

OBITUARY

LLOYD VIEL BERKNER, who allied great talents as a physicist and an administrator with a strong sense of the importance of science as a bond in international affairs, died on 4 June 1967 at the age of 62.

He was born in Milwaukee, Wisconsin, on 1 February 1905, and at an early age became absorbed in the operational aspects of radio; at the age of seventeen he established an American Radio Relay League distance and speed record using a radio set made by himself, and, having gained his operator's licence, worked for several years as a ship's radio officer. In 1923 he entered the University of Minnesota, gaining his BSc in electrical engineering four years later and then taking additional graduate courses at George Washington University. This was followed by a year as associate electrical engineer with the Airways Division of the United States Bureau of Lighthouses, supervising the installation of a radio range system on the pioneering airmail route between New Brunswick and Ohio. From 1928 to 1932 he was associated with the National Bureau of Standards of the United States Department of Commerce and, during this period, served with Byrd's United States Antarctic Expedition, 1928–30, as radio engineer. He accompanied Byrd and Bernt Balchen on a number of the early flights made over Marie Byrd Land.

Preparations for a Second Polar Year, 1932–33, were under way when he returned to the United States and, with other colleagues from the National Bureau of Standards, he made distinctive contributions to our knowledge of world-wide radio propagation and the ionosphere.

In 1933 he was appointed physicist at the Department of Terrestrial Magnetism at the Carnegie Institution in Washington, where he was instrumental in establishing the observatories at Watheroo, in Australia, and at College, Alaska.

At the beginning of the Second World War he was working on the early development of proximity fuses, which later played an important role in anti-aircraft defence. As a member of the Naval Reserve he was called up to organize and direct a section of the Navy's Bureau of Aeronautics concerned with the development of aircraft radar. He ended the war as a captain, and later retired from the Navy as a rear-admiral.

In 1946, as executive secretary, he helped to organize the Joint Research and Development Board, and three years later became Secretary of State Dean Acheson's special assistant to organize the military aid programme under the Atlantic Pact.

Berkner was always alive to the international aspects of scientific work, and his suggestion that a third polar year should be held twenty-five years after the second bore fruit as the International Geophysical Year, 1957–58. He himself served as Chairman of the International Council of Scientific Unions, the sponsoring body of the IGY, where his initiative and administrative ability were of notable value. He was head of Associated Universities Incorporated from 1951 to 1960, a group of nine universities in the eastern United States which founded and administered the great acceleration plant at Brookhaven, Long Island, and the radio-telescope at Green Bank, West Virginia. Between 1958 and 1962 he was Chairman of the National Academy of Science's Space Science Board. He also served as President of the Graduate Center of the Southwest, at Dallas, Texas, between 1960 and 1965. Berkner published a large number of books and papers during his career.

As early as 1934 he was publishing, frequently in collaboration with N. W. Wells, results of multifrequency measurements of virtual heights of the ionosphere, and reviewed this field in *Physics of the earth—VIII* (New York, Mc Graw-Hill Book Company, 1939). In 1952 he collaborated with D. K. Bailey and others in "A new kind of

radio propagation at very high frequencies" in *National Bureau of Standards Report* 1172. His work in connexion with the International Geophysical Year resulted in a number of publications, including "The International Geophysical Year 1957-1958: a pattern for international co-operation in research" in *Proceedings of the American Philosophical Society*, Vol 101, No 2, 1957, and *The scientific age: the impact of science on society* (Yale University Press, 1964). "Geography in space" in the *Geographical Review*, 1959, Vol 49, No 3, p 305-14, and "Geophysics today", in *Transactions of the American Geophysical Union*, 1962, Vol 43, No 2, p 159-62, exemplify his more recent work.

HELGE CHRISTENSEN, a Dane who played a notable part in the development of Greenlandic radio and journalism, was born on 14 June 1912 and died on 15 April 1957. He went to Greenland in 1951 and for two years was head of Grønlands Radio, as well as editor of *Radioavisen* and *Grønlandsposten*. He also published Greenland's first and still only, daily paper in both Eskimo (*Núp Avisia*) and Danish (*Godthåb Avis*) editions. Returning to Denmark, he joined *Berlingske Tidende* for which he edited Greenlandic material for some years. He was editor of *Grønland* from 1956 until the time of his death, and also København correspondent of *Grønlandsposten*. In 1963 he was elected a member of the board of Det Grønlandske Selskab.

His published works included *Jens Rosing-en grønlandsk exlibriskunstner* (1953), *Aron fra Kangeq*, (1953) and *Tre besøg i Grønland* (1954).

