

life. Yet, while large-scale devastation of communities in the north is a thing of the past, new illnesses, such as AIDS and various degenerative diseases, may precipitate a reflexive crisis for the individual and the community. By interpreting and coming to terms with such illnesses, the individual will become involved in a re-definition of self that may, in turn, reflect the attitudes of a wider society.

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Obituary

James Herbert Zumberge, geologist and former president of the University of Southern California, died in Pasadena, California, on 15 April 1992 at the age of 68. A native of Minneapolis and a former Marine Corps lieutenant, he received his bachelor's degree and doctorate from the University of Minnesota. While teaching at the University of Michigan, he led the US Ross Ice Shelf Project during the International Geophysical Year, 1957–58. The reasoning behind the project was that a deforming ice shelf should, in the space of a year, serve as an analogue for millions of years of deformation in rocks. Summer field work continued under his direction until 1962, yielding significant scientific results and PhDs for his students.

A born leader, Zumberge was selected from hundreds of professors in 1962 to be first president of Grand Valley State College in western Michigan. This involved designing a campus to fill what was then a green field site, raising tens of millions of dollars, and, finally, attracting good teaching and research staff and students. Achieving these goals in under two years launched him into a new career as president of successive universities of ever greater prominence, culminating in the presidency of the University of Southern California from 1980 until his retirement in 1991. He raised \$641 million for new developments at USC; to the fame of its athletic department, he added academic excellence.

He maintained a lifelong interest in Antarctic affairs, serving as US delegate to the Scientific Committee on Antarctic Research (SCAR) 1972–86, and president of SCAR 1982–86. He was adviser on Antarctic affairs to the US State Department 1970–73, was appointed by President Gerald Ford to the National Science Board in 1974, and was selected by President Ronald Reagan to chair the Antarctic Research Commission in 1984. At the same time, the Governor of California appointed him to the state Economic Development Commission.

Zumberge's textbook *Elements of geology* (1958) established his position as a teacher at the same time as the Ross Ice Shelf work established his credentials in polar research. An exceptionally competent educator and administrator, he had the knack of delegating responsibility to those he trusted, and his staff responded with loyalty and devotion. He seemed effortlessly to bridge the gulf that often divided academics from businessmen and govern-

ment. As a result, he was appointed to the board of a number of large corporations. A keen sportsman, he was a good skier and a formidable opponent at water polo. His friends in many lands will remember Zumberge's infectious sense of humour and his great skill at the piano, often a focal point for social gatherings at SCAR meetings and elsewhere.

He received six honorary degrees, and, in Antarctica, Cape Zumberge and the Zumberge Coast are named after him.

Charles Swithinbank

Harold Victor Serson, Canadian Arctic specialist, died in February 1992 at the age of 66 during a holiday in Costa Rica, where he suffered a heart attack while swimming. He was born in Ottawa in February 1926. On leaving high school in 1944, Serson's first job was as a seaman in the Hudson Bay Company ship *Nascopie*, operating in the eastern Arctic. In 1947 he joined the technical staff of the Radio Propagation Laboratory of the Defence Research Board (DRB), becoming the following year one of the first people to overwinter at the DRB's Ionospheric Station at *Resolute*, Cornwallis Island, which he helped to establish. Until 1963 Serson continued to work in the radio propagation field for the Defence Research Telecommunications Establishment in Ottawa, apart from a year spent at the DRB's Radar Laboratory in Prince Albert, Saskatchewan. He was promoted from technician to technical officer in 1956.

Early in 1961 Serson and the late Trevor Harwood (*Polar Record* 22 (140): 555–56, 1985) were flown in to investigate the abandoned Soviet ice station NP-7, which had drifted down from the Arctic Ocean through Nares Strait to a position off the east coast of Baffin Island. He and Harwood were an ideal pair to make a full report on the station, with their highly inquisitive minds, the one geared to technical and the other to intelligence matters.

In 1962 Serson transferred to the DRB's Geophysics Section, which was then establishing a new field station at the head of Tanquary Fiord, northern Ellesmere Island. In ensuing years he was the mainstay of the oceanographic work on the ice of the fiords of northwest Ellesmere Island and of the west coast of Axel Heiberg Island. Much of the trail equipment for the long traverses over the ice by

dogteam and snowmobile was made to his design.

During 1965–66 Serson took particular pride in assisting the Scott Polar Research Institute in its radio echo-sounding programme. Dr Stanley Evans, formerly Assistant Director of Research at the Institute, remembered Serson's contributions:

In November 1965 you introduced me to Harold in Ottawa — in a hangar I suppose — saying that he would make and fit an antenna to the Otter if I would say what was wanted. This was the first time that radio echo sounding of glacier depths was to be attempted from the air, and we had only the vaguest idea of what might work. I had no expectation when we returned to Canada the following Easter that the whole wire structure would be fitted already-slung between the undercarriage and the wing tips of the aircraft hired from Atlas Aviation, and waiting for us at Resolute. Transformers hung in the rigging and coaxial cables were threaded through the wings and into the cabin. We were operational from the day of our arrival, thanks to Harold, and that type of antenna on Otter aircraft of the British Antarctic Survey, with minor modifications, lasted for many years.

