physics at the Massachusetts Institute of Technology, and lecturer on physics at Harvard, will give courses in the summer school of the University of California.

Professors E. L. Chaffee and N. H. Black are on leave of absence in Europe. Professor Chaffee is completing his text-book on vacuum tubes, and Professor Black, who has attended courses at the University of Cambridge, will finish his study of the instruction in physics given at the English schools and colleges.

Professor E. C. Kemble will spend the summer in Vermont, writing on quantum mechanics.

Professor F. H. Crawford will take a brief vacation in Virginia and then return to Cambridge and continue his research on band spectra.

J. H. McLeod will teach in the summer school and carry on research in atomic physics; D. S. Muzzey will work on supersonics, F. V. Hunt on architectural acoustics and R. W. Hickman on gas tubes. H. P. Stabler will go to Williams College next year as an instructor in physics.

The remodeling of the Jefferson Physical Laboratory will be completed during the summer, under the direction of H. R. Mimno, instructor in physics, who will also do research on power amplifiers.

HONORARY DEGREES FOR SCIENTIFIC MEN

AMONG honorary degrees conferred by universities at their recent commencement exercises are the following:

Yale University: D.Sc. on Dr. Eugene Lindsay Opie, professor of pathology and director of the department at the University of Pennsylvania, and director of the Henry Phipps Institute, Philadelphia; and on Mr. John Ripley Freeman, civil and mechanical engineer, Providence, Rhode Island.

Northwestern University: D.Sc. on Dr. Isaac Abt, member of the medical faculty of Northwestern University since 1894; and on Dr. Robert Bruce Preble, professor of medicine at Northwestern University since 1895.

The University of Pittsburgh: D.Sc. on Dr. Carl E. Seashore, professor of psychology and dean of the Graduate School of the State University of Iowa.

The University of Wisconsin: D.Sc. on Dr. Irving W. Bailey, professor of plant anatomy at Harvard University.

Middlebury College: D.Sc. on Dr. Albert W. Hull, of the General Electric Company.

Georgetown University: LL.D. on Dr. Felix Neumann, assistant librarian of the Army Medical Library at Washington, D. C.

Wilson College: D.Sc. on Miss Francis Wick, professor of physics at Vassar College.

Jefferson Medical College: LL.D. on Dr. Irving S. Cutter, dean, Northwestern University Medical School.

Earlham College: LL.D. on Mr. Orville Wright, of Dayton, Ohio, co-inventor of the airplane.

Brown University: D.Sc. on Mr. Ambrose Swasey, Cleveland, Ohio.

University of Toronto: D.Sc. on Dr. L. V. Redman, vice-president and director of research of the Bakelite Corporation and president-elect of the American Chemical Society.

SCIENTIFIC NOTES AND NEWS

THE Roosevelt Memorial Association, New York, has awarded a Roosevelt Medal to Dr. C. Hart Merriam, chief of the U. S. Biological Survey from 1885 to 1910, and since research associate of the Smithsonian Institution, who "brought the study of natural history out of the laboratory into the open spaces of field and wood and sky."

PROFESSOR DUGALD C. JACKSON, chairman of the electrical engineering department of the Massachusetts Institute of Technology, was on June 22 presented with the Lamme award for outstanding achievement in engineering teaching, at the annual dinner of the Society for the Promotion of Engineering Education at Purdue University. More than five hundred persons attended the dinner, over which Dr. Harold S. Boardman, president of the University of Maine and president of the society, presided as toastmaster.

Nature states that the portrait of Dr. G. Claridge Druce, which was subscribed for by members of the Botanical Society and Exchange Club of the British Isles on the occasion of his eightieth birthday on May 23, 1930, has been painted by Mr. P. A. de Laszlo.

THE gold medal of the Royal College of Surgeons has been conferred on Mr. G. Buckston Browne, in recognition of his contributions to the surgery of the genito-urinary system, and of his gift of an endowment for an institution for surgical research.

DR. LECOMTE DU NOÜY, director of the department of biophysics of the Pasteur Institute, Paris, has been elected corresponding member of the Society of Biology of Vienna.

DR. CARL E. CORRENS, professor of botany at the University of Berlin, has been elected a foreign member of the Linnean Society, London.

M. H. LEBESGUE, professor of mathematics at the Collège de France, and Dr. A. F. Molengraaf, professor of geology at Delft, have been elected associates of the Royal Academy of Belgium.

