News and Notes

American Association of Physical Anthropologists

The 23rd annual meeting of the American Association of Physical Anthropologists was held at the Fels Research Institute, Yellow Springs, Ohio, Mar. 26–28. Attendance, number and quality of the papers presented, and the lively character of the discussions testified to the vitality and scope of contemporary physical anthropology.

Fifteen of the 41 papers dealt with the skeleton. Of these, three were concerned with the genetics of osseous formation and skeletal growth (Brietnbach, Garn, and Rife; Sawin; Selby), two with the assessment of skeletal maturation in children (Sontag; Silverman), two with the determination of age in skeletal material (Stewart; Brooks), and one with the sexing of the skeleton (Thieme). Others dealt with prenatal chondrification (O'Rahilly and Gardner) and the weight of the skeleton in the adult (Trotter).

Human evolution, a core interest of physical anthropology, was represented directly by four papers (Washburn; Spuhler; Singer; Mednick) and indirectly by several others. The problem of the antiquity of anatomically modern man (Washburn) raised a lively discussion, while a report on the Saldanha skull, recently discovered at Hopefield, South Africa (Singer), was heard with great interest.

Human genetics was also well represented. In addition to the papers related to the skeleton, there were four papers in this area. They included a discussion of primate genetics as a path to the further understanding of human genetics (Tappen), a reevaluation of P.T.C. tasting data (Hoyme), the serology of the Chippewa (Matson), and evidence for linkage in hybrid populations of recent origin (Rife).

Applied physical anthropology, a field now in its second decade, was both heard and seen. Several papers, including accounts of work carried on under contract, illustrated contributions to basic knowledge (Evans and Lissner; Hertzberg, Emanuel and Saul; Dempster; R. W. Newman). A visit to the Wright Air Development Center, and the Wright-Patterson Air Force Base, provided insight into the practical problems in this field and how such problems are being solved.

Five papers illustrated the position of physical anthropology as a bridging discipline, bringing together the biological and social sciences. These dealt with the variety of human mating systems and their genetic implications (Aginsky), the question of physical selection of Mexican migrants (Lasker), migration, culture-contact, and disease in Polynesia (Marshall and Snow), the changing population profile in the state of Israel (Schulman), and social biology in a Cypriote village (Angel).

The meeting was attended by anatomists, geneticists, statisticians, and clinicians as well as by physical and social anthropologists. The range of interest was further shown in the individuals elected to office. W. Montague Cobb, of Howard University, an anatomist, was elected to the vice-presidency, while James N. Spuhler, of the University of Michigan (whose field of interest is human genetics) was elected to the executive committee. Paul Fejos, Research Director of the Wenner-Gren Foundation for Anthropological Research, speaking at the annual dinner of the Association, commented on the expansion of physical anthropology and on the need for "eyeglass" projects yielding both insight and perspectives into the study of man.

STANLEY M. GARN

The Fels Research Institute
Yellow Springs, Ohio

Differential Fertility and the Intelligence of New Generations

A negative association between intelligence, as measured by tests, and the number of children per family has been noted in all countries where tests have been widely applied. Since there is undoubtedly a substantial genetic component in intelligence, this negative association has formed the basis for fears that the average level of intelligence is declining. Several predictions have, in fact, been made of the probable rate of decline.

But the predictions have not been confirmed on the few occasions where it has been possible to test them directly. In the largest test, the 1947 survey of the intelligence of all 11-year-old children in Scotland showed no decline from the average obtained in a comparable survey 15 years earlier.

UNESCO convened a small working party in Paris on Feb. 1–4 to review the available evidence on differential fertility and intelligence and to prepare a report for the use of the World Population Conference which will meet in Rome next September. The group agreed that there had been no demonstrable decline in intelligence but that, possibly, the effects of differential fertility had acted to keep the average from improving. More precise statements are not possible because of a variety of probably influential factors that are not adequately understood. While standardized tests are believed to be appropriate for studying population changes in intelligence, part of the variation in test scores—perhaps 50 percent—is attributable to differences in culture and environment. Thus, educational and environmental differences might tend to mask a decline in genetic quality. Moreover, nearly all surveys have failed to take account of the childless members of the community. Differences in the numbers of childless persons might, therefore, compensate for the differential fertility of those who do have families. The working party recommended a number of investigations and research studies that

would secure a better factual background for future predictions concerning the intelligence of new generations.

The group concluded that at the present time there is no basis for pessimism. The effects of differential ability appear to be small at best, and, whatever the effect, it seems to be disappearing, for there are signs of increasing fertility among those members of the population who usually obtain relatively high scores on intelligence tests. In short, the group advised the World Population Conference that there need be no great concern over an impending decline in intelligence.

In addition to Alva Myrdall and Otto Klineberg of the UNESCO staff, the group included the following demographers, geneticists, and psychologists: Tage Kemp (Denmark), M. A. Girard and M. J. Sutter (France), Livio Livi (Italy), J. A. Böök (Sweden), J. A. Fraser Roberts and J. Maxwell (United Kingdom), and Dael Wolfle (United States). Professor Livi served as president and Mr. Sutter as rapporteur.

DAEL WOLFLE

American Association for the Advancement of Science
Washington 5, D.C.

Science News

A comprehensive 66-page report on **"The Fort Monmouth Security Investigations, August 1953–April 1954"** has been released by the Federation of American Scientists' Committee on Loyalty and Security. The report deals with both the Senate subcommittee investigation and the actions taken under the federal employee security program. It describes the Signal Corps Engineering Laboratories (SCEL) at Ft. Monmouth and attempts to assess the security threat and the disruptive effects of the investigations. The study was based on press reports, personal interviews, copies of charges and responding affidavits and various official documents. Rather complete information was available on all the suspendees and on some 90 percent of the approximately 50 believed to have been implicated. The report recommends that an official and even more detailed survey of the situation be made. An excerpt from the summary follows:

> No evidence of espionage at SCEL, in recent years or at present, was shown during the Subcommittee investigation. Most persons publicly linked with the investigation had little or no connection with the Laboratories, and only one of the 40-odd SCEL employees implicated by the Army was called before the Subcommittee in open hearings. None of these employees has refused to testify, on the grounds of possible self-incrimination or any other grounds: all have cooperated fully during the investigations, and have denied under oath the charges against them, or the conclusions inferred. The sensational headlines arising from the Subcommittee investigation have lowered morale.

