

InfoNorth

The Arctic Council, Antarctica and Northern Studies in Canada

By Peter Adams, M.P.

PREAMBLE

THIS is a time of great debate about the future of Northern Studies in Canada. Most of those engaged in the debate believe that we need a new, rejuvenated vision for Northern Studies. One major change has already occurred: the establishment of the Arctic Council in 1996 gave new impetus to cooperation among the eight circumpolar nations involved. This cooperation has already changed the way in which we perceive and manage Northern Studies in Canada. I would suggest that membership in the Council is leading us inexorably towards another change in Northern Studies: formal recognition that modern Northern Studies are Polar Studies.

One of the strong commonalities in science and technology among the Arctic Council nations is an interest in Antarctica—a region of importance for all nations, but particularly for circumpolar nations of the North, as they derive direct benefits from scientific activities there.

This paper deals with Canada's roles in Antarctica, specifically in comparison to the roles of other Arctic Council nations. It concludes with recommendations on Canada and the Antarctic Treaty and on the way we should view Northern Studies in Canada. The paper is based on a recent report on a visit to the Ross Sea (New Zealand) sector of Antarctica (Adams, 2000). That report includes the text of the Antarctic Treaty and other related documentation.

CANADA AND THE ANTARCTIC TREATY SYSTEM

The Antarctic Treaty was signed by 12 nations in 1959. It sets Antarctica aside “exclusively for peaceful purposes” and specifically encourages scientific research. There is a two-tier system of participation in the Treaty. Consultative party status (i.e., full, or first-class status) is reserved for countries that have demonstrated “an interest in Antarctica by conducting substantial research activities there such as the establishment of a scientific station or the dispatch of a scientific expedition.” The other nations are non-consultative, with second-class status. Today, there are 44 parties to the Antarctic Treaty. Of these, 27 are consultative parties, the most recent being Bulgaria, which



Scott Base, Ross Island, is New Zealand's base in Antarctica. It is close to McMurdo Station and Robert Falcon Scott's first expedition base. The base area looks much like Resolute Bay, Nunavut. It is as far from New Zealand as Resolute is from Montreal.

became a consultative party in 1998 after 20 years of non-consultative status.

Canada is a non-consultative party to the Treaty. We send representatives to Treaty meetings, and we have representatives on various Treaty system committees. But we do not have a decision-making member at the government-to-government level.

In 1991, 30 nations, including Canada, signed the Protocol on Environmental Protection to the Antarctic Treaty, which entered into force in 1998. This Protocol imposes obligations on nations with respect to their own nationals to protect the fragile Antarctic environment. Many countries have passed domestic legislation implementing the Protocol.

Canada signed the Protocol, but still has not ratified it. The other parties to the Protocol have raised this matter at Antarctic Treaty meetings, most recently in May-June 1999. Without naming Canada, the meeting passed a resolution that in effect urged ratification of the Protocol as soon as possible. The issue is important because Canadian tour operators are major players in Antarctica, and Canadian companies are interested in fishing the Antarctic



Taylor Valley, one of the “dry” (ice-free) valleys of this section of Antarctica, was named for Griffith Taylor, first chair of Geography at the University of Toronto.

Ocean. Without ratification, Canada has no means of helping or regulating such businesses.

Shortly after Canada became a non-consultative member of the Treaty in 1988, we ratified two of its Conventions, the Convention for the Conservation of Antarctic Seals (1990) and the Convention for the Conservation of Antarctic Marine Living Resources (1988). However, we are still not a member of the Commission set up to implement the latter convention, although it is closely linked to Canadian policy objectives in protecting marine resources. Illegal fishing is a serious problem in the Antarctic Ocean. New Zealand has taken unilateral action against this, similar to Canada’s famous action regarding fisheries in the Atlantic.

Since 1998, Canada has been a full member of the Scientific Committee of Antarctic Research (SCAR). The Canadian Polar Commission (CPC), which by an Act of Parliament is responsible for promoting knowledge of polar regions, including Antarctica, is the adhering body for Canada. The CPC established the Canadian Committee for Antarctic Research as the national SCAR Committee. Through SCAR, Canada is an active participant on a number of working groups that focus on particular aspects of Antarctic science. Each of these groups bears one of the acronyms with which the Antarctic Treaty system is particularly well endowed.

Canada also participates in the Committee of Managers of National Antarctic Programs (COMNAP), which deals with logistical and operational aspects of work in Antarctica. We are represented by the Director of the Polar Continental Shelf Project (PCSP), which is the logistical support system for research in the Canadian High Arctic. The Canadian Polar Commission pays Canada’s dues to COMNAP. The Director of PCSP is also the current chair of the recently established Forum for Arctic Research Operators, which seeks to coordinate logistics for Arctic Research Programs.



Life in the dry valleys! The absence of life on land is in striking contrast to the Arctic. For some reason, seals (like this one) become disoriented and flop inland until they die.

In recent years, the PCSP has conducted a modest but effective Canadian Arctic/Antarctic Exchange Program (see Adams, 2000). Through this program, foreign researchers gain access to our North in return for allowing Canadian researchers to use their research stations in Antarctica.

