

By W. E. Knowles Middleton, Meteorological Office, Toronto.

- (2) "The Applications of the Barometer in Physics and Chemistry." By John Satterly, University of Toronto.

In proposing that this celebration be held in time of war the participating organizations are expressing their belief that other forces than those of evil will prevail and that the continuity of human endeavor is worthy of emphasis, particularly in these disturbed days.

THE PITTSBURGH MEETING OF THE AMERICAN CHEMICAL SOCIETY

"CATALYSIS of War Chemistry" will be the central theme of hundreds of papers and addresses to be presented before the one hundred and sixth meeting of the American Chemical Society, which will be held in Pittsburgh from September 6 to 10.

Advances in wartime research will be reported at the scientific sessions, of which Dr. Per K. Frolich, director of the Chemical Division, Esso Laboratories of the Standard Oil Development Company, Elizabeth, N. J., is president.

"Manpower" will be the subject of a three-day symposium at which industrial leaders will discuss measures to overcome the shortages of trained scientific workers essential to the war effort. W. L. Elder, of the War Production Board, will preside.

The food needs of the United States, civilian and military, and of the United Nations will be explored in symposia dealing with recent advances in the chemistry of dairy products, vitamins, proteins and boron in agriculture.

Other symposia will be devoted to anti-syphilitic agents, industrial hygiene, research tools of the colloid chemist, research management in small laboratories, unit processes, paint, plastic, reactions of solids, molecular addition compounds and library technique.

Papers to be read at divisional meetings will outline progress in petroleum, gas and fuel, fertilizers, sugar chemistry and technology, cellulose, water, sewage and sanitation and chemical education. The society's divisions of organic chemistry, physical and inorganic chemistry, biological chemistry, analytical and micro-chemistry, colloid chemistry and industrial and engineering chemistry will also convene.

Francis C. Frary, director of research of the

Aluminum Company of America, has been appointed honorary chairman of the convention. Professor J. C. Warner, of the department of chemistry, Carnegie Institute of Technology, is general chairman. William P. Yant, director of development and research, Mine Safety Appliances Company, is general vice-chairman. An attendance of four thousand is expected.

According to the announcement, in attacking the problems of manpower, first-hand knowledge of the experience of the United Nations will be drawn upon.

The record of the American chemical industry in terms of production has been excelled by none and equaled by few.

The tremendous increase in requirements resulting from a huge construction program, the loss of men to the armed forces, the lack of an officially sanctioned training program for replacements, and the use of college and university facilities by the Army and Navy have created a difficult situation.

In the manpower symposium, both current and anticipated shortages will be discussed. Plans to improve existing conditions will be suggested by experts familiar with the employment of women, with successful training programs, draft deferment and other fields concerned with the problem of recruiting personnel for industry.

The symposium on antisyphilitic agents, lasting two days, will be sponsored by the division of medicinal chemistry, of which John H. Speer, of G. D. Searle and Company, Chicago, is chairman. Technological developments in industry will be traced in a unit process symposium at which Professor R. Norris Shreve, of Purdue University, will preside.

F. J. Curtis, of the Monsanto Chemical Company, St. Louis, will be the chairman of the symposium on research management of small laboratories under the auspices of the division of industrial and engineering chemistry. The divisions of biological chemistry and agricultural and food chemistry will hold joint sessions on vitamins.

Divisional meetings will begin on Monday, September 6, at 9 A.M. and conclude on Friday at 2 P.M. Sessions are planned of the council and board of directors, of which Thomas Midgley, Jr., vice-president of Ethyl Corporation, is chairman. A public meeting at which general addresses will be delivered has been arranged for Wednesday, September 8. The headquarters of the convention will be at the Hotel William Penn, where registration of delegates will begin on Sunday afternoon, September 5.

SCIENTIFIC NOTES AND NEWS

THE Lamme Medal, awarded annually for "outstanding achievement in engineering education," was presented on June 19 by the Society for the Promo-

tion of Engineering Education to Professor Thomas Ewing French, head of the department of engineering drawing at the Ohio State University. The presenta-

tion was made by Dr. Henry T. Heald, president of the Illinois Institute of Technology and retiring president of the society, at its golden anniversary dinner.

DR. DAVID RUSSELL LYMAN, of Wallingford, Conn., was presented with the Trudeau Medal for 1943 at the St. Louis meeting on May 5 and 6 of the National Tuberculosis Association.