The report states that the average employee involved is a 37-year-old Civil Service worker earning $7400 a year and supervising 14 persons. He has had 11 years service in the laboratories—more than two-thirds of his professional life. Twenty-nine of the employees were concerned with electronics—14 of these in radar work. At least 12 were among the 200 Monmouth laboratory civilians in Civil Service Grade GS-13 or higher.

The report urges the Presidential appointment of a scientific and administrative committee able to make a more complete study. It proposes that such a panel might explore any effects on research, the possibility of racial and religious prejudice, the background of the Army security personnel and the entire security program. Other FAS Committee suggestions on security procedures and principles follow: (*a*) the revocation of clearance would be preferred to suspension, provided that regular security hearing procedures, not now available to declassified employees, would apply; (*b*) time intervals should be shortened before final decisions; (*c*) any security board decision should be binding for at least two or three years unless "new clearly derogatory material" developed; (*d*) an adequate appeal mechanism should be provided.

A small, inexpensive, and **portable x-ray** unit that has potential uses in medicine and industry has been developed at Argonne National Laboratory of the Atomic Energy Commission and is being tested as a diagnostic tool. The active component of the instrument is a tiny particle of thulium which has been made radioactive. The thulium is mounted in a source holder and shield equipped with a shutter mechanism in order that x-ray photographs may be made. The shutter is operated by a standard photographic cable release.

The development, which was directed by Samuel Untermyer, may meet the long-time need for simple, cheap, and portable equipment. Although the entire unit weighs less than 10 lb, the radioactive thulium provides rays that are comparable in energy to a 100-kv x-ray machine. Further, the instrument does not require an electrical power supply. Exclusive of irradiation charges, the total cost of the first model was **$40.**

That the **general theory of relativity** is valid for purely gravitational phenomena, but breaks down as soon as electromagnetic effects come into play, was asserted in a paper presented during the meeting of the American Physical Society in Washington, Apr. 29–May 1, under the authorship of E. Findlay-Freundlich, University Observatory, St. Andrews, Scotland. Heretofore it has been rather generally accepted that the theory meets experiments not only for the movement of the perihelion of the planet Mercury—a purely gravitational effect—but also for the deflection of light by the sun and the so-called gravitational red-shifts.

For the light deflection, Findlay-Freundlich's investigation indicates that the observed value is about 30 percent higher than the one predicted theoretically. As for the red-shifts, he has shown that those

observed in the spectra of B and O stars are too large to be gravitational red-shifts such as are predicted by the theory of relativity. Suggesting that the shifts may be due to a loss of energy in the radiation field of the stars, he has proposed an equation that accounts for those observed in the spectra of the sun and of O, B, A, supergiant M, and W-R stars. In addition to the shift predicted by the equation, the data for the sun and for Sirius B (a white dwarf) seem to suggest the existence of a purely gravitational red-shift that is, however, only about one-fifth of the value predicted by the theory of relativity. The experimental data bearing on the Freundlich effect are discussed in detail in the March issue of the *Philosophical Magazine*.

The **New York Electrical Society**, a pioneer in presenting popular lectures on scientific subjects to New York audiences for 72 yr, has dissolved and turned over its remaining assets to The Cooper Union. R. Karl Honaman, president of the Society, recently presented a check to Edwin S. Burdell, president of The Cooper Union, for the sum of $4040.43 at simple ceremonies marking the final act of the organization formed in 1881. The money will be used to follow the aims of the old organization through lectures at the Cooper Union Forum.

John T. Edsall, chairman of the Committee on International Relations of the American Academy of Arts and Sciences, has submitted a letter to the House Judiciary Committee which includes the following statements relating to the **visa problems** of foreign visitors to the United States [*Science* **119**, 3A (Mar. 19); and **119**, 498 (Apr. 16)]:

> The Council of the American Academy of Arts and Sciences on recommendation of its Committee on International Relations voted unanimously at its April meeting to give strong support to the Gubser Resolutions, H.J. Res. 307 and 308, especially the latter. The aim of both these resolutions is to encourage the visits of foreign experts in science and other fields of scholarship, by simplifying and accelerating the process of obtaining a temporary visa. . . .
>
> There is much evidence that the scientific and cultural life of this country is suffering from the lack of adequate contacts with our foreign colleagues because of difficulties which so many of them experience when they wish to visit this country. The most obvious evidence of this is found in the increasing tendency to hold international scientific meetings outside of the United States, because of the difficulty of holding them here. . . .
>
> The present unsatisfactory state of affairs is damaging to the United States in at least two ways. First, it arouses antagonism to this country, and sharp criticism of our political methods, among a great number of the intellectual leaders in the countries of western Europe and in other countries which are generally to be regarded as our friends. This is a serious matter, with great political significance. These intellectual leaders have profound influence in their countries; their words are listened to with attention by their governments and by the people at large. If our policies antagonize them and make them suspicious, we are doing direct harm to American foreign policy as well as to international cultural relations. In the second place, by interfering so gravely with the visits of foreign scholars to this country, we are actually weakening the state of national defense. A strong and healthy development of science is an indispensable element of national strength in the world of today. By obstructing the free interchange of ideas between the leading scientists of foreign countries and of our own, we are obstructing our own scientific progress and actually endangering our national security. . . .

