

of subscribers increased more than a quarter of a million during 1939. The financial condition as of December 31, 1939, determined by the New York State Department of Insurance shows that a surplus of \$1,651,249 is available for the added protection of subscribers.

The annual certificate of approval has been awarded by the American Hospital Association for evidence of progress, sound administrative policies and procedures and a financial position which protects the interests of subscribers.

As experience in the field has increased, adjustments have been made in the service, which has had the continued cooperation of subscribers, of more than 270 member hospitals and of the medical profession. The report closes with the statement that "The American people have found a way to protect themselves against the costs of hospital care for unexpected sickness or accident. The future of non-profit hospitalization throughout the nation is bright with possibilities for even greater service."

#### THE THEFT OF RESEARCH MICROSCOPES FROM THE BIOLOGICAL LABORATORY, AMHERST COLLEGE

EARLY in the evening of February 5, two valuable research microscopes were stolen from the Biological Laboratory at Amherst College. One of these was the microscope used by Professor Oscar Schotté. It was taken from his laboratory table. It was a Leitz mon-objective binocular. Maker's No. 300473, Amherst College No. die cut on base A C BIOL 53. This instrument was equipped with 4 Leitz apochromat objectives and paired 8x oculars. In addition there was attached to it a Zeiss paneratic condenser for illuminating.

The other microscope was a Zeiss machine being used by Dr. George Child in Professor H. H. Plough's laboratory. Maker's No. 259779, Amherst College No. die cut on base A C BIOL 61. This machine was equipped with a Butukni binocular draw tube, two achromat and one apochromat objectives and paired 10x oculars.

A Spencer rotary microtome Maker's No. 3631, Amherst College No. die cut on base A C BIOL 207, was taken from Dr. Schotté's room at the same time as the microscope.

The instruments were in use up to six o'clock on that day, but their disappearance was not noted until the following day. The laboratory building is ordinarily locked after six o'clock, but because of an evening lecture it was open on that particular evening.

Apparently neither of the research rooms was locked, although the door of each was closed. Whoever took the instruments knew what he wanted, since other valuable apparatus, including less valuable microscopes and a calculating machine, were passed over without being disturbed.

The Department of Biology of Amherst College will appreciate any information concerning instruments that are offered for sale that will lead to the recovery of the stolen instruments.

#### OFFICERS OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

THE Federation of American Societies for Experimental Biology which is made up of the American Physiological Society, The American Society of Biological Chemists, The American Society for Pharmacology and Experimental Therapeutics and the American Society for Experimental Pathology met at New Orleans on March 13, 14, 15 and 16. Officers elected for the coming year are:

*The American Physiological Society:* Dr. A. C. Ivy, of Northwestern University, *president*; Dr. Philip Bard, the Johns Hopkins University, *secretary*; Dr. C. J. Wiggers, Western Reserve University, *treasurer*, and Dr. Charles H. Best, University of Toronto, *councillor*.

*The American Society of Biological Chemists:* Dr. W. C. Rose, University of Illinois, *president*; Dr. R. J. Anderson, Yale University, *vice-president*; Dr. C. G. King, University of Pittsburgh, *secretary*; Dr. A. Baird Hastings, Harvard, *treasurer*; Dr. Edward A. Doisy, St. Louis University, *councillor*; Dr. Henry A. Mattill, University of Iowa, and Dr. Glenn Cullen, University of Cincinnati, *council members*.

*The American Society for Pharmacology and Experimental Therapeutics:* Dr. E. M. K. Geiling, University of Chicago, *president*; Dr. C. F. Schmidt, University of Pennsylvania, *vice-president*; Dr. G. P. Grabfield, Harvard University, *secretary*; Dr. E. E. Nelson, Tulane University, *treasurer*; Dr. B. H. Robbins, Vanderbilt University, and Dr. C. H. Thienes, University of Southern California, *councillors*, and Dr. H. Gold, *membership committee*.

*The American Society for Experimental Pathology:* Dr. Shields Warren, of Harvard University, *president*; Dr. Jesse Bollman, of Mayo Clinic, Rochester, Minn., *vice-president*; Dr. Harry P. Smith, University of Iowa, *secretary-treasurer*, and Dr. Paul R. Cannon, University of Chicago, and Dr. Balduin Lucké, University of Pennsylvania, *members of the council*.

Dr. Warren, under the plan of having the heads of the constituent groups serve as chairman of the federation in rotation, assumed that office.

