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# The 2003 W.A. Johnston Medal

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See table of contents

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# THE 2003 W.A. JOHNSTON MEDAL

The W.A. Johnston Medal is the highest award of the Canadian Quaternary Association, and is given for professional excellence in Quaternary research. Nominations can be made on behalf of anyone with a demonstrated publication record who has contributed to Quaternary research in Canada or abroad. The nominator must be a member of the Canadian Quaternary Association and the nominee may be a researcher residing anywhere in the world.

The Johnston Medal was named after William Albert Johnston, born in 1874 in Aberarder, Ontario. He joined the Geological Survey of Canada in 1905, where he worked until his retirement in 1939. Johnston's research concentrated on the Quaternary, and his investigations helped define the former limits and historical drainage routes of the eastern glacial Great Lakes. His study of the surficial geology of the Ottawa–Georgian Bay region indicated the extent of isostatic uplift in the area and accurately defined the western limits of the Champlain Sea Transgression in the Ottawa valley. Johnston spent many years investigating the limits of glacial Lake Agassiz. He also helped establish water supplies for Regina and Moose Jaw, and he was an authority on placer gold deposits. He extensively studied the Fraser River and its delta, and helped to improve navigation in the area. Johnston wrote over sixty reports, memoirs and papers covering a wide variety of topics.

The first award was made in 1987, and this year's medallist is the twelfth to be so honoured. The committee had to choose between several very worthy nominees, and its members are thanked for their service in this difficult task. The award was presented at the banquet at the 2003 CANQUA conference in Halifax.

David Liverman

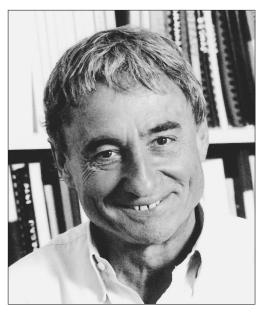
CANQUA past president and chair of committee

### Previous recipients of the W.A. Johnston Medal

1987	Vic Prest
1989	Alexis Dreimanis
1990	Jaan Terasmae
1991	Bill Mathews
1993	Ross Mackay
1995	John Clague and Paul Karrow
1997	Nat Rutter
1999	Jim Ritchie
2001	Wes Blake and Derek Ford

4 DAVID LIVERMAN

## THE 2003 W.A. JOHNSTON MEDALLIST



(Photo d'Alain Desilets tirée de la brochure Les prix du Québec : Les Lauréats 2002 du ministère de la Culture et des Communication et du ministère des Finances, de l'Économie et de la Recherche du Québec)

#### **CLAUDE HILLAIRE-MARCEL**

Professor Claude Hillaire-Marcel, Fellow of the Royal Society of Canada and distinguished Professor at the Université du Québec à Montréal (UQÀM), is CANQUA's 2003 W.A. Johnston Medallist. Dr. Hillaire-Marcel is one of the most prolific and best known internationally of the Quaternary scientists working in Canada today.

The Centre de recherche en géochimie et géodynamique, or GÉOTOP as it is better known, was set up as a research facility in the late 1970's; it became a formal research centre at UQÀM in 1981, with Claude Hillaire-Marcel as its Founding Director (from 1981 to 1989). During this period he also served twice as Director of the Département des sciences de la Terre et de l'atmosphère (Department of Earth Sciences) at UQÀM (1983-1985 and 1987-1989), and then he did a second stint as Director of GÉOTOP from 1997 to 1999. For the last few years GÉOTOP has been affiliated with McGill University as well as with UQÀM. Dr. Hillaire-Marcel has held two endowed chairs: from 1989 to 2000 the Industrial Chair Hydro-Québec-NSERC-UQÀM, and from 2000 on an International Chair of UNESCO.

A glance at Claude Hillaire-Marcel's *curriculum vitae* shows that he has been extraordinarily active in many fields and in many parts of the world, but studies within Canada and in the adjacent seas to the east have always remained preeminent in his endeavors. During the last 30 years, he has authored or coauthored over 150 scientific papers, he has supervised 20 doctoral dissertations and 37 M.Sc. and D.E.A. theses, and in addition, he has had 13 scientists working with him as postdoctoral Mexico, the LLK and the LLS A)

fellows (from Belgium, Canada, Denmark, France, Germany, Mexico, the U.K. and the U.S.A.).

His first papers dealt with Pleistocene marine faunas and isostatic rebound near Montréal, but he soon broadened his scope to include Ungava Bay and Hudson Bay. His first paper dealing with oxygen and carbon isotopes appeared in 1976, and within a few years he was involved in dating studies utilizing isotopes of uranium and thorium. He participated in, or was chief scientist on, six cruises on Canadian ships (CSS Dawson and CSS Hudson) between 1985 and 1991, and he was co-leader aboard the French research ship Marion-Dufresne in Greenland waters in 1999 (2nd leg, IMAGES V, North Atlantic). The Labrador Sea studies culminated in a special issue of the Canadian Journal of Earth Sciences in 1994; nine of the 12 articles were co-authored by Claude Hillaire-Marcel! More recently (2001), he was lead author on a paper in Nature entitled "Absence of deep-water formation in the Labrador Sea during the last interglacial period", and he was one of several authors of an Eos article entitled "New Record Shows Pronounced Changes in Arctic Ocean Circulation and Climate".