Through all of this, perhaps Serson's greatest achievement was to persuade Weldy Phipps, the well-known Arctic pilot, to allow holes to be drilled in the wings of his aircraft!

After promotion to defence scientist in 1974, Harold spent the last five years of his service with the Department of National Defence at the Defence Research Establishment Pacific on Vancouver Island, where he was engaged in further Arctic oceanographic research, and where he settled on his 'retirement' in 1981. Beginning in 1982, he joined forces with Dr Martin Jeffries of the University of Calgary (later of the University of Alaska) in fruitful research on the ice shelves off northern Ellesmere Island. He was content to receive only his travel expenses and \$1 per day, for he sought only 'the joy of working.'

Serson possessed exceptional technical expertise that was largely self-acquired through hard work, intense application, and thoroughness in all he undertook. Moving from one task to the next, he seemed to waste no moment of his time. He was equally capable in fixing recalcitrant radios, generators, and mechanical vehicles of all types, as he was in house-building, boat-building, and cooking. For an ordinary mortal, who in a temperature of -30°C can only fumble with cold hands, it was an education to see Serson deftly replace a snowmobile track. He could be relied upon to remain invincibly cool-headed and resourceful even in the most hostile circumstances. He also possessed considerable scientific insight, as shown by some 40 papers that he authored or co-authored, mainly in the fields of Arctic glaciology and oceanography. He was elected a Fellow of the Arctic Institute of North America in 1988.

Although a man of few words when there was work to do, Serson knew how to relax and to regale his companions from a fund of stories and anecdotes drawn from his long experience in the north. He would be well content that we

should write: a true northerner, he served his country well. He will live on in the legends of the north, and his friends will treasure his memory.

Geoffrey Hattersley-Smith

Thomas Charles Pullen, polar navigator, died in Ottawa on 3 August 1990 at the age of 72. As Captain T.C. Pullen RCN, he commanded the icebreaker HMCS *Labrador* on two major voyages through Canadian Arctic waters in 1956 and 1957. *Labrador's* task was to assist shipping and to support scientific activities in the north. Here was an opportunity to carry on a family tradition, for two of Pullen's great-uncles had played prominent roles as naval officers in the search for HMS *Erebus* and *Terror*, the ships of Sir John Franklin's lost expedition. The Pullen name was already on an island, a strait, and a mountain. He had inherited an interest in exploration and the history of the north.

Many of the channels that *Labrador* charted had never been used by a deep-draft ship. Uncharted shoals led to some tense moments, notably in Foxe Basin, Fury and Hekla Strait, and Bellot Strait. Captain Pullen drove *Labrador* so hard in 211 days at sea that she covered 37,000 miles without once dropping anchor. At the end of the 1957 voyage he was shattered to learn that the navy was to hand over the ship to civilian management, ostensibly on the grounds of economy. The whole of the Canadian Arctic was to be left without a naval presence. He deplored the decision but was unable to reverse it.

On retiring from the Royal Canadian Navy in 1965 he began a second career as an Arctic consultant, spending months of most seasons as adviser or ice-master in waters increasingly frequented by ore-carriers and petroleum exploration ships. Plans for shipping iron and lead/zinc ores from the Arctic depended on the development of docking and loading facilities, and Pullen was employed to search for suitable sites. As economic development was seen to be of national importance, Canadian Coast Guard icebreakers were assigned to assist him. His first task in 1968 was to search for a potential harbour near the Coppermine River.

It was the discovery of the Prudhoe Bay oilfield that led to Captain Pullen's next Arctic assignment. In 1969 he was asked to represent Canada on the Northwest Passage voyage of SS *Manhattan*. This was an ice-strengthened supertanker 10 times the size of any ship that had ever ventured into ice before. Much to his discomfort, she turned out to have three captains on board, none of whom had ever worked pack ice. Pullen was one of two experienced ice navigators, aching to advise this trio but loath to be seen as interfering. Though his wry sense of humour never left him, his tact was stretched to the limit. *Manhattan* was the first ship to transit the Northwest Passage twice in one season.

Pullen supported *Manhattan* again in 1970, this time from on board CCGS *Louis S St Laurent*. In 1971 he was on USCGC *Glacier*, studying the feasibility of shipping

ore from a site on Seward Peninsula in Alaska. The summer of 1974 saw a new development in marine transport in the north: the *MS Lindblad Explorer*, with Captain Pullen as ice-master, made the first tourist cruise to high latitudes in Canada. In subsequent years he undertook the duties of ice-master in ore-carriers and tug/barge convoys, taking mining and petroleum exploration installations to the north.

