Fellowships, National Institutes of Health, United States Public Health Service, and by a grant from the Office of Naval Research.

- ¹ MacMunn, C. A., J. Physiol., 6, 22 (1885).
- ² Keilin, D., Proc. Roy. Soc., B, 98, 312 (1925).
- Warburg, O., for a summary, see "Schwermetalle ...", chapter 14 (Freiburg, 1949).
- Warburg, O., and Negelein, E., Biochem. Z., 214, 64 (1929).
- ⁵ Keilin, D., and Hartree, E. F., *Proc. Roy. Soc.*, B, **127**, 167 (1939). ⁶ Slater, E. C., *Biochem. J.*, **45**, 14 (1949).
- ⁷ Chance, B., Rev. Sci. Instr., 22, 619 (1951).
- ⁸ Haas, E., Naturwiss., 22, 207 (1934).
- Baumberger, J. P., Cold Spring Harbor Symposia, 7, 195 (1939).
 Arvanitaki, A., and Chalazonitis, N., Arch. Internat. Physiol., 54, 441 (1947).
- 441 (1947).

 11 Davies, P. W., and Brink, F., Rev. Sci. Instr., 13, 524 (1942).

 12 Keilin, D., and Hartree, E. F., Biochem. J., 41, 503 (1947).

 13 Theorell, H., Biochem. Z., 285, 207 (1936).

- ¹⁴ Bach, S. J., Dixon, M., and Zerfas, L. G., Biochem. J., 40, 229 (1946). ¹⁵ Pappenheimer, A. M., and Hendee, E. D., J. Biol. Chem., 171, 701 (1947) (and personal communication).
- ¹⁶ Ball, E. G., Strittmatter, C. F., and Cooper, O., J. Biol. Chem., 193, 635 (1951).
- ¹⁷ Theorell, H., and Akesson, A., Ark. Kemi, Min. o. Geol., 17B, No. 7 (1943).
- ¹⁸ Lemberg, R., and Legge, J. W., "Hematin Compounds and Bile Pigments" (Interscience, 1939).
- 18 Agner, K., Acta Physiol. Scand., 2, Supp. 8 (1941).
- 20 Potter, V. R., and Rief, A. C., Fed. Proc., 10, 234 (1951).
- ²¹ Watanabe, M. I., and Williams, C. M., J. Gen. Physiol., 34, 675 (1951).
- Chance, B., in "Advances in Enzymology", 12, 153 (1951).
 Millkan, G. A., Physiol. Rev., 19, 503 (1939).
 Smith, L., Fed. Proc., 10, 249 (1951).
 Tsou, C. L., Biochem. J., 49, 512 (1951).

- ²⁶ Ahmad, K., Schneider, H. G., and Strong, F. M., Arch. Biochem., 28, 281 (1950).
- ²⁷ Euler, H. v., Schlenk, F., Helwinkel, H., and Hogberg, B., Z. physiol. Chem., 256, 208 (1938).
- ²⁸ Theorell, H., and Bonnichsen, R. K., Acta Chem. Scand., 5, 1105
- ³⁹ Altschul, A. M., Abrams, R., and Hogness, T. R., J. Biol. Chem., 136, 777 (1940).
- 30 Chance, B., in "Enzymes and Enzyme Systems" (Harvard Univ. Press, 1951).
- ³¹ Stern, K. G., J. Biol. Chem., **114**, 473 (1936). ³² Tissières, A., Biochem. J., **50**, 279 (1951)
- ⁸³ Kubowitz, F., and Haas, E., Biochem. Z., 255, 247 (1932).

OBITUARIES

Sir Peter Henry Buck, K.C.M.G. (Te Rangi Hiroa)

The death of Sir Peter Henry Buck (Te Rangi Hiroa) on December 1 brought an end to one of the most extraordinary and distinguished careers the world has known. His passing is a bitter loss; but he has left to us a priceless heritage. The influence of his warm and charming personality will endure so long as there are people who had the privilege of knowing him. The results of his lifelong efforts to describe accurately the arts and crafts of the peoples of Polynesia will remain as landmarks of scientific study in the field of anthropology. His contributions to our understanding of people and their problems are being incorporated as a part of an enduring body of knowledge about mankind.

