In carrying on its various activities the Foundation has expended all of its income from year to year and in addition seventeen and a half millions ($17,500,000) of its general fund or principal. A further sum of fifteen and a half millions ($15,500,000), payable in future years, has been pledged to various medical schools and public health projects.

Contributions outside the field of public health and medical education were made, for the most part, during the war and in the earlier years of the foundation's work before its policies and program had become clearly defined. The chief item in this group is the sum of five and two thirds millions ($5,678,599) given to various charities designated by the founder before he relinquished on July 19, 1917, the right he had originally reserved personally to direct the use of a part of the income. A million dollars was given to Herbert Hoover's child-feeding plan in Europe, and another to make possible the Palisades Interstate Park.

In the development of the foundation's program there has been increasing concentration upon medical education and public health.

The International Health Board, established as a department of the foundation in 1913, has sought to promote public health throughout the world by demonstrating the methods and costs of controlling certain diseases, notably hookworm disease, malaria and yellow fever; by fostering the growth of governmental health agencies; and by encouraging the formation of schools of hygiene. In carrying out this program the board has cooperated with twenty-seven American states and fifty foreign governments. Its annual expenditures have increased from $133,237 in 1914 to $1,842,249 in 1922.

In medical education a special feature has been the work of the China Medical Board, in building, equipping and maintaining a modern medical center in Peking. The board has made appropriations to other medical schools and to thirty-two hospitals, as well as to the fostering of science education in China.

Substantial contributions have been made in recent years to centers of medical teaching in London and Brussels. The foundation has also cooperated in the development of medical education in North and South America, Western and Central Europe, the Philippines, Hong Kong and Bangkok.

FELLOWSHIPS IN BIOLOGY OF THE NATIONAL RESEARCH COUNCIL

AT the meeting of the Board of National Research Fellowships in the Biological Sciences, held on April 25, 1923, the following appointments were made: E. G. Anderson, botany; L. R. Cleveland, zoology; R. T. Hance, zoology; M. J. Herskovits, anthropology; Leigh Hoadley, zoology; Marian Irwin, botany; Donald A. Laird, psychology; A. J. Riker, botany; Leslie Spier, anthropology.

On account of the short time available for receiving applications, it was decided to hold another meeting of the board toward the end of June for the consideration of deferred applications in hand and also of other applications that may be received prior to June 1st. Requests for information and application forms should be addressed to the Secretary, Board of National Research Fellowships in the Biological Sciences, 1,701 Massachusetts Avenue, Washington, District of Columbia.

SCIENTIFIC NOTES AND NEWS

THE Walker grand prize of $1,000 has been awarded by the Boston Society of Natural History to Dr. Leonhard Stejneger, head curator of biology at the United States National Museum at Washington, District of Columbia. The Walker annual prize of $60 has been awarded to William Seifriz of Yale University for an essay on "Colloidal properties of protoplasm."

THE gold medal of the Mining and Metallurgical Society of America for 1922, awarded to Robert Peele, professor of mining at Columbia, was formally presented to him on April 26 at a dinner held at the Aldine Club, New York City. The medal is given annually by the society "for distinguished service in the literature of mining."

AT its meeting in Baltimore on April 25 Professor E. V. McCollum, of the School of Hygiene and Public Health of the Johns Hopkins University, gave an address before the Tri-State Medical Association on "The influence of diet on bone and tooth development." In recognition of Professor McCollum's researches

in this field the association presented him its Stephen A. Trimble medal.

AT the recent celebration of the fiftieth anniversary of the establishment at the State University of Iowa of the first department of education, the honorary degree of doctor of laws was conferred on Dr. Edward Lee Thorndike, professor of education and director of the Institute for Educational Research at Teachers College, Columbia University; on Dr. Charles Hubbard Judd, professor of education and dean of the School of Education of the University of Chicago; on Dr. Ellwood P. Cubberley, professor of education and dean of the School of Education at Stanford University, and on Professor James E. Russell, dean of Teachers College, Columbia University.

THE Anthropological-Geographical Society of Stockholm has conferred the Anders Retzius medal in gold upon Sir Aurel Stein for his archeological research in Central Asia.

PROFESSOR J. PROUDMAN, director of the Liverpool University Tidal Institute, has been awarded the Adams Prize of the University of Cambridge for an essay on "The theory of the tides." The essay submitted by Dr. H. Jeffreys has been highly commended by the examiners.

