Obituaries

Bruce Herrod, landscape photographer and former geophysicist with the British Antarctic Survey, died on his descent from the summit of Mount Everest on 25 May 1996 at the age of 37. Herrod's death brought to an end the worst climbing season in the history of Mount Everest. Amongst the pre-monsoon expeditions, compounded by escalating controversy and a disastrous storm, he was the eleventh climber to die tenaciously challenging the world's highest peak. Yet those who knew him understood why he was there. They also knew him as a special individual, equally comfortable in the precincts of academe or in the hostile extremes of the wilderness. During his lifetime, he successfully related to both masters.

Born on 15 June 1958, Louis David Bruce Herrod attended King Edward VI School, Edgbaston, Birmingham. Even as a schoolboy, he united physical prowess with mental ability. Whilst never quite the *Victor Ludorum*, he competed in team sports with resolve and determination, his sporting preference leaning toward track and field. Higher education took him on to New College, Oxford, from where, in 1980, he graduated with a Bachelor of Arts (Hons) in Mathematics. The following year, he earned a Master of Science in Applied Geophysics from the University of Durham. Deciding against a more lucrative career option with a major oil company, he accepted a contract post of field geophysicist with the British Antarctic Survey. Thus, on 1 September 1981, he began a seven-year relationship with a continent that was to profoundly influence his future. His imagination was captured by the polar south, lasting images of which he endeavoured to translate onto film. From that period, his cameras destined his life.

Herrod actively participated in three successive Antarctic field seasons. The more ambitious of these were in the austral summers of 1982/83 and 1983/84. He was the scientific leader of a four-man team using Skidoo motor toboggans and Nansen sledges to successfully recover geophysical data along 3500 km of oversnow traverses. Readings of gravity, radio-echo ice sounding, and seismic depths to bedrock were made. This was also among the first Antarctic sledging parties to use a portable Global Positioning System, a timely technological advance for the remoteness of their unmapped location.

Herrod's colleagues quickly came to respect his scientific acumen, loyalty, field expertise, and wise leadership. With degrees already conferred from Oxford and Durham, he attained a prestigious triple when he was awarded his doctorate from Darwin College, Cambridge. The title of his PhD thesis was 'Geophysical reconnaissance of the Ronne Ice Shelf, Antarctica.' His research contributed to significant publications relating to the structure, tectonics, and fragmentation of Gondwana, that ancient super-continent of which the Antarctic is the keystone.

Fig. 1. Bruce Herrod on Stok Kangri, Ladakh. Photograph by Steve Bell of Himalayan Kingdoms.

Whilst his experiences in Antarctica might have triggered his addiction to photography and adventure, it was apparent that it had long been nurtured, as a member of Outward Bound whilst at school, on the Royal Holloway expedition to Svalbard in 1978 as an undergraduate, and as a keen participant in the Oxford University Climbing Club. And even as he organised his Antarctic research he sought relaxation amongst the mountains of Kenya and the glaciers of Patagonia. It was therefore of little surprise that, on leaving BAS, adventure travel took precedence over academic security.

In 1988 Bruce discovered the Himalayas, and with that evolved an affection comparable to that bestowed upon him by his Antarctic experiences. He earned his fare and his keep by becoming a trek leader. He led by example, was reliable, generous, and self-effacing. There was a strength in his quiet mood, depth to his wistful smile, and mischievousness in his gentle humour. It was on a commercial expedition to climb Stok Kangri in Ladakh that he

met his future partner, Sue Thompson; they went on to discover high and wild places together, including northern India, Nepal, Tibet, Bhutan, the Caucasus, the Andes, Iceland, parts of North America, and New Zealand. For seven years, the wilderness landscapes belonged to them. While not sharing the mountains with clients, they sought fulfilment in private expeditions. Their most memorable exploration was to Mount Kailash in Tibet, their most poignant message drawn from a gravestone in Rangoon: 'We'll catch the broken threads again and finish what we here began.' Throughout their travels, Bruce took many photographs, with Sue providing texts to accompany those published. Closer to home, they walked the hills of Snowdonia to produce the book *The Welsh 3,000 ft peaks*. But through the years, Everest always beckoned.

Herrod had led several treks to Everest Base Camp and had worked with Channel 4 for the 1993 documentary 'Return to Everest'; the cast included members of the first (1953) successful ascent. Earlier this year, he returned to Everest in his own right, as a climbing photographer with the South African Everest Expedition. At 5:15 PM on 25 May, he radioed base camp from the summit of the world and was able to speak to Sue at their London home. After several minutes, he commenced his solo descent toward the South Col. He was never heard from again.

A short distance from Everest Base Camp is a lesser summit called Kala Pattar. It was one of his favoured photographic viewpoints of Mount Everest. A small plaque in his remembrance has been placed there; it reads: 'Bruce Herrod (37) reached the summit of Everest on 25/5/96, and lost the thread to life.'

Geoff Renner

Kjell Gunnar Henriksen died at home in his native Tromsø on 3 April 1996 at the age of 58. He was an outstanding auroral physicist, a dedicated university teacher, an expert on many aspects of polar science, and a devoted family man.

