARTHUR F. VAN DYCK, manager of the industry service section of the RCA Laboratories, was inducted at the recent New York meeting on January 12 as president of the Institute of Radio Engineers. He succeeds Dr. Frederick Emmons Terman, professor of electrical engineering and head of the department at Stanford University.

ERNEST BATEMAN BLACK, consulting engineer of Kansas City, has been elected president of the Amer-

ican Society of Civil Engineers. Charles M. Spofford, of Boston, and Thomas E. Stanton, of Sacramento, Calif., have been elected vice-presidents.

JAMES G. MCDONALD has resigned as president of the Brooklyn Institute of Arts and Sciences. Mr. McDonald, who is a member of the Board of Education and a partner in the firm of W. A. and A. M. White Company, stated that his resignation, which is to take effect on March 1, is due to the exigencies of the war. Adrian Van Sinderen, who has been first vice-president of the institute for many years, has been elected to succeed him.

THE Mathematical Association of America held meetings at Lehigh University on December 31 and January 1, in conjunction with the meetings of the American Mathematical Society, the Association for Symbolic Logic and the National Council of Teachers of Mathematics. On Thursday morning papers were presented by Professors Tibor Radó, C. R. Adams and N. H. McCoy, and on Thursday afternoon by Professors H. A. Rademacher, B. L. Newkirk and T. L. Smith. Professor Tomlinson Fort, of Lehigh University, was elected first vice-president, and Professors W. L. Ayres and R. L. Wilder were elected governors-at-large. Regional governors were chosen at the time of the meeting to represent seven of the fourteen regions into which the United States and Canada are divided.

DR. IRA L. BALDWIN, professor of agricultural bacteriology and assistant dean of the College of Agriculture of the University of Wisconsin, was reelected secretary of the Society of American Bacteriologists at the recent Baltimore meeting. He was, however, compelled to resign on account of ill health. He is succeeded as secretary by Dr. William B. Sarles, associate professor of agricultural bacteriology. The following resolution in honor of Dr. Baldwin was adopted by the society:

> The Society of American Bacteriologists considers itself to have been honored by the devoted and distinguished services which Dr. Ira L. Baldwin has rendered as secretary-treasurer. It has profited and prospered under his careful and considered guidance. The influence of the society has grown immeasurably. Its membership has increased extraordinarily. These are not the results of simple chance. They stem from the devoted industry and sympathetic guidance of a faithful and beloved servant of our science. In complying with Dr. Baldwin's wishes, the society accepts his resignation from office with genuine reluctance and regret.

THE retirement is announced of Dr. Albert Galloway Keller, professor of the science of society at Yale University. A dinner was given in his honor on January 18 at which President Seymour was one of the speakers. Dr. Keller, who will reach the retiring age of sixty-eight years in April, will take leave of absence until his formal retirement in June.

DR. GEORGE RUSSELL HARRISON, professor of physics and director of the research laboratory of experimental physics at the Massachusetts Institute of Technology, has been appointed dean of the School of Science. He will succeed Dr. Samuel C. Prescott, dean since 1931, who will retire on July 1.

DR. HOWARD E. FRITZ has been made director of research of the B. F. Goodrich Company, Akron, Ohio. Dr. Fritz, who has been connected with the company for the last seven years, succeeds James W. Schade, who has been director of research since 1925.

DEAN EDWARD STEIDLE, of the School of Mineral Industries of the Pennsylvania State College, left by airplane early in January for a visit to South America. He was appointed by Governor James as the representative from Pennsylvania to the first Pan American Congress of Mining Engineering and Geology, which was held at Santiago, Chile, from January 15 to 23. He was also a delegate from the American Institute of Mining and Metallurgical Engineers.

CAMILLE LHERISSON, professor of biology at the National School of Medicine, Port-au-Prince, Haiti, has arrived in Washington in response to an invitation of the U. S. Department of State to visit schools of medicine and departments of biology in the United States.

AT the New York convention of the Institute of Radio Engineers on January 12, 13 and 14, the principal address was made by Dr. F. B. Jewett, president of the Bell Telephone Laboratories and head of the communications division of the National Defense Research Committee. He spoke on "The Mobilization of Science." The medal of honor of the institute was presented to Dr. A. Hoyt Taylor, superintendent of the Radio Division of the Naval Research Laboratory.

