SCIENTIFIC NOTES AND NEWS

THE Duddell Medal of the Physical Society, London, has been awarded to Professor Ernest O. Lawrence, of the University of California, for "his invention and subsequent development of the cyclotron."

THE Distinguished Service Medal was awarded at the New York meeting of the American Medical Association to Dr. Chevalier Jackson, until his resignation in 1930 professor of bronchoscopy and esophagoscopy at the Graduate School of Medicine of the University of Pennsylvania and at Jefferson Medical College, Philadelphia, and later, until his recent retirement, professor of clinical bronchoscopy at Temple University.

DR. A. C. FIELDNER, director of research at the U. S. Bureau of Mines, was presented with the Sullivant Medal of the Ohio State University at the commencement exercises on June 10. The medal is awarded every five years to "a graduate of the university for outstanding achievement."

DR. JOHN R. WILLIAMS has been awarded the Albert David Kaiser Medal of the Rochester Academy of Science "for service to the community and to the medical profession." The citation, according to the *Journal* of the American Medical Association, reads: "Dr. Williams has been the leading spirit, guide and director in the establishment of the Medical Museum in the Rochester Academy of Medicine, which from its beginning has maintained a high standard of educational value for the medical profession and the public."

IN recognition of his "outstanding service to psychiatry" Boston University conferred at commencement the honorary degree of doctor of science on Dr. Winfred Overholser, superintendent of St. Elizabeths Hospital, Washington.

DR. B. SMITH HOPKINS, professor of chemistry at the University of Illinois, was on June 10 awarded the honorary degree of doctor of laws by Carroll College, Waukesha, Wis.

THE Cross of the Commander of the Order of Alexander of Bulgaria has been conferred on Dr. Wolfgang Ostwald, professor of colloid chemistry at the University of Leipzig.

THE Robert Bunsen Memorial Medal has been awarded to Dr. Friedrich Rudolf Schenck, director of the State Institute for Metallurgical Chemistry at Marburg.

THE American Association for the Study of Allergy, meeting in New York City on June 10 and 11, elected the following officers: *President,* Dr. Robert L. Benson, Portland, Ore.; *President-elect,* Dr. Milton B. Cohen, Cleveland; *Vice-president,* Dr. Samuel M. Feinberg, Chicago.

AT the anniversary meeting of the Linnean Society of London held on May 24 the following officers were elected: *President,* Dr. E. S. Russell; *Treasurer,* Francis Druce; *Secretaries,* I. Henry Burkill for botany, and Dr. Malcolm Smith for zoology.

DR. EVERETT STANLEY WALLIS, associate professor of chemistry at Princeton University, has become A. Barton Hepburn professor of organic chemistry, succeeding Dr. Lauder W. Jones, who retired in 1937.

DR. FRANCIS CARTER WOOD has been made director emeritus of the Institute of Cancer Research at the College of Physicians and Surgeons of Columbia University. He will continue in private practice. It is also announced that the institute has been converted into the department of cancer research of the medical school, with Dr. William H. Woglom, associate professor of cancer research, as acting executive officer.

DR. ERNEST H. HUNTRESS, associate professor of organic chemistry in charge of the Undergraduate Division of the Massachusetts Institute of Technology, has become chairman of the Graduate School of Chemistry. He succeeds Dr. James F. Norris.

DR. J. P. GUILFORD, professor of psychology and director of the Bureau of Instructional Research at the University of Nebraska, has been appointed professor of psychology at the University of Southern California. Dr. H. M. Cox succeeds him as director of the Bureau of Instructional Research.

DR. JOHN L. RICH has been appointed head of the department of geology and geography of the University of Cincinnati; Daniel R. Bergsmark has been promoted from assistant professor to associate professor of geography, and Otto C. von Schlichten, to associate professor of geology. Dr. Kenneth E. Caster, curator of the museum, has been made assistant professor of geology.

DR. WYNFRID LAURENCE HENRY DUCKWORTH, reader in anatomy at the University of Cambridge, has been elected master of Jesus College.

THE du Pont Fellowship of the value of $2,000 for advanced study in chemistry at Harvard University, has been awarded to Douglas M. Bowen, of Glen Ridge, N. J.