FRANK H. SHAW, president of the Shaw Insulator Company of Irvington, N. J., received the John Wesley Hyatt Award, a gold medal and \$1,000, for distinguished achievement in plastics during 1942 in recognition of his invention and development of transfer moulded plastics. The presentation was made on June 17 at a dinner in the Waldorf-Astoria, New York, by Dr. Per K. Frolich, president of the American Chemical Society and a member of the award committee. The award was established in 1941 by the Hercules Powder Company.

DR. CARL ALFRED MOYER, assistant professor of surgery at the School of Medicine of the University of Michigan, was recently presented with the annual Henry Russel Award in recognition of research on the physiology of breathing and the effect of various drugs on the respiratory processes.

At the recent commencement of the University of North Carolina, Dr. T. Grier Miller, clinical professor of medicine at the Medical School of the University of Pennsylvania, in charge of the gastro-intestinal division of the University Hospital, was awarded the degree of doctor of laws.

THE University of Arizona has conferred the honorary doctorate of science on E. C. Slipper, of the Lowell Observatory at Tucson.

At the seventy-third commencement exercises of Wilson College, the degree of doctor of science was conferred on Dr. Gertrude Rand, research associate in ophthalmology of the Knapp Foundation of the College of Physicians and Surgeons, Columbia University.

THE officers, executive committee and members of the Division of Geology and Geography, National Research Council, for the year beginning July 1, are as follows: *Chairman*, William W. Rubey; *vice-chairman*, Otto E. Guthe; *Executive Committee*, William W. Rubey, Otto E. Guthe, Marland Billings, Monroe G. Cheney, G. Arthur Cooper, Richard J. Russell. *Representatives of Societies*: Marland Billings and T. S. Lovering, Geological Society of America; Paul F. Kerr, Mineralogical Society of America; G. Arthur Cooper, Paleontological Society; Otto E. Guthe and Richard J. Russell, Association of American Geographers; Elizabeth T. Platt,¹ American Geographical

Society; Charles H. Behre, Jr., Society of Economic Geologists; George W. Morey, American Ceramic Society; Monroe G. Cheney, American Association of Petroleum Geologists; John A. Fleming, American Geophysical Union. *Members at Large*: Ralph H. Brown, William W. Rubey and Joseph T. Singewald, Jr.

DR. ROBERT M. GATES, president of Air Preheater Corporation, New York City, has been nominated for president of the American Society of Mechanical Engineers.

THE Mayo Foundation Chapter of Sigma Xi held its annual meeting on June 10, when new members were initiated. The officers elected for 1943-44 are: *President*, Dr. R. K. Ghormley; *Vice-president*, Dr. H. E. Essex; *Secretary-Treasurer*, Dr. C. F. Code. The retiring president, Dr. A. C. Broders, spoke on "The Relationship of Birds to the Economy of Man."

SIR FARQUHAR BUZZARD, Bt., lately regius professor of medicine at the University of Oxford, has been elected to an honorary studentship at Christ Church.

It is reported in *Nature* that at the anniversary meeting of the Linnean Society, London, held on May 24, A. D. Cotton, keeper of the Herbarium in the Royal Botanic Gardens, Kew, was elected president in succession to Dr. E. S. Russell.

At the annual general meeting of the Physical Society, London, held on May 18, the following officers were elected for the year 1943-44: *President*, Professor E. N. da C. Andrade; *Vice-Presidents*, Dr. J. H. Brinkworth, Professor C. D. Ellis, Dr. H. T. Flint, Professor N. F. Mott; *Treasurer*, Dr. C. C. Paterson; *Secretaries*, J. H. Awbery (*Papers*), Dr. W. Jevons (*Business*); *Foreign Secretary*, Sir Owen Richardson; *Librarian*, Professor L. C. Martin.

PROFESSOR RAYMOND C. ARCHIBALD became professor of mathematics emeritus at Brown University on June 30. He has been for thirty-five years a member of the department of mathematics, and was at one time editor-in-chief of the *American Mathematical Monthly*. He plans in his retirement to continue to edit "Mathematical Tables and Aids to Computation," published by the National Research Council since last January, as the organ of a committee of the council of which he is chairman. At the request of a committee of colleagues and former colleagues and students he sat recently for a portrait which has been completed and which will be presented to the university in the autumn.

