JEREMY THOMAS BAILEY died in a crevasse accident on 12 October 1965. He was travelling with two companions, D. P. Wild and J. K. Wilson, some 250 miles inland from Halley Bay, Antarctica, when their tractor crashed into a hidden crevasse. The accident was witnessed, and later reported, by a fourth member of the party, travelling by dog sledge.

Bailey, who was twenty-four at the time of his death, was educated at Watford Grammar School and the University of Bristol, where he obtained his BSc degree in 1963. He then began working for a PhD degree, becoming a member of Downing College, Cambridge, and attached to the Scott Polar Research Institute. He took part in field trials in north-west Greenland during the summer of 1964 in connexion with radio echo methods of sounding ice sheets, then being developed at the Institute. This was to be followed by a year's field research with the British Antarctic Survey, and he left for Halley Bay in December 1964 to begin this. A considerably increased body of data from radio echo sounding results from his 300 mile journey to the south of Halley Bay, completed in April 1965. It was during a second journey after the winter that the tragedy occurred.

Roy Eric Deane was born in 1909 and died on 23 October 1965 in a boating accident on Lake Huron, "Roger" Deane came into geology comparatively late, after school teaching before the war and service with the Royal Canadian Air Force. He specialized in Pleistocene geology, receiving his PhD from the University of Toronto in 1949. After teaching at the University of Indiana, he returned to Toronto in 1955, and was Associate Professor in the Department of Geological Sciences at the time of his death. In 1955 he was in charge of a site survey team for DEW-line stations in the central and western Arctic, and at an age when many geologists have given up strenuous field work he began to develop his interest in problems of Arctic geology and limnology. In 1956 he was in charge of a small field party primarily studying sedimentation in Greenshield Lake, on the Cumberland Peninsula of Baffin Island. During the summers of 1957 and 1958 he was employed by the Defence Research Board as Pleistocene geologist and limnologist during the IGY Operation "Hazen", of which he was second-in-charge and where his genial disposition, energy and resource in the field were seen to great advantage. In 1960 he was appointed Director of Research at the newly-formed Great Lakes Institute of the University of Toronto, a position he held until 1963, later reverting to Research Associate. With characteristic enthusiasm he took up scuba-diving in connexion with his underwater research; he and three companions were investigating an old wreck on the lake bottom when they met their deaths.

Frank Debenham, OBE, geologist of Scott's British Antarctic (*Terra Nova*) Expedition, 1910–13, Emeritus Professor of Geography at the University of Cambridge, founder and first Director of the Scott Polar Research Institute, died in Cambridge on 23 November 1965 after a long period of ill health.

He was born on 26 December 1883 in Bowral, New South Wales, where his father was vicar and ran a successful private school. The widow continued the venture after his death in order to provide for the education of her sons and daughter, and Frank passed from there with a scholarship to King's School, Parramatta. He entered the University of Sydney in 1901, taking an Arts degree three years later, then taught for three years to save enough money to return to University and read for his BSc, which he gained in 1910, specializing in geology. It was a time when Antarctica must have

been very much in a young geologist's mind in Sydney. The Professor of Geology, Edgeworth David, had recently returned from serving with Shackleton's *Nimrod* expedition, 1907–09, and was working on material collected during the expedition, and in particular during the successful traverse he had led to be the first to reach the South Magnetic Pole.

Captain Scott was recruiting for his second expedition, 1910-13, and wished to associate Australia more closely with it. One Australian, Griffith Taylor, he had already recruited in London and he naturally turned to David's "stable" for another and engaged Frank Debenham.

Most of Debenham's geological work in Antarctica was done on the western side of McMurdo Sound. In the late summer following their arrival he journeyed with Griffith Taylor, Wright and Petty Officer Evans to Koettlitz Glacier, Ferrar Glacier and Taylor Dry Valley, in the foothills of the Royal Society Range. He almost missed the second season altogether from injuring his knee while playing football but it recovered in time for him to accompany Griffith Taylor, Gran and Forde on the western journey to Granite Harbour and Mackay Glacier. In addition to geological observations, he constructed a plane table map of the route—of which Griffith Taylor wrote in his With Scott the silver lining (London, 1916) "The plane-table is the instrument par excellence. Debenham deserves great credit for taking one south, for Captain Scott was extremely sceptical as to their value on sledge journeys. In open country with a prominent peak (as a referring object) in the line of traverse—conditions such as one always gets in coastal work—the plane table was extremely rapid and enabled Debenham to do excellent work each day. For details of the geology of a cape or cliff area the plane table is simply magnificent." Later he was one of the party which made the ascent of Mount Erebus, though not of the final assault group. He also took over the responsibility of the photographic work of the expedition after Ponting, the official photographer, left in March 1912.