AT the annual meeting of the British Iron and Steel Institute on May 10, the Bessemer medal was presented to Dr. W. H. Maw.

PROFESSOR NUTTALL and Professor Sir W. J. Pope are to be appointed to represent the University of Cambridge at the ceremonies connected with the centenary of the birth of Pasteur, which will be held in Paris and Strasbourg next month.

DR. LOUIS O. KUNKEL, pathologist of the experiment station of the Sugar Planters' Association of Honolulu, Hawaii, has been appointed head of the work in plant pathology of the Thompson Institute for Plant Research at Yonkers, New York. Dr. Kunkel, with a protozoologist and several others representing various sorts of biological technic, will devote his time to the study of "aster yellows" and other mosaic types of disease.

DR. BERT W. CALDWELL has been appointed superintendent of the university hospital at the University of Iowa by the State Board of Education to succeed Dr. Arthur J. Lomas, who has gone to a post at the University of Maryland. Dr. Caldwell comes from Vera Cruz, Mexico, where he was a member of the yellow fever commission.

SIR HENRY M. W. GRAY, of the Aberdeen Royal Infirmary, has accepted the appointment of chief of the surgical staff of the Royal Victoria Hospital, Montreal.

DR. P. A. MAPLESTONE, who is a graduate of the University of Melbourne and has until recently been lecturer of protozoology in the Liverpool School of Tropical Medicine, has been appointed assistant director of the Research Laboratory at Sierra Leone.

F. W. WILLARD has been appointed superintendent in charge of chemical engineering, development and research for the general manufacturing department of the Western Electric Company's Hawthorne Works, Chicago, Illinois.

THE division of chemistry and chemical technology of the National Research Council, Washington, D. C., has named James R. Withrow, of the Ohio State University, as chairman of the National Research Council Committee on the use of sodium compounds as a substitute for potassium compounds, both in scientific and industrial work.

APPOINTMENT of four members of the committee to conduct an investigation of the storage of coal is announced by the Federated American Engineering Societies. They are: P. F. Walker, dean of engineering, University of Kansas; S. W. Parr, professor of applied chemistry, University of Illinois; H. Foster Bain, director of the United States Bureau of Mines; L. E. Young, Union Light and Power Company, St. Louis. The chairman is W. L. Abbott, chief operating engineer of the Commonwealth Edison Company, Chicago. Four or five additional members of this committee are yet to be selected. Consideration is being given to recommendations by member organizations and it is probable that the committee will be completed in the near future.

THE British secretary for mines has appointed the following to be additional members of the Safety in Mines Research Board: Professor W.

S. Boulton, Professor S. M. Dixon, Dr. J. S. Haldane, Professor C. H. Lees and Professor J. F. Thorpe.

AT a meeting of the permanent committee of the International Society of the History of Medicine, held at Antwerp on April 11, 1923, it was voted to hold the Fourth International Congress of the History of Medicine at Geneva, Switzerland, during the third week of July, 1925. The following officers were elected: *President:* Dr. Charles Green Cumston, Geneva. *Secretary General:* Dr. A. de Peyer, Rue General Dufour, 20, Geneva. *President of honor:* Sir D'arcy Power, London. *Vice-presidents of honor:* Dr. Edward B. Krumbhaar, Philadelphia; Dr. J. G. de Lint, Gorinchem, Holland; Dr. Tricot Royer, Antwerp; Dr. Charles Singer, London; the president of the Medical Society of Geneva for the year 1925.

T. GILBERT PEARSON, president of the National Association of Audubon Societies, sailed for France on May 12. He is going in the interests of furthering the organization and work of the International Committee for Bird Protection, of which he is founder. The committee is composed of representatives elected by leading scientific and conservation organizations in the United States, Canada, Australia, Norway, England, Holland, Luxemburg and France. He goes to Europe as representative of the National Association of Audubon Societies and the American Ornithologists' Union to address the International Convention shortly to be held in Paris under the management of the Societé de Nationale d'Acclimatacion de France.

R. P. ROSE, chemical engineer of the United States Rubber Company, has returned to this country after having spent two years in Sumatra, where he installed plants for the utilization of the Hopkinson process for producing rubber and equipment for the shipment of latex.

DR. M. LUCKIESH, director of the Nela Laboratory of Applied Science of the General Electric Company of Cleveland, delivered an address at Toronto before the Royal Canadian Institute on the subject "Artificial light and civilization" on April 21.