## SCIENTIFIC NOTES AND NEWS

DR. FREDERIC JOLIOT and Madame Irene Joliot-Curie, co-workers in the Radium Institute, Paris, have been awarded the 1940 Barnard Gold Medal for "Mer-

itorious Service to Science" bestowed by Columbia University every five years. The medal was established by the will of Frederick A. P. Barnard, presi-

dent of Columbia from 1864 to 1889, and is awarded "to the person, if any, whether a citizen of the United States or any other country, who within the five years next preceding has made such discovery in physical or astronomical science, or such novel application of science to purposes beneficial to the human race, as in the judgment of the National Academy of Sciences of the United States is esteemed most worthy of such honor."

PRECEDING the Founders Day Convocation of the Case School of Applied Science on March 10 a dinner was given in honor of Dr. and Mrs. Dayton C. Miller, in recognition of Dr. Miller's fifty years of service to the college. Frank A. Quail, president of the Board of Trustees, presided and introduced Dr. J. J. Nassau, professor of astronomy and director of the Warner and Swasey Observatory, and Dr. W. R. Veazey, formerly professor of chemistry, who paid personal tributes to Dr. Miller. Dr. Philip M. Morse, professor of physics at the Massachusetts Institute of Technology, a former student of Dr. Miller, who was associated with him in the ether drift investigations, also spoke at the dinner. An oil portrait, painted by the Cleveland artist, Rolf Stoll, and subscribed to by a group of alumni, faculty and friends, was presented to the college at the convocation. Dr. W. F. G. Swann, director of the Bartol Research Foundation of the Franklin Institute, was the convocation speaker. His address was entitled "Science and Human Happiness." The convocation was held in commemoration of the sixtieth anniversary of the founding of the college, which was the first engineering college established west of the Allegheny Mountains.

DR. FRANK N. FREEMAN, dean of the School of Education of the University of California, previously professor of educational psychology at the University of Chicago, was given a citation for "an outstanding contribution to educational research" on the occasion of the banquet on February 26 at the meeting in St. Louis of the American Educational Research Association. The citation was in recognition of his book on "Twins, a Study in Heredity and Environment."

ACCORDING to the *Journal* of the American Medical Association, Dr. Max Cutler, director of the Chicago Tumor Institute, will be honored at an all-day meeting on March 29, in Atlanta, Ga., on the cure and control of cancer. The sessions will be under the sponsorship of the State Department of Health, the Cancer Commission of the Medical Association of Georgia and the Georgia Division of the Women's Field Army of the American Society for the Control of Cancer. In the evening Dr. Cutler will be presented with an official citation by Governor Rivers in recognition of his "outstanding achievement in the realm of cancer cure and control." At the same time he will be appointed an

honorary lieutenant colonel on the military staff of the governor.

THE degree of doctor of science will be conferred at the eighty-seventh commencement of the University of Wisconsin on Dr. Herbert S. Gasser, director of the Rockefeller Institute for Medical Research, New York City.

THE University of Oxford will confer the degree of doctor of science on Dr. E. V. Appleton, secretary of the Department of Scientific and Industrial Research, previously Wheatstone professor of physics at King's College, London, and Jacksonian professor of natural philosophy in the University of Cambridge.

DR. W. H. SEBRELL, of the National Institute of Health of the U. S. Public Health Service, and Dr. J. C. Keresztesy, Joseph R. Stevens, Stanton A. Harris, Eric T. Stiller and Karl Folkers, of the research laboratories of Merck and Company, were awarded jointly at the New Orleans meeting of the American Institute of Nutrition the prize of \$1,000 of Mead Johnson and Company—the first for his work on riboflavin and keratitis and the others for the synthesis of pantothenic acid.

DR. DOUGLAS JOHNSON, professor of physiography at Columbia University, has been elected to honorary membership in the Société Royale Belge de Géographie, "in recognition of great services rendered to the geographic sciences."

THE student yearbook for 1940 of the Massachusetts State College will be dedicated to Dr. Charles P. Alexander, head of the department of entomology.

DR. SMITH ELY JELLIFFE, consulting neurologist, New York City, has been made an honorary member of the Dutch Society of Psychiatry and Neurology.

WILLIAM HENRY BRADSHAW, director of rayon research of E. I. du Pont de Nemours and Company, Buffalo, N. Y., has been awarded the Jacob F. Schoellkopf Gold Medal for 1940 of the Western New York Section of the American Chemical Society, in recognition of "distinguished chemical achievement which has resulted in the commercial production of cordura, a high-strength viscose yarn used extensively in the manufacture of automobile tires."

