CCEA eco

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... from the CCEA Chair

Linking IUCN categories and Marine Areas

by Ed Wiken

Canada's vast landscapes and seascapes demand large-scale planning and management, and the leap from our domestic attitudes to global points of view seems quite appropriate and natural. We have grown quite comfortable with North American ventures such as the North American Waterfowl Plan (NAWMP) and the North American Commission for Environmental Cooperation (CEC). The Circumpolar Arctic Flora and Fauna (CAFF) program, and even the World Commission on Protected Areas and the World Commission on Ecosystem Management all seem to be very practical tools. These North American and global programs all recognize how important it is to have a greater-than-Canada view in developing effective and sustainable conservation activities. Canada shares habitats, ecosystems and species with many countries within North America, South America and the Polar Regions. What Canadians do for conservation and what other countries do have very strategic consequences on conserving biodiversity—whether that concerns genetics, species, habitats, or ecosystems.

Last year in Prince Edward Island, the CCEA held sessions on IUCN protected area designations as well as on oceanic protected areas. These were in keeping with linking the importance of local and regional protected area efforts in the provinces and territories with global concerns. Some may question why we should do this, arguing that "on the ground" results are achieved primarily through local initiatives. This is partly right. However, sustaining migratory species (e.g., birds, whales, fish, insects) and maintaining ecosystem/habitat integrity occur at a different level. Migrating gray whales, monarch butterflies, burrowing owls and several waterfowl species rely on habitats in various countries (i.e., from Greenland to Argentina), as life-support systems and stepping-stones from one place to another throughout the year. It is therefore crucial how those places are managed and protected outside of Canada as well as within our borders. The inherent nature of ecosystems and habitats is also affected by trans-boundary pollution and various country initiatives. We need to be very cognizant of these large-scale interactions if these stepping-stones are to remain healthy.

The IUCN categories have been a useful way to develop a common international language for protected areas. They provide Canadians and others with some sense of how protected area interests are shared. At the same time, the IUCN system has shown how such a scheme at times fails to identify important regional and jurisdictional distinctions and interests. For wildlife areas, for example, the system does not represent nationwide interests and strategies very well. The direct and indirect names of IUCN categories as well tend to bias certain designations and also set a tone about what is "better" by the sequence of categories from I to VI. Are categories I and II better than V and VI? Any shortcomings of the IUCN system serve as ways to explore opportunities for improving the system and how the system best fits the Canadian context. IUCN expects this to happen, as their system is a catalyst in furthering conservation thinking.

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CCEA Workshop 2001: IUCN Classification of Protected Areas

by Tony Turner and Ed Wiken

Issues associated with the World Conservation Union's (IUCN) global system of protected area management categories has been a focus of the CCEA with its development of the Canadian Conservation Area Database (CCAD) and was a focus of a workshop during CCEA's annual general meeting on October 25–26, 2001. The workshop in particular was aimed at:

- coming to a common understanding of the IUCN system;
- sharing the perspectives of several Canadian jurisdictions; and
- working towards achieving a made-in-Canada application of the IUCN categories.

Adrian Phillips, former chair of the World Commission on Protected Areas (WCPA), gave the keynote address. He outlined the reasons for creating an international system for classifying protected areas. They include:

- to promote international standards;
- to help global accounting and comparisons;
- to capture the full range of protected area values;
- to encourage a systems approach to protection; and,
- to reduce confusion over protected area names and types across various countries.

IUCN Categories

The categories (see Table 1) were developed to assess the management objectives of protected areas, rather than actual management effectiveness (a subject of current research interest within World Commission on Protected Areas—WCPA). Protected areas include those areas set aside by legal or "other effective means" that give a geographic area permanent protection. Floating reserves, no fish zones and other areas of temporary protection were thought to be effective resource management strategies but not protected areas. Similarly, while Ramsar sites, World Heritage sites and Biosphere Reserves can be effective designations, they are not considered protected by the designation alone.

The IUCN management categories date back to 1978 when a 10-class system was introduced, some of which applied to internationally designated sites (like Biosphere Reserves) that were not necessarily protected by legal or other effective means. In 1994 the system was reduced to a 6-class system (see Table 2). All categories are considered equally important to an overall protected area network. However, it is recognized that the degree of human intervention generally increases in roughly the following order I, II, III, VI, IV, V (Figure 1).

Linking

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Until recently, oceanic protected areas initiatives have been overlooked, perhaps in part because seascapes and terrestrial landscapes seem like such disparate items in protected area endeavors. Yet for species like polar bears, success in establishing an effective protected area network relies on recognizing their crucial seasonal land-ocean dependencies.

Federal wildlife marine protected areas were first established in 1919 and remain the most substantive elements in marine protected areas endeavors to date. Being early does not mean that they have progressed like land-based protected areas. In fact, they lack breadth both in of numbers of areas protected and in the range of conservation interests that have been addressed. Across Canada's terrestrial landscapes, about 9 percent is protected whereas within the oceans less than 1 percent is protected. It may surprise many to learn that oceans account for one-third of Canada's sovereign territory. Why has so little happened when various means to protect marine habitats and ecosystems have existed for a long time and even newer ones exist now?

IUCN protected area categories, for either land or ocean, imply a graduation of strictly protected areas and zones through to those that permit various human activities and resource extraction. This supports the notion that protected areas are part of the mosaic of all lands and waters, in which protected and non-protected areas fit. Years ago, Canada's protected areas were designed without considering how they might be managed with the surrounding ecosystem or how they might survive under potential threats. This is evident particularly in southern landscapes, where many protected areas are too small, too disconnected, or too isolated to endure as stand-alone and viable entities. Comprehensive land-use planning and management at the ecosystem level is essential to shape, conserve, and sustainably use durable landscapes and seascapes. Stewardship, ecosystem management principles, biodiversity conservation and sustainability measures are all innovative tools that reflect how we can work within nature rather than apart from it.

The CCEA was one of the first organizations in the world to produce a land and ocean ecosystem framework. Through its various activities over the past twenty years the CCEA continues to develop and promote scientifically based approaches to protecting and managing ecosystems.

Table 1. IUCN Protected area management categories (IUCN, 1994)

IUCN Category		Management goals or practices	Example
I a.	Nature reserve or wilderness area Nature reserve	Primarily for scientific research or ecological monitoring	Race Rocks Marine Ecological Reserve, British Columbia
b.	Wilderness Area	Preservation of natural conditions	Polar Bear Provincial Park, Ontario
II.	National park (or provincial/ territorial equivalent)	Ecosystem protection and recreation	Banff National Park, Alberta
III.	Natural monument	Protection of specific outstanding natural features, provision of opportunities for research and education, and prevention of exploitation or occupation	Parrsboro Fossil Cliffs, Nova Scotia
IV.	Habitat/species management areas	Securement and maintenance of habitat conditions necessary to protect species and ecosystem features where these require human manipulation for optimum management	Cap Tourmente National Wildlife Area, Quebec
V.	Protected landscape or seascape	Conservation, education, recreation, and provision of natural products aimed at safeguarding the integrity of harmonious interactions of nature and culture	Backus Heritage Conservation Area, Ontario
VI.	Managed resource protected areas	Long-term protection and maintenance of biodiversity and other natural values and the promotion of sound management practices for sustainable production purposes	PFRA pasture areas, Saskatchewan

Table 2. Matrix of protected area management objectives and IUCN categories

Management Objectives	Ia	Ib	II	III	IV	V	VI
Science	1	3	2	2	–	2	3
Wilderness	2	1	2	3	3	–	2
Biodiversity* protection	1	2	1	1	1	2	1
Environmental services	2	1	1	–	1	2	1
Natural/cultural features	–	–	2	1	3	1	3
Tourism & recreation	–	2	1	1	3	1	3
Education	–	–	2	2	2	2	3
Sustainable use	–	3	3	–	2	2	1
Cultural attributes	–	–	–	–	–	1	2

1 = primary purpose; 2 = secondary purpose; 3 = acceptable; – = not applicable
* Biodiversity covers genetic, species and habitat/ecosystem level interests not just species.

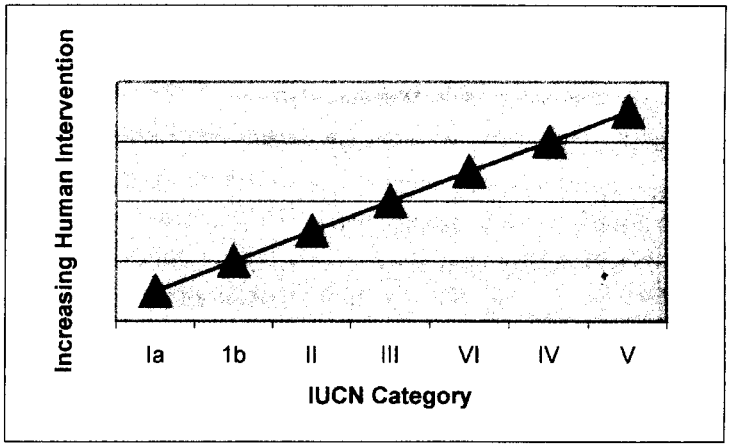

Figure 1. A general representation of the degree of human intervention occurring within the IUCN management categories (note that the relationship is not always linear).

