

that continued until the spring of 1935 when it became the New York University College of Medicine. The college established its own clinic fifty-eight years ago and since that time has treated more than 1,000,000 patients.

This year the college has an enrolment of 499 students and a faculty of 514 men and women. The instructional staff includes 51 full-time teachers and 463 practicing physicians devoting part of their time to teaching at the college. The centennial senior class, which will be graduated this June, consists of 123 young men and women, 92 of whom will become internes in the hospitals of the city.

During the past century 10,900 individuals have been graduated. Dean McEwen pointed out that three out of four students are natives of New York and that one out of every seven doctors in the city is a graduate of the college of medicine.

Among the 10,900 physicians graduated by the college during the past century were Walter Reed, William Crawford Gorgas and Hermann M. Biggs. Such leaders in American medicine as Valentine Mott, John W. Draper, Lewis A. Sayre, Austin Flint, William H. Welch, William Hallock Park and Charles Norris have at different times been members of the faculty.

PHYSICISTS AND NATIONAL DEFENSE

In his report to the annual meeting of the Governing Board of the American Institute of Physics, held on March 15, Dr. Henry A. Barton, director of the institute, estimated that 1,400 physicists, or one out of every four in the United States, are working on problems of national defense. This figure is based on surveys which are not yet completed and is probably a conservative estimate. According to the records of the institute there are from 4,000 to 6,000 physicists in the United States, depending on how a physicist is defined. 4,100 are members of at least one national professional society in physics.

A recent survey of more than 130 universities indicates that, of their total staff of 1,100 professors and instructors of physics, over 100 have recently been called away for official defense research projects. At least another 200 have been named consultants or assigned to full or part-time defense tasks at their home institutions. In addition, some 50 graduate students of physics have dropped their studies to accept defense assignments away from their institutions and another 35 at home.

Aside from these there are approximately 300 physicists in the technical services of the army, navy, air corps and other government departments, mostly full time, and of these at least 250 are at work on problems intimately concerned with national defense.

In industry it is estimated that 2,500 trained physicists are employed, many of them in the research laboratories of large corporations. On the basis of reports received, at least 800 of these have been assigned to new work programs in line with the needs of national defense. Indeed, if all work designed to improve or speed the production of defense materials and products be counted, the number is greater than 800.

Dr. Barton estimates that physicists are laying aside fundamental research and industrial development work and are turning to defense research at the rate of more than a hundred a month. The Civil Service Commission has recently modified regulations to encourage applications from physicists, not enough having been obtained to fill openings in the government service. Industries are applying to the institute for help in expanding their technical staffs, and the institute is unable to find men for them. Defense agencies are already handicapped and are finding it difficult to obtain seriously needed physicist personnel.

Not only is the "supply" of physicists being strained, but the "output" of new physicists is being curtailed. The men who have been called from universities for defense research are often those best fitted to train new research physicists. However, their remaining colleagues, actuated solely by patriotic motives, are generously assuming increased teaching loads, thus enabling the universities to keep up the standards of training offered to students.

Unfortunately, the careers of many students are about to be disrupted by the draft. Most of them are unmarried and of draft age. Unless something can be done to keep these much needed students in the graduate schools, the number of men receiving advanced training in physics will drop to less than half of the recent average of one hundred and thirty per year. What the country needs is to multiply this figure rather than to cut it down. Since a thorough training in physics requires three or four years of graduate study, it is nearly impossible to increase the annual increment of good new physicists. Every effort should be made at least to keep it up.

SCIENTIFIC NOTES AND NEWS

THE meeting on March 20 of the Washington Academy of Sciences was devoted to the presentation of its awards for scientific achievement for 1940 as follows: For the *engineering sciences*, to Harry Diamond, Na-

tional Bureau of Standards, "for his distinguished service in developing radio methods for aircraft navigation and for upper-air meteorological soundings." For the *physical sciences*, to Dr. F. G. Brickwedde,

National Bureau of Standards, "for his distinguished service in low-temperature researches on the different modifications of hydrogen and on the thermometry." The recipients were introduced by Dr. Lyman J. Briggs, director, and Dr. E. C. Crittenden, assistant director in research and testing, of the National Bureau of Standards.