THE B. G. Lamme Graduate Scholarship of the Westinghouse Electric Company for the year 1940–41 has been awarded to John W. McNall, research engineer of the company at Bloomfield, N. J. The Lamme scholarships are provided for by a fund, established about twelve years ago as a memorial to the late Ben-

jamin Garver Lamme, who was for many years chief engineer of the company.

DR. EVARTS A. GRAHAM, professor of surgery in the School of Medicine of Washington University, St. Louis, president of the American College of Surgeons, has been made chairman of the surgical advisory committee on national defense of the National Research Council in collaboration with Surgeon-General James Carre Magee, of the Army, and Surgeon-General Ross T. McIntire, of the Navy.

LOREN C. EISELEY, assistant professor of anthropology at the University of Kansas, has a year's leave of absence to enable him to accept a post-doctoral research training fellowship in physical anthropology from the Social Science Research Council.

W. B. VAN ARSDEL has been appointed chief of the Division of Engineering and Development of the Western Regional Research Laboratory of the U. S. Department of Agriculture at Albany, Calif. He will be in charge of the engineering development of processes worked out in the Western Laboratory and the study of industrial opportunities for expanding outlets for farm products. Dr. G. E. Hilbert has been appointed head of the Starch and Dextrose Division of the Northern Regional Research Laboratory at Peoria, Ill.

DR. W. W. ALEXANDER has resigned as administrator of the Farm Security Administration to become vice-president of the Julius Rosenwald Fund.

ARCHIE J. WEITH has been appointed director of research at the Bloomfield Research and Development Laboratories of the Bakelite Company.

DR. NATHAN WEINER, of Harvard University, late research assistant to Dr. Arthur Michel, and Dr. Joseph T. Bashour, late research assistant to Dr. Zannetti, of Columbia University, have joined the research staff of Endo Products, Inc., Richmond Hill, New York.

DR. H. SHAW, keeper of the Department of Physics and Geophysics at the Science Museum, South Kensington, has been appointed acting director of the museum during the absence of Brigadier E. E. B. Mackintosh.

DR. E. H. CLUVER, secretary for public health and chief health officer for the Union of South Africa, has been appointed director of the South African Institute for Medical Research in succession to the late Sir Spencer Lister. Dr. George Buchanan, superintendent, has been appointed deputy director.

THE British Association has decided to cancel the Conference on Science in its National and International Aspects which was to have been held at Reading from July 25 to 27.

Nature states that the fifth International Congress of the History of Sciences will be held at Lausanne next September if the political and social conditions of Europe permit. M. Aldo Mielli, the perpetual secretary of the International Academy of the History of Sciences, having now settled at Santa Fé in the Argentine Republic as director of the history of sciences at Santa Fé University, M. J. A. Vollgraf, of Leyden, has been appointed assistant secretary for Europe. The review *Archeion,* the official organ of the academy, will henceforth be published at Santa Fé instead of at Rome as hitherto.

THE Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture took over on June 27 its new headquarters at 209 River Street, Hoboken, N. J., where imported plants must be treated before being admitted into the country. The building is four stories in height and was erected at a cost of $400,000. It took two years to construct and replaces a group of buildings in Washington in which the bureau was housed. The bureau will be directed by Dr. George G. Becker, senior entomologist.

THE U. S. Civil Service urges explosive chemists to apply at once for the civil service examinations now open for the various grades of chemist and chemical technologist positions in the federal service. It is pointed out that in connection with the present defense program it is important that a large number of well-qualified explosive chemists and chemical technologists be immediately available should vacancies occur in this field. The salaries for the positions for which these examinations have been announced range from $2,600 to $4,600 a year. Applications must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than July 15, or three days later from states west of Colorado. Information in regard to the examination can be obtained from the Secretary of the Board of U. S. Civil Service Examiners, at any first or second-class post office, or from the Washington office of the commission.

AT the annual meeting of the American Society of Tropical Medicine in Memphis, the Bailey K. Ashford Award in Tropical Medicine was established by Eli Lilly and Company to provide for three awards on alternate years. The award will be $1,000 and a bronze medal suitably engraved. An additional amount of $150 or as much thereof as may be necessary is available toward traveling expenses for the recipient of the award.