Scott wrote of him in his diary "...Debenham's [intellect] is clearer. Here we have a well trained, sturdy worker, with a quiet meaning that carries conviction; he realizes the conception of thoroughness and conscientiousness."

On the return of the expedition, he was one of a group who went to Cambridge to work on results, but this was interrupted by the First World War. He joined the Oxfordshire and Buckinghamshire Light Infantry, rising to the rank of Major, and seeing service in Salonika where he was severely wounded and shell-shocked.

Back in Cambridge after demobilization, he resumed work on his own material and also on the cartography of the expedition—his maps were still in use during the International Geophysical Year, 1957-58. His abilities in this field were recognized in 1919 when he was appointed Royal Geographical Society lecturer in Surveying at the University of Cambridge. This was followed by a Readership in Geography in charge of the department and, in 1931, he was appointed first Professor of Geography. In 1920 he was elected a Fellow of Gonville and Caius College, Edward Wilson's old college. He was a successful and popular professor, and a stimulating lecturer, enlivening his courses on British glacial forms with parallel examples from his Antarctic experience. He took a lively interest in the design and equipment of the Geography department building erected on the Downing Place site early in his tenure of office. After his retirement in 1949, he travelled extensively in central Africa, making a study of the water resources of the Bangweulu Swamp. In 1948 he was awarded the David Livingstone Centenary Medal of the American Geographical Society and in 1965 made an Honorary Fellow of the Royal Geographical Society, one of the small number of such awards.

He was a prolific author, publishing scientific papers on polar and African subjects, books of travel, text books on surveying and cartography and biographies. In addition to his *Terra Nova* expedition reports on geology and maps and survey, his best known



FRANK DEBENHAM

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books of Antarctic interest are *The polar regions* (London, 1930); *In the Antarctic* (London, 1952); *Antarctica*: the study of a continent (London, 1959) and his edition in English of Bellingshausen's Antarctic narrative for the Hakluyt Society (London, 1945).

Frank Debenham's death marks the end of an era in the history of the Scott Polar Research Institute, both in its connexion with Scott and with its own foundation. Without Debenham it is unlikely that the Institute would ever have been founded. It was he who suggested that the portion of the Captain Scott Mansion House Fund which had been set aside for polar research should be used to found an Institute for this purpose. He was appointed Director in January 1926. From a modest beginning in one room in the Sedgwick Museum, the Institute moved to Lensfield House in 1925 and finally to its own building in 1934. Once again he was closely and enthusiastically concerned with plans and equipment for a new building. For over a decade he steered its development and established its reputation as an international centre of polar research that was always to be stimulating and welcoming, particularly to young people. In 1931 he founded this journal, and was its first editor. By the outbreak of the Second World War the Institute had accumulated polar material and other facilities which were of practical value to the government; it also housed a section of the Naval Intelligence Division of the Admiralty during the war years. His role as elder statesman and friend to a wide polar fraternity continued after his retirement in 1946, and his presence as a member of the United Kingdom delegation to the Third Meeting of the Scientific Committee on Antarctic Research in Canberra in 1959 was a delight to all. Shortly after this meeting, however, failing health confined him permanently to his room; he accepted physical disabilities with complete fortitude, and an unbroken succession of friends, old and new, were welcomed, finding him sitting at his table writing, reading and planning, as young in mind as he was old in wisdom.

He was the most good-hearted of men and the most receptive of listeners, modest but firm in his opinions, and never too busy to turn all his energies to the solution of someone else's problems.

To a new Director of the Institute, such as myself, his experience was of great value and his advice invariably helpful—and always offered in a spirit that would take no offence if it were not followed. His pleasure at being told of the grant made by the Ford Foundation towards the extension of the Institute was something to be treasured.

And complementing Deb's genial father-figure there was always "Mrs Deb", keeping open and hospitable house, welcoming and entertaining his colleagues and friends, bringing up their family of two sons and four daughters and, in later years, and with kindly tact, sheltering him from over-exertion.