The National Geographic Society, the National Museum of Canada, and the Smithsonian Institution are sponsoring an **expedition to Southampton Island** in Hudson Bay this summer. It will be headed by Henry B. Collins, Jr., of the Smithsonian, who has carried on many archeological studies in the Arctic. The island offers a spectacular concentration of ruins of different types, including 75 old stone and whalebone houses, believed to be unique in Canada. The expedition plans to study three cultures, the Dorset, Thule, and Sadlermiut.

Scientists in the News

Harvard University has announced the appointment, effective July 1, of two men who have served on the University of Chicago faculty—**Konrad Bloch** as Higgins professor of biochemistry, and **Frank H. Westheimer** as professor of chemistry.

Percy Williams Bridgman, Higgins University Professor of Physics at Harvard University, will retire at the end of the academic year. As student and teacher, Prof. Bridgman has been at Harvard for 54 yr. He is known for his pioneering research in high pressure phenomena and electrical conduction in metals, and for his contributions to thermodynamics and the methodology of science. He has written 10 books and innumerable papers, and his work has brought him many honors, including the 1946 Nobel Prize in physics.

Prof. Bridgman entered Harvard College in 1900, received the A.B. degree in 1904, the A.M. in 1905, and the Ph.D. in 1908; he has taught at Harvard since then. In 1926 he was appointed to the Hollis Professorship of Mathematics and Natural Philosophy, the second oldest endowed professorship in the university, dating back to 1727. In 1951 he was named a University Professor, in which capacity he could teach and carry out research in any department or school of the university.

In addition to the Nobel Prize, Prof. Bridgman has received the Rumford Medal of the American Academy of Arts and Sciences, the Cresson Medal of the Franklin Institute, the Roozeboom Medal of the Royal Academy of Sciences of Amsterdam, the Comstock Prize of the National Academy of Arts and Sciences, and the Research Corporation Award. Harvard, in 1939, awarded him an honorary degree of Doctor of Science with the citation: "An experimentalist who transforms stubborn matter by high pressure; a logi-

cian who alters physical theory by acute analysis."

For 50 yr Prof. Bridgman has been investigating the changes that occur in various materials when they are subjected to high pressure. By the use of new techniques, he has increased available laboratory pressures almost 100 times. His career in the realm of high pressures represents one of the few examples in physics of a "one-man" development of an important field of research. For most purposes, anyone interested in the properties of matter under pressures of more than 10^5 lb/in.^{2} can confine his attention to Prof. Bridgman's papers. Further, the number of original measurements of physical properties that he has published has few parallels. These include measurements of compressibility of solids, liquids and gases; viscosity of liquids under pressure; electrical and thermal conductivities under pressure; thermoelectric effects; and the determination of melting curves, plasticity, and fracture under pressure. All this was done in a pressure range for which he had to design the equipment and develop the measuring processes.

Prof. Bridgman has developed a method of growing large, single crystals that the optical industry now uses to obtain transparent material with optical properties different from those available with glass. One of the by-products of his research has been a new method of strengthening the barrels of military cannon. Developed to increase the resistance of experimental pressure chambers, this method is now commonly used in the manufacture of large gun barrels.

During World War II Prof. Bridgman made various investigations for the Government on the effect of pressure in increasing the ductility and resistance to fracture of steel. Only last year he reported experiments in which high pressures were used to produce new alloys. To produce a new bismuth-tin alloy, a pressure of 4.5×10^5 lb/in.^{2} was used.

John C. Briggs of the Natural History Museum of Stanford University, who is preparing a world monograph of the fishes of the order of Xenopter, has recently returned from a round-the-world trip made for the purpose of studying clingfish material. Among the ichthyological centers visited were those of Sydney, Calcutta, Paris, and London.

Leonard Carmichael, secretary of the Smithsonian Institution, was appointed by Secretary of State Dulles to serve as chairman of the American delegation to an intergovernmental "Conference on the protection of cultural property in the event of armed conflict." The meetings of the conference began at The Hague, Netherlands, on Apr. 21. The delegates are to prepare an international agreement for the protection of cultural property, such as buildings or even whole urban areas which are declared to be cultural or historic monuments, as well as movable works of art or scientific collections.

Oliver W. Cass, assistant laboratory manager of the Du Pont Company's electrochemicals department at Niagara Falls, N.Y., whose pioneering research has contributed to the development of nylon, DDT, and synthetic rubber, has won the 1954 Jacob F. Schoellkopf Medal of the American Chemical Society's Westtern New York Section.

Russell L. Cecil, eminent physician and author of *Textbook of Medicine,* has been named national medical director of the Arthritis and Rheumatism Foundation, New York, succeeding **Gideon K. de Forest,** who has filled the post for 4 yr. Dr. de Forest will continue as associate medical director, which will allow him to devote more time to the Yale University School of Medicine where he is chief of the arthritis clinic and associate professor of clinical medicine. Dr. Cecil will divide his time equally between private practice and the Foundation.

In September, **Randolf Wallace Chapman,** formerly of Johns Hopkins University, will succeed **Edward L. Troxell** as chairman of the Geology Department at Trinity College.

K. K. Chen, director of pharmacologic research at Eli Lilly and Company, recently received the Rho Chi Citation at the Philadelphia College of Pharmacy and Science and delivered the second annual Julius W. Sturmer Memorial Lecture on the subject "From digitalis to corchoroside." He was honored for his achievements in pharmacology over the past 30 yr, among them being the introduction of ephedrine and the development of an effective antidote for cyanide poisoning.

On May 20, the 1954 Honor Scroll of the New York Chapter of the American Institute of Chemists will be presented to **Hans Thacher Clarke,** professor of biochemistry and head of the department at the College of Physicians and Surgeons, Columbia University.

Karl T. Compton, a member of the Atomic Energy Commission panel and former president of the Massachusetts Institute of Technology, has received Dickinson College's annual Priestley Memorial Award of $1000 and a ceramic medallion of Joseph Priestley.