THE Albert Medal of the Royal Society of Arts for 1931 has been awarded by the council to H. R. H. the

Duke of Connaught, "in grateful appreciation of his presidency of the society since 1911."

MEDALS of the Royal Geographical Society, London, were awarded at the annual meeting on June 20 as follows: The Royal Patrons' Medal was awarded to Rear Admiral Richard E. Byrd for his Antarctic expedition and his flights over the North and South Poles. Captain William Galbraith, naval attache of the American Embassy, received the medal, formally presented by Admiral Sir William Goodenough, on behalf of Admiral Byrd. The Founder's Medal was awarded to Bertram Thomas for his geographical work in Arabia and his successful crossing of the Rub-Al-Khali Desert. The following four grants were presented: The Murchison Grant to L. M. Nesbit for his difficult journey through the Danakil country of Abyssinia; the Back Grant to Colonel R. H. Rowe for his services in Nigeria and on the Gold Coast; the Cuthbert Peek Grant to H. J. L. Beadnell for explorations in the Libyan Desert, and the Gill Memorial Grant to Michael Spender for studies of the Great Barrier Reef of Australia.

AT the anniversary meeting of the Linnean Society of London, held on May 28, the Linnean Gold Medal was awarded to Professor Karl Ritter von Goebel, professor of botany in the University of Munich. Officers of the society were elected as follows: Professor Frederick Ernest Weiss, F.R.S., *president;* Mr. Francis Druce, *treasurer;* Mr. John Ramsbottom, *secretary,* botany, and Lieut.-Colonel John Stephenson, zoology.

AT the eighty-fourth annual meeting of the British Paleontographical Society, held in London on May 29, Dr. F. A. Bather, Mr. Robert S. Herries and Sir A. Smith Woodward were reelected president, treasurer and secretary, respectively.

MR. FRANK O. CLEMENTS, technical director of the research laboratories of the General Motors Corporation, has been elected president of the American Society for Testing Materials.

THE title of emeritus professor of biology has been conferred upon Professor Charles Wright Dodge, for the past forty-one years head of the department of biology in the University of Rochester. Professor Dodge retired from active teaching at the close of the academic year.

DR. HARRIS J. RYAN is retiring as head of the department of electrical engineering at Stanford University in order to devote his whole time to electrical research.

DR. EARL BALDWIN MCKINLEY, formerly director of the School of Tropical Medicine of the University of Porto Rico and member of the medical faculty of Columbia University, has been appointed dean of the George Washington University School of Medicine to succeed Dean William Cline Borden, who becomes professor emeritus of medicine. Dean Borden retired from active service in June, after twenty-two years as dean of the school of medicine. His services in the upbuilding of the medical school were recognized by the university at commencement on June 10 when the honorary degree of doctor of science was conferred on him.

DR. WILLIAM LORENZO MOSS has been appointed professor of preventive medicine and dean of the University of Georgia Medical Department to succeed Dr. William H. Goodrich, effective on July 1.

DR. CARL F. CORI, formerly of the State Institute for the Study of Malignant Diseases, Buffalo, New York, has been appointed professor of pharmacology at the Washington University School of Medicine.

DR. RALPH C. BENEDICT, at present chairman of the department of sciences at Haaren High School, New York City, has accepted the appointment of associate professor of biology at Brooklyn College. He will continue to serve as resident investigator at the Brooklyn Botanic Garden, a position that he has held since 1916.

DR. M. N. SHORT, of the U. S. Geological Survey, has been appointed professor of optical mineralogy in the College of Mines and Engineering of the University of Arizona.

DONALD C. BOUGHTON has been appointed assistant professor of zoology and chairman of the reorganized department of biology at the Milwaukee center of the University of Wisconsin Extension Division. Other appointments in the department are Dr. Benj. H. Schlomovitz, lecturer in physiology, and Dr. Ruth I. Walker, in charge of botany.

DR. E. D. FRIEDMAN, professor of neurology at New York University Medical School, has been promoted to the rank of visiting neurologist at Bellevue Hospital.

MR. E. M. JELLENIK, formerly statistician for the United Fruit Company, has been appointed chief statistician of the Memorial Foundation for Neuro-Endocrine Research, Boston.

