

of magnetic fields on glow discharges. At one time he thought that the variation of the dimensions of the negative glow was due to what he called magnetic rays. He investigated the discontinuous glow discharge in the now well-known circuit containing a resistance in series with the discharge and a condenser parallel to it, and it is a sign of his great experimental skill that he was able to record in 1902 with a cathode-ray oscillograph the current in the discharge.

In later years Righi gave his interpretation of the measurements of the velocity of light by Michelson and Morley, and suggested an experiment to test the validity of the theory of relativity. Students of the history of physics will find extracts of all Righi's papers in a forthcoming book by G. C. Dalla Nocce and G. Valle (in Italian)³.

¹ See Lodge, Sir Oliver, *Nature*, **105**, 753 (1920).

² Cardani, P., "In memoria di A. Righi", *Nuovo Cim.*, **21**, 53 (1921).

³ "Scelta di Scritti di Augusto Righi" (Bologna: Zanichelli, 1950).

OBITUARIES

Mr. B. W. Tucker

BERNARD WILLIAM TUCKER, who died on December 19 after a long illness, was not only one of the most influential leaders in the field of ornithology but also a scholar with a profound knowledge of vertebrates in general. By his early death, the Oxford School of Zoology has suffered a severe loss. He was born on January 22, 1901, and educated at Harrow and Magdalen College, Oxford. After graduating in 1923, he went with the Oxford Scholarship to Naples and began an investigation of parasitism in the Crustacea, which took him back to the Stazione Zoologica on several subsequent occasions. During this period he was a demonstrator in zoology at Cambridge for a time, but he returned to Oxford in 1926 and in the following year was appointed University demonstrator and lecturer in zoology and comparative anatomy.

Tucker had been a keen naturalist since his early schooldays, and throughout his life he was specially interested in amphibians, reptiles and birds. His most important contribution to zoological literature was his share in the greatly enlarged and revised five-volume edition of Witherby's "Handbook of British Birds" (1938-41); he was responsible for those sections dealing with habitat, field characters, general habits, voice and display. He obtained this information for every species on the British List, and for many of them their field characters had never been described before; to do all this he made numerous expeditions to various parts of Europe from Spitsbergen and Lapland in the north to the Mediterranean countries in the south. It was his enthusiasm, combined with good judgment and a scrupulous regard for exact observation and description, that made him so important a figure in ornithology. Dr. David Lack writes: "The accuracy and wide scope of his notes set a new standard not only for British birds but for the birds of the world". He brought the same qualities to his editorship of the magazine *British Birds*, which he took over as a labour of love when his great friend H. F. Witherby died.

Although associated with others, Tucker was above all the moving spirit in the development of bird studies in Oxford from the founding of the Oxford Ornithological Society in the 'twenties through a

series of events leading to the establishment of the Edward Grey Institute of Field Ornithology in the 'thirties, and its final incorporation as a definite part of the University and a branch of the new Department of Zoological Field Studies in 1947. Oxford did well to honour him by giving him the title of reader in ornithology in 1946. He was a delegate of the University Museum and devoted much time to the care of the zoological collections; he had extensive plans for the improvement of the display of exhibits when his last illness overtook him.

Colleagues and pupils will always remember his gentle, charming manner, his characteristic smile and his readiness to help others whenever he could.

A. C. HARDY

Dr. G. H. Culverwell, O.B.E.

DR. G. H. CULVERWELL, chief inspector in the Home Office under the Cruelty to Animals Act, 1876, died on December 9, at the age of sixty-three.

Culverwell's early years were spent in the School Medical Services, after which he became an inspector in the Home Office in what eventually became the Children's Branch. His duties were concerned with the conditions prevailing in the 'approved schools' and he was largely responsible for many improvements—especially housing and dietary—which took place during his term of office. There he made his mark and he was duly honoured.

Then his career took an entirely different turn; after some hesitation, he was persuaded to accept an invitation to join the inspectorate under the Cruelty to Animals Act, 1876, and thus a long and happy association began. His intellectual qualities, sound judgment, courteous manner and placid temper made him a most agreeable colleague.

I like to remember Culverwell for his valuable work during the Second World War. During this period unusual experiments involving the use of living animals were devised for testing lethal weapons and to ascertain the measures to be adopted to protect troops and civilians. The nature of the work sometimes brought him into conflict with the research workers, for in such an emergency the rights of the animal are apt to be overlooked. Culverwell, however, followed the rigid principle of holding a proper balance between the merits of a research and the interests of the animal, and his view was generally accepted with good grace. Culverwell was concerned with an Act which gives remarkably little direction. He never tired of making its provisions clear to research workers, and the medical research world owes a deep debt of gratitude to him.

Culverwell was working right up to the onset of his last illness, in spite of the indifferent health of his later years.

J. A. GILES

PROF. E. B. VERNEY, Department of Pharmacology, Cambridge, writes: "Though it was Culverwell's work to see that the law was maintained, his belief in the value of humanity was so great that it inspired a kindly attitude in all laboratories he visited. It was recognition of this belief that showed investigators that he was there to help and not to hinder; and such was his kindness that exacting discipline could be enforced and cheerfully accepted. Although his position was essentially administrative, his wise counsel was always available, and he will be sorely missed by the many who have turned to him in their difficulties."