

who was helped to join the 1978 Yorkshire Schools Exploring Society expedition to Iceland. Both greatly enjoyed their experiences and we feel that, after a long gestation period, the Fuchs Foundation is fully established and operational. Further details can be obtained from Andrew Clarke, Secretary, The Fuchs Foundation, c/o British Antarctic Survey, Madingley Road, Cambridge CB3 0ET, England. Donations, made payable to the Fuchs Foundation, would also be gratefully received.

OBITUARY

Brian Roberts—from his colleagues at the Scott Polar Research Institute

BRIAN BIRLEY ROBERTS, CMG, whose life was devoted to the advancement and organization of knowledge of the polar regions and to the development of government policies for Antarctic regions, died on 9 October 1978. He was unmarried. One brother was killed in action during World War II; his other brother, an architect, died a year before him and he is survived by a sister, Mrs Joy Jourdain.

He was born on 23 October 1912 at Bishopsgarth, Woking, Surrey, one of four children of a medical man. When at preparatory school in Woking at the age of 10, he read a thriller in the *Boys Own Paper* titled 'In the realm of the Arctic Poppy', and thereafter he resolved to become a polar explorer. He went to Uppingham School, where he became particularly interested in ornithology and photography. He first visited the Scott Polar Research Institute while still at school. It was a weekend and the story goes that he broke in through a back window to visit the closed museum.

In his final year at school he wrote a letter to the director of the Institute:

Fircroft, Uppingham
2 November 1930

Dear Mr Debenham

I should feel very grateful if you would be kind enough to see me and advise me as to my future. I am 18, and am at present at Uppingham School. I expect to go to Emmanuel College next October.

I want to be an explorer or at anyrate to take some part in exploring. My present chief interest is in Natural History and anything to do with discovery, and I hope to be able at Cambridge to fit myself to become of use in some definite way to the members of an expedition so that I could have a chance to join them.

I go to Cambridge on Dec. 11th for my Entrance exam which fills up Dec. 12th, and I am due to return to Uppingham on the 12th . . .

If you are able and willing to give me an interview on the 13th, I will try and obtain permission from the Headmaster of Uppingham to remain in Cambridge an extra day on that account. (I do not know if I shall get it till I try.)

I should by way of introduction state that I wrote in the first place to Mr Ponting and he suggested that I should get in touch with you.

Needless to say, Professor Debenham saw and advised him.

At Cambridge Roberts read Part I of the Geographical Tripos, then Archaeology and Anthropology, in which he obtained honours in June 1934. Much of his first two years was devoted to the Cambridge Bird Club, and to organizing expeditions to Iceland and east Greenland. In 1932 he organized and led the Cambridge Expedition to Vatnajökull, Iceland. The six expedition members included Launcelot Fleming and Vaughan Lewis. Although a defect in the seismograph prevented their intended measurements of ice thickness, they succeeded in crossing the Vatnajökull ice cap from south to north and back. Their ecological, geological and other studies were reported by

lecture to the Royal Geographical Society in January 1933. The next year Roberts led the Cambridge Expedition to Scoresbysund, east Greenland. The party consisted of Roberts, Colin Bertram and David Lack. Their aim was to make an ecological survey in east Greenland for comparison with other Arctic areas. The group was taken to and from Greenland by Jean-Baptiste Charcot in the *Pourquoi Pas?* Later the same year Roberts started to plan an expedition to Baffin Island, but an invitation to join the British Graham Land Expedition put an end to the idea.

The British Graham Land Expedition, 1934–37, led by John Rymill, was an important inter-war expedition to the Antarctic. Due to the depressed economy at that time, however, the expedition's finances were limited, with members meeting most of their personal expenses. Historically, it ranks among the major Antarctic expeditions for its exploration of Graham Land and the discovery of King George VI Sound. Roberts, as ornithologist, spent the austral winter of 1935 at the expedition's base in the Argentine Islands, where he suffered from recurring appendicitis. After the expedition had established its southern base on the Debenham Islands, in Marguerite Bay, the following summer, the expedition ship *Penola* returned to Port Stanley in the Falkland Islands, where Roberts' appendix was removed. The ship then sailed to South Georgia for docking and refit at the Grytviken whaling station, and Roberts was able to study Antarctic petrels and Elephant Seals. *Penola* returned to the expedition's base in February 1937 and took the expedition back to South Georgia. The shore party, including Brian Roberts, sailed back to England on the whaling factory ship *Coranda*, to arrive in May 1937.