Museum News reports that by the will of William Benbridge Wetherill, former president of the Tippe-

canoe County Historical Association, Lafayette, Ind., the Board of County Commissioners receives in trust for the association the Wetherill home, with its contents and a trust fund of $100,000 for the erection of a museum, or museum rooms and auditorium on the property. If the entire amount of the fund is not required for the construction, the remainder may be used for improvements or as a maintenance fund. The will provides also for a $5,000 trust fund to be added to Dr. Wetherill's previous gifts to the association.

A COUNCIL of eleven members has been named to conduct the newly established University Research Institute of the University of Texas, which will cover the field of research in business, city government, engineering, economic geology, industrial chemistry and the social sciences. It has been granted an initial budget of $25,000 annually. Members of the council include Drs. J. T. Patterson, R. L. Moore, E. H. Sellards, R. J. Williams, E. C. Barker, F. C. Ayer, J. C. Dolley and Theodore Hornberger. Dr. A. P. Brogan, dean of the Graduate School, has been made chairman. W. R. Woolrich, dean of engineering, and Dr. W. E. Gettys, director of social science research, have been named ex-officio councilmen. Dean Brogan explained that the new program will provide for the first time university money to match grants from educational and scientific foundations which have fallen heretofore outside established university studies.

A REPORT of the British Home Office relating to experiments on living animals shows, according to a summary in the London *Times*, that the total number of experiments performed during 1938 was 958,761, or 39,801 more than in 1937. The number of experiments performed with anesthetics was 49,915, being 9,596 more than in 1937. The number of experiments comprising inoculations, hypodermic injections and other proceedings performed without anesthetics was 908,846, 30,205 more than in 1937. Of the 49,915 experiments performed with anesthetics, comprising all the cases in which a serious operation was involved, 14,797 were performed under license alone or under certificate C, and therefore came under the provision of the act that the animal must be kept under an anesthetic during the whole of the experiment. The experiments performed without anesthetics—908,846 in number—were mostly inoculations and feeding experiments. In addition, a certain number consisted of oral administrations, inhalations, external applications and the abstraction of body fluids. A large number of experiments, almost wholly simple inoculations and similar proceedings, were performed either on behalf of official bodies, with a view to the preservation of the public health or directly for the diagnosis and treatment of disease. Over 183,000 experiments were reported by 365 licensees as having been performed for Government Departments, the Medical Research Council, county councils, municipal corporations or other public health authorities.

DISCUSSION

A POSSIBLE EXPLANATION OF DEEP-FOCUS QUAKES

IN view of the interest shown at the Washington meeting of the International Union of Geodesy and Geophysics in the explanation of deep-focus quakes, it seems appropriate to air a suggested explanation of such quakes advanced informally at a meeting of the Geological Society of America by the writer—an explanation which time has so far prevented his testing properly.

Seismological evidence indicates that some quakes have their origin as far down in the earth as 500 miles or more. From the large amplitude of the shear waves in these quakes we must conclude that considerable shear energy is released. This implies that at a depth of 500 miles in the earth we have a region where resistance to distortion is possible and shear energy can be stored up—quite contrary to geologists' notions of conditions at such a depth. In view of this implication, Jeffreys and others are prepared to attribute finite strength in the earth to this required depth of 500 miles. At the international meeting mentioned, Jeffreys seemed even willing to throw overboard the theory of isostasy. Before thus rejecting orthodox geological views of the earth's interior, the present note suggests another possibility, namely, that in the so-called deep-focus quakes, the quake or fracture actually occurs comparatively near the surface but that a real image of it is formed some hundreds of miles down and it is from this focal point that the seismologist's waves start. The first question that arises on such a hypothesis is—does the seismologist then receive waves both from the quake and from its image or only from its image?

Clearly waves must be emitted from such a near surface fracture, but there are two reasons why perhaps they are not recorded. It is not at all uncommon for the first impulse of a compressional wave on a seismograph record to be preceded some ten or twelve seconds by an emergence. As its name implies, an emergence is a gradual beginning. If we can actually identify such emergences ten or twelve seconds before an impulse, it may well be that some emergences too faint to be identified arrive many seconds earlier still;