The Blakiston Company, Inc., has announced the development of the Blakiston Publications in the Plant Sciences and the appointment of **Hiden T. Cox** as consulting editor. Dr. Cox, associate professor of botany at the Virginia Polytechnic Institute, is at present on leave to serve as deputy executive director of the American Institute of Biological Sciences in Washington.

William N. Fenton, anthropologist and executive secretary of the Division of Anthropology and Psychology of the National Research Council, has been appointed director of the New York State Museum and State Science Service, effective July 1.

Harvard University has announced the appointments of **Sydney Goldstein** and **Eugene G. Fubini** as

the first two Gordon McKay visiting lecturers on applied science. Dr. Fubini will be in residence for the first half of the academic year 1954–55, and Dr. Goldstein for the entire year. Dr. Goldstein, who has an international reputation for research in fluid mechanics, is vice president of the College of Technology in Haifa. Dr. Fubini is supervising engineer of the Special Devices Section of the Airborne Instruments Laboratory, Mineola, N.Y.

Two Philadelphia physicians have been appointed, effective July 1, to positions as chairmen of departments in the Graduate School of Medicine of the University of Pennsylvania. **Herbert R. Hawthorne,** professor of surgery and chief of the Surgical Service at Graduate Hospital and at the American Hospital for Diseases of the Stomach, will succeed **William Bates** as chairman of the Department of Surgery. **Joseph P. Atkins,** clinical professor of bronchology, esophagology, and laryngeal surgery and a member of the staff of five hospitals in the Philadelphia and Camden area, will succeed **Gabriel Tucker** as chairman of the Department of Bronchology, Esophagology and Laryngeal Surgery. Dr. Bates and Dr. Tucker plan to remain active in teaching programs and in clinical activities.

Mervin J. Kelly, president of Bell Telephone Laboratories, has received the Industrial Research Institute's 1954 Medal. The medal is presented annually "to recognize and honor outstanding accomplishment in leadership in or management of industrial research which contributes broadly to the development of industry or the public welfare."

Leo Korchin, Georgetown University instructor in oral surgery, has been named winner of the 1954 Novice Award of the International Association for Dental Research for his report, "An investigation to determine the effect of starch sponge implanted in bone." The award is given for the best first paper submitted on research.

N. B. Kurnick, formerly of Tulane University Medical School, has been appointed associate clinical professor of medicine at the University of California at Los Angeles. He is also on the staff of the Veterans Administration Hospital in Long Beach. Dr. Kurnick will continue clinical work and investigations on the biochemistry of nucleic acids and nucleotic enzymes.

Morris M. Leighton, for 31 yr chief of the Illinois State Geological Survey, will retire on July 1 to give his full time to research on the Pleistocene geology of Illinois. He will be succeeded by **John C. Frye,** state geologist and professor of geology at the University of Kansas. During Dr. Leighton's tenure the offices and laboratories of the State Geological Survey, some 40 in number, have been housed in the new $2,500,000 Natural Resources Building on the campus of the University of Illinois.

Horace W. Magoun, professor of anatomy in the School of Medicine, University of California at Los Angeles, recently delivered the James Arthur Lecture on the evolution of the human brain at The American Museum of Natural History. His subject was "Regulatory functions of the brain stem."

Augustine R. Marusi, formerly vice president in charge of Eastern operations of the Borden Company's Chemical Division, has succeeded **William F. Leicester** as president of the division. Mr. Marusi will have charge of plants in 13 cities, the company's Brazilian operations, and the General Research Laboratory in Philadelphia. Mr. Leicester continues as chairman of the division's directing board and as a vice president of the company.

Kirtley F. Mather, professor of geology at Harvard University and former president of the AAAS, will retire at the end of the academic year. Prof. Mather, who is also curator of the Geological Museum at Harvard, has been on the faculty since 1924. He has written extensively on the world-wide utilization of natural resources and is an authority on petroleum geology. He is known for his geologic studies of the Rocky Mountains in Colorado, and the Andes in Bolivia. For 8 yr director of the Harvard Summer School, he is a past president of both the Boston Center for Adult Education and the Adult Education Council of Boston. From 1946 to 1948 he was President of the National Council of YMCA's of the United States.

He received his B.S. degree from Denison University in 1909 and the Ph.D. from the University of Chicago in 1915. He taught at the University of Arkansas, Queens University, Canada, and Denison University before joining Harvard faculty as an associate professor in 1924. He was promoted to professor in 1927. He has been a member of the Faculty Committee on General Education since 1946 and for the last 6 yr has taught a general education course on the "Impact of science on modern life."

Among books written by Professor Mather are *Old Mother Earth, Science in Search of God, Sons of the Earth, Source Book in Geology* (with S. C. Mason), *Adult Education, A Dynamic for Democracy* (with Dorothy Hewitt), *Enough and To Spare,* and *Crusade for Life.*

On May 6 **Thomas Parran,** dean of the Graduate School of Public Health at the University of Pittsburgh, delivered the Cutter Lecture on Preventive Medicine at the Harvard School of Public Health on the subject, "Contributions of public health to the control of chronic disease."

Harry E. Warmke has been appointed officer in charge of the Federal Experiment Station, Mayaguez, Puerto Rico. He has replaced **Kenneth A. Bartlett,** who resigned to accept the presidency of the Virgin Islands Corporation in St. Croix. **Thomas Theis** has been named assistant officer in charge. The Federal Experiment Station was founded in 1901 and serves as a tropical research outpost of the U.S. Department of Agriculture.

Education

Berea College, Berea, Ky., has recently dedicated its completed Science Building, the first portion of which was erected in 1928 when the college enrollment was 460. Now the enrollment has risen to 1100, necessitating the new $485,000 addition and equipment. The addition consists of two wings, increasing the facilities of the classrooms, laboratories, and offices of all the science departments—physics, geology, biology, and chemistry.