DR. JOHN W. M. BUNKER, professor of biochemistry and physiology and director of the research laboratories of biology at the Massachusetts Institute of Technology, has been appointed dean of the Graduate School. Dr. Bunker will succeed Dr. Harry M. Goodwin, since 1932 professor of physics and electrochemistry, who will retire in June after serving for fifty years on the staff of the institute.

NATHANIEL MCL. SAGE, placement officer of the Massachusetts Institute of Technology, has been ap-

pointed director of the Division of Industrial Cooperation, of which he has been acting head since the death last September of Professor Charles L. Norton, who for many years had charge of research services in the solution of industrial problems. Mr. Sage will continue as placement officer.

THE medical and technical divisions of Sharp and Dohme have been merged under the direction of Dr. William A. Feirer.

THE Parliamentary by-election at the University of Cambridge has been won by Dr. Archibald V. Hill (Independent Unionist), Foulerton research professor and secretary of the Royal Society, with a majority of 4,454. The figures as announced on February 24 were: Dr. Hill, 9,840, and Dr. John A. Ryle (Independent Progressive), professor of physics at the University of Cambridge, 5,386. Of the electorate of 56,286, 41.9 per cent. voted.

It is announced in *Nature* that, at the request of Sir Walter Monckton, director-general of the Press and Censorship Bureau, Sir William Bragg, as president of the Royal Society, has undertaken the formation of a scientific panel to assist the bureau in arranging the censorship of papers in scientific journals. The following have agreed to serve on the panel: Professor C. R. Harington (biochemistry), Professor V. H. Blackman (botany and agriculture), Professor A. C. Egerton (chemistry), Dr. H. L. Guy (engineering sciences), Professor P. G. H. Boswell (geology), Professor S. Chapman (mathematics), Dr. C. H. Desch (metallurgy), Dr. C. G. Darwin (physics), Professor A. V. Hill (physiology), Professor F. C. Bartlett (psychology), Professor W. W. C. Topley (bacteriology and pathology), Professor M. Greenwood (statistics), Sir Guy Marshall (zoology).

OFFICERS of the Sigma Xi Club of Ohio University at Athens for the present academic year are: *President*, Darrell B. Green; *Vice-president*, Clarence L. Dow; *Secretary-Treasurer*, Amos C. Anderson. Meetings are held every two months, with papers by two members presented at each meeting. Dr. K. K. Darrow, physicist with the Bell Telephone Laboratories, New York, is expected to speak at the annual dinner and to give the annual Sigma Xi lecture at a university convocation.

PROFESSOR GEORGE DAVID BIRKHOFF, of Harvard University, delivered public lectures on March 6, 7 and 8 at the Rice Institute, Houston, Texas, the subjects of which were: "A Mathematical Approach to Ethics," "The Principle of Sufficient Reason" and "Rectilinear Drawing."

AFTER the annual meeting on March 15 for the initiation of new members of the Wesleyan chapter of the Society of the Sigma Xi a banquet was held

at which the speaker was Dr. Albert F. Blakeslee, Wesleyan '96, director of the department of genetics at the Cold Spring Harbor Laboratory of the Carnegie Institution, president of the American Association for the Advancement of Science. A series of tests or experiments was given to demonstrate how different people differ in their capacities for taste and smell. In his address at the close of the dinner the importance of the facts demonstrated was discussed.

THE Joseph Henry lecture of the Philosophical Society of Washington was delivered on March 16 by Dr. Harold C. Urey, professor of chemistry of Columbia University. The title of the lecture was "Differences in Physical Properties of Isotopic Substances and the Separation of Isotopes."

DR. ROY CHAPMAN ANDREWS, director of the American Museum of Natural History, will deliver an illustrated lecture on "Hidden Secrets of the Gobi" on the evening of April 2 at a meeting of the Phi Beta Kappa Alumnae in New York.

DR. EDWARD SAMPSON, associate professor and head of the department of geology at Princeton University, addressed the Philadelphia Geological Society at a meeting held at the Academy of Natural Sciences on the evening of March 21. He spoke on "Mineral Resources in Peace and War."

THE twenty-fourth Guthrie Lecture of the British Physical Society was given by Dr. P. M. S. Blackett, professor of physics in the University of Manchester, at the Royal Institution on February 26. The subject of the lecture was "Cosmic Rays: Recent Developments."

APPLICATIONS must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than April 8 for the position of associate entomologist (taxonomy) to fill the position of assistant curator of the National Museum, Smithsonian Institution, at a salary of \$3,200 a year, and for the position of assistant entomologist (taxonomy) in the Bureau of Entomology and Plant Quarantine, Department of Agriculture, at a salary of \$2,600 a year.