Colonel **CHARLES WELLINGTON FURLONG** died in Hanover, New Hampshire, on 9 October 1967, aged 92. Listed in *Who's who* as explorer, writer, painter, soldier, ethnologist and lecturer, he had lived and travelled in many parts of the world, including Tierra del Fuego and Patagonia. From the inhabitants of Tierra del Fuego he collected in 1908 ethnological information, including photographs, foot and hand prints, and voice recordings. Some of the tribes he visited are now extinct. This unique documentation formed part of his extensive library on Tierra del Fuego, which was acquired by Dartmouth College in 1961. Since that date, Colonel Furlong served the College as Consultant to the Stefansson Collection, in which his own library was accommodated. He spent his last years among his books, arranging correspondence and other documents and assisting students and others interested in the region in their researches. His mental and physical vigour in old age were remarkable, and those who heard his stories of travel and adventure will not forget them.

HENRY FRANCIS PORTER HERDMAN was born on 11 March 1901 and, after more than forty years' service with the Discovery Committee and in the National Institute of Oceanography, died on 3 September 1967.

He joined the initial scientific staff of the Discovery Committee in 1924 as a chemist but, having a considerable knowledge of engineering, became an expert on deep-sea oceanographical techniques. His first Antarctic experience came in 1925-27 when he accompanied S. W. Kemp on a preliminary oceanographical survey of the whaling grounds off South Georgia and the South Shetland Islands. He then took part in the 1st (1929-31), 3rd (1933-35), 5th (1937-39) and 6th (1950-51) commissions of *Discovery II*. He was senior scientist in charge of ship's work during the second half of the 5th, and the whole of the 6th, commission having been appointed Chief Scientific Officer, under the Director of Research, in 1936. The summer of 1935-36 he spent on a whale-marking project in a chartered whale catcher, and in 1939 he collaborated with N. A. Mackintosh in studies of Antarctic pack ice. On the outbreak of the Second World War he was lent to the Admiralty and was engaged in fitting anti-submarine equipment to ships, a duty which involved a voyage to Russia by the northern route. Returning to the Discovery Committee, he became involved in the re-fitting of *Discovery II* and

William Scoresby and in conducting his own studies of the bottom topography of Antarctic seas. In 1949, with the rest of the Discovery Committee's staff, he joined the National Institute of Oceanography and became more and more fully occupied with ship management, in which he was largely responsible for the design and equipment of the replacement of *Discovery II*. He did, however, continue his own sea ice studies and was in charge of work during a voyage in the north Atlantic as part of an IGY programme. After the Natural Environment Research Council took over responsibility for the National Institute of Oceanography in 1965, he was given charge of a unit at Plymouth which attends to the management not only of the *Discovery* but of other research ships under the Natural Environment Research Council.

It is probably true to say that Herdman was for many years the leading expert on the equipment of deep-sea research ships. His long experience gave him unique knowledge not only of the problems of scientific equipment in relation to ship design, but also of the manning of research ships and division of responsibilities between scientists, technicians, deck officers, and engineers. He had a remarkably retentive memory of past events and experiences which was often of great value in new projects, and he played a considerable part in the development of oceanographic techniques in this country.

His principal publications appeared in the *Discovery Reports* and include two papers on soundings (Vol 6, 1932 and Vol 25, 1948), one in collaboration with L. H. Pemberton on deep-sea thermometers (Vol 19, 1950) and one in collaboration with N. A. Mackintosh (Vol 29, 1940).

N.A.M.

THERKEL MATHIASSEN, the distinguished Danish archaeologist, was born on 5 September 1892 and died on 14 March 1967. He made his first contact with Eskimo culture as a member of the Fifth Thule Expedition, 1921–24, in company with Knud Rasmussen, Peter Freuchen and Kaj Birket-Smith. The ten volumes of the *Report on the Fifth Thule Expedition, 1921–4*, published in København at various dates between 1927 and 1946, contain six contributions by Mathiasen, including "The archaeology of the Central Eskimos" (1927), a work of fundamental significance in the field of Eskimo archaeology. His excavations at Naujan in Repulse Bay, at Pond Inlet in Baffin Land, at Kuk in Southampton Island and at many minor sites in those areas and around Hudson Bay, linked with previously isolated observations by other investigators, demonstrated the far eastern origin of the Thule culture and its westward penetration from Alaska to Greenland. After the return of the expedition, he began a systematic investigation of the pre-history of Greenland, starting at Upernivik in 1929 and returning to a new area each year until 1934. The discovery of the Inugsuk culture, a later form of the Thule culture but showing specifically Greenlandic characteristics and some Norse influences, was part of the fruit of these investigations. In 1932, as a member of Rasmussen's Seventh Thule Expedition, he excavated sites around Angmagssalik in south-east Greenland, but most of his work was carried out in the west. He held successively the posts of inspektør and overinspektør (1946–52) at the Nationalmuseet, København, and was a regular contributor to *Meddelelser om Grønland*, *Geografisk Tidsskrift* and other periodicals.

ERRATA

Polar Record, Vol 13, No 86, 1967

Page 607, line 48 Add G. H. Siebert (McGill University), Oceanography

Polar Record, Vol 13, No 87, 1967

Page 405, line 31 Add "Esperanza", lat 63° 24' S, long 57° W