Case Institute of Technology has announced that reservations are being accepted for a **Short Course on Operations Research** to be held June 7–18. The course is sponsored by the Operations Research Group of the Department of Engineering Administration. Research experience and sufficient knowledge of mathematics to understand mathematical symbolism is required of registrants. Registration is limited and candidates will be accepted in the order in which their applications are received.

Wayne University has announced that it is the first American university to establish a **department of industrial medicine;** such training will be made an integral part of the education of every one of the university's medical students. Arthur J. Vorwald, internationally known pathologist and former director of the Edward L. Trudeau Foundations in Saranac Lake, N.Y., is to head the new department, which will begin active operation in the fall.

The Department of Chemical and Metallurgical Engineering of the University of Michigan College of Engineering will offer an intensive course, **"The design of distillation and absorption equipment,"** from July 12 to 23. The course is intended for practicing engineers and will provide a working knowledge of fundamental principles. It will cover such subjects as tray layout and hydraulics, azeotropic and extractive distillation, vapor-liquid equilibrium, and tray calculations. Roger H. Newton of the Badger Manufacturing Company will join Robert R. White and Brymer Williams of the university faculty in presenting the course. Registration forms may be obtained from the Department of Chemical and Metallurgical Engineering, 2028 East Engineering Bldg., Ann Arbor.

Purdue University will hold its 7th annual **Industrial Microbiology Institute,** June 6–12. The institute was designed to bring to enrollees a familiarity with the important industrial molds and the latest information concerning culture and control. The course should be of interest to industries using fungi in their productive capacities, to students needing refresher information, and to scientists generally who want to know enough about the subject of mycology to understand and to evaluate the increasing volume of literature dealing with fungi.

A one-week police science workshop for law enforcement officers will be given June 21–26 at Western Reserve University. The **Institute on Science in Law Enforcement** will be sponsored by the new Law-Medicine Center established this winter in cooperation with the Cuyahoga County (Cleveland) Coroner's Office. A faculty of 32 experts representing all phases of police science will lead the lectures, demonstrations, and discussions.

Donald L. Buchanan, director of the Radioisotope Unit of the West Haven Veterans Administration Hospital, West Haven, Conn., has been appointed lecturer in biochemistry at the Yale University School of Medicine, where he has introduced a new course, **"Isotopes in biochemical research,"** during the spring semester.

A course in **medical testimony in malpractice and negligence cases for practitioners of medicine, law, and allied professions** will be given for the first time by New York University-Bellevue Medical Center's Post-Graduate Medical School in cooperation with New York University School of Law. Under the direction of Maxwell H. Poppel, professor and chairman of the Department of Radiology, NYU College of Medicine, sessions will be held every Thursday evening from Oct. 7, 1954, through Mar. 10, 1955. Emphasis will be placed on the radiologic as well as the legal and other aspects and pitfalls of medical tesimony in malpractice and negligence cases. Mock trials, question-and-answer periods, and other practical features simulating actual court conditions will be presented. Members of the Department of Radiology, judicial experts, and qualified officials will participate.

As a major step toward consolidating its rapid growth, the **Polytechnic Institute of Brooklyn** has contracted to purchase for $2,000,000 the eight-story, block-long plant of the American Safety Razor Corporation in downtown Brooklyn. Acquisition of the building, located on Jay St. between Johnson St. and Myrtle Ave., will enable Polytechnic to bring its widely dispersed facilities together in one suitable modern structure

It cannot yet be determined when the Institute will move into the new quarters; the date depends upon a number of factors, particularly the success of efforts to raise the required funds from alumni, friends, and corporations. A campaign for $3,500,000 will be launched under the chairmanship of Carl Whitmore, former president of the New York Telephone Company and a member of the Institute's board of directors. The additional $1,500,000 will be required to adapt the plant for education purposes and to purchase adjacent properties along Jay St. The latter will be the site for a proposed new library and student lounge.

According to Lewis M. Terman, emeritus professor of psychology, Stanford University, a study of 18,000 scientists listed in *American Men of Science,* who got their bachelor's degree between 1924 and 1934, showed that it is not the great university but the small

liberal arts college that has the best **record of turning out scientists.** Reed College in Portland, Ore., topped the list with 132 per thousand graduates. The only technological school in the top 12 was the California Institute of Technology, which was second with an index of 70. Kalamazoo College was third with 66, Earlham (Richmond, Ind.) fourth with 57, and Oberlin fifth with 56. Only a half dozen of the great universities were in the top fifty.

Wayne University dedicated its new Medical Science Building on May 11. The new structure provides physical facilities permitting an enrollment increase from 260 to 400 students. Built with a $3,550,000 state grant and almost $900,000 from the Detroit Board of Education, Wayne's governing body, the building will supply long-needed lecture halls and laboratory facilities for the school. The eight-story, gray brick structure was partially occupied and in use earlier this year. Another major wing of the building will be constructed at a later date.

Grants and Fellowships

A fellowship grant of $12,000 from the **Colgate-Palmolive-Peet Company** of Jersey City to **Rutgers University** has been announced. The money will be used to support three graduate fellowships in chemistry, each providing $2000/yr for a 2-yr period.

Five scientists have been named by Bell Telephone Laboratories to receive the **Frank B. Jewett postdoctoral fellowships** for 1954–55: Stanley Deser of the Institute for Advanced Study; Thomas Fulton of Harvard University; Stanley L. Miller of the University of Chicago; Roger G. Newton of the Institute for Advanced Study; and Richard S. Pierce of Harvard University. Three are physicists, one a mathematician, and the fifth a chemist. Dr. Newton and Dr. Pierce were among the award winners last year.

Grants for the fellowships were established in 1944 by the American Telephone and Telegraph Company, upon the retirement of the late Dr. Jewett as vice president in charge of development and research. The awards this year provide $4000 to each fellow and an additional $1500 to the academic institution selected for his research.

