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OBITUARIES

Prof. T. H. Laby, F.R.S.

THE death of Prof. T. H. Laby, at the age of sixty-six, brings to an end the career of one devoted to the furtherance of physics and of science generally. His efforts in this direction, often in very difficult circumstances, undoubtedly undermined his health. Despite this, he was untiring in his work, the value of which to his native country, Australia, and to the world of science in general, is still inadequately recognized.

Laby was born in Victoria, Australia, and received his early academic education at the University of Sydney. After graduating, he was awarded an Exhibition of 1851 Overseas Research Studentship, and proceeded to Emmanuel College, Cambridge, and to research work at the Cavendish Laboratory under J. J. Thomson. After a successful period there, during which he held the Joule Studentship of the Royal Society, he took up an appointment as professor of physics at Wellington, New Zealand, in 1909. This he held until 1915, when he was elected to the chair of natural philosophy in the University of Melbourne, a post he retained until his resignation in 1942. His influence on Australian physics during this period was remarkable, and it is largely due to him that Australia holds a high place in the realm of physics.

Among the many reasons why Laby played such a unique part in the development of physics in Australia was his great interest in research and the wide range of his own activities in this direction. During his tenure of the chair, there existed throughout his department an air of enthusiasm and a feeling of complete confidence in the importance of the subject, which lent a distinction apparent to undergraduates as well as research students. This led to a remarkably regular production of very keen research students; so regular, in fact, that it was a matter of great surprise if, in any year, one of the Exhibition of 1851 Overseas Studentships did not fall to a member of Laby's department.

His primary interest was in precision experimental physics, but this did not prevent him from realizing the importance of other branches of the subject. Thus he was keenly aware of the importance of theoretical physics and encouraged any students with a bent in that direction. His unusual breadth of view is exhibited by his abolition of practical examinations in the subject, despite his own special interest in experiment.

It is difficult to say in which field of precise experiment Laby was most interested; thermal conduction, mechanical equivalent of heat, X-rays, geophysics, scientific radio all occupied his attention and were a continual source of research problems for his students and assistants. The precision determination of J by Laby and Hercus is well known, as are also the series of papers by Laby and by his assistant Kannuluik on problems of thermal conduction. Laby was actively interested in the work of the geophysical prospecting party, led by Broughton Edge in Australia in 1929, and collaborated with Edge in editing the final report of the work, which is by way of becoming a standard text-book on the subject. Besides these researches in which he, personally, took an active share, Laby encouraged work on nuclear physics, and a neutron generator was in operation just before the War.

Among his publications the most widely used is undoubtedly the "Tables of Physical and Chemical Constants", compiled in collaboration with Dr. G. W. C. Kaye, and now in its ninth edition.

Apart from his academic activities, Laby played a very important part in official developments in Australian science, such as the organisation of the radium supply for hospitals and the formation and operation of the Radio Research Board. As a result of the latter, Australian workers have made, and are continuing to make, very important contributions to problems of radio transmission through the atmosphere. Despite all his other interests Laby maintained a detailed knowledge of developments in radio-physics. Thus, during his visit to England in 1934, he read to the Royal Society a stimulating paper by Martyn and Pulley, and was instrumental in exciting the interest of atomic physicists in ionospheric problems. He was thoroughly convinced of the importance of physics in the development of Australian industry, and devoted a great deal of time and effort towards the often thankless and wearisome task of convincing others of this now generally accepted fact.

At the outbreak of war in 1939, there existed virtually no optical industry in Australia to meet the requirements of optical munitions supply. Laby took a leading part in the organisation of the Optical Munitions Panel of Australia, of which he was the first chairman. This body was vital to the establishment of a sufficiently productive industry. Laby's real value in the war crisis cannot be measured only by this. The great contribution that Australian physicists were able to make to the defence of their country and of the British Commonwealth could not have been made if in preceding years a firm tradition of high-quality physics had not been established in Australia, largely by the efforts of the Department of Natural Philosophy at Melbourne under Laby's direction. The difficulties of doing this under conditions of isolation imposed by the great distance of Australia from Europe and America cannot easily be over-estimated, and there is no doubt that Laby sacrificed himself unsparingly in achieving this end.

H. S. W. MASSEY

Dr. Arthur W. Rogers, F.R.S.

ON June 23 ¹⁶¹he passed away at Cape Town, at the age of seventy-four, one to whom South Africa owes much in regard to geological discovery, description and application. A. W. Rogers was born at Bishops Hall, Somerset, and educated at Clifton College and Christ's College, Cambridge—of which he was later elected an honorary fellow; he also studied at the University of Heidelberg.

In 1896 Rogers became assistant geologist to the Geological Commission of the Cape of Good Hope, director thereof in 1903, and director of the Geological Survey of the Union from 1916 until his retirement in 1932. His forty-three years of sterling service with the Government were divided equally between the Cape and Transvaal provinces.