G. de Q. R.

YAKOV YAKOVLEVICH GAKKEL' died in Leningrad on 30 December 1965 after a short illness. He was born in 1901 in St Petersburg, and educated there. In 1921 he joined the Geographical Institute, which became, in 1925, the geography faculty of Leningrad University. During this period, he undertook his first expeditions: to study limnology in Karelia in 1924, and geomorphology in Yakutia in 1925. Meanwhile he took part in sea ice studies during the winters in the Gulf of Finland.

In 1932, he joined the Arctic Institute where he was to remain until his death. He was associated with many different sides of the Institute's work—oceanography, sea ice studies, navigational problems, geomagnetism, geomorphology, and the history of exploration—and head in turn of various departments, latterly of that of geography and history of exploration. In 1941–42 he was Deputy Director for Research.

He took part, often as leader, in twenty-one expeditions, including the first one-season navigation of the Northern Sea Route in Sibiryakov in 1932, the ill-fated Chelyuskin expedition of 1933-34, high latitude expeditions in Sadko in 1936 and Ob' in 1956,

and the first double transit of the Northern Sea Route in Mossovet in 1937. In 1948 he became interested in the technique of studying the central polar basin by means of drifting stations on the ice. He was active in the work which led to the identification of the Lomonosov submarine ridge, and devoted much time to construction of bathymetric charts of the Arctic Ocean, based largely on drifting station data. This in turn led to an interest in the relation between bottom relief and the structure of the earth, a study on which he was still engaged when he died.

He published widely in many fields; sea ice studies, especially on drift of floes; problems of practical seamanship, such as magnetic compass behaviour; geomorphology of the Arctic Ocean (one of his last papers was a contribution on this subject to the still unpublished American Encyclopaedia of Earth Sciences); history of Arctic studies, notably his history of the Arctic Institute (Za chetvert' veka, Moscow, 1945) and a more general survey of Soviet achievements in the Arctic (Nauka i osvoyeniye Arktiki, Moscow, 1957).

Commander Arthur Edward Harbord, RN, retd, was born in Hull on 13 September 1883 and died on 11 October 1961. He was apprenticed in sail and gained his Extra Masters Certificate ("Square ticket") at the age of 22. He then joined Nimrod in New Zealand for Shackleton's 1907–09 Antarctic expedition, becoming successively Auxiliary Second Officer, Second Officer and Chief Officer. He was also Navigating Officer. After the expedition he served in shipping lines until 1910 when he gained his commission as Lieutenant in the Royal Navy. His peace-time service was in the Hydrographic Department of the Admiralty, and he served in both World Wars. After retiring from the Navy he joined the Mersey Docks and Harbour Board and became Marine Surveyor and Water Bailiff to the Port of Liverpool. He evolved the new salvage technique later used to lift the seventeenth-century Swedish man-of-war Vasa.

ALEKSANDR FEDOROVICH LAKTIONOV, the Soviet geographer and oceanographer, died on 28 April 1965, aged 65. From 1927 until his death, he was on the staff of the Institute in Leningrad now called the Arctic and Antarctic Research Institute [Arkticheskiy i Antarkticheskiy Nauchno-Issledovatel'skiy Institut], where he was head first of the geography section and then of the oceanology section. He took part in thirteen Arctic expeditions, including those in the Sibiryakov, 1932; the Sadko, 1935; and the Fedor Litke, 1948. In addition to many scientific papers, his published work included Severnaya Zemlya (Arkhangel'sk, 1936), a history of Arctic exploration called Severnyy polyus [North Pole] (Arkhangel'sk, first published in 1939, with three later editions), Na dreyfuyushchikh l'dakh [On the drifting ice] (Moscow, 1955), and Mezhdunarodnyy geofizicheskiy god v Antarktike [The International Geophysical Year in the Antarctic] (Leningrad, 1957). He was a man of wide interests, and was known as artist, sculptor, and musical instrumentalist.

BERNHARD LUNCKE, the Norwegian topographer, was born in Gudbrandsdalen on 15 May 1894 and died on 9 April 1963.

He graduated from Kristiania Tekniske Mellomskole in 1914, worked for Ing. Dahls Opmaaling until 1917, and then at Norsk Kulelager A/S until 1921. After two years further study at the Technische Hochschule at Danzig he joined De norske statsunderstøttede Spitsbergenekspeditioner which was successively re-organized as Norges Svalbard-og Ishavsundersøkelser in 1929 and Norsk Polarinstitutt in 1948. Luncke was a pioneer and expert in air photogrammetry, both in his own country and abroad. Since 1923 he had taken part in, and frequently led, no less than eighteen expeditions to northern Norway, Svalbard, Jan Mayen and east Greenland, and one to Dronning Maud Land. Antarctica, for the purpose of air photography.

