

Obituaries

Sir Vivian Fuchs, FRS, scientist, explorer, and administrator, died on 11 November 1999, aged 91. Best-known to the public as leader of the Commonwealth Trans-Antarctic Expedition of 1955–58, Fuchs spanned, and to some degree led, the transition from adventure to scientific bureaucracy in the exploration of Antarctica.

Born in Freshwater, Isle of Wight, on 11 February 1908, Vivian Ernest Fuchs was the only child of a German father and Anglo-Australian mother. During World War I, with his father interned and the family wealth sequestered, he was raised in genteel poverty by a partly disabled but very determined mother. Peace brought reunion to the family and the grudging restoration of its fortunes — a story told with wry bitterness in his autobiography.

Fuchs attended Brighton College as a boarder, and in 1926 was admitted to St John's College, Cambridge, reading natural history with an emphasis on geology. Tutored by James Wordie, who had served on Ernest Shackleton's *Endurance* expedition, Fuchs spent the summer of 1929 in East Greenland with one of Wordie's private expeditions — his first experience of polar fieldwork. During his fourth year at Cambridge he met Louis Leakey, who inspired him to consider research in Africa, and E. Barton Worthington, who enrolled him as geologist on his 1930–31 Cambridge Expedition to the East African Lakes. East Africa fascinated Fuchs: he joined an expedition with Leakey to Olduvai in 1931–32, explored Njorowa Gorge in 1933, and ran his own geological expeditions to Lake Rudolf in 1934 and Lake Rukwa in 1937–38.

In 1933 Fuchs married his cousin Joyce Connell, who shared his interest in travel and adventure. Unable to accompany him to Lake Rudolf because only men were allowed to enter Turkana Province, she spent the time exploring in the Mfumbiro and Ruwenzori ranges, and climbing Mount Meru and Mount Elgon. In 1936 the couple settled in Barton Road, Cambridge, which remained their home base for the rest of their lives. Awarded his doctorate in 1936, Fuchs continued to work on East African material, broadening his interests from geology to anthropology and planning further expeditions.

In 1938, with war impending, he joined the Territorial Army, and in 1939 he was commissioned in the Cambridgeshire Regiment. He saw wartime service in West Africa in 1942–43, followed by a staff course at Camberley. From 1944 he served with the Second Army in Europe, being mentioned in dispatches and ending the war as a major in Civil Affairs in Plön, Schleswig-Holstein. Released from the army in 1946, he returned to a growing family (Hilary, born in 1936, and Peter, born in 1940), and to seek his first permanent civilian job.

Although still drawn to Africa, Fuchs applied for

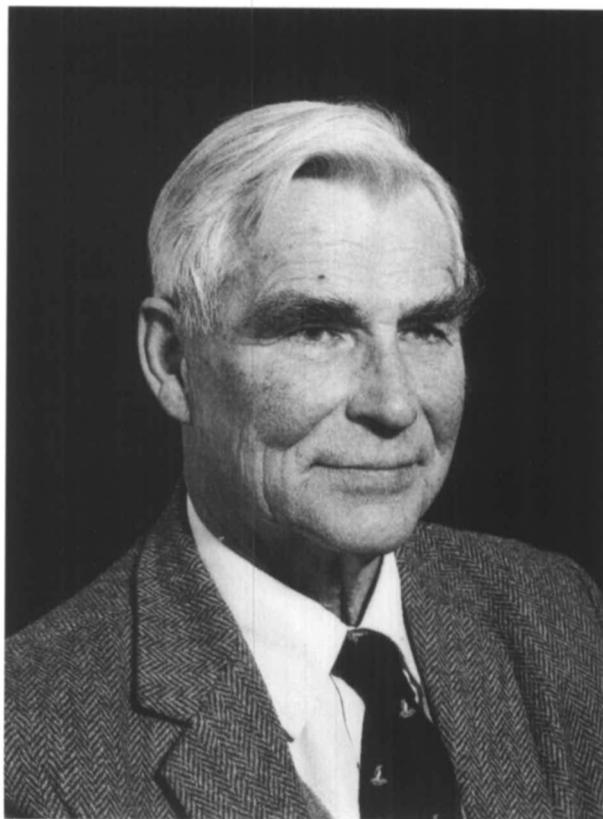


Fig. 1. Sir Vivian Fuchs. Photograph courtesy of British Antarctic Survey.