Canada is a valued player in the Antarctic Treaty system, and much of our value lies in our superb expertise in cold-environment science and technology.

CANADA AND ANTARCTICA IN 2000

In recent years, efforts have been made to document Canada’s contributions to Antarctica. Publications such as *Meridian*, the newsletter of the Canadian Polar Commission, and the *Newsletter of the Canadian Antarctic Research Network* are useful sources of documentation. I believe, however, that the full extent of Canada’s involvement with Antarctica has yet to be determined. The following account of business and research interests is anecdotal to a considerable extent, but it gives a useful indication of reality.

Let’s begin with some observations on our business interests. A Canadian company is interested in starting an Antarctic krill fishery. The two largest Antarctic tourism companies in the world are located in Canada. While in Antarctica, I met a pilot of First Air, Yellowknife, who with his co-pilot was completing an Australian contract. Kenn Borek, another western and northern Canadian air charter company, is an even larger player in Antarctica. Both of these companies operate Canadian Twin Otters, the small aircraft of choice in Antarctica. Canadian snowmobiles, parkas, mukluks, and boots are much in evidence there, as are Canadian portable buildings, tents, and satellite imagery, not to mention the Canadian skills in construction engineering provided to countries operating



Lake Hoare and the Canada Glacier, Taylor Valley. Such lakes are permanently ice covered, whereas Arctic lakes become ice-free most summers. Canadians have worked from this U.S. station for many years.

in Antarctica. The cold-weather expertise of our engineers and technologists is in great demand among Antarctic Treaty countries.

It has been said that Canada is the only country that turns a profit in Antarctica. The other side of the business coin is the way we conduct research in Antarctica—our costs there.

Research is the principal activity in and around Antarctica. Much of this research—for example, studies of the increase in ultraviolet radiation at the earth's surface, global warming, changes in the huge Antarctic Ice Cap, and their effects on sea level—has very obvious global implications.

Before my visit to Antarctica, briefings and readings made me aware of the very considerable amount of past and present research undertaken by Canadians in Antarctica. I suspect that hundreds of Canadian researchers and students have Antarctic interests. One of our smaller universities, Lakehead University in Thunder Bay, Ontario, runs a regular field course in Antarctica! However, Canadian activities in Antarctica are invariably carried out in piggyback fashion with other nations. I personally know of Canadians who have worked in Antarctica with other researchers from the United States, the United Kingdom, Chile, Argentina, Poland, Italy, Russia, Japan, France, and New Zealand. Canadians have been involved in Antarctica from the first overwintering party at the turn of the 20th century to the present (Beeby, 1994).

I suspect that the total of Canadian research activity, measured on a long-term or recent annual basis, exceeds the totals for many countries that are full members of the Antarctic Treaty.

I am very much in favour of cooperative international science. Indeed, one of the great strengths of Canadian science is our ability to work productively with other nations or in international science organizations. But,



The ice cover of Lake Hoare with Canada Glacier. The surface is brittle and honeycombed because of radiation melting.

given our treaty obligations and our business and research interests, is it appropriate that we operate in Antarctica ONLY in this cheap way? I return to this question below.

CANADA AND THE ARCTIC COUNCIL

Canada played a lead role in the establishment of the Arctic Council in 1996. This is a permanent body involving the eight circumpolar nations and three indigenous peoples' organizations. Since the demise of the USSR, the Council's role has been to oversee and provide some coherence to the development of the circumpolar North, land and sea. The Council, working in the complex political scene of the circumpolar North, is greatly occupied with environmental matters. One of its underpinnings, and one of its principal legal instruments, is the Arctic Environmental Protection Strategy. Indeed, the early motivation for the Council was largely environmental, and adoption of the Strategy gave the nations common purpose. The Inuit Circumpolar Conference, an organization that originated in Canada, developed the Strategy years before the Arctic Council came into existence.

THE ARCTIC COUNCIL AND ANTARCTICA

It is interesting to consider the role of the Arctic Council and its member nations in Antarctica.

Five Arctic Council nations (Finland, Norway, Russia, Sweden, and the United States) are full members of the Antarctic Treaty and have ratified the Environmental Protocol to the Treaty (Table 1). Thus a majority of Arctic Council nations, Canada not among them, seem to believe that they benefit from being fully involved in the Antarctic Treaty. Global and moral concerns are certainly an important basis for this belief. However, it seems to me that these nations are also committed in Antarctica because they see

TABLE 1. Roles of Arctic Council nations in Antarctica.

	Antarctic Treaty Status	Environmental Protocol Status	Environmental Protocol Domestic Implementation Legislation	SCAR Membership
Canada	Non-consultative	Signed	No	Full
Denmark/Greenland	Non-consultative	Not signed	No	Not Member
Finland	Consultative	Ratified	Yes	Full
Iceland	Not a party			Not Member
Norway	Consultative	Ratified	Yes	Full
Russia	Consultative	Ratified	No	Full
Sweden	Consultative	Ratified	Yes	Full
United States	Consultative	Ratified	Yes	Full

TABLE 2. Environmental protection: A comparison between Antarctica and the Arctic.

