due in part to the efforts made by the Genetics Society of America to stimulate interest in the Congress among its members. In 1946 the president of the Society appointed a travel committee (R. C. Cook, M. Demerec, Th. Dobzhansky, and M. M. Rhoades), which kept members informed about the preparations for the Congress and about travel facilities, and which appointed a travel agency to serve the geneticists. Travel arrangements were greatly facilitated by the Swedish-American Line, which reserved 50 round-trip passages for geneticists. In addition, the Genetics Society was fortunate in obtaining grants from the Carnegie Corporation and from Mr. W. P. Draper to help members with travel expenses. Twenty-two members, mostly from among the younger geneticists, received travel grants from the Society.

NEWS and Notes

William G. Madow, of the North Carolina Institute of Statistics, Chapel Hill, has been named professor of mathematical statistics at the University of Illinois, effective January 1, 1949.

Stanley J. Czyzak, who for the past two years has been a Stephen H. Wilder Research Fellow at the University of Cincinnati, has joined the Experimental Nuclear Physics Division of Argonne National Laboratory, Chicago, as an associate physicist.

Alex B. Novikoff has been appointed associate professor of experimental pathology at the College of Medicine, University of Vermont. In his new position he is in immediate charge of the Cancer Research Program within the Department of Pathology which at present includes studies of the biochemical and cytochemical changes in growth and neoplasia.

John L. Magee, of the Argonne National Laboratory, has been appointed assistant professor in the Chemistry Department, University of Notre Dame, and **Ernest L. Eliel,** who has recently received the Ph.D. degree from the University of Illinois, has been appointed an instructor in the same department.

E. L. LeClerg, who has been a principal budget examiner in the Bureau of the Budget, Executive Office of the President, Washington, D. C., has been appointed a research coordinator in the Agricultural Research Administration, USDA. His coordination work will be in the field of crop production.

William H. Adolph recently became professor of biochemistry at Peiping Union Medical College. Dr. Adolph had formerly served as biochemistry professor and acting president of Yenching University, Peiping, China.

Morton M. Rayman, chief of the Biochemical Section, Fermentation Research Department, Publicker Industries, Inc., has been named chief of the Microbiological Branch of the Food Research Division, Quartermaster Food and Container Institute for the Armed Forces, Chicago. In his new position, Dr. Rayman will direct research on the nature and factors affecting the microbiological and histological changes which occur in the processing and storage of foods for the armed forces.

Prem Narrain Agarwal, Central Government of India Scholar, recently became a special international trainee under the International Fellowship Program of Joseph E. Seagram & Sons, Inc., Louisville, Kentucky. In June Dr. Agarwal received his Ph.D. in biochemistry from the University of Wisconsin, where he has been working since December 1945 on the production of food yeast from molasses.

George B. Cressey, chairman, Department of Geography, Syracuse University, has been participating in meetings of the International Geographical Union in Brussels and the International Geological Congress being held in London. Dr. Cressey will return to America in mid-September.

Victor Guillemin, Jr., until recently chief of the physics unit of the U. S. Air Forces' Aeromedical Laboratory at Wright Field, has become a biophysicist for the University of Illinois' new Aero Medical and Atmospheric Institute.

Visitors to U. S.

Sir Chandrasekhara Venkata Raman, Indian physicist and Nobel Prize winner, recently completed the last lap of his 5-week tour of the United States by visiting the Polytechnic Institute of Brooklyn. Here he conferred with I. Fankuchen, professor and head of the Division of Applied Physics, as well as founder of the Institute's crystallographic laboratories, which Sir Raman inspected.

Through his research on the spectra, Sir Raman became interested in the study of precious stones and has amassed a collection of some 500 rare diamonds. This, in turn, led to a study of spectrum variations in diamonds and the problem of the origin of luminescence. This work has given physicists new ideas on the behavior of atoms in crystals and promises to throw new light on the phenomena of fluorescence of solids.