AUSTIN H. CLARK, curator of the Division of Echinoderms of the U. S. National Museum, has been elected president of the Washington Academy of Sciences and vice-president representing the Entomological Society of Washington.

DR. M. L. FERNALD, Fisher professor of natural history and director of the Gray Herbarium of Harvard University, has been elected an honorary member of the Portland, Maine, Society of Natural History. He has also been elected an honorary member of the Pennsylvania Horticultural Society.

DR. F. W. KINARD, associate in physiology at the Medical College of the State of South Carolina, has been elected president, and Dr. J. E. Copenhaver, professor of chemistry at the University of South Carolina, has been elected vice-president, of the South Carolina Academy of Science. Dr. John R. Sampey, of Furman University, the retiring president, has been called to the army.

At the recent annual meeting of the Columbia University Chapter of Sigma Xi officers were elected as follows: *President*, Dr. Selig Hecht, professor of biophysics, to succeed Dr. Horatio B. Williams, Dalton professor of physiology; *Vice-president*, Dr. Victor K. LaMer, of the department of chemistry; *Secretary and Treasurer*, Dr. George E. Kimball, assistant professor of chemistry. In addition to eighty-one graduate students, five members of the faculty were elected to membership. These are: Dr. A. Raymond Dochez, John E. Borne professor of medical and surgical research in the College of Physicians and Surgeons; Dr. Benjamin Tenenbaum, clinical assistant in the School of Dental and Oral Surgery; Dr. Dickinson W. Richards, Jr., associate professor of clinical medicine; Dr. Joseph Zubin, instructor in psychiatry, and Thomas Bradford Drew, associate professor of chemical engineering.

At the annual meeting of the Parliamentary and Scientific Committee at the House of Commons on January 28, the Earl of Dudley was elected president for 1941 and Professor A. V. Hill was elected a vice-president. In an address to the committee Dr. Hill, according to the *British Medical Journal*, said that safeguards must be maintained to ensure the independence and integrity of science in the increased volume of state-aided research. He would like to see

introduced into each department or organization some Scientific Advisory Council similar to that of the Ministry of Supply.

THE Buchan Prize for 1941 of the Royal Meteorological Society, London, has been awarded to H. L. Wright for papers contributed to the *Quarterly Journal* of the society during 1935-39.

At the end of the current academic year, Dr. Roswell P. Angier, chairman of the department of psychology and associate dean of the Graduate School of Yale University, will retire after having been a member of the staff for thirty-five years, beginning with his appointment as instructor in psychology in 1906.

DR. WILLIAM E. LADD, clinical professor of surgery at the Harvard Medical School and chief of surgical services at the Children's Hospital, Boston, has been appointed the first William E. Ladd professor of surgery, a chair which has been permanently endowed by his friends and associates. This is the first Harvard professorship devoted exclusively to child surgery.

DR. HENRY S. SHARP, assistant professor of geology at Columbia University, has been appointed chairman of the department of geology of Barnard College.

PROFESSOR ELERY R. BECKER, of the department of zoology of Iowa State College, has succeeded Professor Joseph C. Gilman, of the department of botany, as secretary of the Iowa Academy of Science.

DR. A. B. WALKOM, secretary of the Linnean Society of New South Wales, has been appointed director of the Australian Museum.

DR. EDWARD H. KRAUS, dean of the College of Literature, Science and the Arts of the University of Michigan, is chairman of a committee to make arrangements for the centennial celebration of the college on October 10. A full day's program is planned to which representatives of leading educational institutions, members of the faculty and alumni are invited.

THE Committee on Scientific Research of the American Medical Association has made grants-in-aid as follows: Everett L. Evans, Medical College of Virginia, surgical shock; E. E. Cahn-Bronner, University of Illinois College of Medicine, bacterial metabolism; H. O. Burdick, Alfred University, Alfred, N. Y., effect of desoxycorticosterone on pregnancy; M. R. Todd, University of Oregon Medical School, physiologic effects of canine distemper vaccine; Roland K. Meyer, University of Wisconsin, antihormones.