ANTARCTICA	ARCTIC
Protocol on Environmental Protection to the Antarctic Treaty	Arctic Environmental Protection Strategy
Annex I. Environmental Impact Assessment	Arctic Monitoring and Assessment Program (AMAP)
Annex II. Conservation of Antarctic Fauna and Flora	Conservation of Arctic Flora and Fauna (CAFF)
Annex III. Waste Disposal and Management	
Annex IV. Prevention of Marine Pollution	Protection of the Arctic Marine Environment (PAME)
Annex V. Area Protection and Management	see CAFF
Convention on the Conservation of Antarctic Marine Living Resources	Sustainable Development and Utilization (SDU)
Convention for the Conservation of Antarctic Seals	
Council of Managers of National Antarctic Programs	Emergency Prevention, Preparedness and Response (EPPR)

direct benefits to science and technology in their own jurisdictions.

Table 2 compares key environmental elements of the Antarctic Treaty System with elements of the Arctic Environmental Protection Strategy. Concerns are very similar, and interactions and exchanges among environmental specialists in the two regions are of mutual benefit.

I suggest that research objectives in the Arctic and the Antarctic are also similar. Antarctic research has allowed nations to cooperate there even in times when those nations were technically at war elsewhere on the globe. Cooperation in research in the controlled environment of Antarctica has had a remarkable civilizing effect on diverse nations for half a century. The Arctic Council, in its early years, has found it easiest to cooperate in areas of education and research. The University of the Arctic, which is now officially established, is one example of the fruits of this cooperation.

It is no coincidence that recent meetings of the Arctic Council and of the Antarctic Treaty nations have provided for exchanges of information on environmental and research matters between the two groups.

CANADA AND ANTARCTICA: THE FUTURE

Much of the research in Antarctica and the state of its environment are of interest to all nations. The thinning of the ozone layer (and the associated increase in ultraviolet



Summer melt pond in the debris-covered McMurdo Ice Shelf, site of experiments related to the increase in ultraviolet radiation in Antarctica. One of the researchers here was from Université Laval.

radiation and skin cancers at the earth's surface) was dramatically detected by the seasonal hole in that layer over Antarctica. Worldwide measures to deal with these problems are gradually benefiting life forms everywhere. Similarly, substantial changes in the Antarctic ice cap have serious implications for sea level around the globe. These examples indicate a few of the global benefits from Antarctic research. Arctic Council nations also benefit

directly from advances in cold-weather science and technology achieved in Antarctica. Having already achieved a level of expertise in these matters, they continue to benefit from the application of their technology in Antarctica.

It is no coincidence that north polar nations lead in Antarctic research activities and in activities designed to monitor and protect the Antarctic environment. Canada's self-interest in these matters is evident from my brief description of our current business and research activities in Antarctica.

I return to the question posed earlier. Is it appropriate for Canada to continue to operate in a "cheap" way in Antarctica when we are already a significant player there? Should Canada be only a second-class member of the Antarctic Treaty system? Is it appropriate that Canadians remain entirely dependent on others for basic research support in Antarctica?

The answer to such questions has to be "no." As an advanced polar nation, our moral responsibility is to make a full contribution to the globally important work that is being undertaken in Antarctica. Canada cannot afford to be less than fully committed in Antarctica if we want to remain in the vanguard of developments in cold-environment science and technology. There are now two critical masses of this type of science and technology, one at each pole.

If Canada becomes a full member of the Antarctic Treaty, we can pursue more issues that are of direct interest to Canada. As it is, we are limited to the opportunities others provide for our scientists. We have cold-environment experience that is valuable for the advancement of knowledge in Antarctica. We could begin by emphasizing aspects of Antarctic science that obviously involve common interests of the Arctic and Antarctic regions.

The recommendations in my report (Adams, 2000) include the following:

1. That the existing Canadian Arctic/Antarctic Exchange Program be strengthened (and broadened, with an emphasis on youth).
2. That Canada establish a formal agreement for cooperation in polar matters with New Zealand (it seems to me that New Zealand, which already cooperates with us, would be a useful formal partner. One of our contributions might be occasional loan of an ice-breaker).
3. That Canada ratify the Protocol on Environmental Protection to the Antarctic Treaty.
4. That Canada become a full consultative member of the Antarctic Treaty (I believe that our present level of research activity, with modest changes related to Recommendations 1, 2, and 3, above, will qualify Canada for membership).

CONCLUDING COMMENTS

These simple steps will take Canada to the high ground of Antarctic research, which is already occupied by most of our fellow members of the Arctic Council. Incorporation of this global view into Canada's vision of "Northern Studies" will help our next generation of cold-environment scholars contribute to, and take full advantage of, the huge body of expertise and knowledge that others already instinctively think of as "Polar Studies." This is a vision that is not new to many members of the Arctic Institute of North America, an organization that was founded with a bipolar vision.

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