

struction stage." (Source: *South African National Scientific Programmes Report* 140, 1987.)

**THE ARCTIC A PEACE ZONE?** During a recent visit to Norway Soviet Prime Minister Nikolai Ryzhkov signed bilateral government agreements covering exchanges of information about nuclear installations, prompt notification of nuclear accidents, and cooperation in search and rescue work in the Barents Sea. Scientific and technical cooperation in the Arctic has been agreed between the Soviet State Committee for Science and Technology and the Norwegian Research Council for Natural Sciences. In an appeal to parliamentary foreign affairs commissions of Denmark, Iceland, Norway, Finland, Sweden, the USA and Canada, the Joint Foreign Affairs Commission of the Soviet Parliament has urged cooperation in making the north a zone of peace. Recalling the Gorbachev programme of action announced in Murmansk on 1 October 1987 (*Polar Record* 24 (148): 68-69, 1987), the text

records the belief that "... the time has come for our countries to sit down at the negotiating table and start joint and constructive work to find viable and stable formulas to ensure mutual security as well as mutual interest in other fields, such as the economy, ecology, science ..." and suggests that representatives of parliaments of all interested nations meet in Moscow this year to discuss the ecological protection of the Arctic. (Sources: *Soviet Weekly* 2397: 4, 23 January 1988; 2401: 1, 20 February 1988.)

**POLAR MEDAL: AWARDS.** The following awards of the Polar Medal have recently been announced. *British Antarctic Survey*: Eric Michael Paul Salmon; Eric James Chinn, Alan James McManus. *Scott Polar Research Institute*: Vernon Arthur Squire; Stuart Constantinos Moore. *In the Footsteps of Scott Expedition*: Robert Swann; Roger Mear; Gareth Wood. (Source: Second Supplement to *The London Gazette*, 25 January 1988.)

## Obituary

**Dr ALBERT P. CRARY** died in Washington, DC, on 29 October 1987. After leading U.S. scientific fieldwork in Antarctica during the International Geophysical Year, he became Chief Scientist of the U.S. Antarctic Research Program from 1961 to 1967. He was a modest but natural leader whose standing among his contemporaries could be compared with that of Shackleton in the early part of this century. He planned the US glaciological traverses over the Antarctic ice sheet during and after the IGY. These provided the largest source of data on the bedrock topography and dynamics of the ice sheet of that highly successful international project. Crary led three of the dozen or so US traverses of upwards of 1000 miles between 1956 and 1964. Overcoming hazards of crevasses, collapsing ice cliffs and blizzards was a secondary consideration to obtaining geophysical and glaciological data of high quality. This attitude was passed to all scientists under his leadership. When his third traverse finished at the South Pole in January 1961, he became the first man to set foot on both Poles, but this distinction was to him of little importance compared to the success of his geophysical programme.

Albert Paddock Crary, born in Pierrepont, NY, on 25 July 1911, was descended from families that had settled in Vermont in the early nineteenth century. The second of seven children in a farming family, he obtained distinction in physical sciences at university but was not attracted to laboratory studies. He was introduced to geophysics by Maurice Ewing, with whom he produced papers on propagation of elastic waves in ice in 1934, and on seismic and electrical resistivity techniques. From 1935 this led to fieldwork for the oil industry in Colombia, England



Photo: National Science Foundation

(1942) and other countries. From 1946, working for the US Air Force, Crary studied the upper atmosphere by acoustical sounding in countries ranging from South America to Alaska, and problems of Arctic climate, sea ice and oceanographic research. This led to contact with Bernt Balchen over the need for aircraft landings on Arctic Ocean sea ice, and to his discovery of air-coupled

flexural ('Crary') waves in floating ice. In 1955 he went on loan to Washington DC to direct glaciological operations of the US International Geophysical Year programme. He spent the two years of the IGY in Antarctica as Deputy Chief Scientist of US Antarctic Research Program, becoming Chief Scientist in 1961. With support from Dr T. O. Jones, Director of USARP, the research programme was extended into studies of biology, cartography, geology and oceanography, creating research opportunities as well as considering new research proposals.

