

MAXWELL JOHN DUNBAR (1914–1995)



Maxwell Dunbar in the Arctic.

Max Dunbar died on 14 February 1995, in his 81st year. A Scot, born in Edinburgh, he spent the first three or four years of his life there. The family then made several moves as his father, a judge of local assizes, filled a succession of local two-year postings. Back in Edinburgh at age eight, Max began his schooling at Merchiston Preparatory School, then went on to Dalhousie Castle School, then to Fettes College. He was fortunate in encountering a succession of remarkably good teachers, and those associations clearly had a lifelong effect. This sound Scottish education helped develop in him a wide range of interests, perhaps the most influential of which were English literature, language (including parsing, that wonderful discipline recalled by only a few today), Latin, music and rugger.

In 1933, Max entered Trinity College, Oxford, to read Zoology. There he soon came under the influence of the pioneer ecologist, Charles Elton. This led to participation in the Oxford University Exploration Club, exposure to the fascination of Greenland, and an invitation to join a group set up to map a section of the western Greenland coast. The expedition reached Greenland in August 1935, and so began Max's lifelong involvement with the Arctic. A second visit in 1936 confirmed his interest in marine biology, the main thrust of his later career.

Max received his B.A. from Oxford in 1937, and in the same year set out for a year's study at Yale University, on a

Henry Fellowship. During the year in North America, Max was able to supplement his arctic experience with a visit to the glaciers of Alaska. Then it was back to Oxford for a brief spell, during which Charles Elton offered Max the opportunity to replace him on the 1939 eastern Canadian Arctic patrol. Max accepted and came to Canada, enrolled as a graduate student at McGill, and joined the summer cruise of R.M.S. *Nascopie* for his first venture to the Canadian Arctic.

The advent of the war caused Canada and others to recognize the strategic importance of Greenland. As a result, the first Canadian consulate in Greenland was opened in 1940. In 1942, Max became Canada's third consular representative there. He remained in Greenland until 1943, and returned later for two further postings, which ended in 1946. Along with consular duties, Max was able to accomplish considerable work on the oceanography of western Greenland fjords. His last spell in Greenland was undoubtedly enhanced by the company of his new wife, Joan. Joan died in 1959, and Max's second wife, Nancy, also predeceased him, shortly before his own death.

On his return from Greenland to Montreal, Max joined the Department of Zoology at McGill. He was almost immediately approached by the Fisheries Research Board of Canada to begin a marine study in the Canadian eastern Arctic. With a graduate student from McGill, Max started in Ungava Bay in 1947 what was to become a continuing program of oceanographic study extending throughout the Canadian Arctic. The next year the research vessel *Calanus*, designed by Max and the first vessel built specifically for arctic research in Canada, was sailed to Ungava Bay. Max set up the Eastern Arctic Investigations laboratory at McGill in 1947, and he actively led this federal fisheries group until 1955.

Max taught in the Department of Zoology at McGill from 1946 until 1963. He directed the Marine Sciences Centre at McGill from 1963 until 1977, and its successor, the Institute of Oceanography, from 1978 until his official retirement and appointment as Professor Emeritus in 1982. Evidence that "retirement" did not signify the end of his working life is given by the appearance of at least 32 publications dated 1983 and later, and by his role as a founding member and an active participant in the Centre for Climate and Global Change Research at McGill from 1990 until only months before his death.

Max firmly believed that students are the most important people in a university. The best graduate students, he felt, should be left to pursue their research in their own way, to suffer as little "direction" as possible. To those in real need he was generous in his counsel, but he never pressed it on his students. Nearly all his more than 75 M.Sc. and Ph.D. students published their thesis results in scientific papers, but Max's name was seldom included as an author. This was important to Max, who felt that a student's work is his or her own, to be so recognized.

Max's career in research spanned nearly 60 years and was mainly related to the sea. He developed a classification of

ecological zonation in northern seas which has stood well the tests of time. He advanced study of the structure of polar marine ecosystems, and added much to our understanding of marine climatic change. He pioneered work on the probable importance of natural selection at the ecosystem level, that is, on a scale above the level of species selection, and this was not without controversy. He engaged in many studies on marine biogeography in northern seas, often with emphasis on the importance of dispersal routes of the past.

Max's accomplishments and honours were too numerous to permit a complete listing here. He initiated the first systematic and continuing marine studies in the Canadian Arctic at a time when Canadian efforts lagged far behind those of the Danes to the east, the Americans to the west, and the Russians on the other side of the Arctic Ocean. He organized the first international conference to bring together experts on both arctic and Antarctic ecology, the Polar Oceans Conference of 1974. He was the international convenor for marine productivity within the International Biological Program, a worldwide cooperative scientific undertaking from 1971 to 1975, and he edited the marine volume of results. He was scientific director of the Gulf of St. Lawrence Project, the Canadian co-chairman of the Tri-Academy Committee on Acid Deposition, and one of the founding members and director of the Institute of Marine and Terrestrial Ecology, Toronto.

Max was an Officer of the Order of Canada. He was a Fellow of the Royal Society of Canada, of the Royal and American Geographical Societies, the Linnaean Society of London, the Arctic Institute of North America and others. He was a recipient of the Bruce Memorial Medal of the Royal Society of Edinburgh, the Fry Medal of the Canadian Society of Zoologists, and the J. P. Tully Medal in Oceanography, and of the Arctic Science Prize and the Northern Science Award. He held degrees from Memorial University, Newfoundland, and from the University of Copenhagen.

At one time in his life, Max was faced with the choice of following a career in science or in music. It was obviously not an easy decision to make. Throughout his life music of all kinds was of great importance to him, especially songs, and especially Scots ballads. In 1956 he produced a Folkways recording of Scottish historical ballads called "Songs and ballads of the Scottish wars," an experience which gave him great pleasure. Unhappily, it is now out of print.

Max Dunbar was erudite without pretension, a man comfortable with people of all levels of learning, equally at ease in the McGill faculty club or in the cabin of a small boat in the Arctic. Choosing characteristically the most direct approach, he was consistently impatient with what he saw as needless obstructions to this course. He was especially disturbed by bureaucracies, so many manifestations of which he found and thoroughly condemned in government organizations and elsewhere. He often expressed concern over the problem of reconciling science and government in Canada. He was frequently critical of attempts by politicians to determine science policy, believing that scientists should be solicited for answers, not politicians or senior civil servants who have lost touch with science or have never been scientists at all.

Through his impact on the many students who over the years took something of McGill to academic and research positions across the country and beyond, his nearly 200 publications in scientific and popular print, his many appearances before both scientific and nonscientific groups and his personal relationships, he profoundly influenced many of us, in Canada and abroad. He was a man whose influence was felt far and wide and will long remain.

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