In 1984 he was with *MS Lindblad Explorer* on the first transit of the Northwest Passage by a passenger ship. This was from Newfoundland to Japan, the first time the Northwest Passage had been used for its original purpose as a route to the Orient. In 1988 he made a second transit in *MS Society Explorer* (the same ship renamed), this time from west to east. In 1989 he cruised from Iceland to Greenland and on to Churchill, Manitoba, in *MS World Discoverer*. On these cruises he served as ice-master, and was also a popular lecturer.

Pullen was a frequent contributor to learned journals and expressed fierce opposition to the Canadian government's proposal for nuclear submarines. He believed that a nuclear-powered icebreaker would be much more useful. In 1984 he was appointed to the Order of Canada and awarded the Massey Gold Medal of the Royal Canadian Geographical Society.

Following a distinguished war record, in which he took command of a destroyer at the age of 26, Pullen became, and to the last remained, one of the great polar navigators. *Charles Swithinbank*

Emanuel D. Rudolph, former director of the Institute of Polar Studies and emeritus professor of plant biology at Ohio State University, died in Columbus, Ohio, on 22 June 1992 at the age of 64 after being involved in an automobile accident. A native of New York City, Rudolph received his BA from New York University in 1950 and his PhD from Washington University (St. Louis) in 1955.

An expert on the adaptation of lichens — particularly those in the Antarctic — and on the history of botany, Rudolph taught in the Department of Botany (now the Department of Plant Biology) at Ohio State from 1961 to 1989, serving as chairman of the department 1978–87. He was the author of more than 40 papers on lichenology, and he presented more than 100 papers at scientific meetings. Rudolph also served as director of the Institute of Polar Studies (now the Byrd Polar Research Center) 1969–73, and as the director of the Environmental Biology Graduate Program 1972–78.

A Fellow of the American Association for the Advancement of Science, of the Ohio Academy of Science, of the Arctic Institute of North America, and of the Linnean Society of London, Rudolph was the recipient of many awards and honours, including the Antarctic Medal of the United States (1970). The Rudolph Glacier in Victoria Land, Antarctica, is named after him, as is *Edrudia*, a genus of lichen.

Beau Riffenburgh

Enrique Jorge Pierrou, Argentine Antarctic expert, died on 18 March 1992 at the age of 68. A native of Dolores, Provincia de Buenos Aires, Pierrou joined the Argentine Navy in 1941, ultimately attaining the rank of Lieutenant Commander. For 18 years, Pierrou was responsible for management and logistics of the Argentine naval bases in the Antarctic. He participated in 12 Antarctic summer seasons, was the Argentine representative to the SCAR Working Group on Logistics 1963–68, and became Argentina's acknowledged expert on the study of geographical names.

For most of the last two decades, Pierrou was the nautical adviser to the Servicio de Hidrografía Naval (Hydrographic Service of the Navy), with particular concern for Tierra del Fuego, Antarctica, and the South Atlantic islands. He was also a member of the UN Group of Experts on Geographical Names and of the Subcommittee on Toponymy, Geographical Coordination Commission. In this period he revised all of the geographical names given to the Argentine coasts. He was the author of many papers and books, including *Política geográfica de la Marina de Guerra en la Antártida* (1958) and *Toponimia del Sector Antártico Argentino* (1970).

Beau Riffenburgh

Mrs Frances Elizabeth Inglis Moore, former assistant to the director of the Scott Polar Research Institute (SPRI), died on 20 May 1992 in South Africa. Born Frances Elizabeth Creswick in 1907, she took on the post of assistant to the director in 1931 after a brief interview over lunch with her predecessor, Miss Francis Drake. She had been introduced by her brother George, who was very interested in the Antarctic. Elizabeth made a great success of the job, and I think without her my father (former director Frank Debenham) would have been hard put to keep SPRI going. *Polar Record*, too, owes much to her sub-editorship. My father nicknamed her Betty, and she quickly became a dear friend of the Debenham family. The Institute was housed in Lensfield House on the site now occupied by the University Chemical Laboratory, and Betty would welcome budding explorers, seasoned explorers, researchers, visitors, and schoolchildren alike with tea and buns.

At that time the new building, which opened in November 1934 farther up Lensfield Road, was being planned and built. Betty took a large part in this as well as working hard on behalf of the many expeditions that were setting forth to both polar regions. She was particularly involved with the British Graham Land Expedition, and on its return she married James Moore, an engineer on that expedition. They went to Africa in 1938.

