universities and research institutions, as well as some companies and individuals, are using the service.

Although few results have been produced as yet, some had special significance. One group established that the prior stream-beds were actively depositing more than 34,000 years ago in the area south-west and west-south-west of Griffith, New South Wales. Other results are regarded by archaeologists as of great significance to the study of Stone Age man in Australia. Charcoal occurring with uniface pebble tools from the Clarence Valley in northern New South Wales was aged 3,880 ± 120 years, and it is the earliest evidence of aboriginal occupation of this part of Australia. Of less importance, but great public interest, was the piece of red gum from a deep boring on the site of Melbourne's projected National Gallery and Cultural Centre found to be about 9,400 years old. The information was of value to the architects, who are about to start the foundations of the £5,000,000 building.

Many persons and institutions have willingly given valuable advice and help, and we are especially indebted to the staff and those in charge of the Institute of Nuclear Science's Dating Laboratory at Lower Hutt, New Zealand. Two grants for special equipment from the Australian Institute of Nuclear Science and Engineering enabled the date of the opening to be advanced by some months.

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[2] Focken, C. M., *Austral. J. Sci.*, **17**, 10 (1954).
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OBITUARIES

Prof. H. B. Squire, F.R.S.

HERBERT BRIAN SQUIRE was born at St. Neots in 1909, the son of a Bedfordshire farmer, and he died on November 23, 1961. He was educated at Bedford School and Balliol College, Oxford, where he was an Exhibitioner. He read mathematics, and after graduating with first-class honours, he spent a year as a research student under Prof. R. V. Southwell and a further period of a year was spent at Göttingen working with Prof. L. Prandtl. This initial post-graduate work established his interest and reputation in the field of fluid mechanics. He joined the staff of the Aerodynamics Department at the Royal Aircraft Establishment in 1934 and he remained there until 1938, when he became a lecturer in the Mathematics Department of the University of Manchester. He was married in 1937 to Miss Winifred Fenney and they have a daughter aged twenty-one and a son aged eighteen. At the outbreak of war in September 1939 he returned to the Royal Aircraft Establishment, where he remained until 1949. He then transferred to the Aerodynamics Division of the National Physical Laboratory and in 1952 he was appointed to the Zaharoff chair of aviation at the Imperial College of Science and Technology, London.

Squire was a scientist of considerable versatility and wide-ranging interests, but fluid mechanics remained his prime love. Among his earlier achievements was a now classic theorem on the stability of boundary layers to three-dimensional disturbances, a simple method for determining with acceptable accuracy the development of the turbulent boundary layer, a method for calculating the drag of wings which was readily extended to the calculation of the drag of aircraft, some theoretical and experimental investigations of low-drag wings, a number of valuable solutions to problems of heat transfer, and an important study of helicopter stability. His later work included an investigation of jet flows, the characteristics of surfaces planing on water, and some applications of linearized supersonic wing theory of considerable practical significance leading to a family of wings named after him, while in recent years he has devoted much of his time and effort to the experimental and theoretical study of rotating and vortical flows. The hovercraft was a vehicle that particularly fascinated him, and he had in progress a number of investigations into some of the interesting flow problems that this vehicle presents.

For very many years Squire had been a member of the Fluid Motion Sub-Committee and the Helicopter Committee of the Aeronautical Research Council, and when the latter Committee was replaced by the Powered Lift Committee he was appointed its chairman. He was made a Fellow of the Royal Aeronautical Society in 1945 and a Fellow of the Royal Society in 1957. A few months ago he was appointed to the board of the Hovercraft Development Co.

As a man and as a scientist Squire was of a piece. Integrity and an acute sensitivity are the qualities which his friends and colleagues would most readily associate with him; and he had the great scientist's gift of laying bare the essentials of a problem in simple, elegant terms. This gift was in evidence not only in his work but also in his approach to social and human problems, in which he was deeply interested. He took extraordinary pains over his tasks as a teacher, and he earned the devotion of his students and staff.

Squire had no special hobbies, but he enjoyed most outdoor activities such as walking, cycling, camping and sailing, and he had learnt to fly. A year ago, when he was invited to Bangalore, India, he drove there and back in a 'Land-Rover'; he gave as his reason the wish to prove to himself that he was still young. There is no doubt that he enjoyed the physical challenge of the journey, but certainly his main reason was to get first-hand experience of life in the Near and Middle East. He enjoyed reading, the theatre and conversation, and he found some relaxation in carpentry.

His early death is a tragic loss to the world of science; his friends will long mourn not only the loss of his exceptional intellect but also the shy, kindly warmth that characterized all his thoughts and deeds and made his friendship uniquely precious.

A. D. YOUNG

Prof. J. Husband

EMERITUS PROF. JOSEPH HUSBAND died in Sheffield on December 4, 1961, in his ninety-first year. He was born at Rotherham and educated at the old Central Secondary School, Sheffield. In 1888 he was awarded a Royal Exhibition, which enabled him to study engineering at the Royal College of Science, Dublin, where he gained first place in the final associateship

examination in 1891. For his contributions to engineering literature he was elected a Fellow of the College in 1917.