The names of Canadian protected areas and the names of IUCN categories can be confusing and this leads to misconceptions with respect to conservation goals and human intervention. For example, the Canadian Wildlife Service has National Wildlife Areas. At a casual glance, they would seem to fall into IUCN category IV owing to their name alone. Polar Pass National Wildlife Area, however, is an IUCN category I. Similarly most federal, provincial and territorial parks by their name would seem to fit into IUCN category III, but this category is best thought of as areas that serve goals of protecting representative ecosystems and not areas that are just called 'parks.'

Real Carpentier (Quebec) and Dan Paleczny (Ontario) discussed the scope, difficulties and opportunities associated with applying IUCN management categories to their provincial protected area networks. Other provinces such as Manitoba and British Columbia have also spent considerable effort to consistently apply the IUCN categories.

Tony Turner presented a brief overview of the national situation with respect to IUCN categories based on the Canadian Conservation Areas Database (CCAD). By numbers, Canada has roughly one-third of its protected areas in IUCN Category II and another third in Category V. Most of the area protected in Canada, however, is found in categories II and IV. About 10% of Canada's 3,500 government-owned protected areas do not currently have an assigned IUCN designation, and many others require re-evaluation. A comparison of various jurisdictions suggested that some IUCN categories are applied with varying degrees of care and refinement, creating inconsistencies for national level summaries.

Marine Protected Areas (MPAs) and IUCN Categories

The process and challenges associated with applying an IUCN classification scheme to marine areas was also presented. Land and marine areas are obviously ecologically different but also they are often legally different. Some land-based protected areas may be designed to protect freshwaters and are similar to marine situations. Some marine protected areas require a land base or element to it. Habitats that protect selected bird species, polar bears, otters, and others are examples.

Terrestrial areas and marine protected areas should not be thought of as separate entities or non-related entities. Several similarities were pointed out, such as:

- Both contain a mix of different attributes.
- Both contain species, habitats and ecosystems of concern.
- Both may be interdependent.
- Both contain areas of significant biodiversity (species, genetics, habitats, ecosystems), some of which are threatened.

For marine protected areas (as with terrestrial landscape approaches), it is important both to establish fixed areas of protection and to support conservation measures in surrounding areas. The formal protected area is seldom a successful endeavour without having a number of conservation actions in place in areas that are contiguous with the protected area or in distant locations upon which a protected area is dependent (for example, Monarch Butterfly Reserves rely on places as far away as Mexico). The importance of establishing a range of MPAs, from small areas to large integrated planning areas, was put forward as a model that could be most successful.

Case Studies

Two half-day workshops pointed out the pitfalls and difficulties associated with consistently applying IUCN designations, even under controlled conditions. Participants were asked to apply criteria for IUCN designations to a number of Canadian examples. Guy Swinnerton (University of Alberta) presented an overview of IUCN category V (Protected Landscapes /Seascapes). He then chaired a workshop within which sub-groups were invited to study four Canadian landscapes and provide arguments as to whether the individual areas were truly working landscapes within which the lifestyles and activities of the people are in harmony with nature and where sustainability of the social and cultural fabric of these communities is being maintained or restored.

The examples studied and suggested outcomes were:

Landscape	Suggested IUCN Category
Cooking Lake-Blackfoot Grazing, Wildlife and Provincial Recreation Area (Alberta)	Likely IUCN V but perhaps a VI
Hecla-Grindstone Provincial Park (Manitoba) Heritage Land Use Category Areas	V
The National Capital Greenbelt (Ontario)	V
East Sooke Regional Park (British Columbia)	Not V, more appropriately category II

Judy Loo (Canadian Forest Service) provided details on the Fundy Model Forest Area, one of 12 large multiple-use landscapes designed to "demonstrate sustainable forest management practices in a working landscape." The Fundy Model Forest is a partnership including forest industry, environmental non-government organizations (ENGOs), universities, woodlot owners and provincial and federal government departments as well as several communities. Within the Fundy Model Forest, there are many land designations, including the Fundy National Park, provincial conservation areas, industrial "unique areas" and a variety of special management areas.

Four sub-groups discussed whether the Fundy Model Forest itself could be classified under any one of the IUCN categories. The groups also discussed which IUCN category, if any, should be assigned to each of the land designations.

The groups unanimously concluded that the Fundy Model Forest should not be considered a protected area in itself. One group suggested the management of the area might be considered similar to a Biosphere Reserve with zones of protection, buffer zones, a working landscape and research on sustainability. The various land designations considered were:

Types of Protected Areas in Fundy Model Forest Area

Fundy National Park
Conservation Areas
Deer Wintering Areas
NCC Nature Reserve
Gap Sites
Mature Coniferous Forest Habitat
Unique Areas

Conclusion

In summary, the IUCN workshop enabled the Canadian jurisdictions to better understand the origin and purpose of the IUCN system and share their various perspectives on its application in Canada. The major national issues identified at the meeting included:

- How to consistently apply IUCN guidelines across Canada, especially focussing on Categories V and VI which appeared to present the most problems among the jurisdictions;
- Assessing the merits of applying the system at sub-protected area level, as has being done in Manitoba.

It was noted that IUCN guidelines have been regionally interpreted for both Europe and Australia. It was suggested that CCEA, in conjunction with the North American office of the World Commission on Protected Areas (WCPA), is well-placed to act as an objective national body to help coordinate the development of a handbook to help guide the application of IUCN categories among Canada's jurisdictions. Clarification in the use of the IUCN classification will strengthen the Canadian Conservation Areas Database and the application of this information in reporting.

Further information

EUROPARC Federation 1999. *Guidelines for Protected Area Management Categories. Interpretation and Application of Protected Area Management Categories in Europe.* EUROPARC Federation, IUCN (WCPA) with the assistance to the World Conservation Monitoring Centre. 48pp.

Hockings, M., S. Stolton, and N. Dudley. 2000. *Evaluating Effectiveness: A framework for assessing the management of protected areas.* IUCN, Gland Switzerland and Cambridge UK. 121pp.

IUCN (World Conservation Union). 1994. *Guidelines for Protected Area Management Categories.* CNPPA with the assistance of WCMC. IUCN, Gland Switzerland and Cambridge UK. 261pp.

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CCEA Workshop 2001: The Future of Marine Protected Areas in Canada

by Doug Ballam and Ed Wiken

The goal of the Canadian Council on Ecological Areas (CCEA) is to promote the establishment of a comprehensive system of protected areas representative of both terrestrial and marine ecosystems. In the 2001 AGM, the CCEA organized a workshop on The Future of Marine Protected Areas (MPA) in Canada. The goals of the workshop were to discuss current marine protected area issues, to review the CCEA's marine conservation achievements and to make recommendations on how the CCEA can contribute to these efforts.

Throughout the workshop, there were several presentations on federal government programs and mechanisms. Doug Yurick (Parks Canada), Ed Wiken (Wildlife Habitat Canada), Robert Helie (Canadian Wildlife Service) and Mary Jean Comfort (Department of Fisheries and Oceans) described the various legislative tools available to the Federal Government (Table 1). There were several common challenges, most notably the need for adequate resources and enhanced actions.

These presentations were followed by a number of non-governmental organizations. Martin Willison (Dalhousie University), Josh Laughran (World Wildlife Fund) and Sabine Jessen (Canadian Parks and Wilderness Society) described their involvement with MPAs. It was clear that the most successful approaches to systematic planning involved a cooperative approach between government and NGOs.

Marine Conservation Challenges: The Human Angle

Tony Charles (St. Mary's University) began the workshop with a presentation on some of the challenges facing marine conservation. Specifically, he emphasized that, along with studies on natural systems, we need to encourage a better marine conservation ethic. He described several mechanisms that are currently operating on regional, national and international scales. The Fisheries Resource Conservation Council (FRCC), for example, was created in 1993 in response to the collapse of Atlantic Canada's Northern Cod fishery. The group consists of 15 members derived from the academic community, industry and government. FRCC recommendations are submitted to the Minister of Fisheries and Oceans and are simultaneously released to the public. Other groups concerned with marine conservation include Genuine Progress Index for Atlantic Canada, the International Development Research Centre, the Ocean Management Research Network, and the Northwest Atlantic Fisheries Organization.