Sir Peter was born in New Zealand on August 15, 1880. His father, William Henry Buck, was an Irishman; his mother, Ngarongo-ki-tua, was a native Maori of high status. After spending most of his younger years among his mother's people, he married Margaret Wilson, of Gremouth, New Zealand, in 1905 and entered the University of New Zealand. Receiving his M.D. in 1910, he served as a member of the New Zealand Parliament until 1914. From then until 1919 Dr. Buck served with the first Maori contingent of the New Zealand Medical Corps

in Egypt and Gallipoli, achieving the rank of major. During this period his wife was a hospital nurse in London and in Alexandria. They were decorated for their war services, Mrs. Buck with the M.B.E., and Dr. Buck with the D.S.O.

After the War, Dr. Buck became director of Maori hygiene in New Zealand, leaving in 1927 to serve as ethnologist for the Bishop Museum in Honolulu. In this latter capacity (accompanied by his wife) he made numerous field trips to the islands of Polynesia to collect detailed information on native customs, which served as the basis for his many publications on Polynesian ethnology. Since they were able to speak the native language of the people they visited and enjoyed intimate knowledge of one Polynesian society, the Maori, they accomplished far more in their research than would otherwise have been possible. In 1936 Dr. Buck was made director of the Bishop Museum and professor of anthropology at Yale University. In 1946, he was made a knight commander of the order of St. Michael and St. George in recognition of his scientific research.

CLELLAN S. FORD

Dr. Arthur Bulleid

Dr. ARTHUR BULLEID, who died at his home. Dymboro, Midsomer Norton, Somerset, on December 27, at the age of eighty-nine, will be best remembered as the discoverer of the Iron Age 'B' site known as the Glastonbury Lake Village.

Bulleid, who was by profession a medical practitioner, had an early opportunity of cultivating a taste for archæology, and having read Keller's bock on the Swiss Lake-dwellings, Munro's "Lake Dwellings of Europe" and other works, he became imbued with the idea that remains of a somewhat similar nature were to be found in the swamps of central Somerset. So, in his rambles over the moors, he was on the look-out for possible sites, and he visited peat-cutting operations in the vicinity. A little later, he found the mounds about a mile north of Glastonbury, on the road to Godney, which raised a suspicion in his mind that they were artificial. Certain remains which turned up on mole-heaps settled the point, and Arthur Bulleid got into touch with Dr. Robert Munro and Sir W. Boyd Dawkins and other archæologists. This resulted in the British Association forming a Lake Village Committee in 1893, and making monetary grants from year to year towards the work. The excavations, however, began in 1892 under the direction of Dr. Bulleid: they were found to be unique and became widely known.

In the same year, due to Bulleid's inquiries and his keenness, a flat-bottomed dug-out boat, 17 ft. in length, was recovered at some little distance from the lake village, and is now preserved in the Glastonbury Museum.

The first series of excavations extended until 1898; then there was an interval of six years, except for a comparatively small exploration conducted in 1902 by Mr. H. St. George Gray. Further operations were resumed in 1904 under the joint direction of Dr. Bulleid and Mr. Gray. This work was completed in 1907. In 1911, Vol. 1 of a large fully illustrated report in royal quarto size was published, followed in 1916 by Vol. 2. Before the issue of Vol. 1, Messrs. Bulleid and Gray began a long series of excavations in 1908 on the site of the neighbouring lake village at Meare, which is in two separate areas known as

the West and East villages. Vol. 1, on the West village, was issued in 1948, and Vol. 2 is now in preparation, and will include Dr. Bulleid's description of the dwellings and further chapters by Mr. St. George Gray on the finds, which are very numerous. The Meare exploration has continued season by season up to date except during the period of the two World Wars.

Dr. Bulleid's archæological interests extended beyond the lake villages, and he was a most careful, accurate and painstaking observer, and exceedingly pleasant to work with; he would go to any trouble to achieve satisfactory results. Moreover, he was a good draughtsman-so essential an attainment for archæological work and especially in connexion with illustrating published reports. Bulleid was never happier than when working at the lake villages, where he made many friends who appreciated his archæological enthusiasm.