AN Advisory Board on Blood and Blood Substitutes has been established by the Committee of Revision and the Board of Trustees of the Pharmacopoeia of the

United States to cooperate with and report through the Sub-Committee on Biological Assays. This board is made up of the following members: Dr. Perrin H. Long, of the Johns Hopkins University Medical School, member of the Committee of Revision, *chairman*; Dr. Edwin J. Cohn, Harvard Medical School; Dr. Sidney O. Levinson, Michael Reese Hospital, Chicago; Dr. C. P. Rhoads, Memorial Hospital, New York City, and Dr. Max M. Strumia, Bryn Mawr Hospital.

DR. TREAT B. JOHNSON, Sterling professor of chemistry at Yale University, has been granted leave of absence for the coming academic year. This is the first leave taken by Professor Johnson during a period of forty-one years of service in the department of chemistry.

DR. J. CHESTER BRADLEY, professor of entomology at Cornell University, who has leave of absence, is visiting institutions in the Eastern, Southern and Central States, and is collaborating with other specialists in preparing a field manual of insects of the North-eastern United States.

BRADFORD WASHBURN, director of the New England Museum of Natural History, has left for the West Coast to study the administration, both financial and educational, of leading natural history museums in that area.

DR. ALEXIS CARREL arrived on March 15 in unoccupied France, where he plans to make a study of the effect of food deficiencies on human health. He plans to remain in France for about six weeks. He will then go to Spain to continue his survey there.

THE Adam M. Miller Memorial Lecture of the Long Island College of Medicine will be given by Dr. Esmond Ray Long, director of the Henry Phipps Institute of the University of Pennsylvania, on March 28 at 4 o'clock. His subject will be "Environment and Constitution in the Development of Tuberculosis."

DR. ERNST ANTEVS, research associate of the Carnegie Institution of Washington, will deliver the address at the Sigma Xi banquet on April 28, in connection with the twenty-first annual meeting of the Southwestern Division of the American Association for the Advancement of Science. The meetings will be held at the Texas Technological College at Lubbock. The subject of the address will be "Climatic Variations in the Southwest during the Past 75,000 Years."

THE Hermann Michael Biggs memorial lectures, to be given under the auspices of the Committee on Public Health Relations of the New York Academy of Medicine, will be delivered by Dr. Clarence A. Mills, professor of experimental medicine at the University of Cincinnati, at the New York Academy of

Medicine, on Thursday evening, April 3, at 8:30 P.M. The subject of the lecture will be "The Relationship of Climate and Geography to Health."

PRESIDENT RAY LYMAN WILBUR, of Stanford University, addressed the Congress on Dental Education and Licensure, held in Chicago on February 15. His topic was "Professional Education and Licensure."

THE seventy-first annual meeting of the Wisconsin Academy of Sciences, Arts and Letters will be held at the Milwaukee Public Museum on April 4 and 5. Dr. Loyal Durand, Jr., assistant professor of geography at the University of Wisconsin, is secretary-treasurer of the academy.

THE two hundred and forty-first regular meeting of the American Physical Society will be held in Washington on Thursday, Friday and Saturday, May 1, 2 and 3. The sessions of Thursday and Friday will be held at the National Bureau of Standards, those of Saturday at the National Academy of Sciences.

THE three hundred and seventy-ninth meeting of the American Mathematical Society will be held at the George Washington University, Washington, D. C., on May 2 and 3. This meeting will follow that of the National Academy of Sciences on April 28, 29 and 30, and will be partially concurrent with those of the American Physical Society, on May 1, 2 and 3, and the American Geophysical Union, also on May 1, 2 and 3. Sessions of the society will begin on Friday morning and continue through Saturday afternoon. By invitation of the program committee, addresses are to be given by Professor F. J. Murray, on "The Analysis of Linear Transformations," and by Professor I. M. Sheffer, on "Some Applications of Certain Polynomial Classes." There will be also a symposium on the Rayleigh-Ritz method and its applications, containing three brief addresses, one each by a mathematician, a physicist and an engineer. These will be followed by both formal and informal discussions. There will be a subscription dinner at the Cosmos Club on Friday evening. The Willard Hotel has been chosen as hotel headquarters.