At Yale University Dr. William U. Gardner has been promoted to be professor of anatomy and chair-

¹ Although Miss Platt died on May 22, her successor on the division has not yet been appointed. Therefore, to

show that the American Geographical Society is represented on the division, it seems best to indicate that Miss Platt was the representative for this period.

man of the department of anatomy in the School of Medicine. In both of these appointments he succeeds the late Professor Edgar Allen, who died on February 5, 1943, while on active duty with the U. S. Coast Guard Reserve. Dr. Harry S. N. Greene, associate professor of pathology and surgery, has been appointed professor of pathology. Albert G. Conrad, associate professor of electrical engineering and co-inventor of a new adjustable-speed electric motor, has been appointed chairman of the department of electrical engineering. Cornelius B. Osgood, associate professor of anthropology and curator of anthropology in the Peabody Museum, has been appointed chairman of the department of anthropology.

DR. RAYMOND B. ALLEN, executive dean of the Chicago Colleges of the University of Illinois, has been appointed, from September 1 next, dean of the Medical School. He will succeed Dr. David J. Davis, who is retiring. Dr. Allen will continue in his present position of executive dean of the Chicago departments, which include the colleges of medicine, dentistry and pharmacy and other institutions associated with these units.

DR. GRANVILLE A. BENNETT, associate professor of pathology at the Harvard Medical School, Boston, has been appointed professor of pathology and bacteriology at the School of Medicine of Tulane University of Louisiana.

DR. BURRELL O. RAULSTON, professor and head of the department of medicine and director of clinical teaching since 1930, has been appointed professor of bacteriology and dean of the School of Medicine of the University of Southern California at Los Angeles. He succeeds Dr. Seeley G. Mudd, who will continue as professor of experimental medicine.

PROFESSOR ARTHUR HOLMES, of the University of Durham, has succeeded T. J. Jehu as regius professor of geology and mineralogy at the University of Edinburgh.

DR. EDWARD DAVID HUGHES has succeeded Dr. Kennedy Orton as professor of chemistry at the University of North Wales, Bangor.

PROFESSOR E. J. SALISBURY, F.R.S., Quain professor of botany at University College, London, has been appointed director of the Royal Botanic Gardens, Kew, the appointment to take effect on September 1.

DR. JORGE ANCIZAR-SORDO, director of the National Chemical Laboratory, Bogotá, Colombia, and president of the Colombian Chapter, American Society of Agricultural Sciences, has been appointed a member of the board of directors of the Institute of Tropical Agriculture of the University of Puerto Rico.

DR. JAMES H. ELDER, of the department of psychology of the Louisiana State University, has leave of absence to enable him to serve as psychologist in the office of the chief signal officer of the War Department, Washington, D. C.

DR. E. RAYMOND HALL, associate professor of vertebrate zoology of the University of California at Berkeley, has returned from a visit of two and a half months to Mexico, where he collected specimens and assisted in a survey of natural resources for the Mexican Government. Professor Hall brought back from the southern end of the tableland of Mexico 650 specimens of mammals, which included pocket gophers, skunks, opossums, weasels, mice and rats. The collection is said to be remarkable for the number of varieties, species and even genera which were found so close together.

DR. CARL C. LINDEGREN, research associate, Washington University, gave a university lecture on "Breeding Yeast for the Wartime Diet" at the University of Illinois under the auspices of the Division of Biological Sciences and lectured on June 11 on the same subject before the staff of Dr. Tom D. Spies at the Hillman Hospital in Birmingham.

It is reported in *Nature* that the Council of the British Institution of Electrical Engineers has made the following awards of premiums: *Institution Premium*: C. J. Beaver and E. L. Davey; *Kelvin Premium*: Dr. F. Brailsford and R. G. Martindale; *John Hopkinson Premium*: R. A. W. Connor; *Non-Section Premiums*: Dr. E. Friedlander (Ayrton Premium), C. T. Melling (Llewellyn B. Atkinson Premium), J. Swaffield (extra premium); *Wireless Section Premiums*: Dr. R. L. Smith-Rose and Miss A. C. Stickland (Duddell Premium), G. Parr and W. Grey Walter (Ambrose Fleming Premium), Professor Willis Jackson (extra premium); *Measurements Section Premiums*: Lieutenant-Colonel K. Edgecumbe (Silvanus Thompson Premium), M. Kaufmann and W. Szwander (Mather Premium), G. H. Barker and A. L. Hancock (extra premium); *Transmission Section Premiums*: A. W. Thompson and J. C. Wood-Mallock (Sebastian de Ferranti Premium), A. A. Pollitt (John Snell Premium), H. Willott Taylor and K. L. May (extra premium); *Installations Section Premiums*: G. B. Alvey and N. Tetlow (Crompton Premium), Forbes Jackson, W. J. H. Wood, G. Smith and E. Jacobi (Swan Premium), J. R. Taylor and C. E. Randall (extra premium); *Paris Exhibition, 1881, Premium*: J. N. Waite.