In oceanography, *Eltanin* was equipped for the major oceanographic voyages in the Southern Ocean, some of which Crary led during absences from his Washington desk. He initiated the joint National Science Foundation and Scott Polar Research Institute programme of radar sounding of the Antarctic ice sheet, from long range aircraft flown by the US Navy for the NSF. He gave generous support to many other international research projects at all levels. The Jones-Crary team moved up to the NSF Division of Environmental Sciences, where Crary became Deputy Director in 1965 and Director in 1967. This extended his responsibilities to atmospheric, earth and oceanographic sciences. In the last, he was associated in various ways with the very successful Deep Sea Drilling Program (*Glomar Challenger*), which contributed much to our knowledge of Antarctic geological history as well as to many aspects of global geophysics. In his final year (1975-76) he directed the Division of Earth Sciences and the earth science section of the DSDP (*Glomar Challenger*).

There can be few administrators who have been held in such high regard because of their field record, ability and reputation for hard work. His two decades with the NSF saw great advances in Antarctic glaciology and global geophysics, thanks in no small measure to Crary's judgement and influence on what and how various projects should be supported. Of various honours he received, the most appropriate was the establishment early in 1987 of the Albert P. Crary Professorship of Geophysics in the University of Madison. Of many tributes, Walter G. Sullivan, Science Editor of *The New York Times* said "To me, Bert Crary represented the finest in polar explorers and scientists. In contrast to so many, he was not driven by vanity or ego but by the advancement of knowledge. And he was a wonderful human being". He is survived by his wife, Mildred Rodgers Crary, whom he first met in the IGY planning office, and by his son Frank.

Gordon de Q. Robin

**A. R. F. DALGLIESH**, who served with the advance party of the Royal Society International Geophysical Year Antarctic Expedition, died on Christmas morning 1987, aged only 59.

Leaving Merchant Taylor's School for Sandhurst in 1946, Robin was commissioned in the Buffs two years

later. He saw service in Hong Kong, and in 1952 was wounded in action in Suez. For three years he was on secondment to the Somali Scouts, and later became a District Officer in Kenya, first at Kitui and then at Wajir.

In 1955 he applied to join the advance party of the Royal Society's IGY expedition to Antarctica, which I was leading. I was surprised, knowing his enjoyment of the hot Somaliland desert, but Robin said he would like to try a snow desert for a change. He joined as a tractor driver at £420.00 per year. We may have achieved a first—two brothers on an Antarctic expedition. His most valuable contribution during the establishment of Halley Bay station was his humour. As one of our members said recently on hearing of his death, "From the moment we left Southampton he kept us all laughing"—a wonderful epitaph.

Robin was awarded the Polar Medal in 1957. He later found his metier in the business world, spending seven years with British Cellophane in the Far East and twelve years in Brussels with Memorex. He is survived by his wife Daphne and son Jasper.

David Dalgliesh

**L. M. FORBES.** As reported briefly in the January issue, Lachlan Maxwell ('Max') Forbes, for 17 years editor of *Polar Record* and curator of the Scott Polar Research Institute's museum, died on 19 October 1987 at the age of 77. Born in Salisbury, Southern Rhodesia on 19 January 1910, he received his higher education at Edinburgh University and at King's College, Cambridge, where he read archaeology and anthropology and English literature. In 1935 he entered the Colonial Service as a Cadet District Officer in Uganda, serving in various districts and ending up as District Commissioner in Jinja. In 1942 he met and married Evelyn Ferrar, daughter of H. T. Ferrar, geologist on Captain Scott's *Discovery* expedition of 1901-04. It was through this polar connexion and Evelyn's friendship with Professor Frank Debenham,



Photo: Charles Swithinbank

founder of the Scott Polar Research Institute, that Max, on retirement from the Colonial Service, was persuaded to apply for the post of editor of *Polar Record*, taking over from Douglas Blyth in January 1955.

The job was to prove a demanding one. Not only were the highest editorial standards expected, but the journal itself was about to enter a new era of increasing activity and interest in polar regions, precipitated by the onset of the International Geophysical Year.