THE New York State Section of the American Physical Society will meet at Oneonta, N. Y., on April 5. A conference has been arranged on "Secondary School Problems Relating to Physics and the Physical Sciences," in which a number of high-school teachers will take part.

A CONFERENCE on "immunochemistry" will be held at the American Museum of Natural History on March 28 and 29 by the Section of Physics and Chemistry of the New York Academy of Sciences. There will be an informal subscription dinner at the museum restaurant on March 28.

FURTHER appointments of Research Associates will be made at Battelle Memorial Institute, Columbus, Ohio. Young men who are college graduates and who have shown exceptional aptitude for research, either in graduate work or in a brief industrial experience, are eligible. Preference will be given to those who have majored in physics, physical chemistry, organic chemistry, chemical engineering, metallurgy, fuels or ceramics, and especially to those who have completed their Ph.D. training and who are planning a career in industrial research. An appointment as Research Associate is for one year, including vacation, and may be extended for a second year. The salary is \$1,800. Research Associates work full time on approved research projects under the supervision of the Battelle technical staff.

THE London *Times* states that the University of Edinburgh has established a Polish School of Medicine. This will be staffed by professors and teachers now serving with the Polish Army in Great Britain and by professors of the University Faculty of Medicine in such subjects as may not be represented among the Polish professors. A statement issued by the university reads in part: "The Polish Forces in this country include a considerable number of medical officers of whom many are men of high academic standing who have held important teaching and research appointments in Poland. In addition, there are other medical graduates of Polish universities who have lost for the present almost all opportunities of maintaining the standards of their professional skill. There are also numbers of Polish medical undergraduates in this country, and the value of their studies will be seriously affected unless something is done to mitigate the unfortunate situation in which these men now find themselves."

THE Dublin Institute for Advanced Studies was founded last October. According to *Nature*, it consists of two constituent schools, the School of Celtic Studies and the School of Theoretical Physics. The

institute will provide facilities for advanced studies and research in special branches of knowledge and for the publication of the results of such studies, irrespective of whether they have originated from the institute or not. Members of the governing board of the School of Theoretical Physics include Professors A. W. Conway, *chairman*; F. E. W. Hackett, A. J. M'Connell; W. H. McCrea, Belfast; A. O'Rahilly, Cork, and E. T. Whittaker, Edinburgh. The scope of the school is described as the investigation of the mathematical principles of natural philosophy and their application to the sciences in which they obtain. Both the training of advanced students in methods of original research and the provision of research facilities for professors and lecturers on leave of absence from their academic duties will be included. The first senior professor appointed to the school is Professor E. Schrödinger, formerly of the University of Graz.

T. H. VAN DEN HONERT, acting director of the Buitenzorg Botanic Gardens at Java, writes to SCIENCE: "The *Annales du Jardin botanique de Buitenzorg* up till now have been published at Leyden, Holland. As the European territory of the Kingdom of the Netherlands is now occupied by the enemy, a new series under the name of *Annals of the Botanic Gardens, Buitenzorg*, has been started in Java. This periodical will cover the whole field of pure botany, including plant physiology, morphology, anatomy, cytology, ecology and microbiology. It will contain contributions by the regular staff and visitors to the scientific institutes of the Botanic Gardens as well as from other sources. The editor's mailing list is, however, not available in Java. As it is intended to continue exchange as usual, it seems advisable to renew or confirm each exchange. The same holds for the subscriptions to the new series. The price per volume is fixed at fl. 10. Therefore, subscribers and others interested in this periodical are requested to communicate with the Director of the Botanic Gardens, Buitenzorg, Java, D.E.I."

DISCUSSION

THE MUSEUMS OF NEW YORK

IN a recent unasked-for report to the mayor of New York City the commissioner of parks takes it upon himself to submit a blanket adverse criticism of the museums, zoological park, aquarium, botanical gardens and public library of New York. It is proffered by one with no known experience in either sci-

ence or education. From correspondence and conversation with officials of these institutions it seems fairly evident that the criticism is based chiefly on the reports of others, for apparently the commissioner of parks, with possibly one or two exceptions, has not inspected these institutions in person since he came into office.

It is not only the museums as they stand that