PROFESSOR BAKULE, of Prague, Czecho-Slovakia, gave a lecture and demonstration under the auspices of the St. Louis School of Occupational Therapy at Washington University School of Medicine on May 1. He is touring the United States with a group of handicapped children, whom he has trained to become adept at some gainful occupation. Many of the children would ordinarily be considered as hopelessly incapacitated for life, but instead of being private or public charges, they are able to contribute not only to their own maintenance but to others as well. Briefly stated, his methods are based on appeals to curiosity and direction of their activity along the desired lines.

PROFESSOR EMMANUEL DE MARGERIE, director of the Geological Map Service of Alsace and Lorraine, gave a series of six illustrated lectures on geology at Yale University, beginning on May 7 and continuing through May 15. Professor de Margerie is visiting the United States under a plan perfected by the committee of American Universities on exchange with France of professors of applied science and engineering, with assistance of the Institute of International Education. This committee represents seven institutions: Columbia, Cornell, Harvard, Johns Hopkins, Massachusetts Institute of Technology, University of Pennsylvania and Yale. The topics of these lectures by Professor de Margerie are: "The topographic map of France," "Brief history of the geology of France," "Structural work in the Paris basin, Northern France and Belgium," "The Jura Mountains," "The Western Alps in France and Switzerland," "Provence," "The Pyrenees," "The Western Mediterranean basin."

THE twenty-ninth James Forrest lecture of the Institution of Civil Engineers, London, was delivered on May 4 by Sir Richard Glazebrook, who took as his subject "The interdependence of abstract science and engineering."

THE Adolph von Baeyer Memorial lecture was delivered before the Chemical Society, London, by Professor W. H. Perkins, on May 10.

MR. F. W. HARMER, for more than fifty years a fellow of the Geological Society and well known for his studies of pliocene mollusca, died on April 24, aged eighty-seven.

THE death is announced of Dr. V. Th. Homén, professor of applied physics in the University of Helsingfors, aged seventy-five years.

A MESSAGE received at the Harvard College Observatory from the Rev. Joel H. Metcalf of Portland, Maine, announces the discovery of a comet by him on May 7 in the constellation Ophiuchus, near the star Alpha Opiuchi. The comet was of the ninth magnitude, much too faint to be seen without a telescope, and was moving slowly. It appeared round and brighter on the southwest side. Another telegram received at the observatory from the Lowell Observatory, Flagstaff, Arizona, announces the discovery of a new star by Lampland on May 5 in the great spiral nebula Messier 83. The nova was roughly of fourteenth magnitude, which indicates that it would be visible only with a powerful telescope.

THE discovery announced last year by workers in the Toronto University that an extract from the pancreas of animals is a palliative of diabetes, and the later discoveries that the active substance, called "insulin," can be prepared from the pancreas of fishes, have suggested that the development of this possibility might be of considerable importance in the fisheries of this country. Accordingly, The Fisheries Bulletin reports that arrangements have been made by the Bureau of Fisheries and the hygienic laboratory of the Public Health Service to cooperate in an investigation of the possible production of insulin from fishes. The Bureau of Fisheries is to do the field work in studying the sources and collecting the material, while the hygienic laboratory is to do the laboratory and experimental work, including preparation and standardization of the pancreas extract. A. A. Ellsworth, who is doing the field collecting, went to Fernandina, Florida, in April, where he is now collecting pancreas from sharks at a shark fishery. About 36 sharks a day are being taken. The pancreatic glands of each shark weigh 200 grams or more (around one half pound). It may be noted that the viscera of fish when used at all are used for producing fertilizer and oil, low-priced products. This is the first effort to produce high-priced biological products for medicinal purposes from the glands of fishes. Fish, of course, contain the numerous glandular substances that are found in other animals.

THE British Colonial Office, as reported in the London *Times,* makes the following announcement respecting the *Discovery's* new voyage: The secretary of state for the colonies has appointed an executive committee to control the researches recommended by the Inter-Departmental Committee on Research and Development in the Dependencies of the Falkland Islands, and in particular the investigation of the question of the preservation of whales and of the whaling industry, which has been subject to government regulation since its inception nearly twenty years ago. The members of the committee are as follows: Mr. Rowland Darnley (chairman), Colonial Office; Sir S. F. Harmer (vice chairman) British Museum, Natural History Department; Mr. H. T. Allen (financial member), Colonial Office; Mr. J. O. Borley, Ministry of Agriculture and Fisheries; Captain Robert W. Glennie, R.N., Admiralty; Mr. J. M. Wordie, Royal Geographical Society; and Sir Fortescue Flannery, of Messrs. Flannery, Baggallay and Johnson, consulting naval architects to the Crown Agents for the Colonies, who has consented to serve as a member of the committee until the *Discovery,* which has been purchased for the purposes of the research expedition, has been reconditioned. The *Discovery* is Captain R. F. Scott's old ship, in which also Sir Ernest Shackleton served. She will be principally employed in the waters of South Georgia and the South Shetlands. It is not anticipated that she will be ready to start before next year.