Thus, before his 25th birthday, Roberts had led two summer expeditions to Arctic shores and had taken part in a major Antarctic expedition. He was already achieving recognition as a polar expert and was fortunate that financial circumstances allowed him freedom to continue in that field.

Back in Cambridge, and the Scott Polar Research Institute, Roberts worked on his ornithological results, and was admitted to the Degree of PhD of the University of Cambridge on 5 June 1940 for his thesis 'The biology of some Antarctic birds'. His expedition reports were also written at this time. Together with other members of the Graham Land expedition he was awarded the Polar Medal, which he received on 6 February 1940.

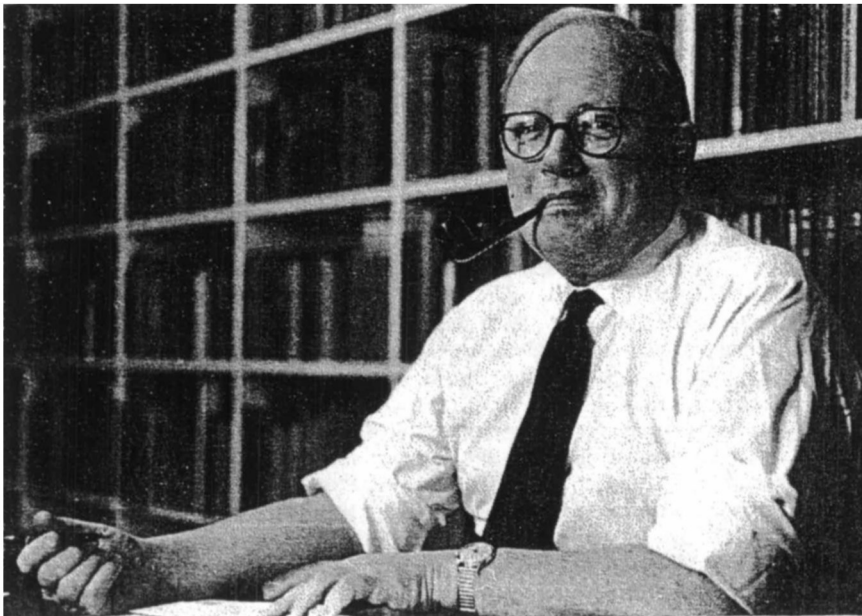
When war broke out Roberts volunteered for the Navy. He was offered a commission in October 1939, but defective eyesight prevented his appointment. In September 1939, along with Hugh Bevan, Andrew Croft, and Tom Lethbridge, he was working on plans for naval intelligence involving a voyage in a trawler to search for potential U-boat bases in Iceland and the Arctic, but this was cancelled as being too risky after Croft and Roberts had arrived in Hull to join the trawler. From May 1940 he worked with Colin Bertram on the *Handbook on clothing and equipment required in cold climates*, which was published by the Director of Ordnance Services. On completion of this task he was appointed, in February 1941, to the Intelligence Division of the Admiralty to join the team producing geographical handbooks on Iceland, Spitsbergen and Greenland. This work was carried out in the Institute, which had been taken over by the Intelligence Division.

In 1943 he visited the United States and Canada for three months, working on cold climate equipment, clothing and operations. He was also concerned during that year with the inauguration of 'Operation Tabarin', the naval forerunner of the Falkland Islands Dependencies Survey. His appointment with the Admiralty having terminated in December 1943, he was appointed to the Foreign Office Research Department on 5 February 1944 to work on polar political problems and to deal with planning and policy for the Falkland Islands Dependencies. With his appointment as part-time Research Fellow at the Scott Polar Research Institute in January 1946 his life took on the pattern which was to continue for the remainder of his active career: three days per week in London and the remainder at the Institute. This routine continued until he retired from the Foreign and Commonwealth Office at the end of 1975.