employment as a geologist with the Falkland Islands Dependencies Survey (FIDS), an expedition of seven semi-permanent bases in the British (South American) sector of Antarctica. To his surprise he found himself appointed field commander — of a chaotic organization, originally a naval operation, recently taken over by a reluctant Colonial Office, and run by a committee with no clear objectives beyond supporting Britain's claim to a sector of Antarctica. Briefed to develop a scientific field programme, Fuchs sailed south in December 1947. He came with plans for a strong field programme of sledging and geological survey, and for two years he led FIDS from Stonington Island, the southernmost base in Marguerite Bay. His style of leadership, initially formal, almost school-masterly, relaxed when he found the old hands helpful, the newcomers adaptive, and everyone fully responsible. He listened, dealt quickly and fairly with day-to-day problems, and became a good leader. There he also acquired skills of dog-driving and ice-craft, as well as the nickname 'Poppa,' to go along with his long-established name of 'Bunny.' He also acquired a taste for Antarctic exploration that entirely displaced his former interests in Africa.

On returning to Britain in 1950 he was retained to establish and direct the FIDS Scientific Bureau — essentially to develop a programme for the proper, effective, and scientific use of Britain's permanent Antarctic stations. Based in Queen Anne's Chambers, central London, he worked in liaison with a logistics bureau in the Falkland Islands, responsible both to the Governor of the Falkland Islands and to a UK committee confused by political and scientific objectives. Not surprisingly his heart was elsewhere. While sledging out of Stonington Island, he had begun to develop plans for an expedition, previously attempted by Wilhelm Filchner in 1911 and Ernest Shackleton in 1914, to cross Antarctica from the Weddell Sea to the Ross Sea. In April 1955 he took leave from the Bureau to plan and set up the Commonwealth Trans-Antarctic Expedition — an ambitious expedition in the 'heroic' mould, motivated by science and adventure, and planned by individuals with government support and public backing.

A blatant attempt by the then-Governor of the Falkland Islands to poach the idea was followed by concerted hostility from almost all the UK polar establishment — machinations that Fuchs details precisely but without reproach in his autobiography. Gaining support from the Treasury; the Royal Geographical Society; the governments of New Zealand, Australia, and South Africa; and others who found the concept right for the times, he recruited an experienced team, including Sir Edmund Hillary (who led the New Zealand contingent) and many who had served with him in FIDS. Using dog teams, tractors, Sno-Cats, and aircraft, Fuchs led the expedition on a trek of 99 days from Shackleton Base, on the Weddell Sea coast, to the South Pole (where he met Hillary), and on to Scott Base in McMurdo Sound. He was knighted on his return to London.

After completing with Hillary the official account (*The crossing of Antarctica*: Cassell, 1958) and winding up the affairs of the expedition, Fuchs returned in 1959 to the Falkland Islands Dependencies Survey. During his absence Sir Raymond Priestley had created a new role of Director, which Fuchs now inherited. Within it he was able to continue rationalization of the survey, increasing its scientific efficiency and output. A somewhat reluctant bureaucrat, he welcomed opportunities to leave his desk and revisit Antarctica, touring the stations every second or third year. In 1961, on Britain's accession to the Antarctic Treaty, the organization was renamed British Antarctic Survey. In 1967 it was relinquished by the Colonial Office and incorporated in the newly formed Natural Environment Research Council. Both shifts helped to emphasize the scientific purpose that the survey had acquired, predominantly in consequence of Fuchs' leadership.

Fuchs retired from the directorship of BAS in 1973. In the following year he was appointed FRS, and through membership and presidencies of many learned societies he remained active in polar, geographic, and scientific affairs. He particularly valued his presidency of the Royal

Geographical Society (1982–84) — an organization that had supported both his African and Antarctic expeditions, and awarded him two of its most prestigious medals. Part of his retirement was occupied by writing, first a history of British Antarctic Survey (*Office and men*: Anthony Nelson, 1982), and later his autobiography (*A time to speak*: Anthony Nelson, 1990). His wife Joyce died in April 1990. In 1991 he married Eleanor Honnywill, whom he met originally in 1955 when she joined the office staff of the Trans-Antarctic Expedition, and had afterwards become his personal assistant.