After gaining practical experience of road, river and bridge works, as an assistant to the County Surveyor of Londonderry in Ulster, Husband was appointed a lecturer in 1892 at the Sheffield Technical School, which later became part of the University of Sheffield. Here he developed the civil engineering department, becoming in 1920 the first professor of civil engineering.

Husband was outstanding as a lecturer, his quiet and dignified manner and lucid exposition commanding immediate respect and attention. He took a keen interest in his students, a large number of whom now occupy important positions in Britain and abroad, and it was a great joy to him to correspond regularly with many of them. He was the author of several books and many papers on surveying, structural and other branches of civil engineering. It is probable that his contribution to civil engineering which will be best remembered is his fine oral and written exposition of the subject.

On reaching the age limit, Prof. Husband retired from the chair of civil engineering and became the senior partner in the firm of Husband and Company, of London, Sheffield and Colombo, which were the consulting engineers for the Jodrell Bank radio telescope.

In recognition of his distinction as a civil engineer and of his services to the University for forty-four years, the University of Sheffield conferred on him the honorary degree of doctor of engineering in 1955.

Prof. Husband had many-sided connexions with his profession in Britain and other countries. To mention only a few: he was a member of the Institution of Civil Engineers, the Institution of Water Engineers, the French Society of Civil Engineers and an honorary member of the American Society of Civil Engineers. During 1937–38 he was president of the Institution of Structural Engineers, of which he had been a member since 1924.

Husband was keenly interested in the æsthetic aspect of structural design, and many of his friends will recall with pleasure his remarkable gift for making pen-and-ink and water-colour drawings. It is significant that when he was awarded in 1901 the James Watt Medal and Telford Premium by the Institution of Civil Engineers, the paper which earned the award was entitled "The Æsthetic Treatment of Bridge Structures".

He took a delight in fine scenery and when not engaged on his professional work he was a keen cyclist and until quite recently an indefatigable walker, being a member of the Derbyshire Pennine Club. He was also for many years an executive member of the Sheffield and Peak District Branch of the Council for the Preservation of Rural England.

Husband possessed a dignity and personal charm which was reminiscent of the more tranquil years of his youth, and his many friends will recall his delightful conversation enlivened by anecdotes.

N. S. BOULTON

NEWS and VIEWS

Tropical Hygiene at Liverpool: Prof. T. H. Davey, O.B.E.

PROF. T. H. DAVEY retired at the end of September from the Middlemass Hunt chair of tropical hygiene in the School of Tropical Medicine, University of Liverpool, an institution he had been continuously associated with since April 1929. The early part of his career was spent in Freetown, Sierra Leone, in the Sir Alfred Lewis Jones Laboratory. There his main interests lay in malaria and schistosomiasis and the vectors of these diseases. For a short time in 1935 he joined G. M. Findlay in the Gambia during an outbreak of yellow fever, and there, for the first time in Africa, live virus vaccine was used to protect the susceptible immigrant population. In 1939 he was appointed director of the Sir Alfred Jones Laboratory and continued his work there until 1941 when the laboratory was closed. He then returned to the Liverpool School, where he worked until his retirement. In 1945 he was asked by the Colonial Office to undertake a fact-finding mission and to report on human and animal trypanosomiasis in West Africa. In the same year he was appointed to the chair of tropical hygiene. Davey served on a number of official committees, including the Inter-University Council for Higher Education Overseas, the Colonial Advisory Medical Committee, the Tsetse Fly and Trypanosomiasis Committee, and the Federation of Rhodesia Medical School Planning Committee. In 1954 he was appointed by the Southern Rhodesian Government to be a member of a Commission of Enquiry on Human and Animal Trypanosomiasis in Southern Rhodesia, and in 1958 was appointed Nuffield visiting professor to the University College, Ibadan.

Prof. T. Wilson, C.B.E.

DR. T. WILSON, who succeeds Prof. T. H. Davey in the chair of tropical hygiene at Liverpool, is a graduate of Queen's University, Belfast. After obtaining a diploma in public health at Belfast and a diploma in tropical medicine and hygiene at Liverpool, he joined the Colonial Medical Service and was posted to Malaya, where he worked as a health officer for a number of years. He joined the Royal Army Medical Corps during the Second World War, serving with No. 6 Malaria Field Laboratory; he was a prisoner of war in Malaya and Thailand from 1942 to 1945. On demobilization in 1946 he resumed his duties as health officer in the Malayan Medical Service. In 1949 he was appointed senior malaria research officer in the Institute for Medical Research at Kuala Lumpur, and in 1956 he was appointed director of the Institute. He retired from the Malayan Medical Service in 1959 and was appointed senior lecturer in tropical hygiene in the Liverpool School of Tropical Medicine. Most of Dr. Wilson's published work concerns the post-war investigation of the problems of malaria and filariasis carried out in Malaya at the Institute for Medical Research. Dr. Wilson has served on various World Health Organization panels and committees dealing with malaria and filariasis. He has been a member of the World Health Organization Expert Advisory Panel on Malaria since 1955, and in 1960 was appointed secretary of the Helminthiasis Committee of the Medical Research Council.