Table 1. Some legislative options for Marine Protected Areas or Conservation Areas in Canada

Presenters	Organizations	Legislation/Acts
Mary Jean Comfort	DFO	*Oceans Act* (Marine Protected Area)
Doug Yurick	Parks Canada	*Bill C-10 An Act respecting the national marine conservation areas of Canada* (National Marine Conservation Areas)
Ed Wiken/ Robert Helie	WHC/CWS	*Canada Wildlife Act* (Marine Wildlife Areas, National Wildlife Areas), *Migratory Bird Convention Act* (Migratory Bird Sanctuaries), *Ramsar Convention* (Ramsar sites)

Workshop 2001: Classification of Protected Areas

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Kelleher, G. 1999. *Guidelines for Marine Protected Areas.* IUCN, Gland, Switzerland, and Cambridge, UK. 107pp.

Phillips, A. 1999. *Management Categories for Protected Areas.* Presented at the International IUCN Seminar on the Classification of Protected Areas: Helsinki, Finland, 11 September 1998.

Paleczny, D.R., P.A. Gray, R.J. Davidson, T.J. Beechey, and J.V. Jalava. 2002. "Ontario's Protected Areas: An Examination of IUCN's Protected Areas Management Categories." In: *Managing Protected Areas in a Changing World, Proceedings of the Fourth International Conference on Science and Management of Protected Areas*, University of Waterloo, Ontario, Canada, May 2000, 12pp.

Salm, R.V., John Clark, and Erkki Siirla. 2000. *Marine and Coastal Protected Areas: A guide for planners and managers.* IUCN Washington.

Wiken, E. 1996. *IUCN Protected Area Classification: Applications in the Canadian Conservation Area Database (CCAD).* Paper and presentation to the Federal/ Provincial Forest Inventory Committee meetings. Fredericton, New Brunswick.

CCEA Perspective

Ed Wiken (CCEA) discussed marine conservation from a number of perspectives including the CCEA, the state of oceans reporting and the Canadian Conservation Areas Database (CCAD). He reported that Canada's marine conservation areas started around 1920 and that most marine conservation areas to date are wildlife based areas. While there are about 200 marine areas, the percent protected is less than one per cent of Canada's 5.4 million square kilometers of ocean territory.

He identified a number of areas and issues that require additional attention. These include understanding the basics of oceanic ecosystems (i.e. characteristics, geographical distribution, and diversity), the role of both protected and non-protected areas, the marine-coastal interface and relationships, and the need for education about marine waters and issues. The latter is especially important, since many Canadians are not even sure about the number of oceans that surround our country. Canada has, through national and regional state of the environment reports, tracked trends and conditions but these efforts need to be enhanced. Also, by enhancing the CCAD information base and using indicators, a more strategic set of cooperative ventures can be made to respect the diversity of MPA interests.

Specific MPA Initiatives

Most of the remaining presentations were concerned with specific marine protected areas from across the country. Starting in the east, Jason Simms (DFO) outlined three recent MPA proposals in Newfoundland and Labrador. He illustrated that there are distinct challenges to establishing MPAs in a province that is defined by the sea. Martin Willison (Dalhousie University) gave a fascinating glimpse of some offshore Atlantic Coral sites, which have only recently been recognized. He was followed by Paul McNab, who gave a thorough overview of some of the issues facing the protection of The Gully off Nova Scotia. Jessica Jackson finished the East Coast proposals with a discussion of the Basin Head candidate marine protected area, which supports an endemic form of Irish Moss.

Moving to central Canada, Gail Jackson discussed related freshwater initiatives such as the Great Lakes MPAs, including the Lake Superior National Marine Conservation Area proposal. She described the extraordinary amount of work performed by workers and volunteers. Further west, Sabine Jessen (CPAWS) gave an overview of the many MPA initiatives that CPAWS is involved with in British Columbia. These include Gwaii Haanas, Southern Strait of Georgia, Indian and sponge reefs, Race Rocks Ecological Reserve, and others. Dale Gueret (BC) presented an update on the efforts to protect the fascinating Bowie Seamount. Finally, Doug Yurick (Parks Canada) presented a comprehensive overview of the Gwaii Haanas National Marine Conservation Area.

Summary

The remainder of the workshop was given over to a discussion of common themes across the country. In addition, the group compiled a number of suggestions as to how the CCEA might play a role in facilitating the establishment of marine protected areas. Some common themes included the following:

- Need for a local champion to support the establishment of a MPA;
- Significant lack of resources for assessment and support at all levels;
- Essential need for extensive cooperation between governments and NGOs; and
- Need for a better understanding/definition of jurisdictional roles.

Martin Willison (Dalhousie Univ.) first congratulated the CCEA for including MPAs as a theme in this workshop and encouraged them to continue their work and then presented the group's recommendations.

1. The CCEA is in a special position to facilitate common understanding of IUCN classification relative to MPAs in Canada. Given the apolitical nature of the CCEA, they may conduct a national, cross-jurisdictional study of IUCN standards and criteria for MPAs.
2. CCEA may play an assisting role between Canadian agencies and WCPA when MPA designations are formalized.
3. Future meetings, not necessarily of the CCEA, should bring together those people working on protecting freshwater systems, including large lakes and rivers.
4. Because the CCEA has a special role in bringing together provincial agencies, it may pay special attention to the role of provinces in MPA decision-making (e.g. education, promotion, facilitation, etc.).
5. The CCEA should continue to support getting MPA data into the CCAD, particularly at the provincial level.
   - MPA workers need to have more communication with professional fish harvester groups such as the Canadian Council of Professional Fish Harvesters;
   - There is a need for annual meetings on Marine Protected Areas.
6. The CCEA should consider holding meetings that focus on First Nations involvement in protected areas and traditional ecological knowledge

The group also made some general recommendations that are not necessarily directed towards the CEAA. Ed Wiken (CCEA) finished the workshop with a note of congratulations to the participants and a promise to promote and deliver the excellent suggestions to other CCEA members and key agencies. He urged the group to help foster a comprehensive system of MPAs and to look beyond Canada's three ocean territories. The marine and protected area work done by the Circumpolar Arctic Flora and Fauna (CAFF) group and the North American Commission on Environmental Cooperation (CEC) are examples of activities that will be needed to help maintain the integrity of many of the nation's valued species, habitats and ecosystems.

Links and Further Information

Canadian Wildlife Service, www.cws-scf.ec.gc.ca/index_e.cfm

Canadian Council on Ecological Areas, www.ccea.org

Commission for Environmental Cooperation, www.cec.org

Department of Fisheries and Oceans Marine Protected Areas, www.nwafc.nf.ca/sealane/Divisions/Oceans/Sections/Oceans_Act_Integration_Intro/Marine_Protected_Areas.htm

GPI Atlantic, www.gpiatlantic.org/

International Development Research Centre, www.idrc.ca/

Northwest Atlantic Fisheries Organization, www.nafo.ca/

Ocean Management Research Network, www.sshrc.ca/english/programinfo/grantsguide/ocean_management.html

Parks Canada National Marine Conservation Areas, www.parkscanada.gc.ca/nmca/nmp_e.htm

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The State of Oceanic Ecosystems in Canada—An Overview

by Ed Wiken and Moreno Padilla*

For many years the interests in Canada's oceans have been largely limited to commercial interests. How could these interests be so limited when Canada has

- Parts of three major oceans embracing the western, northern and eastern borders of the country;
- The world's longest coastline;
- Immense ocean territories that are equivalent to about 50% of our land mass;
- Well known fishing industries;
- Frequently visited saltwater coastlines, beaches, and recreation areas;
- Many historical tragedies (e.g., Franklin expedition) and ocean exploits;
- Trades like "fishers" and "whalers" that are as well known as "loggers" and "farmers";
- Prominent management issues pertaining to harvesting, conservation and biodiversity?

Superlatives, history and commerce have still not helped in making Canadians truly aware of their oceans' diversity and values. In some respects many Canadians believe that Canada ends at the ocean's edge instead of recognizing that this is where the other third of Canada begins.

Different Issues and Changing Values

Until the 1980s, our appreciation of the oceans and coasts was mainly focused around fisheries, shipping and recreation. Many of the scientific studies and personal interests of Canadians were directed at these kinds of employment and leisure activities. Our knowledge was also very southern-based and often linked to the larger coastal cities such as Vancouver, Halifax, and St. John's.

Canadians have tended to be most interested in "surface"-type issues—what could be hauled to the surface via fish harvesting, what debris (oil, plastics) was floating on the sea surface, what junk washed up on the beaches, what contaminants got into our seafood meals, and what dead or deformed wildlife washed ashore.