The **Link Foundation,** which was established last December to make grants that will advance scientific, technological, general educational, and charitable projects—and more specifically, advance training and education in aeronautics—announced the following four grants:

Norwich University, Northfield, Vt., for scholarships to teachers enrolled in the school's 1954 Summer Aviation Education Workshop.

The University of Illinois Foundation, to provide flight experience for a selected group of high school teachers, and to prepare a suggested curriculum guide for training aviation personnel.

The University of Nebraska, to provide scholarships to elementary school teachers attending the university's Teachers' Workshop and for the preparation of educational materials.

The National Fund for Medical Education, Inc., for research in aviation medicine.

The headquarters of the Link Foundation will be established in Washington in association with the National Air Museum of the Smithsonian Institution.

Ohio State University has announced the following 12 research contracts, totaling $348,926:

Radio Corporation of America, Camden, N.J. Superturnstile antenna, $16,345.

Godfrey L. Cabot, Inc., Boston. Application of Wallastonite in ceramic field, $15,634.

Air Research and Development Command, Lackland Air Force Base, San Antonio, Tex. Development of improved methods for evaluating the effectiveness of RB-47 crews, $70,000.

Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, Ohio. Microwave oscillator tubes, $35,000; heat transfer within rotating electrical equipment. $29,991; fuming nitric acid containers and kinetics of the decomposition of fuming nitric acids, $25,000.

Department of the Navy, Office of Naval Research, Washington, D.C. Literature search, nitro compounds, $5000.

Rome Air Development Center, Rome, N.Y. Effects of direction of polarization, $17,500; high powered infra-red source, $28,186.

Laboratory Procurement Office, Signal Corps Supply Agency, Fort Monmouth, N.J. Transmitting and receiving antenna vehicular, $24,972; antenna phenomena research, $51,298.

Department of the Army, Engineer Center, Fort Belvoir, Va. Basic factors limiting the accuracy of mapping, $30,000.

The **University of Wisconsin** has received $33,091.46 for cancer research from the estate of the late Mabel C. Pratt of Beloit.

The **Yale University School of Medicine** will receive from the Victoria Fund a gift of $50,000 annually over a period of 5 yr in support of teaching, research, and patient care in the field of cardiovascular disease. William W. L. Glenn, associate professor of surgery in charge of the Section of Cardiovascular Surgery and Herbert S. Harned, Jr., assistant professor of Pediatrics, have been designated to fill the faculty posts supported by the gift and will work closely with A. V. N. Goodyer, R. Whittemore, and others in developing the study program. The Victoria Fund was founded by Hendon Chubb, Yale 1895, who has made several other substantial gifts to the university.

Meetings and Elections

The 8th annual meeting of the **American Electroencephalographic Society** will take place at the Hotel Claridge, Atlantic City, N.J., June 11–13, immediately preceding the annual meeting of the American Neurological Association. Both scientific and business sessions will be held on June 11, and that evening there will be a special session on the medico-legal aspects of clinical electroencephalography, with A. Earl Walker as moderator. The annual banquet is scheduled for June 12.

A symposium on "The Rhinencephalon," under the chairmanship of Robert Schwab, will be held on June 13. Committee and council meetings are scheduled for the 10th and the morning of the 11th.

AAAS members are cordially invited to attend the **Fifth Alaska Science Conference,** Sept. 7–10, sponsored by the Alaska Division of the AAAS. These annual meetings are devoted to problems applicable to Arctic and sub-Arctic scientific endeavor. To contribute a paper, immediately send the chairman of your Section a tentative title and a brief note on the subject matter. Subsections and subsection chairmen will be assigned on the basis of the interest indicated.

The section chairmen are: agriculture and forestry, Curtis Dearborn, Agricultural Experiment Station, Palmer, Alaska; engineering, William B. Page, Arctic Health Research Center, Box 960, Anchorage; biological sciences, Brina Kessel, University of Alaska, College, Alaska; public health and medicine, Edward Blomquist, Arctic Health Research Center, Box 960, Anchorage; physical sciences, Robert Knecht, National Bureau of Standards, Box 1861, Anchorage; social sciences, Willeta Matsen, Arctic Health Research Center, Box 960, Anchorage.

The **16th Midwest Regional Meeting of the American Chemical Society** will be held in Omaha, Nov. 4–6. The general chairman is Willard M. Hoehn of G. D. Searle and Company, Chicago. Sessions have been tentatively scheduled for agricultural and food, analytical, biological, industrial and engineering, medicinal, organic, and physical and inorganic chemistry; and also for chemical marketing and economics, and chemical education. Several other divisions may be added if there are sufficient papers.

This meeting is being held in conjunction with Omaha's Centennial Celebration, and the Omaha Section of the ACS will supervise a month-long atomic energy exhibit during November at the Joslyn Memorial Art Museum.

The Astronomy Department of the University of California in Berkeley will arrange an **astronomy conference** between Aug. 12 and Sept. 11 for college and university instructors and other qualified persons. This conference will be held under the auspices of the National Science Foundation and the Extension Division of the University of California. The purpose is to acquaint instructors with modern developments in the fields of astronomy and astrophysics. Membership will be limited to about twenty. The National Science Foundation will pay travel and subsistence expenses. The principal lecturer will be Bart J. Bok of Harvard University, who will discuss the structure of our galaxy. There also will be lectures on problems of the sun and of stellar physics. The participants will be encouraged to take an active part in all discussions. Applications should be sent to the Department of Astronomy, Univ. of California, Berkeley, *before June 15.*

Seven hundred electrical technical experts from 29 countries and the U.S. will attend the 50th anniversary meeting of the **International Electrochemical Commission** (IEC) to be held at the University of Pennsylvania, Sept. 1–16. The IEC was founded in St. Louis in 1904 with Lord Kelvin (Sir William Thomson) of England as first president; however, the only meeting ever held in this country took place in New York in 1926. Harold S. Osborne, formerly chief engineer, American Telephone and Telegraph Co., is IEC president; Richard C. Sogge, General Electric Co., is president of the U.S. National Committee of IEC; and P. H. Chase, Philadelphia Electric Co., is chairman of the General Committee in charge of arrangements. The American Standards Association is the group through which U.S. participation in the event is being carried out. The meetings are being made possible by funds contributed by American industry, particularly in the electrical and allied fields. Chairman of the finance committee is Walker Cisler, president of the Detroit Edison Company.