Bernard Stonehouse

Robert Loring Christie, Canadian Arctic geologist, died 1 September 1999, in hospital at Belleville, Ontario, a few hours after suffering a heart attack while sailing his boat. He was 73.

Bob Christie was born in Vancouver in 1926, the eldest of the five children of Professor Herbert Christie of the Department of Forest Engineering, University of British Columbia (UBC); his mother was a secretary at the university. By the time he graduated in geology from UBC in 1948, he had already spent three seasons as a field assistant with the Geological Survey of Canada (GSC). In 1944, when only 17, he had been part of a packhorse party in the western Cordillera, and in 1945–46 he was with Fred Roots in the Cassiar Mountains of northern British Columbia. After joining the permanent staff of the GSC in 1948, Christie devoted the 1949–53 seasons to mapping the geology of the Bennett Lake area in the Coast Ranges, northern British Columbia — work that eventually led to the award of his PhD from the University of Toronto in 1959.

Christie's career as a field geologist in the Arctic, spanning 36 years, started in 1954, when he was a member of a four-man party to the north coast of Ellesmere Island. The expedition was organized by the Canadian Defence Research Board (DRB) and the United States Air Force Cambridge Research Center, and included Albert Crary and Geoffrey Hattersley-Smith. The members of the party made their main camp near Ward Hunt Island, where they were landed in mid-April and were retrieved in early October, by ski-wheel C47 (Dakota) aircraft of the USAF North East Air Command out of Thule Air Base, northwest Greenland. The objectives of the party were a detailed investigation of the Ward Hunt Ice Shelf and the first geological reconnaissance of the north coast of Ellesmere Island, westward from Cape Columbia. The party was supported by two Inughuit dog-drivers for the first six weeks of the season.

Much of Christie's geological work was undertaken in 24 days during May–June on a 750-km return journey by dog-sledge from Ward Hunt Island to Lands Lokk on Nansen Sound, in company with Hattersley-Smith. As a bonus to the scientific work, the two men found records in cairns by the leaders of the only three parties that had preceded them along parts or all of this coast, namely,

Lieutenant P. Aldrich, RN (1876), Commander R.E. Peary, USN (1906), and Dr H.K.E. Krüger (1930).

During that long 1954 season, Christie was in every way the best of companions — tolerant and tactful, and always ready to fall in with general plans and arrangements, while improving these with sensible suggestions of his own. He learned much from the personal example of Cray, expert in seismology, but insistent on the keeping of all possible records on the physical and biological environment. Christie himself became well-known for his concern to record data and to take samples of interest to others outside his own field.

In the 1957–58 seasons, Christie was the GSC member of the Canadian International Geophysical Year expedition to Lake Hazen, Ellesmere Island, organized by the DRB and led by Hattersley-Smith. In 1957 he made a geological reconnaissance of the area around the lake (noting especially the coal seams of Tertiary age) and southeastward to Archer Fiord. In 1958, with an assistant, Barry Walker, he expanded his work area northeastwards to Alert and eastwards to Fort Conger on Discovery Harbour, where he examined the coal seams used by the British Arctic Expedition, 1875–76, and by the United States Lady Franklin Bay Expedition, 1881–84. In the following season he was a member of the four-man GSC party working on Banks, Victoria, and Stefansson islands in the western Arctic. His 1960–61 seasons were special, because in these seasons he made two of the last major journeys by dog-team carried out in the Arctic by GSC personnel. In 1960 he travelled overland from Makinson Inlet on the east coast to Starnes Fiord on the south coast of Ellesmere Island. In 1961, working from the Royal Canadian Mounted Police post at Alexandra Fiord, east-central Ellesmere Island, he made a coastal reconnaissance southward, then returned from Talbot Inlet across the Prince of Wales Ice Cap, a sledge journey of several hundred kilometres.