For the Proceedings of the Somerset Archaeological Society he wrote valued papers, notably "The Chambered Barrows of North Somerset", "The Ancient Trackway in Meare Heath" and "The Shapwick Boat", and in collaboration with Dr. Wilfrid Jackson "The Burtle Sand Beds in Somerset" (in two

papers).

NATURE

Bulleid was one of the very few remaining members of the Somerset Archæological Society who joined in the last century, namely, in 1893; and he was elected a vice-president in 1924. He became a Fellow of the Society of Antiquaries of London in 1896, of which body he was for some years one of the local secretaries for Somerset. He is survived by his wife and all his children—two sons and four daughters.

NEWS and VIEWS

Physiology at Cambridge: Prof. B. H. Č. Matthews, C.B.E., F.R.S.

PROF. E. D. ADRIAN, Nobel prizeman in medicine in 1932, and president since 1950 of the Royal Society (see *Nature*, **166**, **978**; **1950**), has recently been elected master of Trinity College, Cambridge. He has now retired from the chair of physiology in the University which he has held with great distinction since 1937, and he has been succeeded by Dr. B. H. C. Matthews, reader in experimental physiology in the University. Prof. Matthews is one of the foremost authorities on the activity of sense organs and nervous structures as well as a pioneer in the modern

developments of electrophysiological technique. With the advent of the valve amplifier after the First World War, it became possible to record the very small potential changes due to individual nerve fibres, but convenient recording instruments were not then available. Prof. Matthews not only designed the robust moving-iron oscillograph which met the need, but also has been responsible for much of the subsequent improve-

ment in the design of amplifiers for biological work. He showed his great technical skill in the classical investigation of sensory discharges from muscles which he published in 1933 and in his later work on conduction in the spinal cord. In 1939, his familiarity with a wide range of experiment made him an ideal head of the Physiological Laboratory which was set up at Farnborough to study problems of aviation medicine. He was made a reader on his return to Cambridge in 1946, but still acts as an adviser in aero-medical research. Electro-physiologists in many countries owe their initial training to him and will join in congratulating him on his election to the professorship.

Institute of Metals: Awards

THE Council of the Institute of Metals has made the following awards of medals for 1952:

Institute of Metals (Platinum) Medal: Mr. W. S. Robinson, until recently president of the Consolidated Zine Corporation, Ltd., in recognition of his outstanding services to the non-ferrous metal industries in developing the Australian zinc-lead industry and the British zine industry.

Rosenhain Medal: Prof. André Guinier, Conservatoire National des Arts et Métiers, Paris, in recognition of his outstanding contributions in the field of physical metallurgy, particularly in connexion with precipitation phenomena.

W. H. A. Robertson Medal: Mr. C. E. Davies, for his paper on "The Cold-Rolling of Non-Ferrous

Metals in Sheet and Strip Form" (J. Inst. Metals, 78, 501 (1951)).

Textile Institute: Awards

THE Textile Institute has made the following awards: Institute Medal, awarded in recognition of distinguished services to the textile industry in general, and to the Institute in particular, to Prof. W. E. Morton, professor of textile nology, Manchester College of Technology, and to Mr. W. R. Wadsworth,

Mr. W. R. Wadsworth, managing director, Wm. Frost and Sons, Ltd., Macclesfield; Service Medal, awarded in recognition of valuable services to the Institute, to Mr. F. Kendall, textile consultant and manager of the Physical Testing Laboratory, Bradford Dyers' Association, and to Mr. R. J. Smith, textile technologist at Imperial Chemical Industries, Ltd., Dyestuffs Division, Blackley, Manchester.

British Commonwealth Scientific Conference

A British Commonwealth Scientific Conference will be held in Australia during February 18-March 9 under the chairmanship of Dr. Clunies Ross, chairman of the Australian Commonwealth Scientific and Industrial Research Organization. The Conference will commence at Canberra and after a few days will then adjourn to Melbourne. The delegates for

It is with deep regret that we announce the death of His Majesty The King