

SCIENTIFIC NOTES AND NEWS

DR. HARVEY NATHANIEL DAVIS, president of the Stevens Institute of Technology, Hoboken, N. J., and director of the Office of Production Research and Development of the War Production Board, has been elected an honorary member of the Institution of Mechanical Engineers of Great Britain. He is the fourth living American to be so honored. The others are Henry Ford, Professor A. G. Christie, of the Johns Hopkins University, who were elected honorary members in 1939, and Orville Wright, who was elected in 1942. Dr. Davis returned recently from England, where he had been on a government mission for the Office of Production Research and Development and the Combined Production Resources Board of Great Britain, Canada and the United States.

THE Medal of Honor of the Institute of Radio Engineers for service in the field of radio communication has been awarded to Haraden Pratt, vice-president and chief engineer of the Mackay Radio and Telegraph Company and of the Federal Telephone and Radio Corporation, affiliates of the International Telephone and Telegraph Corporation.

SIR GIRLING BALL was appointed Bradshaw Lecturer for the year 1944, at a recent meeting of the council of the Royal College of Surgeons.

DR. M. A. STEWART, associate professor of parasitology at the University of California, has been elected president of the Pacific Coast Entomological Society. Dr. E. Gordon Linsley, assistant professor, has been reelected secretary.

THE American Association for Applied Psychology in September, 1943, authorized the establishment of a Section of Military Psychology. Officers appointed by the Board of Governors are Major T. W. Harrell, AC, office of assistant chief of air staff for personnel, *Chairman*; Lieutenant C. Gilbert Wrenn, U. S. Naval Reserve, Bureau of Naval Personnel, *Secretary*. The present objectives of the section are: (1) to encourage professional relationships among psychologists in the armed services; (2) to provide for the continued availability to the armed services of technical advances in psychology both during and following the war period. Up to January 1, 90 members of the association had joined the section out of about 115 eligible for membership. Of this group of 90, there are 50 serving in Army billets, including the Air Corps, and 40 from the Navy, including the Marine Corps and the Maritime Service.

DR. WALTER B. CANNON, professor emeritus of Harvard University, has been appointed visiting professor of physiology at the New York University College of Medicine.

DR. PHILLIPS FOSTER GREENE, professor of surgery at the Hsiang Ya Medical School, Changsha, China, has been appointed visiting professor of surgery from December 1, 1943, to July 1, 1944, at the Long Island College of Medicine. The appointment was made possible under the terms of a grant from the Commonwealth Fund to encourage the exchange of members of the teaching staff of various medical schools.

DR. LOYAL DURAND, JR., of the department of geography of the University of Wisconsin, has been appointed associate professor in the department of geology and geography of the University of Tennessee. He will take up his new work on February 1.

DR. L. R. WAGER, lecturer in petrology at the University of Reading, England, has been appointed professor of geology at the University of Durham.

DR. JAMES ROWLAND ANGELL, consultant in education for the National Broadcasting Company, formerly president of Yale University, has been appointed to succeed the late Professor William Lyon Phelps as director of the Hall of Fame of New York University.

DR. GUY F. MACLEOD, professor of entomology at the University of California, has been appointed chief of the chemicals and fertilizer branch of the Chemical Division of the War Food Administration.

J. C. MARQUARDT, assistant professor of dairying at the New York State Agricultural Experiment Station at Geneva, has resigned to become assistant director of the division of milk control for the New York State Department of Agriculture.

DR. WILFRED F. HORNER, of the department of biology of Loyola University, Chicago, is now equipping a new biological research laboratory for the Belmont Radio Corporation in Chicago.

DR. ALBERT E. MEDER, JR., professor of mathematics at the New Jersey College for Women, has been appointed secretary of Rutgers University. Dr. Richard Morris has retired as head of the department of mathematics at the New Jersey College for Women.

JAMES E. FENN, chief research chemist of the Gummer Products Company, Troy, Ohio, has resigned his position to join the staff of Johnson, Salisbury, Inc., Consulting Laboratory in New York City.

FRED ERNSBERGER has been reappointed research fellow at the Research Foundation of the Ohio State University. He is working on the cement rehydration project sponsored for the past three years by the Master Builders Company of Cleveland, Ohio.

MRS. ALBERT D. LASKER, of New York, and Dr. George H. Preston, Maryland State Commissioner of

Mental Hygiene, president of the American Orthopsychiatric Association, have been elected members of the board of directors of the National Committee for Mental Hygiene.