In November 1945 he was appointed Secretary of the UK Antarctic Place-names Committee. His work in this sphere made him a foremost expert on place-names and a staunch advocate of any terminology which he firmly believed to be correct and necessary for clear definition of geographical features. His sincere and forceful advocacy of some unpopular or unfashionable terms is well known. A definitive work on place-names of the British Antarctic Territories, which occupied him for many years, is approaching completion by Geoffrey Hattersley-Smith, his successor as Secretary of the Committee. The official gazetteers of the British Antarctic Territory and the Falkland Islands Dependencies are another product of his work for this committee.

He was elected to the Committee of the British Glaciological Society, now the International Glaciological Society, on its formation in 1945, and along with Gerald Seligman, Launcelot Fleming and Robert Moss, edited its new *Journal of Glaciology*, the first number of which appeared in 1947. That it is now the leading international journal in this field is largely due to its editors, of whom Gerald Seligman and Brian Roberts deserve special mention for their influence during its early years.

The development of government policies in both polar regions took on an increasingly important role in Roberts' life. Initially at the Foreign Office he was concerned with historical surveys of the Falkland Islands and its Dependencies, and hence with territorial claims in the Antarctic, which provided the basic argument for continuing British activity in the Antarctic during the years after World War II. With growing determination he advocated the need to expand scientific studies of Antarctica, and within the Foreign Office he was able to ensure that the case for continued



Brian Birley Roberts.

support for the Falkland Islands Dependencies Survey, later the British Antarctic Survey, received attention in the appropriate quarters. His knowledge of the workings of the civil service helped him to gain government support for the Norwegian-British-Swedish Antarctic Expedition, 1949–52, on whose UK and international committees he served. With Dr Harald Sverdrup he sailed in the *Norsel* to the expedition's base at Maudheim in the 1950–51 austral summer. Following the success of this expedition he advocated the need for an air survey of the Falkland Islands Dependencies, which led to the Falkland Islands and Dependencies Aerial Survey Expeditions of 1955–57. On a smaller scale, he provided the inspiration for the Gough Island Scientific Survey of 1955–56 and the South Georgia Survey of 1951–57. It was not until the British Antarctic Survey was transferred from the Foreign Office to the Natural Environment Research Council in 1967 that scientific research became the main justification for continuation of a British presence. When sovereignty issues gave way to an international approach to Antarctic research Roberts, who was clearly an internationalist at heart, gave wholehearted support to the change.

There was perhaps no other individual who was so fully involved as Roberts in the drafting of the Antarctic Treaty in 1959 and in the subsequent 14 consultative meetings until his retirement in

1975. He was determined that any avenue that would possibly lead to the strengthening of the Treaty should be explored. His friendship with delegates from other countries did much at Treaty meetings to open up discussion on sensitive issues.

One achievement of the Treaty in which he took great pleasure was the development of policies for the conservation of nature in Antarctica. His contacts with many scientists ensured that he kept abreast of their ideas on conservation, and he was able to steer them clear of problems that would be disruptive within the Treaty. He made the major contribution to the Convention for the Conservation of Antarctic Seals, signed in London in 1972, and which came into effect on 11 March 1978 after ratification by seven nations. He was also involved in the early talks on the problems of Antarctic mineral resources and on the marine biological resources of the Southern Ocean. In discussion of these problems, which are now causing considerable concern to the signatories to the Antarctic Treaty, Roberts' guidance and advocacy are much missed.

His next visit to the Antarctic took place when he was the official UK observer with the US 'Operation Deep Freeze 61'. During this operation he was marooned on shore with three American companions for three nights in a sudden blizzard which prevented their return to ship by helicopter. The wind was too strong to erect a tent. His companions stated that they owed their lives to Roberts' experience and knowledge of how to cope with such emergencies. He made his last visit to the Antarctic in 1976, shortly after his retirement, when he toured the bases of the British Antarctic Territories in the new RRS *Bransfield*. Thus he was able to see for himself the first-class organization of men, bases, ships and aircraft towards which he had worked indefatigably over the years.