On his return to India (see *Science,* July 30, p. 101), Sir Raman will direct the research and teaching of the newly-completed Raman Research Institute in Mysore province. Patterned after the Royal Institute of London, the Raman Institute will be dedicated to fundamental scientific work. Sir Raman hopes it will become one of the leading scientific research centers as well as an international cultural center accessible to men in all scientific fields.

Rajindar Pal, entomologist for the Malaria Institute of India, will shortly arrive in this country as a research fellow of the National Institute of Health. Dr. Pal will be conducting studies, over the period of the next

year, on the methods of action of DDT on malaria mosquitoes with the Technical Development Division, Communicable Disease Center, USPHS, Savannah, Georgia. For the past two years, Dr. Pal has been working on the penetration of insecticides through insect cuticle at the London School of Hygiene and Tropical Medicine, as a fellow of the Rockefeller Foundation.

Grants and Awards

The Stuart Ballantine Medal of the Franklin Institute will be awarded at Medal Day ceremonies in Philadelphia on October 20 to Ray Davis Kell, who since 1942 has been director of television research at the RCA Laboratories in Princeton, New Jersey. The medal goes to Mr. Kell "in consideration of his outstanding pioneer work in television, the adaptation of this means of communication to military needs, and for his inventive contributions and leadership in the development of color television."

High school seniors from the 25,000 schools in the United States, Alaska, Hawaii, and Puerto Rico are being invited to take part in the 1949 Pepsi-Cola Scholarship Program under which 119 four-year college scholarships and 600 college entrance prizes, totaling $350,000, will be awarded. This is the fifth consecutive year that the Pepsi-Cola Company has financed such scholarships. Winners, selected on the basis of two examinations, will be announced next March. The four-year scholarships include full college tuition, $25 a month, and traveling expenses for the period. College entrance prizes, awarded to runners-up, are worth $50.

John M. Stalnaker, professor of psychology at Stanford University and director of the Pepsi-Cola Scholarship Board, states that in the past four years the program has grown from one in which only 3,729 schools took part to one embracing almost half the secondary schools in the Nation.

Arthur F. Schalk, of the College of Veterinary Medicine, Ohio State University, has been named the 1948 winner of the $1,000 Borden Award presented to a veterinarian for outstanding work in dairy cattle research. The award was made to Dr. Schalk during the meeting of the American Veterinary Medicine Association in San Francisco for his discovery of a fatal cattle disease, resulting from eating of spoiled sweet clover hay or silage, together with methods of its prevention and cure.

The American Council of Learned Societies has just made a grant to the *Linguistic Atlas* providing for 8 months of field work in upstate New York, an area which was left incomplete by the death of Guy S. Lowman in 1941. The field work will be done be R. I. McDavid, Jr., who recently completed the field work in the South Atlantic States and is now finishing a survey of the folk-speech of Michigan. With the culmination of the upstate New York work, materials will be at hand from the entire Atlantic seaboard area—the scope of the *Atlas* as planned by Hans Kurath, its director.

Paul L. Day, head of the Biochemistry Department in the University of Arkansas School of Medicine, has been selected for the 1948 Midwest Award of the St. Louis Section, American Chemical Society. Dr. Day was recognized for his pioneer research leading to the discovery of vitamin M for the treatment of pernicious anemia. The gold medallion award will be presented to him at a special ceremony to be held during the forthcoming Midwest session of the 114th meeting of the Society.

Colleges and Universities

A new Department of Statistics, the functions of which will include training in statistics at undergraduate and graduate levels, research in statistical theory and techniques, and consultation on statistical aspects of university research, will be instituted at Stanford University this fall. Acting head of the Department will be Albert H. Bowker, who has been assistant professor of mathematical statistics at Stanford since 1946. From 1943 to 1945 Prof. Bowker was assistant director of the Statistical Research Group of the Applied Mathematics Panel at Columbia University. Meyer A. Girshick, author of a number of articles on statistical theory and its applications, who has been serving as research statistician for a government research project being conducted at the Douglas Aircraft Company in Santa Monica, California, has been appointed professor in the Department. Other Stanford faculty members whose work already includes special applications of statistics will cooperate in instruction and research. They are: Eugene L. Grant (economics of engineering), Quinn McNemar (psychology and education), George Polya (mathematics), Willis H. Rich (biology), Paul B. Simpson (economics), Holbrook Working (Food Research Institute), William A. Spurr (Graduate School of Business), and Frank W. Weymouth (physiology).