Henriksen started his professional career in 1968 at the Auroral Observatory in Tromsø. There he trained in, and ultimately became an integral part of, the long tradition in Norwegian science for pioneering auroral research. Henriksen's first love was the aurora, and it was to remain so for the rest of his life. His many optical studies of the physical properties and characteristics of electron and proton aurora were carried out by photometric and spectrophotometric methods. He had a special interest in those high-energy proton and alpha-particle events associated with catastrophic 'cosmic-ray' solar flares that bring the aurora down into relatively low levels in the polar ionosphere. In the latter years of his life, Henriksen and his associates made numerous measurements of ozone levels in the upper atmosphere and of ultra-violet irradiation at ground level at many sites in the European Arctic. Most of these experiments, made in collaboration with biologists, were of major scientific and economic interest. These included, for example, a study of the measurement of ultra-violet intensity at different levels in the sea and its effect on marine life, and a study of artificial irradiation of a small herd of Svalbard reindeer with monochromatic light of different wavelengths during the polar night, to determine the effect on melatonin serum levels in these animals. These experiments were planned to elucidate the ability of these reindeer to survive the polar winter on a minimal diet. They may also be relevant to the role of melatonin in darkness psychosis, a form of depression that occurs relatively commonly in those living at high latitudes during polar darkness. The prodigious list of publications that flowed from all these studies reflects the breadth and depth of his work over a wide range of polar disciplines. However, his most important accomplishment was probably the establishment of Nordlysstasjonen (The Auroral Station) in Adventdalen on Spitsbergen. His choice of site depended on the fact that the Earth's diurnal rotation brings the station under the dayside cleft almost every day around geomagnetic noon, and that, in consequence, it is probably the most suitable land-based place in the northern hemisphere for studying patchy prenoon, cusp (noontime), and discrete postnoon aurora. With major support from the Geophysical Institute of the University of Alaska, the station was soon recognised as a leading centre for auroral research. However, Henriksen's flair for organisation and cooperation was not limited to the important Alaskan connection. He sought and obtained, from time to time, collaboration with his fellow Norwegians at Ny Ålesund (Spitsbergen); the Polish station at Hornsund (Spitsbergen); the Russian station at Barentsburg (Spitsbergen); the EISCAT stations at Ramfjordmoen (Norway), Kiruna (Sweden), and Sodankylä (Finland); and the Russian Polar Institute in Murmansk. The cooperation between these stations (which lie approximately along the same geomagnetic meridian) made it possible to compare geomagnetic events occurring simultaneously over the dayside and nightside sectors of the auroral oval.

Henriksen was essentially an experimental geophysicist, but he also had a deep theoretical knowledge and understanding of his subject that made him an excellent teacher. He was devoted to his students, and they in turn held him in the highest regard as their mentor and friend. He was never happier than when relaxing among his students, making and discussing auroral observations during the long polar night at his Adventdalen station. However, Henriksen's concern for his students went beyond the merely academic. He worked tirelessly to ensure that they had the best possible social and economic support, especially if they came from abroad. Both they, and scientists in transit to and from Spitsbergen, frequently enjoyed the kind hospitality of his home in Tromsø in the time-honoured ritual of 'Coffee and cake with the Professor.' Those of us who were recipients of such kindness will recall with much pleasure those happy occasions shared with his wife and family in the comfort of their Tromsø home.

Kjell Henriksen was truly an Arctic man. He was born

there, he lived there, he worked there, and he died there. To those of us from southern climes, the Arctic is high adventure. To him it was more than that — it was also his home and natural environment. He will be sadly missed but never forgotten by those who had the privilege of knowing him as a respected colleague, a good companion, and a loyal friend.
Alastair Simmons

Harold Oswald Fletcher, the assistant zoologist on Sir Douglas Mawson's British, Australian, New Zealand Antarctic Research Expedition (BANZARE) of 1929–1931, died on 3 August 1996 at the age of 93.

Born on 26 February 1903 in Sydney, Australia, Fletcher joined the Australian Museum staff as a general assistant at the age of 15. As the Museum's representative, he joined a South Australian Hydrograhic Survey expedition on a journey to Lake Eyre in 1922.

In 1929 Fletcher suggested to the director of the Australian Museum that their institution should have a representative on Mawson's widely publicised upcoming expedition. The director agreed, and Fletcher put himself forward. He ultimately was seconded to BANZARE as assistant zoologist. With the rest of the Australian staff, he joined *Discovery* in Capetown, from where they sailed south in October 1929.

On the two voyages of BANZARE (1929–1930 and 1930–1931), the expedition explored more than 3000 km of unmapped coastline of what later became Australian Antarctic Territory. For his role on the expedition, Fletcher was awarded the Polar Medal in 1933. Mawson said of him: 'his jovial disposition and fine physique proved an asset at all times.'

After his return from the south, Fletcher rejoined the Museum staff in Sydney. He was made an honorary palaeontolgist to the Geological Survey of New South Wales in 1937, and was also elected to the Explorers Club of New York. In 1939 he was a member of the expedition led by C.T. Madigan of the University of South Australia, which was the first to cross the Simpson Desert.

Fletcher was promoted to deputy director of the Museum in 1953, a position he held until his retirement in 1967. He remained busy in his retirement, publishing an account of his BANZARE experiences in 1984 under the title *Antarctic days with Mawson*. He was working on a book detailing his Australian adventures at the time of his death.

He is survived by his wife Mollie, whom he married in 1933, and their son Ian and daughter Ann.
Bill Storer