

Obituary

Robert Ferguson Legget, engineer, geologist, author, historian, and dedicated servant of the public, died in Ottawa, Ontario, on 17 April 1994. Born in Liverpool of Scottish parents, he attended the University of Liverpool, where he obtained a degree in civil engineering in 1925 and a Master of Engineering in 1927. Following four years with a consulting firm in London, he emigrated to Canada, where he spent another seven years in private practice.

During this initial period, Legget developed interests in geology and soils. His first paper, published in 1934, led to the book *Geology and engineering*, published in 1939 and now in its third edition. The 11 years of practical experience gave him an appreciation of the need for engineering education and research, closely linked to practice. After attending the first international meeting on soil mechanics, held in 1936, he joined the staff of Queen's University, and subsequently moved to the University of Toronto in 1938. At these institutions he established courses in soil mechanics and in foundation engineering, among the first in the country, and developed a lasting reputation as an inspiring teacher.

In 1947 the National Research Council of Canada formed a Division of Building Research (DBR), and its president, Dr C.J. Mackenzie, invited Legget to direct it. Although it would mean a great change in his career, he accepted the challenge, recognizing that geology and soils were major factors for construction, and accepted also the task of developing a National Building Code. He moved to Ottawa and soon demonstrated his remarkable ability to plan and organize. By the time he retired 22 years later, DBR had a skilled staff of 250, major facilities for research and testing for the construction industry, and a highly respected information service; the National Building Code had been adopted by every province and territory, a remarkable achievement in a country as large and diverse as Canada.

In 1945 Mackenzie had asked Legget to chair a wartime committee that was to oversee research on tracked vehicles, which evolved into the Associate Committee on Soil and Snow Mechanics (ACSSM). Both Legget and Mackenzie felt strongly that snow and ice were materials about which Canadians should know a great deal and were, therefore, important subjects for research. The National Research Council had initiated studies on aircraft skis in 1935 and had made an important contribution in 1942–1943 to Habbakuk, a wartime project on the possibility of building large ships of ice.

As part of the work on tracked vehicles, Legget made a trip to Europe in 1946, specifically to look at snow and ice research in Switzerland. It was on this trip that he met Gerald Seligman in London, marking the beginning of a lifelong association with the Glaciological Society. After

becoming director of DBR, he asked Swiss authorities for assistance in setting up a program of research on snow and ice, in response to which Marcel de Quervain came to Ottawa in 1948 for one year. Legget had also carried out a study of the transportation system on the Mackenzie River in 1940, at which time he encountered permafrost. Permafrost and building in the north joined snow and ice as important subjects of study for DBR. One of the outcomes of this activity, which brought Legget great satisfaction, was the publication of the first permafrost map of Canada, due largely to the work of Dr R.J.E. Brown.

For the 22 years that Legget chaired the ACSSM, it was a major player in Canada in the development and support of research on soil, ice, snow, peat, and permafrost, through publications and the sponsorship of conferences, workshops, and other meetings. In this period and following his tenure, the Committee, supported strongly by staff at DBR, was closely associated with the establishment of the *Canadian Geotechnical Journal*, the Canadian Geotechnical Society, the Canadian Tunneling Association, and the International Permafrost Association, and participated in major programs such as the International Geophysical Year. The International Glaciological Society made Legget a life member in 1970, in recognition of his strong support of its goals.

Legget's ability to create an environment that enabled others to contribute was as significant as his personal research. With his strong support and encouragement, many attained high recognition in their fields. The scope and comprehensiveness of his activities can be appreciated from the fact that he served as the president of the American Society for Testing and Materials, the Geological Society of America, and le Conseil International du Batiment, all within the period 1965–1969. He was the founding president of the Canadian Academy of Engineering in 1987–1988.

Throughout his life Legget was an avid reader, keen observer, and accomplished writer. He contributed regularly to technical and other publications on topics of interest to the engineer and others. Many of these were based on serendipitous discoveries buried in old records and journals. His respect for the past was reflected in his papers and books, shown most clearly in his study of the Rideau Waterway, a 200 km canal joining Ottawa and Kingston, Ontario, built by the Royal Engineers of Great Britain between 1826 and 1832. He was the author of 12 books and editor of several more. His thirteenth book, on the development of the Mackenzie River, had just been submitted for publication at the time of his death. Legget received 12 honorary degrees and 15 special awards from professional and learned societies. Among the awards he

cherished most were his appointment to Companion in the Order of Canada, and his election as an Honorary Fellow in the Institution of Civil Engineers (London) and as an Honorary Fellow of the Royal Society of Edinburgh.

Robert Legget had a deep love for Canada and its north, and he expressed this without reserve in his contributions to our knowledge of the land in all its seasons.
Lorne W. Gold

In Brief

ANTARCTIC DIVISION BUDGET CUT. The budget of the Australian Antarctic Division has been cut by \$A4.2 million to \$A59.4 million in the 1994–1995 Australian federal budget. This cut of 11.3%, in real terms, follows a reduction of outlays of \$A1.8 million in the previous financial year. A total of \$A118 million (in 1994–1995 prices) has been spent on the rebuilding of Casey, Davis, and Mawson stations since the 1980/81 season. A further \$A5.5 million for capital building works (included in the Antarctic Division's annual budget) has been approved for the three years commencing in 1994–1995.

The funding cuts have resulted in the discontinuation of the charter of the cargo and passenger vessel *Icebird*, which, since 1984, has been one of the two ships providing logistical support to the Australian programme. There will be a reduction of about 20% in the overall number of scientists who undertake programmes in Antarctica. The government decided in 1993 to rationalise the operations of Mawson and Macquarie Island stations. The charter period of the research vessel *Aurora Australis* will be extended from the end of August 1994 to the beginning of May 1995. It is planned to use two long-range helicopters to support field programs and to ferry some expeditioners between the stations.

INACCESSIBLE ISLAND TO BECOME A NATURE RESERVE. On 15 March 1994 the Island Council of Tristan da Cunha agreed that Inaccessible Island should be declared a nature reserve. Inaccessible Island is an unin-

habited island lying midway between Africa and South America in the central South Atlantic Ocean, and is one of the three main islands of the Tristan da Cunha Group. Gough Island, also in the Tristan da Cunha Group, is already a nature reserve, which means that, when Inaccessible Island is included, the Tristan islanders have set aside 44% of the Tristan da Cunha Group for conservation.

Inaccessible Island now has no introduced mammals, and only a small number of introduced plants and invertebrates, hence its oceanic island ecosystem has remained relatively intact. Once the nature reserve is established, there will be restricted access, and, although the Tristan islanders will retain the right to collect firewood and guano, all living resources will be protected.

Perhaps the most important aspect of Inaccessible Island is its avian populations. At least 16 species of bird breed on Inaccessible, the largest population of which is *Eudyptes chrysocome* (rockhopper penguin). Between 17,000 and 27,000 breeding pairs of rockhoppers have been counted. Other breeding species include *Diomedea exulans* (wandering albatross) and *Diomedea chlororhynchos* (yellow-nosed albatross), at least three species of shearwater, petrels (including *Procellaria aequinoctialis conspicillata*, the spectacled form of white-chinned petrel that breeds only on Inaccessible Island), gulls, and terns, as well as some landbirds endemic to the Tristan da Cunha Group. *Atlantisia rogersi* (the Inaccessible flightless rail) is found only on Inaccessible Island. There are also endemic weevils and snails.