A need for effective access to polar information and a determination that information once gained should not be lost stimulated Roberts' continuing interest in the techniques of documentation and, more especially, classification systems. In 1960 he published a paper on this subject, *The organization of polar information* (SPRI Occasional Paper No 1), with a view to improving arrangements for collecting and making readily accessible records and information of all kinds. It was his considered opinion that polar information was becoming progressively more difficult to assimilate as it increased in quantity, and that the accessibility of records was a problem that could only be solved by closer co-operation between polar organizations. Co-operation, he felt, should not only involve polar institutions in a full exchange of publications but should extend to co-operative cataloguing, an internationally agreed system of classification, a common policy for place-names, and increased attention to the standardization of nomenclature and transliteration. In particular he strove to develop a library classification system which would accommodate all aspects of polar knowledge, could be continuously updated and would be internationally acceptable. To this end he developed and finally edited for publication the *Universal Decimal Classification for use in polar libraries*, today a widely accepted library tool. Roberts took pains to ensure that the library of the Scott Polar Research Institute attained the highest standards, seeing it as a model which other polar libraries might emulate. In 1976 the library's catalogue was published in its entirety in 19 volumes, thus fulfilling Roberts' ambition to make the riches of this great polar collection available to the world at large.

His influence on publications is perhaps less well known than other activities. He had a broad sense of the significance of events, which played an important part in the selection of material for *Polar Record*. He also had a meticulous eye for detail, and for years the relative scarcity of factual and typographical errors in this journal was due to his background support to the various editors and his long membership of the Editorial Committee. Many other authors of polar works are in his debt for his carefully considered advice, and often for his scrutiny of their proofs. Although unsigned, the accuracy of British government reports on polar matters owes much to the high standards and ability that he brought to all his writing. The Blandford Press edition of *Edward Wilson's birds of the Antarctic*, which Roberts compiled and to which he contributed several biographical and historical chapters, was recognized as one of the 100 best produced British books of 1967. The production of such a fine volume not only gave him pleasure as a task well done, but it formed a tribute from him to an outstanding individual whom he held in very high regard.

Roberts received recognition early in his career with the award of the Bruce Memorial Prize of the Royal Society of Edinburgh in 1940 and the Back Grant of the Royal Geographical Society in 1949. He was president of the Antarctic Club in 1963 and of the Arctic Club in 1973. In 1969 he was made a Companion of the Order of St Michael and St George and received the Founder's Gold

Medal of the Royal Geographical Society in 1976 for his contribution to polar exploration. Within Cambridge, his part-time research fellowship at the Institute was changed in 1960 to the *ad hominem* post of 'Research Associate in the Scott Polar Research Institute', a special post within the university establishment created for the tenure of the first holder only. In this post he undertook general supervision of the library and information activities of the Institute. His guidance, persuasion and insistence on the highest standards have provided valuable training to the library staff which they have carried to other libraries and institutes. In 1965 he was made an Extraordinary Fellow of Churchill College—where he had the opportunity to exercise his expertise in matters of manuscript conservation at a time when the college was setting up its own archives.

After retirement from the Foreign and Commonwealth Office he was able to express freely his views on the future prospects for Antarctica. These were published in the May 1978 issue of this journal shortly before his death and show the breadth of his vision and high objectives typical of all his work. With his inexhaustible capacity for work, his exacting standards and incisive intelligence, Roberts was a formidable figure with whom few could compare. Yet his humour, sensitivity and kindness caused him to be held in much affection by his colleagues and friends.

Many letters of appreciation have been received by the Institute since his death. One of them, from his friend Phillip Law of Australia, is printed below as a fitting tribute to his life and work.

Brian Roberts was a remarkable man. I regarded him as the world's greatest expert on Antarctic matters. He had a fine mind, an encyclopaedic memory, tremendous energy and great tenacity of purpose. But, in addition, he had a zest for life, a keen appreciation of good food and wine, and a bubbling sense of humour that made him a lively and entertaining companion.