DR. JOSEPH M. LOONEY, acting professor of physiological chemistry and toxicology at Jefferson Medical College, has accepted appointment with the Memorial Foundation for Neuro-Endocrine Research as chief of laboratories at the Worcester (Mass.) State Hospital. Dr. Hugh T. Carmichael, of the department of medicine of Union University, Albany, New York, has been appointed resident psychiatrist on the research service of the hospital.

MR. S. H. MCCRORY has been appointed head of the newly organized Bureau of Agricultural Engineering of the U. S. Department of Agriculture, authorized by act of the last Congress. This bureau takes the place of the Division of Agricultural Engineering of the Bureau of Public Roads. Mr. McCrory came to the department twenty-four years ago and for several years has been chief of the division that now becomes a bureau.

DR. ALFRED L. KROEBER, of the University of California, has been appointed visiting professor of anthropology at Columbia University.

DR. CHARLES H. DANFORTH, of Stanford University, has been appointed exchange professor at the Harvard Medical School for the coming year.

DR. W. W. DIMOCK, head of the department of animal pathology at the University of Kentucky, has been called to England as a guest of the British Bloodstock Agency, Ltd., of London, to confer with breeders and scientific men in regard to horse-breeding problems.

DR. ROBERT L. PENDLETON has been granted a year's leave of absence from the post of professor of soil technology and head of the department of soils, at the College of Agriculture of the University of the Philippines, stationed at Los Baños. He has undertaken a soil survey of China, which will involve actual field work in soil mapping, training a staff for the development of the work, etc. The soil survey will be a branch of the National Geological Survey of China, which has its headquarters and laboratories at Peiping.

UNDER the auspices of Yale University, Dr. Hellmut de Terra, formerly of the University of Berlin, now research associate in geology at Yale, will lead a scientific expedition to the Himalayas and western Tibet. The personnel of the expedition will consist of Dr. and Mrs. de Terra, Dr. G. Evelyn Hutchinson, a member of the Yale department of zoology, and George E. Lewis, fellow in vertebrate paleontology. The members of the expedition will start for India in February, 1932, where they expect to spend a year.

JAMES A. G. REHN, secretary and an associate curator of the Philadelphia Academy of Natural Sciences, is now on his way from São Paulo, Brazil, to Descalvados, 1,400 miles north of Rio de Janeiro, to join the Matto Grosso Expedition directed by Captain Vladimir Perfilieff, which already has spent several months in this "campo" country. Mr. Rehn will make a study of the bird, mammal, fish and insect life, and collect specimens for the academy's museum and its scientific collections.

DR. JOSEPH B. NIEDERL and Dr. A. Benedetti-Pichler, of the Department of Chemistry, Washington Square College, New York University, who are spending the summer in Germany and Austria, attended the Hauptversammlung des Vereins Deutscher Chemischer, held at Vienna from May 26 to May 30. Dr. Niederl contributed papers on the quantitative microanalytical estimation of ethyl alcohol in human and animal organs, and on the addition of phenols to double bonds; and Dr. Pichler on experiments, carried out with Professor Alexander O. Gettler, on the isolation of ethyl alcohol from human organs. Dr. R. H. Muller contributed a paper on the application of photoelectric methods in precision colorimetry.

AT the commencement exercises of the Colleges of Medicine and Dentistry and the School of Pharmacy of the University of Illinois on June 13, the commencement address was given by Dr. Edward H. Kraus, dean of the College of Pharmacy, University of Michigan, on "Some Pertinent Aspects of Higher Education." At these exercises, the William Beaumont Prize of $100 for the best research on "Diseases of the Gastro-Intestinal Tract" was awarded to Dr. Alexander J. Nedzel, for work on "The Passage of Bacteria through the Splanchnic Body Surface." The University of Illinois Chapter of Sigma Xi Prize of $25 for the best original piece of scientific investigation by a student during the year was awarded to Morris A. Kaplan, for a report on "A Modified Method for the Preparation of Hematoporphyrin."

THE Committee on Scientific Research of the American Medical Association announces the award of a research grant to Professor Harry J. Deuel, Jr., of the University of Southern California Medical School, for the study of glycogenesis and glycogenolysis in animals after the administration of various sugars; to Dr. Daniel A. McGinty, of the Emory University School of Medicine, for the continuation of studies on the blood in the coronary circulation, and to Dr. W. R. Tweedy, associate professor in the department of physiological chemistry, Loyola University School of Medicine, Chicago, "for further purification of the parathyroid hormone."

