

appointing him Grand Commander of the Royal Greek Order of the Phoenix and the Archon Actuarius of the Ecumenical Orthodox Patriarchate.

At the time of his death he was Professor of Neurology at the Cornell Medical College, Attending Physician at New York Hospital and a Special Assistant to the President of the Memorial Sloan-Kettering Cancer Center. He had accepted these positions in 1974, moving his laboratories and personnel just prior to becoming ill. Despite this, he continued to be active and involved in a number of new fields of investigation related to the aging process in the nervous system and mechanisms involved in carcinogenesis. Undoubtedly, this work will be carried forward by his colleagues and collaborators, many trained by him over the years. Yet his presence will be sorely missed in the scientific community throughout the world.

Melvin D. Yahr

C. F. Hickling

DR C. F. HICKLING, CMG, ScD, who died on 14 June at the age of 74 had a unique influence on the development of marine, lake and river fisheries and fish culture over the wide extent of the former British Empire. He was educated at Taunton School and then at St. Catherine's College, Cambridge, to join, in 1927, the staff of the Fisheries Laboratory at Lowestoft. He was a born fisheries naturalist, as keenly interested in the methods of fishing and in the fishermen as in collecting data and interpreting their significance. His prime concern was with the hake fishery, to rise and then fall during this period. It has rightly been said that our knowledge of the biology of that fish owes everything to him. This formed the subject matter of a series of reports largely summarised in his Buckland lectures for 1934 on *The Hake and the Hake Fishery*.

During the war he was Port Fishery Officer at Milford Haven. In 1945 he was appointed Fisheries Adviser to the Secretary of State for the Colonies. In 1961, a year before his retirement, he was transferred to the Department of Technical Co-operation. His activities were literally world-wide, on innumerable islands in the Caribbean and Pacific, in East and West Africa, in Malaya, Singapore, Hong Kong and Sarawak. He advised on river fisheries in Nigeria, on those of the great lakes of Central Africa—then on those of

the created Lake Kariba—and promoted development of sea fisheries off African and Pacific coasts.

He was responsible for the organisation of training courses for fisheries officers appointed during this belated period of colonial activity, also for advice on the location and planning of research laboratories notably at Entebbe in Uganda, in Zanzibar, on Lake Nyasa, at Freetown, Sierra Leone and at Singapore. The largest scheme, carried through during the communist troubles, was the Tropical Fish Culture Institute at Malacca of which, there happily accompanied by his wife, Marjory, he was Acting Director in 1957-59. There he succeeded in crossing strains of *Tilapia mossambica* to produce unisex cultures which grew without the runting that accompanies the early reproductive activities in these fish.

It was a notable experience, as the writer can testify, to accompany Fred on a tour. He moved from the Governor's residence to the humblest fish landing, advising on scientific and commercial policy and then on the fitting of outboard motors to dug-out canoes, on the quality and handling of nets and on preserving and marketing of the catch. He was rightly described as a 'one man FAO'.

He leaves much of his wide knowledge to posterity in the pages of his books on *Tropical Inland Fisheries* and *Fish Culture*. All who knew him remember him with deep affection, so utterly the right man in the right place. We think also of his widow and two sons.

Maurice Yonge

J. A. Robbie

JAMES ANDREW ROBBIE, FRSE, FGS, died in Edinburgh in his 67th year on 19 May 1977. Born near Laurencekirk he graduated BSc with Honours in Geology at Aberdeen University in 1934. After a short period as Demonstrator in the Geology Department there he was appointed Geologist in the Geological Survey of Great Britain in 1935. He served initially in southern England carrying out geological surveys in the vicinity of Chatham, Bridport and Yeovil. Publication of his work was delayed by the Second World War but eventually appeared as a paper on the Chalk Rock at Winterborne Abbas in his favourite county of Dorset and contributions to the Geological Survey Memoirs on Chatham and Bridport and Yeovil. Although concerned with water

supply, mineral resources and airfield construction during the war he was located in London, a period of his life which evoked vivid tales of the blitz and food shortages, the latter being the greater burden for the gourmet.

In 1947 he was transferred to Belfast as part of the team which initiated the Geological Survey of Northern Ireland. On promotion to District Geologist in charge of the Belfast Office in 1959 he was instrumental in establishing the close relationships with central and local government which have resulted in a key role for the Geological Survey in the area. The acme of his geological career came in Northern Ireland with many studies including those of the Mourne Mountain granite as revealed in the Slieve Binnian Tunnel and of the Carboniferous stratigraphy proved by boreholes between Coalisland and Dungannon, published in the Bulletin of the Geological Survey of Great Britain. The scope of his experience and knowledge is demonstrated by his accounts of lithology, stratigraphy and structure of strata of the Dalradian, Silurian, Carboniferous, Triassic, Rhaetic, Liassic, Cretaceous, Tertiary and Pleistocene in memoirs describing the geology of the Dungannon, Ballycastle and Belfast districts.

When promoted to Edinburgh to be Assistant Director in charge of all the activities of the Institute of Geological Sciences in Scotland he was so deeply entrenched in Northern Ireland geology that his model became something of an anathema to the Scots in their analyses of local geology. While involved in the expansion of IGS activities both on land and offshore he played a major role in planning and developing Murchison House, the new headquarters of IGS in Scotland, which was nearing completion as he retired in 1975.

Elected a Fellow of the Royal Society of Edinburgh in 1968 he was appointed Vice President in 1975. He was a Fellow of the Geological Society of London, served as President of the Edinburgh Geological Society from 1971-73, and was elected an Honorary Member of the Belfast Geologists' Society of which he was President twice. In his official capacity he served on the Council of Management of the Macaulay Institute for Soil Research from 1969 until 1975.

A quiet, shy, self-effacing man Jim Robbie shunned the social scene and yet enjoyed nothing more than to meet friends over a glass of his favourite national spirit. He faced his retirement full of plans for remodelling his garden, refurbishing his beloved old car and travelling the world, plans only in the earliest stages of fulfillment when he died.

G. I. Lumsden