In the 1990s and onwards, concerns about the oceans have broadened considerably to include issues such as conservation, biodiversity, protected areas, climate change, sustainable resource use, and integrated planning. These topics do not concern just the ocean's surface but oceanic ecosystems in their entirety. They raise more technical questions about ocean dynamics, ecosystems and relationships, health and integrity.

Along with the increasing concern for ocean conservation and management has come an expansion in interest groups and stakeholders. Beyond fisherman and industry people, the oceans have attracted an expanded set of the interests from the tourism sector, coastal communities, First Nations, the general public (reef watchers, beach watchers), conservation groups, agencies with species and protected area interests, resource managers and educators. The parties involved are not just local or national. As with many sustainable development and resource use issues, audiences have become continental and even global.

With a widening set of clients, new approaches are required. Many of these newer interests have been captured well in the Canada Oceans Act and its proposed strategies on Integrated Management, Marine Protected Areas and Marine Environmental Quality. This Act and set of strategies builds upon related federal/provincial Acts and policies concerning ocean management and planning. Importantly, they lay out a more inclusive set of considerations and instruments for action.

The Knowledge Base

With the growing concerns about ocean management and conservation, it is perhaps not surprising that the knowledge about the oceans is generally not well developed. This limited knowledge tends to be restricted to certain subject areas, to smaller regional settings or to groups with special interests or expertise.

It is becoming increasingly apparent that the current understanding about the oceans needs to improve. Canadians and others need to be informed about the status of our ocean's diversity, health and integrity. Such information is an essential basis for better decision-making—not restricted to isolated groups or interests but more for promoting an effective dialogue amongst groups that may have either differing or complementary views.

Canadians know much about fisheries—commercial fish, fish harvesting issues, fisheries management and so on. At times, they are familiar with ocean pollution. Oceanic ecosystem diversity and protection, wildlife and habitat management, or ocean threats and risks are still rather poorly understood. People likely relate more to these more technical topics by making connections to what is happening on land.

Oceanic resources, however, are far more shared than those on land simply because of their dynamics and open "borders." International mechanisms for cooperation are vital. NAFTA's Commission on Environmental Cooperation (CEC) and their marine conservation pro-

*Wildlife Habitat Canada

gram as well as the Circumpolar Arctic Flora and Fauna program and WHC's Wildlife Habitat Status reporting are examples of the types of initiatives that will be required to make Canada's marine conservation efforts successful.

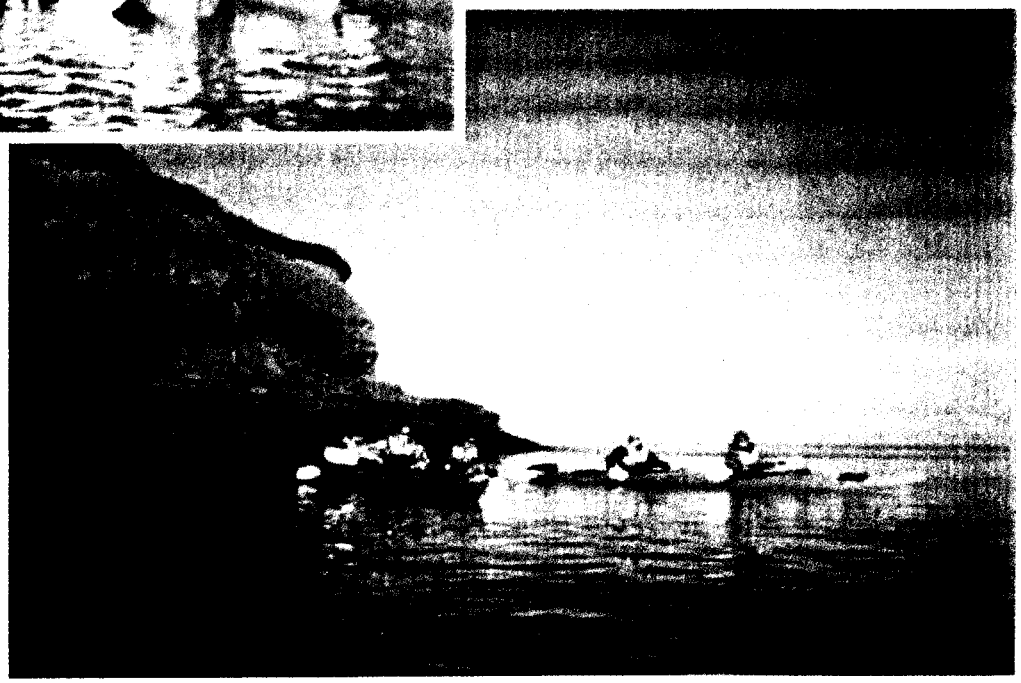
Essence of Successful State-of-the-Ocean Reporting

State of Canada's Oceans (SOCO) reporting is an important tool to accomplish conservation goals for Canada's oceans. SOCO reporting can take many forms, use different presentation formats and involve various time cycles in reporting. Comprehensive reporting has been tried in many other fields such as forestry, parks, agriculture, wildlife habitats and the environment. Generally speaking, such reports in other fields have proved most effective when they:

- Strategically aligned key issues and client needs;
- Targeted key messages and interests;
- Were written for a non-specialist audience;
- Were based on objective facts and indicators;
- Identified past/current/future trends and conditions;
- Contained interesting non-textual information (maps, pictures, graphs);
- Analyzed what instruments are available for correcting problems;
- Were released as short fact-sheet type items;
- Were supported, endorsed or written by the key agencies;
- Recommended directions and actions; and
- Were structured to fit ecosystem management principles.

A Marine Ecosystem Classification Framework

In cooperation with the North American Commission on Environmental Cooperation (www.cec.org), the CCEA (www.ccea.ca) has been working with the jurisdictions within Canada as well as in the United States and Mexico to further improve the classification of marine ecosystems. This will help to promote the establishment of marine protected areas, state of the oceans reporting, ocean habitat management and integrated seascape planning.



Canadian Council on Ecological Areas Sea Kayaking Field Trip, 27 October 2001, Prince Edward Island National Park, North Rustico Harbour.

North American Commission for Environmental Cooperation (NACEC) and CCEA

by Ed Wiken and David Gauthier

In the recent past, the CCEA assisted the North American Commission for Environmental Cooperation (NACEC) with two core projects:

- A North American Ecosystem Framework, designed for protected-area planning, reporting on the State of North America's Ecosystems and for encouraging ecological thinking.
- The North American Conservation Area Database (NCAD), patterned after the Canadian Conservation Area Database (CCAD).

The CCEA involved various federal, provincial, NGO and academic groups in completing these projects and obtained significant contributions from GeoAccess, State of Environment Reporting (SOER), Canadian Wildlife Service, Canadian Plains Research Center and many other agencies.

NACEC is an agency that tries to facilitate communications about conservation and biodiversity issues affecting two or three of the main North American countries (e.g., Canada, USA, and Mexico). Several years ago, NACEC gathered about 60 experts from across North America, including the CCEA Chair, to examine potential bilateral and tri-lateral priority areas in North America. NACEC wanted to prepare a list of about 10 priority areas, of which they could target about three in any given year. The conservation of North American marine and grassland areas emerged as key concerns and the CCEA was asked to help.

The marine program consists of several related projects which involve producing a basic marine ecosystem framework, a marine protected area network, a "marine species and spaces of common concern" evaluation and a marine protected areas managers exchange. The CCEA, via the Chair, leads the marine ecosystem work that has involved about 60 people (mainly CCEA network and contacts) as a network. Other members of the CCEA have been asked to be involved in some of the working groups, and the CCAD has been used as well.

Projects within the program for North American Grasslands include producing an information/analysis /ecosystem framework, a grasslands "species and spaces of common concern" evaluation, and a series of bird conservation initiatives, as well as assembling a grasslands strategy group. The CCEA plays a lead role in the strategy group and the information/analysis group. Various grassland conservation and SOE people, largely in Saskatchewan and Manitoba, are conducting this work.

NACEC has undertaken to develop a framework document from which to develop a strategy for conservation of the central North American grasslands. Since 2000, the three federal Wildlife Services of North America have worked together to protect 17 species of wild birds and mammals considered *"Species of Common Conservation Concern"* (SCCC). Given that the majority of these species are associated with grasslands, NACEC organized a workshop to establish the foundations of a conservation strategy for these species. The workshop took place in Nuevo Casas Grandes, Chihuahua, Mexico, March 2001, and involved government representatives from Canada, USA and Mexico, as well as representatives from NGOs, academia and landowners.

The shared vision is: to sustain the ecological, social and economic viability of grassland landscapes in North America for current and future generations.