Closely associated in the field at first with his colleague Prof. E. H. L. Schwarz, largely within the picturesque south-western corner of the Cape with its magnificent exposures of folded strata, he was able, by 1905, to publish "An Introduction to the Geology of Cape Colony", the first text-book of its kind for southern Africa, and a work of considerable

merit. In it were set forth the main tectonic lines, stratigraphy, palaeontology and history of this interesting land with its many pre-Cambrian systems, Carboniferous glacials, prolific Permo-Triassic vertebrates and Mesozoic dolerites. During the next decade he carried investigation far to the north—to the border of the Kalahari and German territory—describing little-known pre-Cambrian groups or discovering new ones, such as the crocidolite-bearing jaspers, the Numees tillite, Ongeluk tillite, magmatic copper-bearing eruptives and melilite-basalts.

In the Transvaal, Rogers' main work lay in the mapping of the Heidelberg goldfields, during which the glacials of the Witwatersrand Beds were first recorded. Administrative duties greatly interfered with his output of purely scientific work. Under his able direction, however, a high standard was achieved by the Geological Survey, and numerous maps and memoirs issued, not a few of them of great economic importance.

Attracted, like so many others, by the vast Kalahari and its queer siliceous and calcareous rocks, he was able to cross its heart as well as inspect its borders, and contributed two illuminating addresses on the solid and surface geology of that sand-strewn region.

Always interested in the finer structure of substances, Rogers developed upon retiring to the Cape in 1932 a still keener interest in the microscopical and microchemical examination of the sedimentary rocks, a study which he pursued the more constantly after 1938, when ill-health had debarred him from further field work. To many of us such minuter researches proved helpful indeed.

Rogers' writings were numerous and varied: for the most part accounts of regional geology appearing as departmental reports or in yearbooks, or else as papers based thereon, though none was of monographic size. His most important works are "The Geology of the Country around Heidelberg", his contribution to the "Handbuch der Regionalen Geologie: The Union of South Africa" (1929) and his fascinating history of "The Pioneers in South African Geology and their Work" (1937), in which so much interesting geological as well as biographical information was so meticulously recorded for posterity. His presidential addresses cover a wider field, and range in their subjects from past climates to the evolution of river systems and 'pans'. Only just

recently he completed a description of the diatom floras of the diatomaceous deposits of the Union in collaboration with L. E. Kent, intended for Memoir No. 42 of the Geological Survey, a research on which he had been long engaged.

In all, Dr. Rogers contributed both abundantly and nobly to our geological and geographical knowledge of a wide terrain, which I indeed regard as one of the key regions of the earth.

Connected with many learned societies, he was elected a fellow of the Royal Society of London (1918), the Geological Society of London (1896) and Royal Society of South Africa, as well as honorary fellow, member or correspondent of others. Rogers had been president of the Geological Society of South Africa (1915), of the South African Association for the Advancement of Science (1922), of the International Geological Congress (1929) and of the Royal Society of South Africa (1934-35). His awards were numerous: the Bigsby Medal (1907) and Wollaston Medal (1931) of the Geological Society; South African Medal (1913) of the South African Association for the Advancement of Science; Scott Medal (1931) of the Biological Society of South Africa, and Draper Memorial Medal (1936) of the Geological Society of South Africa. He received the degree of Sc.D. from Cambridge and an honorary degree of D.Sc. from the University of the Witwatersrand.

Rogers will always be remembered for his geniality, readiness to discuss or guide, scrupulous attitude towards the work or views of others, and honesty of purpose. His outlook was, however, coloured by some conservatism. Throughout, he was the man of science pursuing his subject for its own sake, and perhaps for that reason the grander problems of the African continent do not seem to have gripped him. Having been closely associated with Arthur Rogers over many years, I feel that a noteworthy geologist has been lost to the world. ALEX. L. DU TOIT

WE regret to announce the following deaths:

Dr. H. A. Colwell, known for his work on X-ray therapy and related subjects, on July 22, aged seventy.

Prof. J. Park, emeritus professor and formerly dean of the Faculty of Mining in the University of Otago, aged eighty-nine.

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NEWS and VIEWS

Social Anthropology at Oxford:

Prof. A. R. Radcliffe-Brown

PROF. A. R. RADCLIFFE-BROWN, who is retiring from the chair of social anthropology in the University of Oxford, took a Cambridge degree in moral philosophy and studied anthropology as a post-graduate student under Haddon and Rivers, lecturing also occasionally for the London School of Economics. He started work in the field with a visit to the Andamans as Anthony Wilkin Student in 1906, but his book on "The Andaman Islanders", in its first form presented as a fellowship thesis at Trinity College, though finished before the First World War, was not published until 1922. By that time Radcliffe-Brown had been lecturing on anthropology at Johannesburg and was the first professor of social anthropology at Cape Town. From Cape Town he went as the first holder of a chair of anthropology at

Sydney, and his foundation of a school of research and teaching at these two universities has perhaps been the most important contribution to anthropology of his career. His series of very important papers on Australian kinship systems, originally published separately in *Oceania*, have since been incorporated and published as a single volume. From Sydney he went to Chicago, again as the first professor of anthropology, so that his choice in 1937 to occupy a newly founded chair in social anthropology at Oxford was almost a foregone conclusion.

Prof. Radcliffe-Brown received the Rivers Memorial Medal of the Royal Anthropological Institute for research in the field in 1938; he was president of the Institute in 1939 and 1940; he was Frazer Lecturer in Cambridge in 1939; and he was Henry Myers Lecturer at the Royal Anthropological Institute in 1945. His contributions to anthropology in the form of researches on Australian kinship systems