THE autumn meeting of the National Academy of Sciences will be held at Yale University on November 16, 17 and 18, 1931. Dr. Yandell Henderson is secretary of the local committee on arrangements.

APPLICATIONS for the position of principal metallurgist must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than July 24. The examination is to fill vacancies in the Bureau of Mines, for duty in Washington, D. C., at Pittsburgh, Pennsylvania, or elsewhere in the field. The entrance salaries range from $5,600 to $6,400 a

year. Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience.

THE Rockefeller Institute has made a grant of $45,000 to Columbia University in aid of research on the common cold. The work is being undertaken at the Columbia-Presbyterian Medical Center by Dr. A. R. Dochez and Dr. Yale Kneeland, Jr., of the College of Physicians and Surgeons.

THE Valentine's Meat Juice Company has made a grant of two thousand dollars a year for a period of three years to the Medical College of Virginia, Richmond, for the purpose of cooperative research in the basic sciences as related to medicine, dentistry, pharmacy and nursing.

AN Associated Press despatch reports that an appropriation of $6,000,000 for an educational campaign on the proper care of the eyes was passed at the national convention of the American Optometric Association meeting in San Antonio. Dr. J. Fred Andreae, of Baltimore, the president, said that the appropriation would be spent in the next four years in newspapers, magazines and other mediums to stimulate interest in the problems of defective vision.

BUILDING has begun on the new monkey house at the Johns Hopkins Medical School for the housing of the rhesus colony of the department of embryology, Carnegie Institution of Washington. Twenty paddocks and six breeding cages together with laboratory space will occupy the roof of the New Hunterian Building at the corner of Wolfe and Madison Streets. Several hundred monkeys may be accommodated under conditions which six years of study in Baltimore and experience at other places have shown are satisfactory for the rhesus monkey.

ACCORDING to *The Museum News* the National Museum in Rio de Janeiro, Brazil, has been reorganized by the new government, with departments of mineralogy and petrography, stratigraphy and paleontology, botany (two sections), zoology (two sections), anthropology, ethnography, and educational work. The director of the museum, Dr. Edgard Roquette-Pinto, reports that during the past year expeditions have been sent out to the Island of Marajo to study Indian pottery, to Maranhao to study the tribes there, to Serra do Mar for botanical study and collecting, and to the valley of the Paraopeba River in Minas for zoological work. Educational work included lectures, motion picture showings, and loans of specimens and slides. Attendance for the year was 114,723.

THE London *Times* states that the Royal research ship *Discovery II* arrived recently at Falmouth from South Georgia, after having been absent from England for about eighteen months on scientific research work in the Antarctic regions. In due course a report will be issued by the committee, of which Mr. E. R. Darnley, of Claygate, Surbiton, is the chairman, and Mr. F. H. Harper, of Putney, the secretary. The *Discovery II* has been engaged on research work on the coast of Graham Island, and has brought home two officers from the marine biological station at South Georgia, Mr. F. D. Omunney and Mr. F. J. Hary. The *Discovery II* was launched in November, 1929, on the Clyde, having been built for the *Discovery* Committee to the order of the Crown Agents for the Colonies.

A new ship, the *Atlantis,* built especially for scientific work at sea, is now on the way to America, but since she will go to work even on her maiden voyage she will not arrive at her destination until about the first of September. The *Atlantis,* built at Copenhagen for the Woods Hole Oceanographic Institution, will reach Woods Hole about September 1. Science Service reports that she is a steel boat of approximately 380 tons displacement, 142 feet long, 29 feet beam and 16 feet extreme draft. She carries a 250 Diesel engine, and can cruise under power alone for 3,000 miles at eight knots; with sail she can extend her radius indefinitely. She carries two laboratories and living accommodations for twelve or sixteen persons. She left Copenhagen for Plymouth, England, a few days ago, and will set sail from the latter port about July 10 for Woods Hole. On the way over she will turn from her course for two north-south profiles across the North Atlantic Drift, one on the longitude of the Azores, the other about fifty degrees west longitude. Another profile will be run off the coast of Nova Scotia. On these scientific runs special attention will be paid to the distribution of the smaller life of the sea in its relation to light penetration into the water and also to the capture of fish that swim at great depths. Chemical studies will also be made of the sea water at stations spaced between Europe and America. The physical studies will be in charge of the commander of the *Atlantis,* C. O. Iselin; the biological work will be conducted under Dr. George L. Clarke, and the chemical researches will be made by Dr. F. Zorell, of the Deutsche Seewarte.