In the 1965–66 seasons, Christie organized and led Operation 'Grant Land,' a geological reconnaissance on both sides of the northern part of Nares Strait, covering the Lake Hazen area and Judge Daly Promontory in Ellesmere Island, as well as Hall Land, Wulff Land, and Nyeboe Land in North Greenland. This highly successful venture was the first of several cooperative programmes between geologists from the Greenland Geological Survey, other geological institutions in Denmark, and the GSC. Christie's work in the Lake Hazen area continued in the 1970s. His other major endeavours were on Melville Island in 1984–85, where he was in charge of the logistics of a large, complicated field-mapping programme, and on Axel Heiberg Island in 1987–88, where he studied the Tertiary fossil forests at Geodetic Hills. During his last two years with the GSC, before retiring in 1990, he was seconded to the Polar Continental Shelf Project to coordinate scientific work on 'Hobson's Choice' ice island, derived from the ice shelf along which he had sledged in 1954.

In the words of one colleague, Christie was 'a very observant and reliable geologist'; at the same time he was

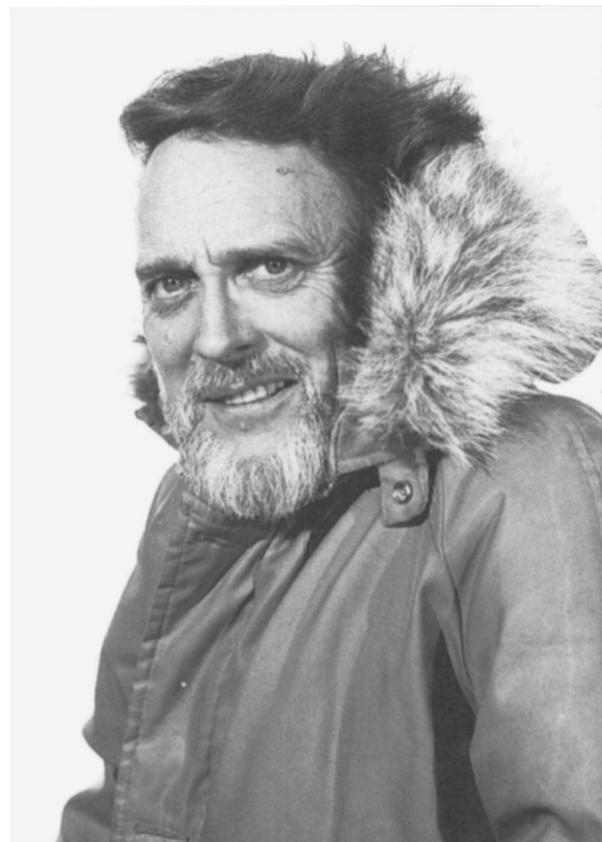


Fig. 1. Robert Loring Christie.

eclectic in his outlook, which always made talking with him so interesting. He admired the early GSC geologists who habitually considered many other aspects of the area they were mapping, including the flora, fauna, climate, and history. Dick Harington, palaeobiologist at the Canadian Museum of Nature, recalls that Christie had notified him of muskox bones partly buried in frozen ground near the shores of Lake Hazen. He passed on the specimens, which provided important information on early muskoxen in the area. In 1961 Christie and John Fyles discovered beaver-cut sticks near Strathcona Fiord, Ellesmere Island, which led to Harington spending six seasons near the site and identifying about 20 species of Pliocene vertebrates. For his part, Harington, who always regarded Christie as his touchstone on Arctic geology, provided him with observations on geological formations, which Christie always followed up with enthusiasm. Likewise, Wes Blake, Quaternary geologist at the GSC, recalls that Christie, primarily a bedrock geologist, made many observations and collections that proved valuable to Quaternary geologists and geomorphologists, in particular as to the sources of erratic rocks found in eastern Ellesmere Island.

Christie was invariably self-effacing about his own exploits. When asked about his two-man geological reconnaissance between Lake Hazen and Alert with packdogs — the first recorded traverse of the area — he couldn't remember anything unusual about the trip! Some of his later years with the GSC were in striking contrast to

his early years, for, by reason of his extensive Arctic experience, planning ability, and adroitness in handling people, he ran massive field parties very successfully. Yet he admitted that he would much rather be doing field geology than managing other people doing field geology.

