who were members of his staff in the university; Juan T. Lewis, formerly professor of physiology at Rosario, and Oscar Orías, who was professor of physiology at Córdoba. As recently announced, the Rockefeller Foundation has made a grant for equipment and supplies and for stipends to several young investigators who wish to work with the group.

Because the library accumulated by Dr. Houssay through years of effort and personal expense had been given by him to the University of Buenos Aires before his separation from its faculty, the new institute is in need of reprints and other scientific literature. North American colleagues can give practical evidence of sympathy and good will for the new institution and its devoted members by sending their publications.

Referring in a recent letter to the dismissal inflicted upon him and his colleagues by the government because they signed a manifesto advocating Argentine participation in a Pan-American democratic policy, Dr. Houssay writes (translation): "All that remains to us is life, honor and dignity, the scientific vocation and love of our distracted country."

SCIENTIFIC NOTES AND NEWS

SIR RICHARD GREGORY received from the council of the British Association on his eightieth birthday a message of good wishes expressing appreciation of his service to the association.

THE Luther Gulick Award for distinguished service in physical education was presented on April 24 at the convention in New York City of the American Association for Health, Physical Education and Recreation to Dr. C. H. McCloy, research professor of anthropometry and physical education at the State University of Iowa. Dr. McCloy has been serving since January as civilian consultant to the Surgeon General of the U. S. Army. He is expected to return to the university in June.

THE annual journal award of the Motion Picture Engineers Society was presented at the recent New York meeting to William L. Bell and Ray R. Scoville, of the Bell Telephone Laboratories, for their article describing the design and use of equipment for reducing background noise in film sound-recording systems.

PROFESSOR B. J. LAMBERT, head of the department of civil engineering at the State University of Iowa, is retiring after having been connected with the university for forty-two years. A formal dinner was held on April 25, to celebrate his seventieth birthday and to announce a scholarship fund set up in his honor. He received a scroll, bearing the names of contributors to the fund, expressing appreciation of his services to the university.

BAYARD LONG, since 1914 curator of the herbarium of the Philadelphia Botanical Club, research associate of botany at the Academy of Natural Sciences of Philadelphia, was presented with a gift of books and a purse at the March meeting of the club. The presentation was made by the president of the club, Dr. Francis W. Pennell, curator of plants of the academy.

DR. ANGUS E. TAYLOR, assistant professor of mathematics at the University of California at Los Angeles, has been elected a corresponding member of the National Academy of Exact, Physical and Natural Sciences of Lima, Peru.

THE newly elected officers for the year 1944 for the Eastern Missouri Branch of the Society of American Bacteriologists are: *President,* Dr. John B. Rehm, Anheuser Busch, Inc., St. Louis; *Vice-president,* Dr. Fred W. Gallagher, department of bacteriology, St. Louis University School of Medicine; *Secretary-Treasurer,* Mary Louise Hoevel, St. Louis County Hospital, Clayton, and *Counsellor,* Dr. Philip L. Varney, department of bacteriology of the School of Medicine of Washington University.

AT a meeting on April 11 of the Wellesley College Chapter of the Society of Sigma Xi, Dr. Louise S. McDowell, professor of physics, was elected president, and Dr. Elizabeth Eiselin, instructor in geology, was elected vice-president. At this meeting, Dr. Hugh M. Raup, assistant professor of plant ecology at the Arnold Arboretum of Harvard University, gave the annual lecture. It was entitled "Botanical Exploration along the Alaska Highway."

AT the sixty-sixth annual general meeting of the Royal Institute of Chemistry held on March 15, Professor Alexander Findlay, professor of chemistry at the University of Aberdeen, was reelected to the presidency. He made the formal announcement that the style "Royal" had been added to the title of the institute. At this meeting the Sir Edward Frankland Medal and Prize for registered students of the institute was awarded to Dudley Rhoden Scarffe, of the Imperial College of Science and Technology, for his essay entitled "Introduction of the Chemist to the Public."

DR. R. G. W. NORRISH, F.R.S., professor of physical chemistry at the University of Cambridge, has been elected president of the British Association of Chemists.

DR. HUGH STOTT TAYLOR, David B. Jones professor of physical chemistry, will succeed in July, 1945, Dr. Luther P. Eisenhart as dean of the Graduate School

of Princeton University. The change, which would normally have taken place this June, has been postponed owing to the war duties of both.

