Mathematical Tripos list for 1885 he was eighth Wrangler. In 1886 he obtained a first class in physics in Part II of the Natural Sciences Tripos, and in the same year graduated as doctor of science in the University of London.

Stroud was appointed lecturer in physics at the College of Physical Science (which later became Armstrong College and is now King's College), Newcastle-upon-Tyne, in 1886 and was elected professor a year later. In the following years he became a strong believer in the value of popular scientific lectures, and many will remember his numerous experimentally illustrated lectures given in towns and villages throughout the northern counties of England on X-rays, radium and wireless telegraphy at a time when these subjects were in their infancy. He played an important part in the development of the institution as a self-contained university college and as a unit of the University of Durham.

For several years Stroud was associated with the late Lord Armstrong in his researches on "Electric Movements in Air and Water". Although he published little himself, he was always keenly interested in research and he endowed various college prizes with a view to its encouragement. On his retirement in 1926, after forty strenuous sessions in harness, he was elected professor emeritus by a college grateful for his valuable services. Stroud died in peaceful seclusion at Gerrard's Cross on September 3.

GEORGE W. TODD.

Colonel H. L. Crosthwait, C.I.E.

HERBERT LELAND CROSTHWAIT, who died on September 11, aged seventy-two, was the eldest son of the late Mr. Samuel Crosthwait, of The Lodge, Bagenalstown, County Carlow, Ireland, and educated at Rossall and at Trinity College, Dublin. He entered the Royal Engineers in 1890. Two years later he went to India and in 1897 he joined the Survey of India, in which he remained for the rest of his service. Here he soon became well known for his very extended knowledge of a variety of scientific subjects; in fact, if he had concentrated on any one subject he would easily have been one of the authorities on that subject. His wide knowledge and experience, however, made him a most delightful companion. He could talk well and easily and with full knowledge on many topics.

As a surveyor, Crosthwait was mostly employed on the scientific side, but quite easily switched on to the topographical branch when required, as, for example, when employed on the Chile-Argentine Boundary Commission, or during the War of 1914-18 in East Persia, and during the Waziristan Expedition and Third Afghan War of 1919-20. For these services he was awarded a C.I.E.

On his retirement Crosthwait began to specialize on the subject of air surveys and became a director of the Aircraft Operating Company, Ltd., where his knowledge of topography and his very quickly acquired knowledge of the application of air photography to map-making made him a much valued colleague. He was on the council of the Royal Geographical

Society for many years, where his appreciation of the value of air photography to map-making made him a most useful member; it might, in fact, be fairly said that no one rendered better service to cartography of late years than Crosthwait did in leading air survey on the right lines; that is, to a full but not excessive appreciation of its value.

Added to his wide knowledge over an extensive range of subjects, Crosthwait had a great charm of manner, and a very human kindness which made him a valued companion, whether in the wilds of the jungle or at a civilized meeting of the members of a scientific society. His death will leave a wide gap among his large circle of friends.

C. H. D. RYDER.

Lieut. J. H. Martin, R.N.V.R.

LIEUT. JAMES MARTIN, who has been reported lost at sea, had an unusual career compared with other polar explorers of the last twenty years. His whole interest was the sea, and his contributions to Antarctic discovery depended on his intimate knowledge of seamanship and his devotion to shipwork. He broke away from office work in the City to serve before the mast in the sailing ship *Garthpool*, and some years later he signed on as a seaman in the *Discovery* on a summer voyage to the Antarctic in 1929-30 under Sir Douglas Mawson. Martin shipped on her again in the following season and was ranked as boatswain. In order to improve his knowledge of ice navigation he then went to Norway for spring sealing in the White Sea and served as a seaman in the *Quest*. Soon afterwards he was chosen as leader of the 1933 Oxford University Expedition to Spitsbergen, but was prevented in the end from actually taking part owing to having been severely frost-bitten whilst sledging in Northern Canada.

Martin made plans for an Antarctic expedition, but set them aside in favour of John Rymill's British Graham Land Expedition. He accordingly volunteered as one of Rymill's crew and was appointed mate in the *Penola* commanded by Lieut. R. E. D. Ryder, R.N. Much of the ship work was done under sail, in which Martin was an expert. Great size and strength, fearlessness and gentleness went to the make up of this remarkable man. Ryder has made clear how much he depended on his mate during the three years voyage, and the success of the expedition was in part due to the way these two understood each other, and worked the ship in narrow waters. When war broke out, Martin transferred to the Navy from the Grenadier Guards, in which he had held a commission in 1918, and from then for most of the time was shipmate once again with Ryder.

J. M. WORDIE.

WE regret to announce the death of Mr. J. B. Beresford, C.B.E., formerly secretary of the University Grants Committee, and of the Standing Committee on Museums and Galleries, as a result of enemy action, aged sixty-two.