1938

SIR SAMUEL PHILLIPS BEDSON, F.R.S.

(Facing p. 1)

Obituary

S. P. BEDSON, 1886-1969

Sam Bedson was born in Newcastle upon Tyne, where his father was Professor of Chemistry. He was educated privately up to the age of ten and after a year at a preparatory school went to Abbotsholme School in Derbyshire, where he spent the next six years. In 1904 he entered the Faculty of Science at Armstrong College and three years later graduated B.Sc. with Honours. Then followed five years in the Durham University College of Medicine and in 1912 he graduated M.B., B.S. again with Honours. He spent the next year at the Pasteur Institute in Paris, where he attended the annual course in microbiology: among the lecturers were Metchnikov, Roux, Borrel, Laveran and Besredka. During this year also he studied in Weinberg's laboratory toxic substances from *Ascaris* and *Taenia*. An account of this work submitted as a thesis won him the M.D. of Durham with a gold medal. In 1913 he returned to London and was working as British Medical Scholar with John Ledingham at the Lister Institute on blood platelets when war broke out. He was not accepted by the Royal Army Medical Corps because his training had been in research, so he obtained a commission in the Northumberland Fusiliers. He suffered a chest wound in Gallipoli in 1915 and was sent home to England; he was gazetted captain the same year. While in France in 1916 he was transferred to the R.A.M.C. and at the end of the war was Adviser in Pathology to the Fifth Army (France). From 1919 to 1921 he was a lecturer in the School of Medicine in Newcastle in the department of Bacteriology with his old teacher Hutchens. He was then appointed assistant in the Bacteriology Department of the Lister Institute and returned to the work on platelets and their role in the production of purpura - the work which had been interrupted in 1914. A series of papers on experimental purpura was published during the next few years, and Bedson came to the conclusion that purpura was due to the great diminution of blood platelets together with some factor that damaged vascular endothelium. His experimental studies led him to believe that platelets were manufactured by megakaryocytes in bone marrow and destroyed for the most part in the spleen.

In 1924 Bedson was seconded to work on foot-and-mouth disease at the Lister Institute under the general supervision of J. A. Arkwright, who was a member of the committee formed by the Ministry of Agriculture to advise on research on this important disease of farm animals. At this time there were no facilities for research on farm animals and Bedson, with H. B. Maitland and Mrs Burbury, did most of their work with guinea pigs. This was Bedson's introduction to virus research. They used intradermal inoculation of the guinea-pig foot-pad as a means of detecting and titrating the virus. They studied the resistance of the virus to various physical and chemical agencies and showed that virus inactivated by formalin would immunize guinea pigs against virulent virus but that heat-inactivated virus failed to do so. They also confirmed the plurality of immunological types of foot-and-mouth virus. Their attempts to cultivate the virus in various media to which serum or guinea-pig embryo tissue had been added were unsuccessful.

In 1926 Bedson was appointed to one of two newly created Freedom Research Fellowships at the London Hospital, the late Lord Florey being appointed to the other. Thus began a close friendship with Sir Philip Panton, which lasted until Panton's death in 1950. Panton had been responsible for the creation of the Freedom Fellowships and for the next eight years Bedson was allowed complete liberty in his choice of work, unencumbered by administrative, diagnostic or teaching responsibilities. These were the early days of research on virus diseases, and Bedson applied himself to studies on the nature of viruses and immunity to them, using for the most part the viruses of vaccinia and herpes simplex in his experiments. In 1929 there occurred the pandemic of human psittacosis infection caused by the commercial distribution of infected psittacine birds from South America and Australia. Bedson's previous training equipped him admirably for the investigation of this disease. From cases admitted to the London Hospital at this time and from diseased birds he isolated the causal agent, by inoculation at first of healthy parrakeets and canaries and later of mice. Thus began his studies on the psittacosis-lymphogranuloma group of agents which were to remain his chief research interest for the rest of his working life and which gained him his international reputation. In 1953 Dr K. F. Meyer proposed that, as Bedson had first furnished adequate proof that the 'elementary bodies' caused psittacosis and had been responsible for the elucidation of the morphological, physiological and immunological properties of this group of agents, the name *Bedsonia* should be the generic title of all agents grouped under the name of psittacosis virus of avian, human and mammalian origin (*Annals of the New York Academy of Sciences* (1953), 56, 381-622). Although later work showed that the psittacosis agents were more closely related to bacteria than to the true viruses, another American authority enthusiastically endorsed Meyer's suggestion that 'the name of Sir Samuel Bedson be reflected in terminology' (Moulder, J. W.: *The Psittacosis Group as Bacteria* (1964), John Wiley & Sons, New York).