Harington recalls seeing, in 1957, a nice-looking pair of ski boots in a corner of the stores hut at Lake Hazen. On enquiring, he was told that they belonged to Christie, who had discarded them after receiving bad blisters while doing local geology. The geographical name Blister Creek was the result of this episode. In the fullness of time Christie will no doubt be commemorated more personally in the land he loved.

Christie's contribution to the geological literature of the Arctic was important and wide-ranging. In 1964 his GSC Memoir, *Geological reconnaissance of northeastern Ellesmere Island*, was published, followed in 1967 by his GSC Bulletin, *Reconnaissance of the surficial geology of northeastern Ellesmere Island*. The latter report was the first major compilation of our knowledge of the surficial deposits and glacial history of the region, and it included observations made by various colleagues. The Bulletin was accompanied by a coloured 1:500,000 map — the first to depict a suggested limit for Greenland ice on Ellesmere Island, based on the distribution of erratic boulders. In the same year his GSC Memoir on the geology of Bache Peninsula, east-central Ellesmere Island, was published. With these major reports, Christie's reputation as a leading Arctic geologist was well established. Over the years, many more reports and articles followed on a wide variety of topics. In 1981, with GSC and Danish colleagues, he published an article in *Nature* entitled 'Geological evidence against major displacement in the Nares Strait,' and with J.W. Kerr, in a special Royal Society of Canada volume, a chapter on the 'Geological exploration of the Canadian Arctic Islands.' The following year, with P. Dawes of the Greenland Geological Survey, he published an introductory chapter on the 'History of exploration and geology of the Nares Strait region' in *Meddelelser om Grønland*, and was co-author of three chapters on Proterozoic, Cambrian, and Ordovician stratigraphy in the same volume. In 1991 he and N.J. McMillan co-edited the GSC Bulletin, *Tertiary fossil forests of the Geodetic Hills, Axel Heiberg Island, Arctic Archipelago*, acclaimed as the standard reference on the subject, and, in 1994, they co-edited the GSC Bulletin *The geology of Melville Island*. Christie's continuing interest in history is evident through articles such as 'Fort Conger: crossroads of the high Arctic' (*Muskox* 1986) and, with P. Dawes, 'Geographic and geological exploration' in *Geology of Canada* (1991). He was an active member of 'The Arctic Circle,' Ottawa, and sometime honorary secretary of that club. His talk to the club in April 1997, entitled 'Stefansson and the Geological Survey of Canada,' was especially memorable.

At the time of Bob's death, the Christies had just sold their farm at Madoc, Ontario, and were preparing to move to Gabriola Island, British Columbia. His wife Audrey (to

whom he had been married for 45 years) survives him, together with their three sons and two daughters. We are very grateful to their eldest son Michael for providing details of his father's family and of his earlier years.

Weston Blake Jr

Dick Harington

Geoffrey Hattersley-Smith

Martin Guy White, marine biologist and expert Antarctic scuba diver, died at his home in Conington on 3 July 1999, aged 55.

White was born 1 February 1944 in Hounslow, London, but spent his early years in Finsbury Park and then near the coast in Newhaven, East Sussex. After graduating with an honours degree in zoology from Leicester University in 1965, he joined the British Antarctic Survey.

For the next two years White was stationed at Signy Island, where he conducted research into a giant underwater isopod and its environment. He also began a life-long affair with scuba diving, which played an integral part in his research. After he returned to Britain, he produced papers on a wide range of subjects, including isopod taxonomy and physiology, Antarctic benthos, penguin biology, and diving.