DR. CURTIS SAUNDERS, M.R.I.P.H.H., master sergeant, in the Division of Parasitology and Tropical Medicine, Army Medical School, Washington, D. C., has been appointed Captain in the Sanitary Corps, Army of the United States. He will be on duty at the Army Medical School.

At the Central Laboratories, Hoboken, N. J., of the General Foods Corporation, Dr. Aksel G. Olson succeeds as manager Thomas M. Rector, now vice-president in charge of research and development. Dr. Roland E. Kremers has been appointed director of basic research, with supervision over the sections of organic chemistry and physical research and the newly established section of biochemistry. The following directors have been appointed: Dr. Harry M. Barnes, of the section of organic chemistry; Harvey K. Murer, of the section of biochemistry; Charles W. Kaufman, of the section of processing technology; Dr. Willard L. Roberts, of the section of cereal technology; Hamilton W. Putnam, of the division of cereal chemistry, and Dr. Martha Johnson, of the division of analytical chemistry.

PROFESSOR L. J. WITTS, Nuffield professor of clinical medicine at the University of Oxford, and Professor J. R. Learmonth, surgeon to H.M. Medical Household in Scotland, professor of surgery in the University of Edinburgh and surgeon-in-ordinary of the Edinburgh Royal Infirmary, have been appointed members of the British Medical Research Council.

SIR RICHARD GREGORY, president of the British Association for the Advancement of Science, was recently chairman of a deputation of scientific men to Robert Foot, director-general of the British Broadcasting Company, to ask for better and more frequent scientific broadcasts.

DR. HOWARD T. KARSNER, professor of pathology and director of the Institute of Pathology of the School of Medicine, Western Reserve University, will deliver the eighth Christian Fenger Lecture of the Institute of Medicine of Chicago and the Chicago Pathological Society at the Palmer House on February 14. His subject will be "Calcific Aortic Stenosis."

DR. DETLEV W. BRONK, Johnson professor of biophysics and director of the Eldridge Reeves Johnson Foundation for Medical Physics of the School of Medicine of the University of Pennsylvania, will deliver the second Walter Wile Hamburger Memorial Lecture of the Institute of Medicine of Chicago on January 28. The lecture will be entitled "Cardiovascular Problems in Military Aviation."

PROFESSOR KARL S. VAN DYKE, chief physicist of the Quartz Crystal Section of the Engineering and Technical Service of the Office of the Chief Signal Officer, Army Service Forces, War Department, Washington, D. C., now on leave of absence from Wesleyan University, made an address entitled "Standardization of Quartz Crystal Units" on January 5 before the New York Section of the Institute of Radio Engineers.

DR. JAMES C. MAGEE, Major General, U. S. A. (retired), a former Surgeon General and now director of Medical Informational Service of the National Research Council, recently addressed a special meeting of the staff and students of the Medical Branch of the University of Texas at Galveston, on the significance of tropical diseases before and after the war. The address was sponsored by the Association of American Medical Colleges and the John and Mary R. Markle Foundation.

At the fifty-seventh annual convention of the Association of Land-Grant Colleges and Universities, held in Chicago in October, the vice-president, C. B. Hutchison, dean of the College of Agriculture of the University of California, was elected president, with C. S. Boucher, of Nebraska, vice-president, and Thomas P. Cooper, of Kentucky, secretary-treasurer. C. A. Dykstra, of Wisconsin, and M. S. Eisenhower, of Kansas, were elected to the executive committee for four-year terms, and W. H. Martin, of the New Jersey Agriculture Experiment Station, was elected to fill the two-year term vacancy created by the death of C. E. Ladd.

THE third annual meeting of the Society of Vertebrate Paleontology, held in the Sinclair Library of Princeton University on December 30, was devoted entirely to business matters and was attended by the officers, C. W. Gilmore, *President*; G. L. Jepsen, *Secretary-treasurer*, and E. H. Colbert, *proxy* for instructed votes. Ten new members were elected.

A war production conference for the solution of manufacturing problems, sponsored by the Engineering Societies committee on war production at the request of the War Production Board, was held at the Hotel Commodore, New York City, on January 14. The program was devoted to the interchange of practical ideas and discussion of common problems. There was a dinner in the evening at which Ralph S. Damon, vice-president and general manager of the American Air Lines, Inc., was toastmaster. Captain Eddie Rickenbacker, president and general manager, Eastern Air Lines, Inc., gave an address entitled "Production Responsibilities for 1944." In the afternoon panel meetings were held on the following subjects: chemical industries; metallurgical

problems; transportation; civilian requirements; safety on and off the job and foundry industries and in the evening manpower utilization; welding problems; production and tool engineering; metallurgical problems and foundry industries.