The University of Arkansas School of Medicine has recently announced several additions to its staff. Among them are Carl E. Duffy, formerly associate professor of bacteriology at Wayne University School of Medicine, who has been appointed professor and head of the Department of Bacteriology and Parasitology succeeding James T. Culbertson, who is now associated with the National Institute of Health; Harry J. Clausen, of the Loyola University School of Dentistry, New Orleans, who has been appointed associate professor of anatomy; James S. Dinning, who will be assistant professor of biochemistry; and James O. Fergeson, Capt., M. C., who was stationed at Shaw Field, Sumter, South Carolina, prior to separation from the military service and who has been appointed instructor in the Department of Anatomy.

James H. Growden, now associate professor of surgery, has been named acting head of the Department of Oncology, which was recently established with the aid of a grant of $21,000 from the National Institute of Health.

The Medical College of Virginia, Richmond, will inaugurate this year a Department of Legal Medicine, the program of which will follow to some extent that of the School of Medicine at Harvard University, which established the first such department. Courses will be offered in the field

of medicine as it relates to the collection of scientific evidence for administering civil and criminal law. The new department, under the direction of H. S. Breyfogle, Chief Medical Examiner of Virginia, will also engage in research and offer postgraduate work to physicians. The first research to be undertaken will be a study of the role of injury in the cause of cancer.

The Department of Biology, University of Notre Dame, recently announced the following staff appointments: Arthur Schipper, formerly of Texas A. & M., as assistant professor in biology (animal physiology); Norbert Scully, of the University of Chicago, as assistant professor in biology (plant physiology); and the Rev. Cletus Bachofer as instructor (phycology). Dr. Scully has been granted a year's leave of absence to participate in radiobiological research at the Argonne National Laboratory.

The Chemistry Department, University of Pittsburgh, recently completed installation of a Collins Helium Cryostat for research in chemical thermodynamics. Determinations of the low-temperature specific heats of a number of substances is currently under way. Later, energy studies of some selected metals and alloys in the ultra-low-temperature range will be undertaken with the cryostat, which permits temperature measurements between 2° K and room temperature.

Industrial Laboratories

"Carbon copies" of powerful lightning bolts are being made by Westinghouse Electric scientists in an effort to improve our defenses against one of the most destructive forces in nature. Lightning strokes trapped at outdoor experiment stations by special instruments which record their current, wave shape, duration, and number of separate components are reproduced in the laboratory and their effects on various materials and pieces of equipment tested. The information obtained is filed for future reference in building improved protective devices.

The most powerful stroke recorded by Westinghouse engineers occurred in the summer of 1947 and was estimated as equal to the current flowing into 300,000 homes. This particular bolt was so powerful that it damaged some of the equipment set up to trap it atop the University of Pittsburgh's 535-foot Cathedral of Learning.

Horizons, Inc., Princeton, New Jersey, has made several additions to its laboratory staff this summer. Samuel Bousky, Ohio engineer and president of the Cleveland Section of the Instrument Society of America, has joined the organization as chief of the Physics Division. Since 1935 he has been concerned with the development of special electrical and electronic instruments for industrial use. New head of the Ceramics Department at the Cleveland laboratory of Horizons is Alexis G. Pincus, who since 1932 has been associated with the Research Department of the American Optical Company. Morris Steinberg, who received his doctorate in metallurgy from the Massachusetts Institute of Technology this past June, has joined the Metallurgy Department staff in Cleveland, while Edward F. Mayer, who was graduated from Yale University this year with a B.S. in physics, will be associated with the Physics Department.