COMMANDER ARTHUR S. ADAMS, U.S.N. (retired), assistant dean of the College of Engineering of Cornell University, on completion of his work with the Navy will become provost of the university.

PROFESSOR HARRY B. VAN DYKE, director of the division of pharmacology of the Squibb Institute of Medical Research, has been appointed professor of pharmacology and head of the department of Columbia University. Dr. Paul F. Kerr, professor of mineralogy, has been named executive officer of the department of geology.

DR. F. A. E. CREW, F.R.S., since 1938 Buchanan professor of animal genetics at the University of Edinburgh, has been appointed to succeed Professor P. S. Lelean as Bruce and John Usher professor of public health. Dr. Crew has had leave of absence for two years to work as director of biological research with the rank of brigadier in the medical department of the British War Office.

AT the February meeting of the Medical Fellowship Board of the National Research Council, Washington, D. C., of which Dr. Francis G. Blake, Sterling professor of medicine at Yale University, is chairman, two fellowships in the medical sciences were awarded. Three appointments, including two renewals, were made to fellowships in the filtrable viruses and orthopedic surgery. These are as follows: *Medical Sciences,* Sidney S. Sobin, Harvard Medical School, and Harry A. Wilmer, the Johns Hopkins University; *Filtrable Viruses,* Edward H. Anderson (renewal), Vanderbilt University, and I. William McLean, Jr. (renewal), Duke Hospital; *Orthopedic Surgery,* Paul S. Rubin, the Johns Hopkins University.

DR. WILBUR A. SAWYER, director of the International Health Division of the Rockefeller Foundation, has been appointed director of the Health Division of the United Nations Relief and Rehabilitation Administration.

DR. LESLIE EARLE ARNOW, head of the department of biochemical research in the division of medical research of Sharp and Dohme, Glenolden, Pa., has been appointed director of research.

F. H. FRANKLAND, since 1934 director of engineering for the American Institute of Steel Construction, has retired in order to undertake private practice as a consulting engineer.

THOMAS R. CAMP, since 1929 associate professor of sanitary engineering at the Massachusetts Institute of Technology, has resigned to open offices in the Statler Office Building, Boston, for full-time practice as a consulting engineer. He will specialize in water works, sewage works, municipal and industrial wastes, stream sanitation and flood control.

DR. ROBERT RAE, professor of agriculture at the University of Reading, England, and a member of the board of the National Institute of Research in Dairying, will succeed Professor James A. Scott Watson, who for the past two years has been agricultural attaché at the British Embassy in Washington and agricultural adviser to the High Commissioner for the United Kingdom in Canada.

DR. GEORGE K. K. LINK, professor of plant pathology at the University of Chicago, was given leave of absence for the winter quarter and is in residence at the University of Arizona, where he has guest privileges in the department of botany and the department of plant pathology. During February and March he lectured at the University of Southern California, at the University of Arizona at the Citrus Experiment Station at Riverside, at the California Institute of Technology, at Stanford University and at the University of California at Berkeley.

DR. ARTHUR MASSEY, medical officer of health of Coventry, England, has arrived in the United States as a guest of the American Public Health Association. Under the auspices of the British Information Services he will attend a series of state and regional public health meetings in the central and western states during May and June, together with a group of speakers organized to give refresher courses for two-day periods. Dr. Massey, with ten other members of the group, will appear before public health associations in Des Moines, Iowa; Minneapolis, Minn.; Chicago, Ill.; Madison, Wis.; Fargo, N. D.; Helena, Mont.; Spokane, Wash.; Moscow, Idaho; Portland, Ore.; Sacramento, Calif.; Pasadena, Calif.; Salt Lake City, Utah; Denver, Colo., and Raton, N. M., and before the health officers and public health nurses of New York State at Saratoga.

JOSEPH W. BARKER, professor of electrical engineering and dean of the faculty of engineering of Columbia University, will be the principal speaker at the ninety-fourth annual commencement on May 14 of the University of Rochester. Dean Barker has had leave of absence since 1941 to become special assistant to the U. S. Assistant Secretary of the Navy.

DR. HOWARD T. KARSNER, professor of pathology and director of the Institute of Pathology of Western Reserve University and of the University Hospitals of Cleveland, will give on May 12 at the Long Island College of Medicine, Brooklyn, N. Y., the Adam M. Miller Memorial Lecture. His subject will be the "Calcific Aortic Stenosis."