Nature says that the issue by the British Association of a catalogue of the objects in the memorial rooms of Down House, Darwin's home at Farnborough, where he lived and worked for almost forty years, will be widely appreciated in view of the approaching centenary meeting of the association in London. Mr. Buxton Browne, the curator and generous donor of Down House to the British Associa-

tion, "to be held in custody for the nation," has restored the memorial rooms as nearly as possible to the state in which they were when Darwin lived there. Much of the furniture is original, and, thanks to the generous assistance of members of the Darwin family and admirers of Darwin, the pictures and other objects and the articles which Darwin had in daily use are here in what was formerly their accustomed place. Among the latest acquisitions are selections from the letters (in facsimile) from Darwin to Fritz Müller, the German naturalist, who was Darwin's correspondent in Brazil between 1865 and 1882. These letters were acquired in 1929 by Professor Henry Fairfield Osborn, of the American Museum of Natural History, New York. Professor A. C. Seward, professor of botany in the University of Cambridge, has recently expressed his intention of placing on loan at Down House the major part of the Darwin Library, which was bequeathed by Sir Francis Darwin to the professor of botany in the university for the time being. The catalogue, which has been prepared by Mr. Buxton Browne and the secretary of the British Association, gives brief historical and descriptive notes on the house and grounds, and is illustrated.

DISCUSSION

THE POSITION OF SCIENCE IN SOVIET RUSSIA

I SHOULD like to add my impressions to Professor Cockerell's contribution in a recent number of SCIENCE. During my travels in the Soviet Union for three months last year, it was evident to me that science and the scientific method have assumed an importance in the minds of the Russian leaders second only to communism. In every town that I visited there were new scientific institutes. Small laboratories have been attached to almost every kind of establishment, from the experimental vineyards of the Transcaucasus to the kitchen factories of Moscow.

At the Academy of Sciences in Leningrad I made special inquiry whether research work is encouraged by the Soviet Government. Professor Paul Nikoforoff, the director of the Seismological Institute, who was a member of the staff before the revolution, was emphatic in affirming that research receives the greatest encouragement, and as evidence showed me a number of reprints of recent scientific investigations made by his department. He said that before the revolution the department had a staff of three men, including himself and Prince Galitzin. Last summer the department had a staff of seventy persons, located in twenty-five different stations in the Union. The government is building a 500,000-ruble seismological laboratory on the site of a building belonging to a pre-revolutionary beer baron. "The former wine cellars," he said, "will provide us with excellent constant temperature rooms." At the time of my visit several mechanics were busy in the machine shop with the construction of seismological instruments of a type recently developed by the department.

How is one to reconcile this situation with the reports of the plight of scientific men in the Soviet Union, particularly that of members of the Academy of Sciences? How can it be reconciled with the recent declaration of policy limiting research to the field of applied science?

This is one of the many contradictions which exist in Soviet Russia. For example, why are the Bolshevik leaders so ruthless in dealing with individuals, while at the same time they express sympathy with the lot of the under-dog? Why are they creating new classes, such as the disfranchised groups, while at the same time they profess to aim at a classless society?

In order to explain these and many other contradictions between Russian theory and practice, we must try to look into the minds of the Bolsheviks and to understand their point of view. If we do this we shall find that their principal anxiety is to safeguard the future of the revolution. In their determination not to repeat the mistakes of the French Revolution they are willing to sacrifice anything and everything that they suspect of contributing in the slightest measure to the possibility of counter-revolution. Their ruthlessness toward kulaks, toward private traders and toward engineers and scientists whom they suspect of having capitalistic leanings is due to this anxiety.

Furthermore, the Bolshevik leaders consider their country to be in a state of war, a war against the old order. They take their war even more seriously than we took the World War. If we refresh our memories with regard to some of the things that were done during the World War under the impulse of war psychology, in sending scientists into the trenches, in dealing with people suspected of sympathizing with the enemy, in committing to prison for ten to twenty years people who declared themselves to be opposed to war, we shall gain some inkling of the present psychology of Russian communists.

Another factor that affects the position of science in Russia is the question of *valuta,* that is, foreign