I first met Brian in 1950 when, as the fresh young Director of the Antarctic Division of the Australian Department of External Affairs, I visited England to glean as much knowledge as I could from the polar experts at the Scott Polar Research Institute. In Brian Roberts I discovered a gold mine of information. He was interested in all my problems and gave unstintingly of his knowledge, time and patience in advising me. Our discussions ranged over Antarctic politics, expedition administration, polar science, information services and libraries, museum collections, ship designs, place-names policies, the psychology of expedition personnel and leadership problems. I took home with me, in my head and in my brief case, an astonishing assortment of facts, figures and new ideas.

From that time on I returned periodically to refresh myself at this fountain of knowledge. In Australia in those early years there was no person with whom I could talk in depth over such a range of specialized Antarctic problems. I therefore looked forward keenly to visiting England every few years and to the great stimulation that several days in Brian's company would afford me. On two of my visits I found he was away on vacation and I had to pursue him to Majorca. The pattern there was much the same as that in Cambridge—talk, food, drink, talk, swim, argument, sight-seeing, more talk and argument, through each day and most of each night for a week.

Back in Australia I kept up a constant correspondence, particularly on Antarctic place-names. I was Chairman of the Antarctic Names Committee of Australia and Brian was Secretary of the Antarctic Place-Names Committee of Great Britain. His meticulous scholarship, his ruthless logic, his long experience of the international problems involved and his extensive knowledge of Antarctic geography placed him in the forefront of Antarctic experts in this field and I learned to value his judgments very highly. But he brought to this task something more: he was an idealist with a vision of the future in which international agreement on place-names would result in the universal use of a single map of Antarctica.

Over recent years my discussions with Brian tended to concentrate upon matters arising from the Antarctic Treaty—environmental conservation, the protection of species, the preservation of historic sites, the exploitation of Antarctic resources and possible future regimes for the control of Antarctica. My last meeting with him was in Punta Arenas, Chile, in April 1977, at a symposium on the development of Antarctica. The paper that he delivered, 'International co-operation for Antarctic development: the test for the Antarctic Treaty' (reproduced in *Polar Record*, Vol 19, No 119, p 107–120), was in my opinion the most important contribution to the symposium and it was a good example of the lucid and logical style that, over the years, had made Brian Roberts such an effective proponent of new ideas.

Brian Roberts will be greatly missed, and not only in his own country. The depth of scholarship and the profundity of thought that he brought to bear upon Antarctic problems, combined with his personal experience of the Antarctic environment and his individual involvement in Antarctic science, gave his contributions to Antarctic Treaty deliberations a special value.

My own sense of loss, however, is much more personal. During the 19 years of my work as an administrator of Antarctic expeditions, there was no man who influenced me professionally as much as Brian Roberts. I owe him a great deal and remember him with affection and gratitude.

Phillip Law,
Director, Antarctic Division,
Australian Department of
External Affairs, 1949–66

KNUD LAURITZEN, head of the J. Lauritzen shipping company whose ships have made regular visits to the Arctic and Antarctic since 1952, died on 6 May 1978, at the age of 74. Lauritzen, prompted by the prospects of trade after hearing of the discovery of lead deposits at Mesters Vig, north-east Greenland, instigated the building of the company's first polar vessel, the *Kista Dan*. This ship also made the company's first trip to the Antarctic when in 1952–53 she carried an Australian scientific expedition to its bases. Since then, Lauritzen ships have made annual visits to the Antarctic, carrying French, British, Belgian and Dutch expeditions and returning with overwintering parties. The company's current operations also include trips to the Canadian Arctic and the winter navigation of the St Lawrence River. Lauritzen was awarded an Honorary Fellowship of the Royal Geographical Society in 1966 to mark his outstanding contribution to polar transportation.

Dr **FRANCIS C. FRASER**, CBE, a well-known zoologist who participated in the *Discovery* expeditions, died on 21 October 1978. He was born on 16 June 1903 in Dingwall, Scotland, and attended the Dingwall Academy before studying zoology at Glasgow University. He joined the scientific staff of the *Discovery* Expedition in 1925, went south in the RRS *William Scoresby* on her maiden voyage in 1926 and was transferred to the RRS *Discovery* at Cape Town. When he first boarded, the mate, having asked his name, replied that there was already a Francis on board so he would be 'Jimmie', a nickname that stuck to him for the rest of his life.