The delegates will hold 226 morning and afternoon sessions in which they will work on international standards in the fields of electric light, power, and communications. About 300 of those attending will come from foreign countries. The work of the IEC is carried on by 37 technical committees, 26 of which will hold sessions in Philadelphia. The work covers the entire field of the electrical art and includes such specific committee subjects as dimensions of motors, standard voltages, current ratings and frequencies, overhead lines, safety, insulating materials, and electronic tubes. The United States heads five of the committees: steam and hydraulic turbines, internal combustion engines, letter symbols and signs, and lightning arrestors.

The Philadelphia meetings will include an all-day Jubilee celebration on Sept. 9 commemorating 50 yr of IEC. Speakers will be Lord Waverly, chairman of the Port of London Authority and past president of the British Standards Institution; Haakan Sterky, head of the Swedish communication system; Pierre P. Ailleret, director of Electricité de France; and Lee A. DuBridge, president, California Institute of Technology. A banquet in the Bellevue Stratford Hotel will be held that evening.

The **National Academy of Sciences** at its 91st Annual Meeting in Washington, D.C., elected a president, a foreign secretary, 2 members of the Council, 30 members, and 3 foreign associates.

Detlev W. Bronk, president of the Rockefeller Institute for Medical Research, was reelected president for a 4-yr term, beginning July 1. Dr. Bronk has served as president of the Academy since July 1, 1950.

John Gamble Kirkwood, director, Sterling Chemistry Laboratory at Yale University, was elected foreign secretary for a 4-yr term, beginning July 1. Dr. Kirkwood succeeds Roger Adams of the University of Illinois.

Other officers of the Academy, all of whom are members of the Council, are: vice pres., George W. Corner; home sec., Alexander Wetmore; treas., William J. Robbins.

Farrington Daniels of the Department of Chemistry at the University of Wisconsin, and Merle A. Tuve of the Department of Terrestrial Magnetism at the

Carnegie Institution of Washington, were elected to membership on the Council to serve until June 30, 1957. Additional members of the Council are Hugh L. Dryden, Robert F. Loeb, William W. Rubey, Wendell M. Stanley, and Edwin B. Wilson.

New members

Edgar Anderson, professor of botany, Washington University.

H. W. Babcock, astronomer, Mount Wilson Observatory.

Edgar Collins Bain, vice president in charge of research and technology, U.S. Steel Corporation, Pittsburgh.

Arnold Kent Balls, professor of enzyme chemistry, Purdue University.

John Bardeen, professor of physics and electrical engineering, University of Illinois.

William Bloom, professor of anatomy, University of Chicago.

M. N. Bramlette, geologist, Scripps Institution of Oceanography.

Wallace R. Brode, associate director, National Bureau of Standards.

Melvin Calvin, professor of chemistry, University of California.

Britton Chance, director, Johnson Foundation, University of Pennsylvania.

Richard Phillips Feynman, professor of theoretical physics, California Institute of Technology.

Hermann O. L. Fischer, professor of biochemistry, University of California, Berkeley.

J. B. Fisk, director of research in the physical sciences, Bell Telephone Laboratories, Murray Hill, N.J.

J. P. Guilford, professor of psychology, University of Southern California.

Nathan Jacobson, professor of mathematics, Yale University.

George E. Kimball, professor of chemistry, Columbia University.

Willis E. Lamb, professor of physics, Stanford University.

Eugene Markley Landis, professor of physiology, Harvard Medical School.

Ernst Mayr, professor of zoology, Harvard University.

William F. Meggers, chief, Spectroscopy Section, National Bureau of Standards.

Alfred E. Mirsky, member, Rockefeller Institute for Medical Research.

Brian O'Brien, vice president, American Optical Company, Southbridge, Mass.

Wolfgang K. H. Panofsky, professor of physics, Stanford University.

Alexander Petrunkevitch, professor emeritus of zoology, Yale University.

Arnold R. Rich, professor of pathology, School of Medicine, Johns Hopkins University.

Julian H. Steward, professor of anthropology, University of Illinois.

Ernest H. Vestine, chairman, Section on Statistical and Analytical Geophysics, Department of Terrestrial Magnetism, Carnegie Institution of Washington.

F. H. Westheimer, professor of chemistry, University of Chicago.

Ralph H. Wetmore, professor of botany, Harvard University.

Albert E. Whitford, professor and director, Washburn Observatory, University of Wisconsin.

Foreign associates

Frank Macfarlane Burnet, director of the Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia.

Albert M. G. R. Portevin, consulting engineer, Paris, France.

Otto Renner, professor and head, Botanical Institute and Garden, Munich, Germany.

The fifth annual Interfaith Conference on the Coming Great Church, July 31–Aug. 7, will have as its theme **"Religion in the age of science."** The meeting will take place on Star Island, Isles of Shoals, which is 10 mi out of Portsmouth, N.H. The conference is under the auspices of an autonomous committee that is nondenominational. "It is the conviction of the program committee that the Coming Great Church will arise out of a new and universally valid synthesis of religious doctrine in which the universally acceptable approach to truth established in the sciences will be a crucial source of inspiration and insight." In preceding years the conference emphasized the points of view of particular religious groups; this year the scope will be broadened to explore, with the leadership of outstanding scientists, the problems of religion in the age of science. The participating scientists have been asked to present their thinking in three areas of concern to religion: the nature of truth and reality; the nature of the cosmos; and the nature of man. Discussion groups will seek to integrate scientific and religious points of view.