Max's administrative skills, coupled with his love of good English, his unflinching tact in handling committees and his ability to charm copy out of dilatory authors, ensured that *Polar Record* continued to maintain a leading position in its field, during a period of changing editorial policy bedevilled by inflation and rising costs. Over the years Max supervised numerous other Institute publications, plus those of the Scientific Committee on Antarctic Research. At the same time he was responsible for the museum, the Institute's 'shop window', an area of activity which he greatly enjoyed and which to this day owes very much to Max's good artistic sense and his flair for acquiring new and interesting exhibits.

After a decade of editing, writing and lecturing on polar affairs the editor of *Polar Record* found himself appointed in 1965 the official United Kingdom observer in Antarctica attached to the United States Operation Deep Freeze. Well-briefed and socially at ease, Max was the perfect candidate for the task of making personal contacts, reporting back on scientific work in progress and generally representing his country in the frozen continent. Uniquely he must have been the first editor of a learned journal to visit the South Pole.

Throughout the years of his editorship Max had played an exceedingly active part in his local community. He was a Justice of the Peace and chairman of his local parish council. In 1972 he resigned the post of editor to become Deputy Director of the Cambridgeshire Community Council and to cultivate various other outside interests, to all of which he gave his characteristic enthusiastic support. Max faced up to his final illness with fortitude, remaining outwardly his usual effervescent self. We who enjoyed his company as friends and colleagues will cherish his memory with pleasure and appreciation.

H. G. R. King

**ALEC HIBBARD LAURIE**, who served as a biologist with Discovery Investigations, died on 18 April 1987, aged 80. Born in Edinburgh in 1907, and educated at Sedbergh and King's College, Cambridge, he taught biology briefly at Westminster School before joining Discovery Investigations as a biologist and chemist. He served at the marine laboratory, South Georgia 1930–31 and on the whale factory ship *Southern Princess* for the season 1932–33, and also led a whale marking cruise; his biological research included an early investi-

gation of reproduction in blue whales, and the physiology and structure of whale respiratory mechanisms. He was awarded the Polar Medal in 1942.

During World War II Laurie was involved in weapons research, firstly as a civilian and later in the Royal Navy, in which he was commissioned. After the war he applied scientific research to problems in several aquatic fields, including harbour protection, fish farming and sewage treatment.

**Dr THEODORE SHABAD** died on 4 May 1987 in New York, aged 65. A journalist, his special interest had for many years been the geography of the USSR. Born in Berlin, he went to France and then in 1938 to the USA. In 1943 he joined the staff of the *New York Times*, on which he remained until his death, spending three periods in the paper's Moscow bureau. His interest in geography included the northern regions of the USSR, and he will be remembered for his publications, especially the journals *Soviet geography: review and translation* and *Polar geography and geology*, both of which he founded. His books included a standard textbook *The geography of the USSR* (1951), *Basic industrial resources of the USSR* (1969), *Gateway to Siberian resources* with Victor Mote (1977) and *The Soviet energy system* with Leslie Dienes (1979). His collection of source materials from Soviet publications was vast, as was his generosity in sharing it with others.

Terence Armstrong

**Maj-Gen R. A. SMART CBE** died on 6 November 1986, aged 72. A graduate in medicine of Aberdeen University, Robert Arthur ('Robin') Smart joined the RAMC in 1936 and served as a medical officer in World War II, being mentioned three times in despatches. In 1948 he first became interested in medical problems associated with extreme cold, and in 1948–49 served in northern Canada and Alaska, investigating polar clothing and equipment for the army. In 1956, after four years' service as Assistant Director of Army Health in East Africa, he was appointed leader of the main party of the Royal Society International Geophysical Year Antarctic Expedition, taking over in January 1957 the research station at Halley Bay that had been established by an advance party in the previous year.

He became involved in all the scientific activities of the station, including observations on the nearby emperor penguin colony, upper air investigations and physiological research. Relinquishing command in 1958, he was appointed CBE and awarded the Polar Medal. On returning to army service he held a succession of senior posts including Director of Army Health, and was appointed a Queen's Honorary Surgeon; on retiring in 1972 he became Medical Officer to the Yeoman Warders of the Tower of London and chief medical officer to Esso Petroleum.