One of the key results of this workshop was the elaboration of a shared vision, which emphasizes the need to protect grassland species through the conservation of their habitat. The shared vision is: to sustain the ecological, social and economic viability of grassland landscapes in North America for current and future generations. Following upon the suite of recommendations resulting from that tri-national workshop, NACEC in cooperation with Mexico, U.S.A. and Canada agreed to facilitate a focus on the conservation of grasslands of tri-national importance. Individuals were identified in each of the three countries to coordinate development of a framework document toward a North American strategy. Advisors were also identified in each of the three countries to assist the coordinators, and a workshop was held in Montreal in February 2002 to discuss the framework document and its structure and content. The final draft of the framework document is currently being prepared.

Further information:

http://www.cec.org/programs_projects/conserv_biodiv/stewardship/index.cfm

http://www.cec.org/pubs_info_resources/publications/enviro_conserv/ecomap.cfm

Canadian Conservation Areas Database (CCAD)

by Ed Wiken, Claire Gosson, Robert Vanderkam*, and Robert Helie

Objective and authoritative assessments of protected areas activities continue to be in demand by all levels of government within Canada, and increasingly so by environmental organizations outside of the country. Answering these queries requires a comprehensive information base that contains basic quantitative and descriptive details about the different kinds of protected and related conservation areas. The Canadian Conservation Areas Database (CCAD) is a standardized database of areas in Canada that house information to address many of those queries. The CCAD is designed to be inclusive and is not biased to particular themes, organizations or levels of management. It is used as a regional, Canadian and international reference source related to assessing progress on establishing conservation areas, selecting and applying protected area indicators, determining gaps in protected area plans and for land/water use decision making.

In the CCAD, the term 'conservation areas' means the more formally 'protected areas' as well as those types of designations that promote conservation initiatives like Ramsar sites or biosphere reserves. These examples are largely special designations given to areas that are not protected by legislation except when they are in whole or in part associated with some other protected area designation like a National Wildlife Area or a National Park.

The goal of the CCAD is to provide descriptive and quantifiable details that can serve to describe the overall status and trends of Canada's network of protected areas. The CCAD contains information gathered from various agencies and groups that contribute to establishing conservation/protected areas. Federal, provincial and territorial governments, environmental groups, industrial sectors and individuals are all examples of contributors.

CCAD has drawn together information...designed to portray the broad picture and to target a key framework of allocated lands and waters.

The CCAD was created as a means to assess the status of protected areas and to assist strategies for developing a comprehensive network of protected areas. Numerous agencies cooperated under the auspices of the Canadian Council on Ecological Areas (CCEA) to establish the first national registry of protected areas in 1986. The CCEA was created under the leadership of the Canadian Wildlife Service (CWS) of Environment Canada. The CCEA was maintained initially by CWS and then subsequently housed within the Ecological Applications Division, Sustainable Development Directorate of Environment Canada. In 1991, the CCEA was moved to the Ecological Monitoring and Assessment Branch of the State of the Environment Reporting Service. When the State of the Environment Service was dissolved in the mid-1990s, the CCEA returned to CWS.

Updating of CCAD has been mainly done through the yearly CCEA jurisdictional reports as well as through special studies such as protected area indicators and reporting. Beyond the fairly steady support that CWS and State of the Environment Directorate has provided to the CCEA, many others contributed time and resources to maintain and improve the information throughout the early 1990s. The major contributors include:

- The National Atlas Information Service (Natural Resources Canada) created the initial boundary files for the largest protected areas (those over 50,000 hectares).
- The Canadian Forest Service (Natural Resources Canada) has contributed expertise and resources to creating boundary files as well as developing assessments of representation of ecoregions and protected forest coverage. They have benefited through the creation of a quantitative protected area profile that serves as a foundation for their National Forest Ecological Reserve Strategy and contributes to their program of Criteria and Indicators for Sustainable Forest Management.
- The Mineral Policy Sector (Natural Resources Canada) contributed expertise and protected area boundaries from their National Land Use (NATLUS) database project. Information from CCAD is used to help quantitatively assess the areas restricted from mineral extraction.
- Parks Canada (Department of Canadian Heritage) has provided revised National Park information, descriptive national park inventories and profiles, improved national park boundary files and funds to assess ecoregion representation. Information from CCAD is used to assess ecosystem representation and ecological integrity and serves as basic background information for developing national protected area profiles.
- CWS (Environment Canada) has contributed information on federal wildlife properties and provided funding to gather information on non-government protected areas. They have established a regional

*Environment Canada

desk to maintain the Atlantic region portion of CCAD. Information from CCAD supports regional and national wetland conservation and habitat programs and contributes to the international assessments, such as the Circumpolar Protected Areas Network (CPAN) and Conservation of Arctic Flora and Fauna (CAFF).

- Non-government organizations (in particular Ducks Unlimited Canada) have contributed time and resources to collect and share information from their numerous project areas in order that the significant contributions by non-government organizations to ecosystem protection are documented.
- All provincial and territorial agencies responsible for protected areas (primarily park, wildlife and forest management agencies) have actively contributed time to complete updates, revisions and add new information about their protected areas.
- International agencies such as the World Conservation Monitoring Centre (WCMC) and the World Conservation Union (IUCN) provide advice on the assignment of protected area management categories and publish compendia of international information that enables Canadian protected area contributions to be placed in a global context.
- GeoAccess Division of Natural Resources Canada has provided support for data frameworks and for data dissemination via http://geogratis.cgdi.gc.ca /index1.html.

Provinces, territories, regional governments, NGO's and various federal agencies hold a number of conservation area databases. CCAD was designed to capitalize on these efforts and to consolidate a more Canada-wide and cross-jurisdictional perspective. Using selected descriptors of common concern as well as ecosystem-based standards, CCAD has drawn information together on Canada's area contributions. Most of this information is designed to portray the broad picture and to target a key framework of allocated lands and waters.

CCAD was originally established to support the CCEA goal of promoting a comprehensive system of ecological areas. A basis was needed to assess the status, progress and gaps in Canada's conservation areas. Many of the federal, provincial and territorial agencies and NGO's wanted to have a means to compile a national view of the IUCN protected area categories and related areas such as Ramsar designations. CCAD has greatly helped in the development of protected area indicators, mechanisms for reporting, and new and enhanced strategies for area protection. CCAD has also been a way to improve coding standards.

A partnership between the CCEA and GeoAccess (Natural Resources Canada) has connected ecosystem information through EcoMAP and has portrayed protected area issues via National Atlas map analysis. Through GeoAccess and the CEC, an initial version of the North American Conservation Areas Database (NCAD) was created by the CCEA. Over the years GeoAccess has made substantial contributions to improve the quality and access to CCAD.

Owing to its national and international value, GeoAccess has recently entered into a Memorandum of Understanding (MOU) with the CCEA. The MOU builds upon related and newer agreements with Environment Canada (EC), and with the generous support provided by the provinces and territories.

For information, contact claire.gosson@ccrs.nrcan.gc.ca.

Alberta's North Country: The Canadian Shield

by Carey Booth*

Scientists from Alberta Parks and Protected Areas, the University of Alberta, and the Canadian Forest Service are attempting to inventory the living and non-living components of Colin-Cornwall Lakes Wildland Provincial Park, 100 km northeast of Fort Chipewyan, Alberta. Remote, rugged, and near-pristine, Colin-Cornwall is part of a larger network of protected areas that represent the six different natural regions in the province. The definition of each natural region is determined from identifying the dominant climatic, geologic, plant, and animal elements found within them. With the conclusion of the Special Places initiative in 2001, additional research and studies are required to help formulate management plans for these new protected areas. Colin-Cornwall is one of those areas where additional biophysical information is required to complement what is already known about the area.

The province's north country situated between Wood Buffalo National Park, and the Saskatchewan and Northwest Territories borders, represents the Canadian Shield Natural Region in Alberta. Alberta's other regions include the Boreal Forest, Parkland, Foothills, Rocky Mountain, and Grassland—but the Canadian Shield is the smallest and least known of the six. A blend of Canadian Shield granites, steep cliffs, and a high density of lakes and wetlands characterize Colin-Cornwall's landscape. Roughly

**Alberta Parks and Protected Areas*

700 km² in size, the park is located in a transition zone between the boreal forest and sub-arctic woodland. It contains species found in both ecosystems, plus species associated with Canadian Shield habitats. The park ranks highly as one of the most ecologically diverse and significant areas of Alberta along with the Willmore-Kakwa, Waterton, and Cypress Hills-Milk River Canyon. Colin-Cornwall is also home to provincially rare plants such as lens-fruited sedge, knotted pearlwort, meadow bitter cress, and weak sedge.

As human needs on the land become more complex and demanding, identifying rare, sensitive, and even common species and their habitats in protected areas can guide planning decisions.