AS headquarters for a geological field station ten acres of land in Ste. Genevieve County, Missouri, were given to the University of Chicago in 1921 by one of its graduates, Mr. William E. Wrather, a geologist of Dallas, Texas. At the same time the donor provided a concrete building for kitchen and dining room purposes and a concrete springhouse to protect the water supply. Through the generosity of the donor also two new buildings are now being erected, one for dormitory purposes, to accommodate twenty students, and another to provide facilities for shower baths. Field instruction in geology has been conducted by the university in Ste. Genevieve County each season since 1914, except during the two war years, 1917-18.

The establishment of the permanent camp has made possible much more efficient class work. The region available for study exhibits a remarkable variety of geological phenomena in a small area. The whole district studied is about five or six miles long and less than three miles wide, and the permanent camp is situated near the center. Within this area more than twenty-five distinct geological formations are outcropping, ranging in age from the Cambrian to the Mississippian, most of them being more or less abundantly fossiliferous. In addition, unusual fault phenomena provide problems of great interest for class work, while there is a remarkable opportunity for the collection of fossils from numerous Paleozoic horizons. It is proposed in the near future to expand the work at the Field Station into a real Field School of Geology and to continue it throughout the summer quarter, with a number of distinct courses and the proper instructors for each.

EMPLOYING the methods of engineering, research in eye conservation on a nationwide scale has been undertaken by the Eyesight Conservation Council of America. The work is in charge of J. E. Hannum, a former member of the teaching staff of Purdue University and a member of the American Society of Mechanical Engineers. The plan, which follows revelations of human and industrial waste in industry, made by the Hoover Committee on the elimination of waste in industry of the Federated American Engineering Societies, of which J. Parke Channing of New York is chairman, aims to determine the extent to which attention is being given to the conservation of vision in the educational, commercial and industrial activities of the United States. A study of statutory provisions now in force and affecting eyesight will be carried on. Experiments to determine the true economic value of perfect vision will be made. It is proposed to measure the improvement in health, increase in quality and quantity of production, advancement of individual performance and decrease in losses due to waste and accident. Factory, home and school lighting, now a subject of scientific research here and abroad, will be studied. Mr. Hannum, a former Indianapolis engineer, is a graduate of Pennsylvania State College, and was formerly connected with the Red Cross Institute for the Blind in Baltimore.

UNIVERSITY AND EDUCATIONAL NOTES

THE committee of the Associated Harvard Clubs which is raising $250,000 to endow five professorships at Berea College, Kentucky, in memory of Professor N. S. Shaler, the Harvard geologist, has been continued for another year to go on with its campaign, which has already secured more than $50,000.

WINTHROP MORE DANIELS, a member of the Interstate Commerce Commission, has been appointed to the newly established chair of transportation at Yale University.

DR. B. B. BRACKETT, who has for the past fourteen years been the head of the electrical engineering department at the South Dakota State College, has accepted a professorship of electrical engineering in the college of engineering of the University of South Dakota.

DR. H. M. DADOURIAN, associate professor of physics at Trinity College, Hartford, Connecticut, has been appointed Seabury professor of mathematics.

DR. R. W. WHYTLAW-GRAY, science master at Eton College, has been appointed professor of chemistry at University College, London, in succession to Professor Arthur Smithells.

We learn from *Nature* that Dr. S. P. Smith, assistant professor in the City Guilds (Engineering) College, Imperial College of Science and Technology, London, has been appointed professor of electrical engineering at the Royal Technical College, Glasgow, in succession to Professor Magnus Maclean, who is about to retire after occupying the chair for twenty-four years.

DISCUSSION AND CORRESPONDENCE

AS TO THE CAUSES OF EVOLUTION

ABOUT a year ago I published a note (SCIENCE, April 14, 1922) on the evolution controversy. In this I spoke of the causes of evolution. It has come to my attention that my remarks on this subject have been considerably misunderstood. And it now appears