PROFESSOR W. D. CAIRNS, of Oberlin College, gave two lectures on "The Mathematics of Seismology" before the graduate students of Brown University on January 5 and 6.

AUSTIN H. CLARK, curator of the division of echinoderms of the U. S. National Museum, delivered an address as retiring president of the Washington Academy of Sciences at the forty-fourth annual meeting of the academy. He spoke on "Science and War."

DR. H. E. MCCOMB delivered on January 17 the address as retiring president of the Philosophical Society of Washington on "Geophysical Measurements in the Laboratory and Field."

THE London *Times* for December 11 prints the fol-

lowing statement: "Sir Patrick Hannon has given notice to ask the Minister of Information in the House of Commons if his attention has been called to the interview given by Professor Julian Huxley on his arrival in the United States of America to isolationist newspapers, in which he has expressed opinions tending seriously to affect the good relations between the United States of America and the British Commonwealth of Nations, and if he will take immediate steps for the recall of this lecturer."

ACCORDING to *Nature,* the Financial Secretary to the British Treasury stated on December 11 in reply to a question in the House of Commons that the number of students at universities and university colleges in Great Britain during the past autumn was approximately 25,000, of whom 5,900 were grouped as taking arts subjects and 19,100 scientific, technical and medical subjects.

AT the autumn meeting of the National Academy of Sciences certain limitations were placed upon the use of the academy building in Washington, in order better to safeguard its defense activities. Since that meeting the United States has entered the war against the Axis powers, and the situation has changed. The executive committee of the council has made the following recommendations to the committee on arrangements for the 1942 annual meeting of the academy: that the meetings be restricted to members alone; that the scientific program be replaced by business meetings at which the functions and relations of the National Academy and of the National Research Council to our Government, during the emergency and afterwards, can be discussed confidentially and at length; that the organization of the academy be considered with reference to most effective operation during war time. Under the proposed arrangements, only members of the academy will be admitted to the sessions; no scientific papers will be read; no public lecture will be given; no formal dinner will be arranged; and no provision will be made for guests at any time, including the informal lunches and the smokers.

A MEETING of the Industrial Research Institute will be held in New York on February 6 and 7. Sixty industrial executives and research directors are expected to attend, and will participate in round-table discussions of research management. Headquarters will be at the Hotel Savoy-Plaza. The sessions will begin on Friday morning with a panel discussion of economic, political and social trends and their possible long-range effects on industrial research policies. There will be a dinner session on Friday evening. Dr. Sumner H. Slichter, professor of business economics, Harvard School of Business, will speak on "The Interrelationships of Labor Problems and Research Problems." On Saturday morning problems involved in adapting industrial research organizations and programs to war-time needs will be discussed.

THE Department of Economics of Columbia University has adopted the following paragraph for insertion in the announcement of the Faculty of Political Science. The department hopes that it will be brought to the attention of students interested in economics at a sufficiently early stage to lead them to acquire at least the mathematical preparation indicated while they are still undergraduates. This is not a requirement, but is advice offered to prospective graduate students in economics; and also that some economic studies make use of mathematics substantially more advanced than calculus and higher algebra. *"Mathematical Preparation:* The use of mathematics, including higher mathematics, has become important in several branches of economics and statistics. Much of the recent important literature of general economics is written in a language not easily understood without some knowledge of the differential and integral calculus. Students planning to work for the Ph.D. degree in economics will therefore find it advantageous to acquire familiarity with the calculus and with higher algebra before beginning their graduate studies in economics."

FOLLOWING a proposal of the Iowa State College Chapter of the American Association of University Professors, the college is instituting a series of "Honor Lectures," to be delivered by members of the staff and published by the Iowa State College Press. The series is designed to examine and emphasize the social philosophy and human significance of science and technology; to provide regular opportunities for the members of the faculty and the graduate student body to learn of recent advances in fields of scholarship other than their own, and to recognize and encourage quality and distinction in teaching and research among the members of the staff. The lecturers will be chosen by a committee of officials of the college, of the chapter of the American Association of University Professors and of other professional societies.

ACCORDING to a cable from Bogota, Colombia, to the *New York Times,* an Institute of Tropical Agriculture is to be established in Colombia to foster the development of the natural resources and productive capacity of the country. Under the agreement by the Colombian Government and the U. S. Department of Agriculture, $5,000,000 is to be allotted to the work.