THE *Journal* of the American Medical Association reports that the first Inter-American Congress of Radiology was recently held in Buenos Aires under the presidency of Dr. Jose F. Merlo Gomez. Delegates to the congress resolved (1) to create an Inter-American College of Roentgenology in Buenos Aires, (2) to stimulate the creation of laws in Pan American countries to promote roentgenology and protect roentgenologists and (3) to provide for retirement of roentgenologists if they become victims of the practice of roentgenology. At the close of the congress a monument in honor of Roentgen, Curie and the victims of roentgenology was unveiled in the Instituto

Municipal de Radiologia y Fisioterapia of Buenos Aires.

In its recent report the National Central Library of London, according to *The Publishers Weekly*, records a partial list of the book losses during two years of bombing of the English libraries: National Central Library—105,000 volumes lost, Birmingham Natural History Library—completely destroyed, Coventry Public Library—completely destroyed, Exeter Public Library—almost destroyed, Liverpool Public Library—150,000 volumes lost, Manchester Literary and Philosophical Library—completely destroyed, Plymouth Proprietary Library—completely destroyed, Plymouth Public Library—completely destroyed, University of London Library—many thousand volumes lost, University College Library, London—about 100,000 volumes lost.

DISCUSSION

THE DEMONSTRATION OF TONIC NECK AND LABYRINTHINE REFLEXES AND POSITIVE HELIOTROPIC RESPONSES IN NORMAL HUMAN SUBJECTS

In decerebrate animals, in newborn infants and in functionally decerebrate or decorticate adult human subjects, rotation or tilting of the head to the side results in extension of the fore and hind limbs of that side and flexion of the limbs of the opposite side. Similarly, backward tilting of the head increases extensor tonus in both fore limbs and diminishes the tonus of the hind limbs. Forward tilting of the head produces opposite results. These phenomena are not ordinarily demonstrable, in clear-cut fashion, in normal adults, but when extensor muscles of the limbs are rendered hypertonic, by the procedures to be described, tonic neck and labyrinthine reflexes are elicited in striking fashion.

If one stands in a narrow doorway and stretches the extensor and abductor muscles of both arms for one to two minutes by exerting strong lateral pressure against the backs of the hands, placed against opposite doorposts, it is found, on standing away and relaxing all voluntary effort, that the arms float toward a horizontal position in a surprising manner. The reflex extensor hypertonus, responsible for the effect of this well-known parlor trick, gradually subsides during a minute or less and the arms fall slowly, or suddenly, to the sides. The mechanism of augmentation of the stretch reflexes, upon which this hypertonus probably depends, has been a subject for speculation.¹ What-

ever the mechanism, the increased tone provides a basis for the study of the tonic neck, labyrinthine, eye, crossed extensor, nociceptive and various positive and negative combinations of these reflexes in normal subjects.

During "levitation" of the arms, turning or tilting the head to the right, or turning the eyes strongly to the left, or shining a strong light into the eyes from the left increases the abduction of the right arm and diminishes or abolishes tonus in the left arm. The reverse positions of the head or eyes or light cause the left arm to rise again to some degree and the right arm to drop. Forceful downward rotation of the eyes or light from below, or backward tilting of the head increases the tonus and degree of abduction of both arms, while upward rotation of eyes or light from above or ventriflexion of the head reduces tonus in both limbs. A crossed extensor reflex, resulting from strong voluntary flexion of one elbow, facilitates reflex extension on the opposite side. Painful stimulation, as by pinching, quickly abolishes tonus on the affected side. The reflexes mentioned may be combined successively or simultaneously in various patterns of facilitation and inhibition of the extensor tonus.

Temporary hypertonus of the knee extensors results from pushing the toe of one shoe against a wall. The resulting hypertonus may be modified by eye, neck and labyrinthine reflexes, as in a decerebrate animal.

A slight degree of hypertonus of the flexors of the elbow or knee may follow prolonged voluntary contraction of these muscles against resistance. Tonic neck, labyrinthine and eye reflexes produce the ex-

¹ A. Schwartz and P. Meyer, *Compt. rend. Soc. Biol.*, 85: 490, 1921.