Another interesting ecological feature of the area is the obvious and frequent effects of wildfire. Other than remote fly-in fishing lodges, there are virtually no industrial or residential structures to protect, and forests in this area have been allowed to burn. Deadfall and other accumulated forest fire fuels are few. Furthermore, the land is free of seismic cut-lines, logging plots, power lines, gas heads, and other industrial features.

With more research a clearer picture is emerging of the area's ecology. For example, there is much evidence to suggest that wolves control the relative numbers of the park's other mammals including moose, caribou, and black bear. Throughout the shores, islands, and forests of Colin-Cornwall, there are well-established trails that have not been created by humans, but rather by many generations of wolves. At various locales there are den, rendezvous, and kill sites marked by frequent wolf activity. Each site reveals more information about these wolves. One of the more interesting finds was a den-site littered with fish bones, indicating that the wolves were consuming fish as part of their diet.

While much of the research the public hears about tends to focuses on charismatic species such as cougars, wolves, and bears, this inventory project is an example of the efforts by government and other agencies to study a wide range of species for the purpose of extending our knowledge of ecosystems. Large protected areas in near- pristine condition, such as Colin-Cornwall, serve as benchmarks to measure the relative health of other similar areas, especially those with industrial and recreation activities. As human needs on the land become more complex and demanding, identifying rare, sensitive, and even common species and their habitats in protected areas can guide planning decisions. The importance of gathering this information cannot be overstated, as it becomes part of the process of deciding how landscapes will be used and helps develop management strategies. Ultimately, these efforts will contribute to the preservation and long-term sustainability of Alberta's biodiversity and natural resources. ✱

Climate Change Impacts on the Island Forests of the Great Plains

by Norm Henderson*

The Prairie Adaptation Research Collaborative, a network of researchers studying climate change impacts in the prairie provinces, in cooperation with the Government of Saskatchewan, has released a draft study of probable climate change impacts on ecologically isolated "island" forests in the northern Great Plains region of Canada and the United States. The study sites examined are the Sweet Grass Hills, Montana; Cypress Hills, Alberta-Saskatchewan; Moose Mountain, Saskatchewan; Spruce Woods, Manitoba; and Turtle Mountain, Manitoba-North Dakota. All sites contain public lands and 4 of the 5 include provincial, state and/or national parks. The analysis is, however, likely applicable at many other forest sites. If you wish to see the study, send your request to ifp@uregina.ca and a .pdf file version of the study will be emailed to you.

The study presents up-to-date climate scenarios for the 2020s, 2050s and 2080s. Climate change is expected to have severe impacts, including the conversion of large areas of forest from trees to scrub or grass cover, the possible extirpation of some tree species, and negative impacts on biodiversity, landscape diversity, and recreational and cultural values. Passive management will not prevent loss of diversity and risks catastrophic and permanent landscape change. The research recommends adopting a policy of "managed retreat," including the aggressive control of natural disturbances and the possible introduction of exotic tree species into the island forests. The key management choice may well be between conversion of native forests to grass, or conversion of native forests to a new forest dominated by deliberately introduced exotic trees better suited to a drier and warmer climate. ✱

**Prairie Adaptation Research Collaborative*

Circumpolar Protected Areas Network (CPAN)

by Tiina Kurvits* and Bas Oosenbrug

The Arctic is a climatically extreme and ecologically unique region characterized by expansive and relatively undisturbed habitats populated by highly adapted flora and fauna. The region is shared by eight Arctic nations, each of which individually and as a group has committed to the conservation of the region's ecological diversity, including establishing protected areas to conserve important ecosystems, species, and habitat. First under the Arctic Environmental Protection Strategy (AEPS) and under currently the Arctic Council (AC), the countries have agreed to work together towards a protected areas network that will encompass the circumpolar Arctic. A Circumpolar Protected Areas Network (CPAN) has been developed in recognition that the Arctic is a shared system, with many species having circumpolar distribution.

CPAN is a cooperative effort to protect important areas of the unique Arctic environment. The goal of CPAN is to establish an adequate and well-managed network of protected areas that will: i) maintain the dynamic biodiversity of the Arctic region; ii) represent the widest variety of Arctic ecosystems possible; iii) contribute to maintain viable populations of all Arctic species; and iv) serve to maintain ecological and evolutionary processes. CPAN assists countries by providing a baseline for identifying the most significant gaps in each country's system of protected areas, and encouraging practical cooperation among participating countries. Additionally, CPAN promotes domestic and international policies and legislation relative to protected areas in the Arctic.

In the mid-1990s, protected areas comprised approximately 15% of the Arctic terrestrial area with an uneven distribution among ecosystems and countries. Reports identified an inverse relationship between biological diversity and the level of protection accorded to the richest areas; Arctic deserts received the highest level of protection, while productive marine and northern boreal systems received the least protection. By country, protected areas ranged from approximately 5% to 56% of their territory.

In order to address these imbalances and to make progress on one of the objectives of the Conservation of Arctic Flora and Fauna (CAFF) (i.e., *"to establish protected areas in the Arctic region where they contribute to the conservation of ecosystems, habitats, and species"*), the CAFF Working Group began development of CPAN pursuant to guidance given by the Arctic Council Ministers.

During 1994-1996, five background CAFF Habitat Conservation Reports (HCR) were prepared to provide a foundation for a CPAN strategy:

HCR1. *The State of Protected Areas in the Circumpolar Arctic*, 1994

HCR2. *Proposed Protected Areas in the Circumpolar Arctic*, 1996

HCR3. *National Mechanisms and Principles for Protected Areas in the Arctic Countries*, 1996

HCR4. *Circumpolar Protected Area Network Principles and Guidelines*, 1996

HCR5. *CPAN Preliminary Gap Analysis*, 1996

Based on results generated from these reports, the CPAN *Strategy and Action Plan* (HCR6) described the main elements of the strategy and actions necessary to develop the Circumpolar Protected Areas Network to guide its future activities. The Arctic Council Ministers endorsed the *Strategy and Action Plan* in 1996.

The 1996 *Strategy and Action Plan* proposed a comprehensive list of tasks to improve protected area coverage and management in the Arctic, including:

- Filling identified gaps in national protected area coverage;
- Strengthening mechanisms for creating and managing protected areas;
- Improving integration of protected areas needs into national policies and planning frameworks;
- Enhancing political and public support for protected areas;
- Improving legal and institutional frameworks;
- Providing adequate funding for protected areas;
- Developing and linking country systems of protected areas into a comprehensive circumpolar protected areas network, through improved physical, informational and managerial linkages; and
- Monitoring the state of protected areas.

Countries have reported that CPAN has had many positive effects on Arctic conservation and legislation. In particular, considerable progress has been made on expanding the protected area network in the Russian Arctic. The intensely productive early years leading to the development of the CPAN *Strategy and Action Plan* have laid a strong foundation for implementing the network. However, progress has slowed somewhat since 1998. With exception of a progress report in 1997, little activity occurred on CPAN again until the CAFF VII meeting in Yellowknife, Canada, in 1999, when a permanent CPAN Expert Group was established. The first formal meeting of the group was in 2000, but was not followed up on until February 2002 in Anchorage, Alaska, with US and Canada assuming a joint lead for the eight Arctic countries.

**UNEP/GRID-Arendal*

In his evaluation of the CPAN process, Baldursson (2000) identified a number of challenges faced by CPAN. He has noted that the *Strategy and Action Plan* might be too ambitious and detailed and could be compromised by a lack of project milestones and objective methods for evaluating progress. He has also noted the reluctance of Arctic countries to adopt a network approach to protected areas establishment and management.

In February 2002, the CPAN Expert Group (EG) convened to review and evaluate progress made on the CPAN *Strategy and Action Plan*. The EG considered how to strengthen CPAN, as well as where CPAN could effect the most influence and provide the most value regionally, nationally, internationally, to CAFF, and to the Arctic Council. Development of an Implementation Plan was considered a high priority in order to focus the group on the highest priority activities of the *Strategy and Action Plan*.

Upon determining that the tasks and actions described in the *Strategic Action Plan* were still relevant to the continued needs of CPAN, the EG prioritized a number of short-term and long-term activities. The EG then classified the prioritized activities into five themes or project areas that highlighted the connectivity among actions identified in the *Strategic Action Plan* and supported the objectives presented in the CAFF *Strategic Plan for Conservation of Arctic Biodiversity* (1997). The five themes were:

- Protected Area Enhancement
- Participation
- Protecting Marine Areas
- Establishing Linkages
- Management and Monitoring

The themes also complemented major elements recommended for strengthening CPAN (Baldursson 2000): i) increase linkages, ii) improve coordination with indigenous people's organizations, NGOs, and other AC programs, and iii) improve outreach and integration with respect to stakeholders. A four-year implementation plan that coincides with two Arctic Council Ministerials was proposed at the 2002 CAFF/CPAN meeting in Abisko, Sweden. It includes eight short-term activities to be accomplished within a four-year work cycle. The four-year plan would promote a consistent and focused process to ensure achievement of CPAN and CAFF objectives.

