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OBITUARY

Sir Bryan Matthews
CBE, SGD, FRS

Sir Matthews, emeritus professor of physiology at Cambridge, and director of the Royal Airforce physiological laboratories from 1939 to 1946, died on 22 July 1986, aged 80.

Born in 1906, he was educated at Clifton and King's College, Cambridge; he graduated with a first in physiology in part II of the natural sciences tripos in 1927. As a research student of E.D. Adrian he soon showed his flair for the design of apparatus as he invented the moving iron oscilloscope (1928) for photographing the traces of single nerve impulses in the spate experiments. In 1934 he invented the differential amplifier, which greatly alleviated problems of 50 cycle pick up at high gain. All electro-physiologists have used it ever since. In the meantime he was engaged in the work that proved to be the inspiration for countless physiologists, his classic investigation of the single nerve fibre responses of muscle spindles, first in the frog and then in the cat (1933),

Matthews collaborated with Adrian in the mid-1930s in experiments on electrical waves in the cerebral cortex. Their historic demonstration at the Cambridge meeting of the Physiological Society in 1934 launched the science of electroencephalography. Afterwards Matthews, with D.H. Barron, investigated the not dissimilar slow potential waves seen in the spinal cord. This also proved to become a classic publication (1938).

When war threatened he was asked to organize research in aviation medicine at Farnborough for the RAF. He and his team developed the first oxygen equipment for the RAF and the Royal Navy. He investigated problems such as blackingout in tight turns, heat loss, bends from explosive decompression of pressurized aircraft, and night vision.

After the war Matthews returned to Cambridge and was professor of physiology from 1952 to 1973 in succession to Adrian. Matthews was a fellow of King's College from 1929 until his death, but was perhaps a somewhat atypical Kingsman. His tastes were practical and outdoor: mountaineering, skiing, and particularly, the sea.

[With courtesy of the British Medical Journal

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