In addition to his research within and offshore of Canada, between 1980 and 1997 he has carried out field studies or been involved in research in Algeria, Burundi, Egypt, Ethiopia, Kenya, Libya, Mali, Niger, Tanzania and Tunisia in Africa, Israel and Syria in the Middle East, Chile, Mexico, Peru, and Uruguay in Latin America, as well as France, Greece and Spain (including the Balearic and Canary islands as well as the Spanish mainland) in Europe. In conjunction with his wide-ranging research, he has trained a great many students for advanced degrees and as post-doctoral fellows. Of these, more than 40 have devoted their research to Canadian/Labrador Sea/North Atlantic topics. Claude's graduate students and postdoctoral fellows now hold university or government positions, or are consultants, in Belgium, Brazil, Canada (Québec, Nova Scotia, Ontario), Denmark, France, Greece, Morocco, Portugal, Tanzania, and the U.S.A.

Finally, between 1977 and 2002, he has co-authored some 24 peer-reviewed scientific papers in the fields of agriculture, nutrition, bodily exercise, and testing the authenticity of maple syrup! These non-Quaternary papers represent a major component of Claude Hillaire-Marcel's scientific production!

On top of his teaching/administrative duties, and his wide-ranging scientific research, Claude Hillaire-Marcel has found the time to serve on numerous committees within Québec, on the national scene in Canada (for NSERC, the Royal Society of Canada and CANQUA) and internationally (for example, INQUA, ODP, IMAGES, the World Climate Research Program [WCRP], and the Joint Global Oceans Flux Studies [JGOFS]). He continues to give generously of his time to these activities, as witnessed

by his current membership: Member of the Consultative Committee for the Environment of Hydro-Québec, Vice-President of the Sub-commission for the Americas of the INQUA Commission on Shorelines, Member of the Canadian Scientific Committee for the Integrated ODP, Member of the Scientific Committee of the Institut du Sahel, and Member of the Executive Committee of the Fonds québécois de la recherche sur la nature et les technologies (previously Fonds FCAR). Dr. Hillaire-Marcel is also active in editorial duties, at present for *Géographie physique et Quaternaire*, *Canadian Journal of Earth Sciences* and *Quaternary Science Review*.

The scientists who supported this nomination, from Canada, Denmark, Germany, Russia and the U.S.A., were unanimous in commenting that Claude is an extremely generous individual – whether it is doing analyses in his lab, sharing data, commenting on a manuscript, or teaching students how to use a new technique or new equipment. All felt honoured to write on his behalf!

In summary, Claude Hillaire-Marcel is a Canadian geoscientist of great distinction and a world leader in Quaternary research. He has already been honored with numerous awards, most recently with the prestigious Prix du Québec Marie-Victorin, the highest award in Québec for scientific merit in the natural sciences and engineering. But now, it is CANQUA's turn, Claude – our sincere congratulations on being selected as the winning candidate for the 2003 W.A. Johnston Medal!

Weston Blake, Jr. and Alain Plouffe Geological Survey of Canada

#### **ACCEPTANCE TEXT**

A distinction awarded by peers represents much more than a simple thrill of pleasure. In *Kim*, a novel that I have read many and many times since my childhood, Kipling writes that "praise from equals of work appreciated by fellow-workers can be a deadly pitfall. Earth – does he add – has nothing on the same plane to compare with it". There is indeed some truth there. However, before facing the pitfall, I will first rejoice in the distinction I am receiving today and convey my gratitude to the friends who supported my nomination as well as to the members of the Johnston Award committee for having retained my name.

Another reason for me to be deeply honored by this medal lies in the fact that among former winners I see the names of many of the Quaternary geoscientists in Canada for whom I have a great admiration. From Vic Prest, CANQUA's first Johnston Medal winner in 1987, to Derek Ford and Wes Blake, who received this award a couple of years ago only, the list of prominent scientists who received the Johnston Medal is impressive, to the point that I almost wonder how I have ended up in this list myself!

Nevertheless, in any medal, there are two faces, as we often say in French, and the Johnston Medal is no exception. It does convey the invaluable appreciation of peers... but it also comes more often nearer the end of a scientific career than at its beginning... So, there perhaps lies the deadly pitfall Kipling was referring to!

Well, from this viewpoint, with more than thirty years of geoscientific activity, here, in Canada, I am indeed under the impression that I have participated to a long trip around our globe and its climatic history. This travel started in a time when "Quaternary Geology" was at its apogee, the time of the Friends of the Pleistocene, of the great debates upon eustasy and isostasy, of endless and enjoyable controversies about the single or multidome Laurentide Ice Sheet concepts. This journey has been that of CANQUA and of many comparable societies. It has now led us into a new world, the "global change" world.

It is not a big surprise to me, to observe that some of the most important contributions to the present understanding of these ongoing changes are those of Quaternary geoscientists. In comparison with other fields of research, Quaternary geosciences allows us to move back and forth into the recent past of the Earth, atmosphere and ocean systems, providing the ability to take into account forcing mechanisms operating at all time scales involved, from millions of years, to seasonal. Here, as well as in many environmental issues, I still believe that contributions from our community will continue to prove invaluable during forthcoming years, in particular if we succeed in coupling observation and modeling.

I must conclude now, in thanking you again for the great honour the association has awarded me.

Claude Hillaire-Marcel
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