THE Amateur Astronomers Association, with headquarters at the Hayden Planetarium of the American Museum of Natural History, has established an award

to be known as the Amateur Astronomers Medal to stimulate interest in astronomy and to commemorate the quadricentennial of the death of Copernicus. The medal will be given from time to time to an amateur astronomer or layman who performs an outstanding service to astronomy.

It is reported in *The New York Times* that Arthur Curtiss James, railroad industrialist, who died on June 4, 1941, left a gross estate of \$37,771,613 and a net of \$34,771,702. Charitable, religious and educational institutions share \$25,317,154, of which the James Foundation gets \$23,030,387. The James Foundation, which was created to aid charitable, religious and educational institutions, will receive eight tenths of his residuary estate. In addition to this it also receives art and real estate worth \$574,085 and remainder interests in trusts set up in his will valued at \$1,202,682. Mr. James requested the foundation to aid institutions which he had helped during his lifetime. Among these are Amherst College, Hampton Normal College and the Tuskegee Normal and Industrial Institute.

ACCORDING to the *Harvard Alumni Bulletin*, gifts to the university for the year to the date of commencement amounted to \$5,144,255, a million and a half larger than the total amount received over the preceding year. The gifts for immediate use (\$1,078,574) were lower than for any year from 1933-34. But capital gifts of \$4,065,681 were larger than for all except three years of the last ten; and of these the unrestricted gifts—the most valued and most needed by the university—amount to \$3,320,884, or to more than the total unrestricted gifts for capital to the university in the eight years preceding. At the com-

mencement ceremonies the marshal, David M. Little, presented to the university on behalf of the class of 1918 a check for \$100,000.

THE Academia Nacional de Medicina of Buenos Aires has recently established the Hirsch Medical Scholarship with a fund of 500,000 pesos given by Alfredo Hirsch, of Buenos Aires. Selected students will follow medical studies in the United States or Great Britain for two years, beginning in the middle of 1943. For the first ten years the scholarships will be given for studies on cancer, leprosy and infantile paralysis.

THE San Diego Society of Natural History, whose museum in Balboa Park has been taken over by the U. S. Navy for hospital purposes, has been allowed to retain a considerable section of the ground floor, according to Clinton G. Abbott, director. Here the extensive study collections and departmental libraries have been gathered, and the research and publication activities of the staff are being continued. The main library has been moved to San Diego State College for the duration. The exhibits have been stored.

Nature reports that ten Chinese students, the first to visit Britain under a new scheme operated by the British Council, are now on their way to Great Britain. They have been given scholarships by the council, and will study some branch of engineering and will work at the university or college most suited to their special qualifications. Their training is expected to be of special value both because it will equip them for reconstruction work in China, and because their familiarity with British engineering practice and equipment will furnish a link between Great Britain and China.

DISCUSSION

THE CONCEPT OF CELLS HELD BY HOOKE AND GREW

REFERENCES to historical topics in current text-books of biology, botany and zoology can be counted in most cases on the fingers of one hand. In view of the decided lack of any historical approach, it seems rather anomalous that two concepts that are presented from this standpoint are so often either incorrect or distinctly misleading. The first of these—namely, that Schleiden and Schwann were the real originators of the cell theory and enunciated it before any one else—has been disproved in scholarly fashion by Karling.¹

The second general error is a misunderstanding of the conception of the cell held by the early microscopists, especially by Robert Hooke and Nehemiah Grew. Almost all the biological text-books, including those of botany and zoology, if they refer to the topic

at all, either state or imply that Hooke saw merely the walls of cork, pith and charcoal. To be sure, he did see the walls of such cells, and with his ineffective microscope, they must have stood out more clearly in such tissues than in living material.

However, Hooke was perfectly aware that cells in living plants had contents. This is stated very definitely in his "Micrographia," published in 1665. "But though I could not with my *Microscope*, nor with my breath, nor any other way I have yet try'd, discover a passage out of one of those cavities into another, yet I cannot thence conclude, that therefore there are none such, by which the *Succus nutritius*, or appropriate juices of Vegetables, may pass through them; for, in several of those Vegetables, whil'st green, I have with my *Microscope*, plainly enough discover'd these Cells or Poles fill'd with juices, and by degrees sweating them out: as I have also observed in green

¹ J. S. Karling, *Amer. Nat.*, 73: 517-537, 1939.