Jimmie took part in the working of stations at sea and became especially occupied with the planktonic crustacea. The result of this work was the monograph *The development and distribution of the young stages of krill*, in *Discovery Reports*, Vol XIV, the foundation on which all later work on the species has been built. He also worked on whales at the southern whaling stations but was particularly interested in the smaller cetacean species. I well remember his enthusiasm on a memorable voyage from Cape Town to South Georgia in the *William Scoresby* when he first saw the Dusky Dolphin, Killer, and other dolphins including the beautiful little Southern Right Whale Dolphin. During the years 1928–29 he was at the Marine Station, South Georgia, and then joined the first commission of RRS *Discovery II* at the end of 1929. He remained with the *Discovery* Investigations until 1933. He then joined the staff of the British Museum (Natural History) as an Assistant Keeper, where he took charge of the Osteological Room which contained the collection of Cetacea, and the whale gallery. During this time he worked on the auditory system of whales and dolphins and along with Dr P. E. Purves produced the classic *Hearing in cetaceans*. In 1957 he became Keeper of Zoology but relinquished the position in 1964 to devote his time to research, and retired from the museum in 1969. He was awarded the Polar Medal in 1942 and created CBE in 1962.

As a ship mate or shore companion no-one could wish for a more congenial or convivial friend than Jimmie Fraser. He was a man of wide interests far beyond the science in which he had specialized, and had a great sense of humour. His interest in the Antarctic never waned: he contributed to many conferences and symposia and wrote a masterly chapter for the lavishly illustrated volume *Antarctic research*.

L. Harrison Matthews

FRANKLIN ALTON WADE, chairman of the United States Polar Society and a leading Antarctic geologist, died on 30 September 1978, aged 75 years. He was born at Akron, Ohio, on 5 February 1903 and studied first at the Western Reserve Academy and then at Kenyon College, obtaining a BSc in chemistry in 1926. He became interested in the Antarctic after reading Shackleton's *The heart of Antarctica*. His first trip there was as a member of Byrd's 1933–35 expedition and while there he was able to start work on his primary interest, geology. He obtained his PhD in geology in 1937 from Johns Hopkins University.

In 1936 he joined the staff of Miami University, Ohio, and was appointed a professor in 1947. He transferred to the Texas Technical University, Lubbock, in 1954 and here he set up an Antarctic geological group which took advantage of the expansion of Antarctic research activities that occurred after the International Geophysical Year.

Apart from his Antarctic activities he was also absent from his university in 1943–45 with the US Air Force where he served in the rank of major at stations in Greenland. In 1950–51 he headed a special staff section, Operation Analysis, Fifth Air Force, then serving in the Far East, for which he received the Meritorious Civilian Service award.

He is best known for his geological work in Marie Byrd Land, which he commenced originally in 1935, and he led active field parties to the region again in 1966–67, 1967–68 and 1969–70. In 1969–70 his group joined the Scott Polar Research Institute studying the bedrock topography of the region by radio echo sounding as part of the long-range sounding programme sponsored by the National Science Foundation. Before these activities, in 1962–63, and again in 1966–67 he studied the geology of the Queen Maud Mountains. On a 1939–41, expedition he also initiated glaciological pit studies of the structure of Antarctic firn, a field that has been followed up by many other workers, and in 1935 he studied the onset of frostbite. Most recently he has been responsible for the preparation of an Antarctic geological map for the Circum-Pacific Council for Energy and Mineral Resources. At the time of his death he was Horn Professor Emeritus of Geosciences at Texas Technical University and was working on data collected from Marie Byrd and Ellsworth lands.

Al Wade will be remembered by his many friends as a capable, hardworking and friendly man whose commonsense advice helped many students and geologists over a wide range of problems of which he had first class knowledge.

Gordon de Q. Robin

ERRATUM

Polar Record, Vol. 19, No. 120, September, 1978, p 248. Dr Inigo Eversan author of 'Antarctic fisheries', would like the following wording to be added to his list of acknowledgements: 'Thanks are also due to Professor Dr D. Sahrhage for permission to use photographs taken during the 1975–76 West German Antarctic Expedition and to Dr G. Freytag for supplying information relating to the echograms.'