A 70,000,000-volt synchrotron is being constructed by General Electric Company for Queens University, Kingston, Canada, and will be modeled after one developed by the G-E Research Laboratory for its own use in atomic research. The synchrotron, which will be used by members of the Queens University staff and other Canadian scientists in research with high-energy X-rays, will be installed in a special underground chamber and operated from a remote-control station in a nearby building.

Meetings

The fall meeting of the American Society of Mechanical Engineers is to be held this year at Portland, Oregon, September 7–10, with hydroelectric power resources and the wood industries of the Pacific Northwest cofeatured in the technical program. Symposia on hydroelectric power and on light metals will constitute two of the 10 technical sessions planned. All of these will be held at Reed College. Dinner and luncheon addresses will be made by A. J. Groening, head of the Physics Department, Lewis and Clark College, whose subject will be "Atoms for Peace"; Wilson M. Compton, president of the State College of Washington, who will speak on "Engineering in an Era of Big Science and Big Government"; and L. J. Fletcher, of the Caterpillar Tractor Company, Peoria, Illinois, who will discuss "The Engineer's Stake in His Community." During the meetings members of ASME will inspect installations at Bonneville Dam, the world's largest sawmill at Longview, the Reynolds Metal Aluminum Plant at Troutdale, and other plants manufacturing paper and wood fiber products.

A meeting of the Committee on Science and its Social Relations of the International Council of Scientific Unions held at UNESCO House in Paris, June 15–16, was attended by Bart J. Bok, of the Harvard College Observatory; J. M. Burgers (secretary), of Delft, Holland; C. H. Desch, of London; A. Establier, liaison officer ICSU-UNESCO, Paris; and P. B. Rehberg, of Copenhagen—all members of the Committee. Also present were two representatives of the Natural Sciences Section of UNESCO, S. N. Sen and B. Michelsen, designated by P. Auger, who was absent from Europe; M. P. Bonet-Maury, secretary of the World Federation of Scientific Workers; and Wang Ging-Hsi, of the UNESCO secretariat, who represented the Chinese members of the Committee.

After presentation of various reports on aspects of the work of the CSSR and of UNESCO, the method of working of CSSR and subjects to be included in its future program were discussed extensively and several resolutions adopted unanimously.

In the opinion of the Committee the most urgent problems of the social relations of science today are (1) the dangers threatening science from the fact that research has in large measure become dependent on military sources and on industry for financial assistance, and (2) the way in which results of science are introduced into society. In working on these problems the Committee expects to call on both scientific institutions and individual

scientists as well as UNESCO for advice and cooperation. In order to facilitate the work to be undertaken the Committee has pointed out the value of founding a journal devoted to subjects referring to the social relations of science and of providing stipends to research workers to whom special problems could be entrusted. The Committee has requested both the ICSU and UNESCO to grant the necessary financial means for these projects.

The second resolution involved principles of a charter for scientists. It is quoted in full below.

The prominent position held at present by science in society, and the rapid transformation of the world through the application of science, carry with them for scientific workers special obligations over and above the ordinary duties of citizenship. Besides this the scientific worker has special responsibilities since he or she has the possibility of obtaining information not readily available to the average citizen. It thus becomes the duty of the scientist to: (a) maintain a spirit of frankness, honesty, integrity and cooperation, and to work for international understanding; (b) consciously examine the meaning and purposes of the work that he or she is performing; (c) when in the service of others, inquire into the purpose for which the work is being done and the moral issues that may be involved; (d) promote the development of science in the way most beneficial to mankind and exert his or her influence as far as possible to prevent its misuse; (e) assist in the education of the people and the government in the purposes and the achievements of science.