References and further information:

Baldursson, S. 2000. "The Circumpolar Protected Areas Network (CPAN)." In: B.S. Ebbing, Y.U.L. Mazourov and P.S. Tomkovich, Eds. pp. 561-570. *Willem Barents Memorial Arctic Conservation Symposium, Moscow 1998*. Ecopros, the Hague. Netherlands Ministry of Agriculture, Nature Management and Fisheries.

http://www.caff.is/

Joint Canadian Council on Ecological Areas (CCEA)—Circumpolar Protected Areas Network (CPAN) Workshop

September 8–11, 2003

The CCEA and CPAN are jointly holding a workshop on **"Designing Protected Areas–Wild Areas for Wildlife"** to be held in Yellowknife, Northwest Territories, during September 8-11, 2003. Endangerment of species and habitats throughout many parts of Canada and other arctic nations provides an ongoing testimonial to the need for improved conservation strategies. Increasingly, protection of both important wildlife areas in northern regions and seasonal habitat of transient species outside the Arctic has become an urgent task. This urgency is tied to industrial development and environmental changes, and to government commitments such as the Biodiversity Convention and various sustainable resource policies. A major focus of this workshop will be on criteria for designing large areas to effectively protect wildlife and habitat, and the approach will be forward-looking to prevent fragmentation typical of landscapes and seascapes in southern Canada and elsewhere.

The objectives of the CCEA/CPAN workshop are:

- To make an initial assessment of the status of large intact areas in northern regions, and their adequacy for conservation;
- To better understand the nature and extent of stressors on these areas and how they affect the integrity of different habitats and ecosystems; and
- To examine strategic opportunities and make practical recommendations for establishing and managing large intact areas designed for wildlife habitat conservation.

For more information, visit the CCEA web site - http://www.ccea.org, or contact bas_oosenbrug@gov.nt.ca.

Upcoming Conferences/Workshops

National Conference on Canadian Wetlands Stewardship – February 3-5, 2003

In association with World Wetlands Day, February 2, a national policy conference entitled **"Canadian Wetlands Stewardship – Setting a Course, Together"** (www.stewardshipcanada.ca) will be held at the Westin Hotel, Ottawa, Ontario, February 3-5, 2003. The primary objective of this conference is to facilitate consensus and definition of new directions for wetland stewardship and management in Canada over the next decade. The meeting will also report on Canada's progress from 1990 to 2002 concerning wetland conservation. Recommendations will be derived through facilitated sectorial working sessions, introduced by a series of commissioned issues papers. Information on this conference can also be viewed at www.wetlandscanada.org or obtained from the conference secretariat at nawcc1@bellnet.ca.

Parks Research Forum of Ontario - May 8-10, 2003

The Parks Research Forum of Ontario (PRFO) 2003 conference **"Protected Areas and Watershed Management"** is the sixth in a series of many successful PRFO annual conferences to be held at the University of Western Ontario, London, Ontario, May 8-10, 2003. Drawing on the experience developed in past conferences on topics such as ecological integrity and coastal ecosystems, this meeting intends to explore the role of protected areas in watershed planning and management with special reference to ecological, institutional and planning considerations. In addition, a day of volunteered papers will be available in which to further explore this topic, as well as a half-day workshop on Heritage Rivers on the afternoon of the second day. PRFO conferences focus on research relating to protected areas and should be of interest to planners, managers, researchers, government and non-government organizations, educators, and concerned citizens. For more information or to purchase past conference proceedings, please visit the PRFO website (www.prfo.ca) or contact the PRFO coordinator Chris Lemieux (hrc@fes.uwaterloo.ca) at the Heritage Resources Centre, University of Waterloo, Ontario.

International Conference on Science and the Management of Protected Areas (SAMPAA) – May 11-16, 2003

SAMPAA conferences attract a forum of diverse individuals, organisations and institutions from across North America and welcome broad international representation. Participants include protected area professionals, academics, researchers, managers of protected areas and habitats, members of non-government organisations and corporate representatives. The goal of this conference is to develop further the links between science and management of protected areas in the context of ecosystem-based management approaches. The 2003 SAMPAA Conference (info@sampaa.org) will be held at the University of Victoria, Victoria, British Columbia, and is titled **"Making Ecosystem-Based Management Work: Connecting Managers and Researchers."**

2003 National Stewardship Conference – July 3-6, 2003

A second national gathering of Canada's stewardship and conservation communities (info@stewardship2003.ca) entitled **"The Leading Edge – Stewardship & Conservation in Canada"** is being planned for July 3-6, 2003, at the University of Victoria, British Columbia. This conference aims to advance the role of stewardship and conservation in protecting natural and cultural heritage in Canada by bringing leading-edge doers, thinkers and policy makers from across Canada to exchange information, to share successes, and to work together to:

- Assist in strategic planning and promote public policy development to better support stewardship and conservation,
- Provide program support and information about tools, and
- Increase opportunities for partnerships between non-government organizations, governments, business, professionals and landowners.

World Parks Congress – September 8-17, 2003

The World Parks Congress meets every ten years as the major global forum for protected areas. It offers a unique opportunity to take stock of protected areas; provide an honest appraisal of progress and setbacks; and chart the course for protected areas over the next decade and beyond. The Vth World Parks Congress entitled **"Benefits Beyond Boundaries"** will be held in Durban, South Africa, September 8-17, 2003. Participation is by nomination only; the deadline for nomination is 31 December 2002.

Joint Canadian Council on Ecological Areas (CCEA)—Circumpolar Protected Areas Network (CPAN) Workshop — September 8-11, 2003

For details, see page 14.

...News on Protected Areas

Yukon

John Meikle

The Yukon Parks and Land Certainty Act was proclaimed in fall 2001. The Act revises and defines the types of designations available; sets out representation goals and guidelines; and directs establishment process. Also, implementation of the Yukon Protected Areas Strategy was continued with further direction on designation process.

Management planning continued for three wildlife protection areas agreed to as part of Yukon First Nation land claim agreements. These areas include two wetland complexes, **Lhtsaw** and **Nordenskiold Habitat Protection Areas**. **Ddhaw Ghro Habitat Protection Area**, formerly McArthur Wildlife Sanctuary, focuses on upland habitats of a fannin sheep population and the Ethel Lake Caribou Herd. The first management plan for **Vuntut National Park** is in final draft form and will go to Ottawa for approval by December 2002. The management plan review for **Kluane National Park and Reserve** has been completed and the revised management plan is in the recommendation and approval stage.

The work of the Planning Team on the management plan for **Fishing Branch Wilderness Preserve and Habitat Protection Area** is complete. The plan is awaiting consideration by the Yukon Government. Once the plan is approved, requisite steps can be taken to formally designate the protected area complex. Land transfers from Canada to Yukon and withdrawals for minerals along with oil and gas are complete. The **Tombstone Territorial Park** Management Plan has also been completed and will be recommended to the Tr'ondek Hwech'in and Yukon governments for review and approval at the end of 2002. Canada will most likely transfer the land to Yukon in the fall of 2002.

The Yukon Government will likely approve the **Tatshenshini** Management Strategy this fall. It will be developed by the Champagne-Aishihik First Nations and Department of Indian and Northern Development and forwarded to the Canadian Heritage Rivers Board for final designation in February 2003.

Inventory work in support of new core protected areas was conducted in central Yukon in the Yukon Plateau North, Yukon Plateau Central and Klondike Plateau ecoregions. The Yukon Government established a working group to identify representative designations in Eagle Plains, Peel River Plateau, Mackenzie Mountains and Yukon Plateau North ecoregions. A candidate area for Eagle Plains Ecoregion was announced.

Parks Canada has identified the Wolf Lake area as the preferred location to represent Natural Region #7, the Northern Interior Mountains and Plateaux, in the National Parks System. The Yukon Government has identified a similar option for representation of the Pelly Mountains and Yukon Southern Lakes ecoregions, with preference given to a Yukon Parks Act designation. During the reporting period, a regional land use planning process was initiated. A variety of options for conservation are likely to be considered during this process.

The framework for settlement of First Nation land claim agreements includes a chapter on 'Special Management Areas.' This provision has enabled the designation of most existing Yukon protected areas to date. Further areas are contemplated in outstanding agreements.

The Yukon Protected Areas Secretariat was reintegrated with the Parks and Protected Areas Branch, also within the Department of Environment (formerly Renewable Resources).

'Nature Serve,' a conservation data centre, has been cooperatively established primarily between Yukon's Department of Environment and the Canadian Wildlife Service. While including data on the few rare and endangered species known in Yukon, Nature Serve may also include components dealing with traditional and local knowledge, protected areas data and spatially limited or threatened ecosystems.