Some of the famous scientists of history and their impact on religion will be the theme of the daily chapel talks by the conference chaplain, Edwin P. Booth. The schedule calls for two or three formal lectures or panel discussions per day, and also informal discussion and book-review sessions. There will be opportunity for all to ask questions of the scientists, philosophers, and theologians. The list of speakers includes: Karl W. Deutsch, professor of history at M.I.T.; Edwin P. Booth, professor of historical theology, Boston University; C. J. Ducasse, professor of philosophy, Brown University; Philipp Frank, lecturer on physics and mathematics at Harvard; Edwin C. Kemble, professor of physics at Harvard; Gerlad Holton, physicist at Harvard; Henry Margenau, professor of physics at Yale; Harlow Shapley, lecturer on cosmography at Harvard, and for over 30 years director of the Harvard Observatory; George Wald, professor of biology at Harvard, specialist in the biochemistry of living processes; Roy G. Hoskins, formerly

director of research, Memorial Foundation for Neuro-Endocrine Research, Harvard Medical School, and the Worcester State Hospital; H. B. Phillips, formerly head of the department of mathematics, M.I.T.; B. F. Skinner, professor of psychology at Harvard.

Because the number of conferees is limited to a total of 180, interested persons are urged to register immediately. For details, write to the Star Island Corporation, 355 Boylston St., Boston 16.

A combined meeting of the **Second World Congress of Cardiology** and the **27th Scientific Sessions of the American Heart Association** will take place in Washington, D.C., Sept. 12–17. This will be the first international medical gathering of its kind to be held in the United States. (The first World Congress of Cardiology was held in Paris in September 1950). Papers will be presented in English, French, and Spanish, and will constitute one of the most comprehensive programs relating to heart and blood vessel diseases ever presented.

Chairman of the organizational committee is Paul D. White, executive director of the National Advisory Heart Council and consultant in medicine at Massachusetts General Hospital, Boston. For further information address inquiries to L. W. Gorham, Sec.-Gen., Second World Congress of Cardiology, American Heart Association, 44 East 23 St., New York 10.

The **South Carolina Academy of Science** held its 27th annual meeting in joint session with the Western Carolinas Section of the American Chemical Society and with the South Carolina Section of the Southern Society for Philosophy and Psychology on Apr. 10, at Wofford College, Spartanburg. President J. E. Copenhaver of Sunoco Products Company presided. Seven papers were presented at the General Morning Meeting; and 13 papers were given at the Biology Section, 8 at the Chemical Section, and 4 at the Philosophy and Psychology Section. The Academy sponsors a Science Talent Contest for high school students for which awards were given.

The following officers were elected for 1954: pres., Elsie Taber, Medical College of S.C.; v. pres., G. M. Armstrong, Clemson; sec.-treas., Harry W. Freeman, Univ. of S.C.

A **symposium on multivariate statistical analysis** was held at the University of North Carolina, Apr. 21–24, the first sessions at Chapel Hill and the final one at Raleigh. Some 35 statisticians, psychologists, and economists attended. The formally announced participants were Maurice G. Kendall, C. Radhakrishna Rao, Harold Hotelling, S. N. Roy, R. C. Bose, R. L. Anderson, Aleyamma George, Seymour Geisser, and Earl Diamond, but a number of others also contributed. Each lecture was followed by extensive discussion. Much unpublished material and many new ideas were brought to light in fields such as factor analysis, multicollinearity, discriminant functions and related classification problems, basic criteria for multiple-parameter estimation, canonical correlation, serial correlation, T statistics, and multivariate confidence bounds.

The **1954 Teaching Institute of the Association of American Medical Colleges** will focus on pathology, microbiology, immunology, and genetics. The first institute, held at Atlantic City in October 1953, covered the areas of physiology, biochemistry, and pharmacology. Douglas H. Sprunt, professor of pathology at the University of Tennessee is chairman and Robert A. Moore, vice-chancellor of the University of Pittsburgh is cochairman of this year's institute, which will take place Oct. 10–15. The Coordinators of Cancer Teaching will participate and then will hold their own meeting Oct. 15–16. The annual meeting of the Association will follow on Oct. 17–20. All meetings will be at the French Lick Springs Hotel, French Lick, Ind.

The objectives of the teaching institutes are to provide an opportunity for medical educators to discuss important teaching problems, to review current experiments in medical education, to exchange philosophies and experiences, and to make any suggestions that might improve the effectiveness of medical teaching and the educational opportunities offered to medical students.

Attendance will be by invitation only and will be limited to 120 participants, which will include one teacher from each of the 95 medical schools in the United States, Canada, Puerto Rico, and the Philippines. The total group will represent a balance among the several disciplines and areas to be explored. In advance of the institute, medical school participants will collect background information and opinions from their colleagues for the use of committees in planning topics for discussion. The institute will be a working conference functioning through informal discussion groups of 10 to 15 persons.

Miscellaneous

William R. Amberson of the University of Maryland School of Medicine has announced that on Apr. 20 contributions to the **Edwin Grant Conklin Memorial Fund** had reached $3254.50. The Committee is now circulating a final appeal for funds to support the program at the Marine Biological Laboratory, Woods Hole, in honor of Dr. Conklin, who was a past president of the AAAS. Checks may be sent to the treasurer, Mr. Homer P. Smith, at MBL.

The United States Civil Service Commission has announced a **technologist examination** for filling positions paying $4205 to $10,800 a year, in the Washington, D.C., area. The positions cover a wide variety of products and processes. To qualify, applicants must have had appropriate education or experience. No written test is required. Information and application forms may be secured at many post offices or from the U.S. Civil Service Commission, Washington 25, D.C.