Through the 1970s White spent many field seasons in the South Orkney Islands or around South Georgia. Already a world expert on Antarctic benthos and invertebrates, he developed into a leader in the study of Antarctic fish biology and marine ecology. He also became the BAS Institute Diving Officer, training young divers in safety

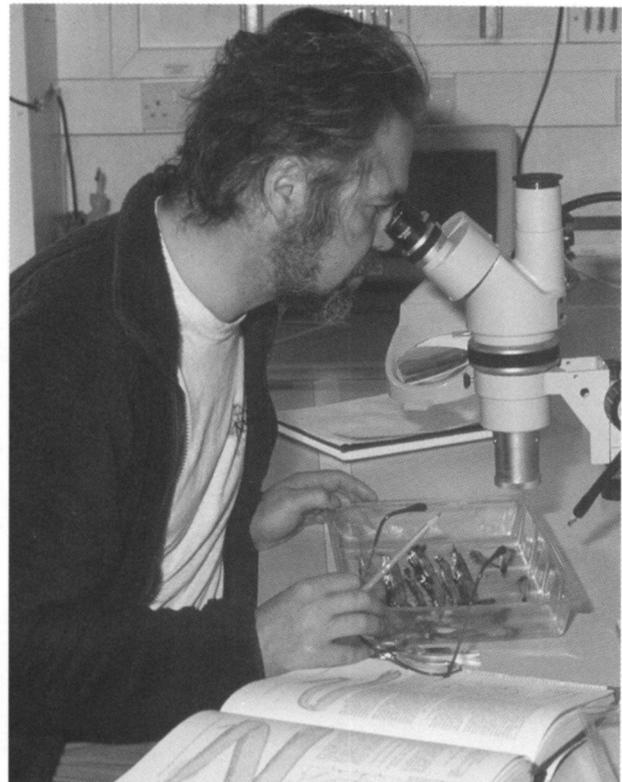


Fig. 1. Martin White at work. Photograph courtesy of British Antarctic Survey.

procedures and managing the BAS diving programme, which he helped build into one of the world's premier Antarctic underwater operations. In the 1995–96 field season, he supervised the transfer of diving facilities from Signy to Rothera. He also played a major role in discussions with the UK Health and Safety Executive, helping maintain the operation of scientific diving when that government organisation considered imposing new restrictions on this key aspect of research.

White was always exceptionally generous with his time, whether that meant helping other researchers from

around the world to obtain specimens, supervising or examining post-graduate students, giving practical or research guidance to younger members of staff at the British Antarctic Survey, or contributing to the review process of journals, including *Polar Record*, which he assisted numerous times.

He was awarded the Polar Medal with clasp in 1980 and a second clasp in 1987. He was diagnosed with stomach cancer in January 1999. He is survived by his wife Jannifer and their son Richard and daughter Catherine.

Beau Riffenburgh

In Brief

A THIRD CENTURY. The Norwegian scholar and navigator Dr Helge Ingstad is one of few men in history to have lived in three centuries, for, in December 1999, he celebrated his one-hundredth birthday in Oslo. In 1960 he discovered the only authenticated Norse ruins in North America — at L'Anse aux Meadows, Newfoundland — which were subsequently excavated by his late wife Dr Anne-Stine Ingstad (see her obituary, *Polar Record* 34 (190): 273 (1998)).

EVANS' LETTER TO BE AUCTIONED. A letter to be auctioned at Christie's, London, on 21 September 2000, has attracted considerable media attention. The letter was written to Ralph, Silvia, and 'Lal' Gifford by Commander E.R.G.R. Evans, second-in-command of the British Antarctic Expedition led by Captain Robert Falcon Scott. Dated 6 February 1913 and written shortly before the arrival of *Terra Nova* in New Zealand, Evans reported his

shock at learning of the death of the members of the Polar Party and stated 'thank God I was not included in the advance party.'

The letter is noteworthy for its strong criticism of Scott's decision to retain his load of geological specimens until the end. 'It seems to me extraordinary that...they stuck to all their records & specimens, we dumped ours at the first big check. I must say I considered the safety of my party before the value of the records & extra stores – not eatable. Apparently, Scott did not. His sledge contained 150 lbs of trash.'

In actual fact, Scott's party brought back 35 rather than 150 lbs of rocks, which had been collected at Edward Wilson's insistence on the slopes of Mt Buckley above the Beardmore Glacier. Had Scott really insisted on hauling 150 lbs of specimens, Evans' criticism would have been understandable, but it appears that his comments were based on a misunderstanding of the weight involved.