DR. THOMAS GRIER MILLER, professor of clinical medicine at the School of Medicine of the University of Pennsylvania, will deliver on May 26 the twentieth Lewis Linn McArthur Lecture of the Frank Billings Foundation at the Institute of Medicine of Chicago. The subject of the lecture will be "Observations on the Human Digestive Tract by Intubation."

THE James Arthur Lecture on the Evolution of the Human Brain of the American Museum of Natural History will be given on May 11, at 8:15 P.M. by Professor James Howard McGregor, professor emeritus of zoology of Columbia University and research associate of the museum. His subject will be "The Brains of Primates."

AN Associated Press dispatch reports that Lieutenant Commander J. W. S. Marr and a party of fourteen British scientific men are now in the Antarctic making a study of polar meteorology, radio conditions and mineral resources. The party established a base in February at Hope Bay, Grahamland, and will remain there for two years.

THE twentieth annual conference and exhibit of the National Safety Council was held in Pittsburgh on April 25, 26 and 27.

A CONFERENCE ON CONVALESCENCE AND REHABILITATION, with Dr. Oswald R. Jones as chairman, arranged by the Committee on Public Health Relations with the aid of a grant from the Josiah Macy Jr. Foundation, was held at the New York Academy of Medicine on April 25 and 26.

THE second annual meeting of the Conference on the Scientific Spirit and Democratic Faith, of which Dr. John Dewey is honorary chairman, will be held on May 27 and 28 at 2 West 64th Street, New York City.

THE National Committee for Mental Hygiene has established a fund for research in psychosomatic medicine dealing with the relationship between the emotions and bodily illness. The fund begins with a nucleus of $10,000, which, it is expected, will be increased later in the light of developments and results. Dr. George S. Stevenson is the medical director of the committee under which the fund will be administered. Dr. Edward Weiss, professor of clinical medicine at the School of Medicine of Temple University, Philadelphia, has been appointed director of the fund. Members of the committee to select projects have been elected as follows: Dr. Charles M. Aldrich, head of the department of pediatric research of the Mayo Clinic, Rochester, Minn.; Dr. Franz Alexander, director of the Institute of Psychoanalysis, Chicago; Dr. Stanley Cobb, professor of neuropathology at the Harvard Medical School; Lieutenant Colonel William Menninger, head of the psychiatric division of the U. S. Army, Medical Department, Surgeon General's Office, Washington, D. C., and Dr. John Romano, professor of psychiatry at the Medical School of the University of Cincinnati.

IT is reported in the daily press that Dr. Albert Ashton Berg, consulting surgeon of Mt. Sinai Hospital, New York City, president-elect of the International College of Surgeons, has given the hospital a sum of money for a modern research laboratory to be constructed after the war. The amount of the gift has not been announced, but plans for the building, to be known as the Henry W. Berg Research Laboratory, it is said, provide accommodations for research in bacteriology, pathology, physiology, chemistry, gastro-enterology, cardiology and other subjects.

THE following chemicals are wanted by the National Registry of Rare Chemicals, Armour Research Foundation, 33rd, Federal and Dearborn Streets, Chicago 16, Ill.: Guanine, adenine, thymine and cytosine desoxyribosides; thymine and cytosine desoxyriboside phosphoric esters; optical fluorite—transmission limit 144 A°; sphacelenic acid; thiol carbamic acid ethyl ester (thiourethane) 10 g; thione carbamic acid ethyl ester (xanthogenamide) 10 g; dithio urethane 10 g; 1-benzyl or 1-phenyl cyclopentan-1-ol; 1-benzyl or 1-phenyl cyclopentan-1,2-diol; 1-benzyl or 1-phenyl cyclopentene-1; triamino triethyl amine β, β′-dipyridyl; sym bis acetyl acetone; triiodo acetic acid (100 grams), and isatin beta oxime.

THE Royal Aeronautical Society, London, has recently received from an anonymous donor a collection of aeronautical medals, more than three hundred in number, dating from 1714 to 1941.

THE report on "Industry and Research" of the Federation of British Industries has recommended the establishment of an organization whose principal object would be to stress continuously the need for industrial research and to promote and foster it in all possible ways. The form and functions of this suggested organization were discussed at a recent conference which was attended by representatives of the Royal Society, the Department of Scientific and Industrial Research, the universities and the research associations. A full discussion took place, and a subcommittee was appointed to inquire further into the subject.