SERGEY VLADIMIROVICH OBRUCHEV, the Soviet geologist and geographer, died in 1965, aged 74. He was the son of another famous geologist, Academician V. A. Obruchev, and, like his father, worked much in Siberia. Between 1917 and 1939 he made many expeditions to the Yenisey, Lena and Kolyma basins, and in 1925 and 1927 visited Spitsbergen and Novaya Zemlya. His Siberian work led to the identification of the Tungus coal basin, an immense and still virtually unexploited field, and to the discovery of gold on the Kolyma and Indigirka. He published much—popular exploration narratives as well as geological reports—and towards the end of his life made an interesting and scholarly contribution to historical geography with a book which sought to throw light on early Russian visits to Spitsbergen. He taught for a while at Leningrad University, and was made a Corresponding Member of the Academy of Sciences of the USSR in 1953.

Captain Alberto J. Oddera, Argentine Navy retd, Secretary General to the Instituto Antártico Argentino, died on 24 September 1965. Born in Buenos Aires on 14 November 1900, he received his commission in 1922 and remained on the active list until 1949, serving as Naval Attaché in London between 1947 and 1949. He led the Argentine Antarctic expedition of 1942, in *Primero de Mayo*, which visited Deception Island and carried out a hydrographic survey at the Melchior Islands. The first Argentine Antarctic flights were carried out during the expedition. It was on this occasion that formal possession of the sector between longs 25° and 68° 34′ W, south of lat 60° S, was taken on behalf of the Argentine Government. He became secretary of the Instituto Antártico Argentino in September 1956.

Dr Willi Rickmer Rickmers, German pioneer exponent of ski-ing, died on 15 June 1965. Rickmers was born near Hanover in 1873. As well as being a mountaineer he was an expert ski-er and was one of the first to appreciate the possibilities of skis for mountain exploration. In 1935 he was awarded the Patron's Medal of the Royal Geographical Society for his many long journeys in the Caucasus and in Russian Turkestan; more especially for his leadership of the Alai-Pamir Russian-German Expedition in 1928. With E. C. Richardson and Chrichton Somerville, he was joint author of Ski-running (London, 1904), the first English manual on ski-ing.

FELIX ROONEY, a member of the crew of SY Nimrod during Shackleton's British Antarctic Expedition, 1907–09, died in Wellington, New Zealand, on 4 November 1965 at the age of 80. On the return of the expedition he remained in New Zealand serving in trans-Tasman and coastal ships and, after service during the First World War, with the Union Steam Ship Co.

DAVID PETER WILD died in a crevasse accident on 12 October 1965, when the tractor in which he was travelling with J. T. Bailey and J. K. Wilson crashed into a hidden crevasse some 250 miles inland from Halley Bay, Antarctica. The accident was witnessed, and later reported, by a fourth member of the party travelling by dog sledge. Wild, who was twenty-four at the time of his death, was educated at St Asaph Grammar School and the University College of Wales, Swansea, where he gained honours in geography. He was an enthusiastic mountaineer and accompanied a university expedition to Arctic Norway in 1961, studying raised beaches and moraines. He joined the British Antarctic Survey as topographical engineer in 1963 and had completed a considerable coverage of mountains south of Halley Bay during his two years there; unfortunately it is feared that most of his work was lost with him.

John Kershaw Wilson, medical officer at Halley Bay, Antarctica, was killed in an accident on 12 October 1965. The tractor, in which he was travelling with two companions, J. T. Bailey and D. P. Wild, crashed into a hidden crevasse some 250 miles inland from the station. The accident was witnessed and reported by a fourth man, travelling by dog sledge. Wilson, who was twenty-nine at the time of his death, was educated at Bedales School and Queen's College, Oxford, where he took his BA degree in animal physiology in 1959. He qualified for his BM, BCh at Middlesex Hospital Medical School in 1962. After holding several hospital posts he joined the British Antarctic Survey in 1964, and spent five months at the Department of Human Physiology of the Medical Research Council developing a research project he later worked on in Antarctica, leaving for Halley Bay in December. He had applied to spend a second year at the station, an application which was immediately accepted.