After the war they lived in Kenya, where Betty's many interests included the East Africa Women's League (EAWL) and the Mountain Club. To them all she brought the same cheerfulness, imagination, and dedication. She was largely responsible for the lovely tapestries worked by members of EAWL, representing daily-life histories of

each district of Kenya.

In 1964 Betty and Jim retired to Cornwall. Here, too, Betty never ceased from good works, church embroideries, and editing *Jambo*, the EAWL journal. After Jim's death in 1989 Betty went to live near her son in South Africa. Betty contributed significantly to *The quiet land*, the book of my father's diaries, edited by my sister June Back, recently published.

Miss Barbara Debenham

Zdzislaw Czeppe, one of Poland's most distinguished geographers, died on 19 August 1991 at the age of 74. Polar activity occupied a prominent position in his rich, interesting life and was close to his heart. Czeppe was one of the first geomorphologists to move from general hypothesis to the systematic observation of geophysical data in the polar regions.

Czeppe's scientific career was delayed by World War II. After the German invasion of Poland, he escaped to France and joined the Polish army there. When France collapsed, he went to Great Britain and served in the Royal Air Force.

Czeppe's polar career began when he became a member of the wintering group of the Polish Spitsbergen Expedition during the International Geophysical Year, 1957–58. The results of his investigations during that

winter and the summers of 1957–60 were among the first empirical works in the dynamic geomorphology of polar periglacial areas, an area of study that he helped popularize. From this research came his doctoral thesis, entitled 'Annual course of frost ground movements at Hornsund, Spitsbergen, 1957–58.' This study included early data on the intensity and course of the processes that form structural soils in the Arctic. He also produced some two dozen papers from his studies of the time, which gained great interest in Poland and made him among his nation's most-respected geographers.

Between 1969 and 1978 Czeppe specialised in landscape ecology. He applied a method of physicogeographical mapping (initially elaborated by his Department of Physical Geography for a detailed survey of southern Poland) to the non-glaciated areas of Sørkapp Land in the south of Spitsbergen.

The last major period of polar study in Czeppe's career began in 1979, when he helped found the Laboratory for Polar Research in the Institute of Geography at the Jagiellonian University. That laboratory (and thus Czeppe) had the duty of organizing the Polish expeditions to Spitsbergen and became the centre of Polish polar affairs. Czeppe's personal research during the final period of his academic career centred on understanding the relationships between particular environmental components.

Wieslaw Ziaj

In Brief

SLEDGE-DOG RACE ON KAMCHATKA. The second Beringia Sledge-dog Race was held in March and April in eastern Siberia. Starting on 8 March from the town of Esso on Kamchatka, the contestants had to cover a 1,980-km course in 28 days, each day completing up to 160 km. The winners were Vladimir Radzivilov, a 43-year-old electrician, and his 17-year-old daughter Nastya, who completed the course in 71 hours, 34 minutes, and 34 seconds. The rules of the race show great concern for the sledge dogs and require that if one of the nine dogs on each sledge tires, that he be taken onto the sledge to rest and be immediately treated by a veterinarian. Japanese breeders offered more than \$1 million for eight of the winning dogs.

SPRI SEEKS NEW DIRECTOR. Following a promotion to the University position of Reader in Polar Studies, Dr Peter Wadhams, the director of the Scott Polar Research Institute since 1988, has resigned effective 1 October. This is only the second time that a member of SPRI has been so honoured by the University; Dr Terence Armstrong was Reader in Arctic Studies 1977–83. In his new position, Dr Wadhams will head the research carried out by the Sea Ice Group at the Institute, involving fieldwork in both polar regions. As a result of Dr Wadhams' resignation, the University of Cambridge is currently seeking a new director for the Scott Polar Research Institute.

14TH POLAR LIBRARIES COLLOQUY, COLUMBUS, OHIO, 3–8 MAY 1992. Seventy-nine librarians and information specialists from nine countries convened at the Byrd Polar Research Center, Ohio State University, for a conference focused on the topic 'International sharing of polar information resources.' The biennial meeting of the PLC provides the one opportunity for the world's community of polar librarians — by definition, a very scattered group — to discuss common problems and to develop shared means whereby these may be overcome. Thirty-four papers were given in the four sessions: 'Cooperative databases and database products,' 'Polar archival resources,' 'The Antarctic Treaty System and Antarctic literature,' and 'End users of polar information.' An innovation was the panel discussion, attended by several editors of polar journals, to debate the roles of such journals in polar literature and to provide a somewhat different vantage point on the essential interaction between research and information dissemination. The Byrd Polar Research Center proved an excellent host, with considerable powers of organization displayed by the program director, Lynn Jay. The 15th PLC will be held at Cambridge, UK, 3–8 July, 1994, and will be co-hosted by the Scott Polar Research Institute and the British Antarctic Survey. Those requiring further information should contact: Christine Phillips (BAS) or William Mills (SPRI).