In order to fulfill these obligations it is necessary to claim certain rights for scientists, the principal ones of which are: (i) freedom of publication and the utmost freedom to discuss one's work with other scientists; (ii) economic security and the right to participate freely in all activities permitted to all citizens; (iii) the possibility of obtaining information about the purposes for which his or her work is being done.

A third resolution had to do with the dangers arising from subvention of research from military sources. The Committee believes that "this influence sooner or later through its secrecy restrictions will lead to the abrogation of the traditional freedom of expression and of publication, and result in directed research not planned primarily for the benefit of science and mankind but rather for its destruction."

It was also agreed that the CSSR should conduct an enquiry among scientists, sociologists, prominent people in educational work, etc. on the meaning of science and scientific cooperation for peace. The results of this enquiry, which is expected to be concluded by the end of September, will be widely disseminated.

As the result of a fifth resolution the Committee will investigate the attention to be given to the human factor in the social relations of science, devoting itself to three principal aspects: (1) the scientist before society, (2) changes introduced in human societies through technological developments, and (3) the antagonisms between biological order and social order.

Prof. J. M. Burgers has been nominated chairman of CSSR, and Prof. M. Florkin, Laboratoires de Biochimie, 17, Place Delcour, Liège, Belgium, secretary.

Members of an expedition to little known Nepal, situated in the shadow of the Himalayas, will sail from Seattle on September 15, according to an announcement from the National Geographic Society, which is sponsoring the expedition in cooperation with Yale University and the Smithsonian Institution. Dillon Ripley, associate curator and lecturer in zoology at Yale, who is heading the party, estimates that about 5 months will be spent in the field, a considerable portion of that time being devoted to natural history study and collection of specimens in Nepal's southern lowlands, which abound in a large assortment of beasts and birds which have never been studied scientifically. Subsidiary work will also be done in adjacent areas of India, including a survey for the Indian government looking toward a national park to preserve the vanishing great Indian rhinoceros.

Dr. Ripley will be accompanied by E. C. Migdalski, of Yale's Peabody Museum; Howard C. Weaver and Richard S. Mack, assistant mammalogists, from Fredonia, New York, and Del Monte, California; Volkmar Wentzel, of the National Geographic Society staff; and Indian taxidermists and other personnel to be recruited after arrival in Asia.

The U. S. Department of Agriculture has just announced the appointment of Philip V. Cardon as head of the Agricultural Research Administration. Dr. Cardon comes to the position with 39 years of experience in agricultural research obtained in both university and government work. On May 17 of this year he received the Distinguished Service Award of the Department of Agriculture for "outstanding service and exceptional leadership in the advancement of agricultural science." He fills the position left vacant by the resignation of W. V. Lambert, now dean of the Nebraska College of Agriculture and director of the Experiment Station.

Simultaneously it was announced that Byron T. Shaw, soil physicist, who for the past 18 months has served as assistant administrator of research in the Department, had been appointed deputy administrator. In this position he will be responsible for many of the day-to-day operations of ARA, the largest civilian research organization in the world.

Oak Ridge National Laboratory now has on hand a considerable quantity of Calcium 45, which is formed as a by-product in the production of Carbon 14 by irradiation of $Ca(NO_3)_2$. The specific activity of this Ca 45 is between 0.3 and 0.4 mc/gm of Ca. The material is available for distribution in the form of solid $CaCO_3$ at a cost of $2.20/mc. Those wishing to request the material from the Isotopes Division should specify "Item S–5B" on the Application for Radioisotope Procurement, AEC Form 313.

The American Chemical Society has announced the establishment of a new Local Section at Richland, Washington, manufacturing site of plutonium. The Richland Section to be composed of chemists and chemical engineers of Benton and Franklin counties, has a charter enrollment of 102 members. First chairman of the new section is Robert Lee Moore, of the Technical Department of the G-E Hanford Works, Richland. Other officers, all associated with the Hanford Works, are: Wayne W. Marshall, vice-chairman; Harry A. Koruberg, secretary; and Howard E. Hanthorn, treasurer.