DURING the national meeting of the American Association for the Advancement of Science, which will be held in Seattle from June 17 to 22, there will be an opportunity for those interested in various phases of oceanography to visit the Oceanographic Laboratories at Friday Harbor. Arrangements should be completed prior to arriving in Seattle because instruction and research in all departments begins on June 24 and housing facilities at Friday Harbor are limited.

It is announced in the London *Times* that the British Association for the Advancement of Science is arranging a conference on science in its national and inter-

national aspects. The conference, which will be held at Reading on July 24, 25 and 26, will take the place of the ordinary annual meeting, which would in normal circumstances have been held at Newcastle.

THE second International Congress of Eugenics has been postponed indefinitely. Further information can be obtained from the general secretary, Professor G. Constantinesco, director of the National Zootechnical Institute, Strada Dr. Staicovici 63, Bucarest.

THE New York State Section of the American Physical Society will hold its spring meeting at the University of Buffalo on April 6. The address of welcome will be made by Dr. S. P. Capen, chancellor of the university. In addition to the program of technical papers, Professor H. A. Bethe, of Cornell University, will give the Foster lecture on Friday evening, April 5. He will speak on "The Theory of Stellar Energy." The lecture will be preceded by a buffet supper.

THE Association of Southeastern Biologists, of which Professor H. L. Blomquist, of Duke University, is president, will meet on April 19 and 20 in Nashville, Tenn., with Vanderbilt University as the host institution. Titles of papers to be presented should be filed with Donald C. Boughton, secretary-treasurer, Regional Laboratory, U. S. Department of Agriculture, Auburn, Ala.

THE annual joint meeting of the Institute of Radio Engineers and the American Section of the International Scientific Radio Union will be held in Washing-

ton, D. C., on Friday, April 26. This meeting will be held in the building of the National Academy of Sciences.

THE sixty-ninth annual meeting of the American Public Health Association will be held in Detroit, Michigan, from October 8 to 11, with the Book-Cadillac Hotel as headquarters. The Michigan Public Health Association, the American School Health Association, the International Society of Medical Health Officers, the Association of Women in Public Health and a number of other allied and related organizations will meet in conjunction with the association. Dr. Reginald M. Atwater is executive secretary of the association, with offices at 50 West 50th Street, New York City.

ON Wednesday, March 6, the inaugural Ephraim McDowell Lectureship of the University of Louisville School of Medicine was presented in the amphitheater of the Louisville City Hospital. The meeting was opened by Dr. John W. Moore, dean of the medical school. Dr. Irvin Abell, who is an authority on the life of Ephraim McDowell, gave a résumé of the life and work of the great Kentucky pioneer surgeon. Dr. M. Herbert Barker, of Northwestern University Medical School, delivered the inaugural lecture. He was introduced by Dr. J. Murray Kinsman, of the University of Louisville. Dr. Barker's subject was "Modern Pioneers in Vascular Diseases." The McDowell lectures are being sponsored annually by the Phi Beta Pi Medical Fraternity.

## DISCUSSION

### CHANGES IN MODERN MATHEMATICS

IN 1898 there appeared the first part of a large mathematical encyclopedia entitled "Encyklopädie der Mathematischen Wissenschaften," which was due to international cooperation and was completed in 1935. Even before it was completed it was commonly recognized that at least the first one of the six volumes was already out of date and in need of many fundamental changes in order to be abreast with current scholarship along its line. This rapid obsolescence may be contrasted with the fact that certain parts of Euclid's "Elements" were used as text-books more than two thousand years after they were written and are still regarded as masterpieces. Since the summer of 1939 several parts of a revised volume 1 of this mathematical encyclopedia have been published, and it is interesting to see how profoundly these parts, relating to algebra and the theory of numbers, differ from the corresponding parts of the first edition.

In particular, much more space is devoted to the

theory of groups and its applications in this revised edition than in the first edition. While only about 18 pages were devoted to finite discrete groups in this first edition, 51 pages are devoted to only a part of this subject under the heading of general group theory in this revised edition. It is especially interesting to note that the subject of general or abstract groups precedes that of permutation groups in this edition, while the reverse method was followed in the first edition. These two subjects supplement each other, and it would not be profitable to try to determine their relative importance even if the former is more widely useful. The subject of group theory was, however, first studied in connection with permutation or substitution groups. The fact that abstract groups permeate the treatment of various other subjects in this revised edition is especially noteworthy.

What may be of most interest to the non-mathematician in connection with this revised edition is the fact that some of the modern mathematics relating to