THE Nuffield Foundation Trustees, in development of one of the objects specified by Lord Nuffield, are undertaking a survey of the problems of aging and the care of old people. The British Ministry of Health and the Assistance Board have warmly welcomed the proposal, and will cooperate in the conduct of the survey, the object of which is to collect and collate as much information as possible with regard to the problems, individual, social and medical, associated

with aging and old age; the work being done by public authorities and voluntary organizations, and the public and private resources that exist for the care and comfort of old people in Great Britain; the provision made for old people in those countries which have given special consideration to these problems; medical research on the causes and results of aging, and on the lines on which action might usefully be taken in the future by public authorities and private organizations, including the foundation. The chairman of the survey committee is Dr. B. Seebohn Rowntree, chairman of Rowntree and Company.

DISCUSSION

IS BIOLOGY A SCIENCE?

IN "Life: Outlines of General Biology" Sir J. Arthur Thomson and Patrick Geddes say: "It is a regrettable fact that there is relatively little education in biology in the universities of the British Empire! There is abundance of first-class zoology and first-class botany, but there is relatively little general biology. No one can seriously pretend that a little zoology plus a little botany make a course of biology. One might as well say that a whiff of oxygen and a whiff of hydrogen will serve as a drink of water." These authors then tell of a student guide who was asked by a visiting professor the meaning of the word "biology" which he saw engraved over a door. After a bewildered pause the student replied: "Oh, yes! I remember now; biology is the dogfish and the bean plant."

Unfortunately general biology often is "the dogfish and the bean plant" or some other set of extractions from the biological sciences. Sometimes it is a little botany, a little zoology, a little physiology, a little anatomy, a little embryology, a little taxonomy, a little genetics, a little ecology, a little everything—a parade of discrete biological topics. If one may judge the biology course from some text-books it is an encyclopedia of biological terms, concepts and principles, which might be more conveniently arranged in alphabetical order.

Perhaps Dr. C. A. Shull, in approving of Report No. 15 of the U. S. Office of Education (SCIENCE, March 10) has been misled by courses and texts that are biology only in name. It is my opinion that Dr. Shull's anathema will not deter teachers of introductory and general courses in the biological sciences from continuing their efforts to develop biology courses which give promise of showing that biology is a science. After all, a science is a man-made category rather than an immutable compartment of knowledge imposed from above. Any science or subdivision thereof is an isolate from the totality of scientific knowledge. Under certain circumstances and for certain ends it may be convenient and appropriate to deal with a very restricted field of knowledge which can be fully and intensively explored by a specialist.

The old field of natural science has been subdivided into finer and finer categories as each former subdivision becomes too unwieldy to comprehend intensively. With no intention of decrying this tendency, which has been necessary to the expansion of knowledge and without which our conquest of the unknown would be impossible, I wish to suggest that other circumstances and other purposes demand broader and less penetrating viewpoints. I refer to present circumstances and to the purposes of general education. The present circumstances are the conditions of the democratic society in which we live and which we hope to improve; chief among the purposes of general education, I believe, is the preparation of an intelligent citizenry for the responsibilities of citizenship in our democracy. In this preparation the biological sciences must be recognized as essential to the understanding of the responsibilities, both personal and social, of the citizen. Good health, adequate growth and development, nutrition, food production, reproduction, heredity and environment, and the conservation of natural resources for use and for recreation are some of the topics appropriate to general education. These are biological rather than zoological or botanical topics, for they require fundamental knowledge drawn from both plant and animal kingdoms.

The more specialized a course is, the more difficult it becomes to select facts and principles which are most pertinent to the objectives of general education and to eliminate those of academic interest and those which have exaggerated significance in the minds of specialists who are unable to appreciate other objectives than their own. Biology, because it is more generalized than botany and zoology, thus lends itself better to general education than these specialized courses.

Furthermore, from a pedagogical standpoint, there is much to be gained in understanding and appreciation by the student if the living world is synthetically rather than analytically treated. Through common physiological phenomena and especially through ecological connections plants and animals, not excluding man, are bound in one great unit. Animals can not be thoroughly understood or appreciated without knowledge of plants; neither can plants be isolated from animals without losing much that is essential to a knowledge of their place in the world of man.

Because most of us have been trained as specialists it is easy for us to lose sight of the broader aspects of