In 1934 William Bulloch retired from the Goldsmiths Company's Chair of Bacteriology at the London Hospital Medical College and Bedson was chosen to succeed him. Although the teaching and administrative duties inseparable from the professorship lessened the time he could spend at the bench, Bedson enjoyed contact with the students. He was a good lecturer and got to know personally all London students for the next 18 years. At the same time he continued his studies on the nature of the antigens of the psittacosis group of agents until the outbreak of war in 1939. For the next five years he was Pathologist to sectors I and II of region V of the Emergency Medical Service with his headquarters in Billericay in Essex. He returned to the London Hospital in 1944 and in 1946 succeeded Panton as Director of the Division of Pathology, thus adding to his responsibilities in the Medical College. In 1949 he followed Panton as Consultant Adviser in Pathology to the Ministry of Health, an office he held until 1962. When he retired from the Chair at the London in 1952 he was invited to take charge of the British Empire Cancer Campaign virus unit at the Bland Sutton Institute of Pathology in the Middlesex Hospital. Here he continued his research work on viruses until 1962, when he gave up this post and the work for the Ministry.

In spite of a busy life at the London Hospital Bedson was involved in much committee work outside the London. He was a member of the first Governing Body of the Foot and Mouth Disease Research Institute at Pirbright (1950-55), the Council of the Imperial Cancer Research Fund (1942-55), the Army Pathological Advisory

Committee (1937–62), the Governing Body of the Lister Institute (1944–54), the Public Health Laboratory Service Board (1950–57), the Medical Research Council (1941–45) and the Council of the Royal Society (1937–38 and 1941–42). He also served on the committee of the Pathological Society (1946–49) and on the Council of the Association of Clinical Pathologists (1948–50). He was an original member of the Society for General Microbiology and was elected an Honorary Member in 1963. The Honorary degree of Doctor of Science was conferred on him by Queen's University, Belfast, in 1937 and by the University of Durham in 1946. He was elected a Fellow of the Royal Society in 1934, a Fellow of the Royal College of Physicians in 1945 and was created a Knight in 1956. In 1952 he was awarded the Conway Evans prize of the Royal Society and the Royal College of Physicians, 'given only for a valuable addition or contribution to science'.

Bedson was neat and orderly in all he did. He was a very skilful technician and preferred to do all his own experiments, which were devised with precision and care. He expected from his staff the same high standards that he set himself. His opinions were tenaciously held and would only be abandoned if convincing evidence were forthcoming to refute them. His writing, like his lectures, was clear and concise. His colleagues and pupils will remember him with great affection and respect. In private life he was a delightful companion and host. He was a competent golfer and a keen gardener, but the hobby which gave him greatest pleasure was trout fishing. For many years he had an annual holiday with his sons fishing the streams of Westmorland and Yorkshire. He had played cricket and rugby in his earlier years and later on followed the fortunes of Sussex at cricket and England on the rugby field with strongly partisan enthusiasm.

In 1926 he married Dorothea Annie Hoffert, the elder daughter of Henry Hoffert, a senior inspector of schools for the Board of Education. There were three sons, the second of whom is Reader in Virology in Birmingham University.

A complete list of Bedson's published work is to be found appended to the longer article in *Bibliographical Memoirs of Fellows of the Royal Society* (1970), **16**, 15–35.

A. W. DOWNIE