Northwest Territories

Bas Oosenbrug

The Government of the Northwest Territories (GNWT) and Government of Canada approved a Northwest Territories Protected Areas Strategy (NWT-PAS) in September 1999. The GNWT also in 1999 approved a process to review and revise the *Wildlife Act*, as well as develop new species-at-risk legislation. Consultation for a new *Wildlife Act* and species-at-risk legislation continued during 2001-02. The GNWT is committed to review its regulations, legislation and policies, and to amend them where necessary to be consistent with the NWT-PAS. Documents were produced in 2001 identifying how provisions of the NWT-PAS could be incorporated into territorial legislation, and specifically, what categories of protected areas should be covered in wildlife, species-at-risk, parks, or forestry legislation and regulations.

from across the country—2001–02

One of the goals of the NWT-PAS is to protect core representative areas within each ecoregion of the Northwest Territories. A revised GNWT document outlining ecological procedures to select and design protected areas in the Northwest Territories was completed in January 2001; the document provides guidelines for assessing ecoregion representation by candidate sites, and for designing ecological reserves. The NWT-PAS also outlines eight steps for the planning and establishment of protected areas. As part of this process, site proposals originating from communities and regional organizations are submitted to government for additional information input, including landscape unit/ecoregion representation analysis. Over the past year preliminary evaluations have been conducted for four proposed candidate sites.

The NWT-PAS states that candidate protected areas will largely be brought forward through community led initiatives. In January 2001 the Deh Cho First Nations (communities of Fort Simpson, Fort Providence, Jean Marie River and Wrigley), with support from World Wildlife Fund Canada (WWF) and Canadian Parks and Wilderness Society, NWT Chapter (CPAWS) collectively requested Environment Canada to sponsor the Horn Plateau/Mills Lake, or **Edehzie** candidate protected area. This request was supported by a report detailing the biological values, land use and resources of the candidate site. The plateau and adjacent lakes and streams provide important source waters, waterfowl staging areas and woodland caribou habitat, and is an area of cultural significance.

Throughout spring and summer of 2000 the community of Deline worked with the NWT-PAS Secretariat, WWF and CPAWS to develop a detailed proposal for protecting the cultural and ecological values of two peninsulas in Great Bear Lake–Grizzly Bear Mountain-Scented Grass Hills (**Sahyoue-Edacho**) as a National Historic Park. In February 2001 this site was granted a 5-year land withdrawal, during which time further consultation and detailed ecological, cultural and economic evaluations of the candidate area will be conducted. In July 2000 CPAWS contracted preliminary biological investigations of Scented Grass Hills (Edacho). With the interim land withdrawal in place and with support from the GNWT and federal government, more detailed studies of **Edacho** were conducted during 2001 and additional studies of Grizzly Bear Mountain (**Sahyoue**) will occur in summer 2002.

A Protected Areas Implementation Advisory Committee (AIC) has been established to monitor the implementation of the strategy, to provide a forum for information, and to advise the territorial and federal ministers on matters relating to implementation of the NWT-PAS. The AIC consists of 13 members comprising various regional Aboriginal organizations, industry, environmental organizations and the territorial and federal governments. The first meeting of the IAC was held in September 2000. This and subsequent meetings in 2001 focussed in part on developing guidelines for interim protection, compensation for third-party interests and non-renewable resource assessments of candidate protected areas. Guidelines for ecological assessments were begun in February 2001 and completed in March 2002.

Following completion of the ecological integrity statement for Nahanni National Park Reserve, Parks Canada in November 2001 produced information on areas of high conservation value around the park, as part of negotiating boundary configurations through the Deh Cho Process, or land claim for the Dene and Metis of the Deh Cho region. Parks Canada's information along with that from other government agencies will be used to determine possible configurations for an interim withdrawal and public consultation, pending conclusion of the Deh Cho final land claim agreement.

The GNWT participates on the Canadian National Vegetation Classification (C-NVC) working group, consisting of federal, provincial, territorial governments and environmental organizations. The C-NVC group wishes to construct a standardized Canadian vegetation classification system similar to the International Classification of Ecological Communities (ICEC), and supported by the Nature Conservancy and Association for Biodiversity.

Canada is a member of the 8-country Arctic Council, and the GNWT reports to Council as one of its Senior Arctic Officials. The Department of Resources, Wildlife and Economic Development (RWED), Wildlife and Fisheries Division participates on the Conservation of Arctic Flora and Fauna (CAFF) and Circumpolar Protected Areas Network (CPAN) Expert Group, and represents the department's national interest and jurisdiction for conservation of wildlife and wildlife habitat in the Northwest Territories. In 2001 RWED contributed and coordinated input of protected areas holdings for Yukon, Northwest Territories and Nunavut toward CAFF and CPAN, as well as the Canadian Conservation Areas Database and World Conservation Monitoring Centre.

Alberta

Dan Chambers

Alberta's Special Places program concluded on July 24, 2001 with designation of five new sites adding more than 697,000 hectares to Alberta's network of parks and protected areas. Formally announced in 1995, the five and a half year Special Places initiative added 81 new and 13 expanded sites to the protected areas network. In total almost 2 million hectares were added, resulting in a more than three-fold increase in the amount of provincial land in Alberta's protected areas network Approximately 12.5% of the province is now protected in national parks, wildland provincial parks, provincial parks, wilderness areas, ecological reserves, natural areas and Willmore Wilderness Park. The five new sites are:

Caribou Mountains Wildland Provincial Park (5,910 km^2) is the largest area protected under the Special Places initiative and the largest protected area designated by the province. Caribou Mountains represents the diversity of the Subarctic Subregion of the Boreal Forest. A rich bird environment, the Caribou Mountains provide habitat for species found much further north including gray-cheeked thrush, red-necked phalarope, red-throated loon, American

tree sparrow, mew gull, pacific loon, and surf scoter. The wildland includes about 80% of the range of an important population of woodland caribou. A population of up to 120 wood bison lives in the Wentzel Lake area in small groups of up to 15 animals. Polar reed grass found in this area is believed to have been introduced by the bison. Wetlands are an integral part of the Caribou Mountains. The Peat Plateau Bog and the Northern Ribbed Fens are unique environments of provincial significance. Caribou Mountains Wildland shares a common boundary with Wood Buffalo National Park on the north and east.

Peace River Wildland Provincial Park (246km^2) preserves the south bank of the Peace River from the town of Peace River west towards Dunvegan. Included in the wildland is about 30 km of the Smoky River and valley upstream of its junction with the Peace River. Most of the wildland is forested by aspen and some spruce. The Smoky-Peace Point area includes grassland and shrubland communities typical of the Peace River Parkland. Deer, elk, black bear and wolf frequent the area.

Bluerock Wildland Provincial Park (127 km^2) preserves the valley of the Sheep River between Elbow-Sheep Wildland and the eastern boundary of Kananaskis Country. The wildland park provides a transition zone between the Rocky Mountains and the Foothills natural regions. It protects one of the most extraordinary wildlife corridors in Kananaskis Country, where moose, elk, white-tailed deer, mule deer, bighorn sheep, wolves, grizzly bears, black bears and Alberta's most studied population of cougars move freely along the Sheep River valley. The Bluerock Wildland Provincial Park provides opportunities for fishing, carefully regulated hunting, guide-outfitter operations, hiking, back-country camping and horseback riding but permits no industrial development.

Sheep River Provincial Park (62 km^2) Sheep River Provincial Park includes the former Sheep River Wildlife Sanctuary, which is home year round to a herd of bighorn sheep. The eastern portion of the area extends into the Lower Foothills where open grassy slopes provide critical winter range for elk and deer that spend their summers in the higher alpine areas to the west. Sheep River Provincial Park and adjacent areas have some of the highest documented populations of cougar in North America. The park has been a wildlife sanctuary for many years and has supported much of Alberta's leading wildlife field research from the University of Calgary and the University of Alberta. It contains two major campgrounds and a wide range of day use sites and trails. The Sheep River Provincial Park will continue to be closed to hunting, as a wildlife sanctuary, and will permit no industrial development.

Don Getty Wildland Provincial Park (628 km^2) consists of a number of parcels of land that add ecological integrity and contiguity to adjacent protected areas including Ghost River Wilderness Area, Banff National Park, Bow Valley Wildland Park, Elbow-Sheep Wildland Park. Forget-Me-Not Ridge to the east of Elbow-Sheep Wildland is particularly noteworthy with spectacular panoramic views and one of the deepest known caves in Alberta, as well as exceptional examples of felsenmeer, stone stripes and stone polygons. These periglacial features are well preserved with little disturbance from industrial activities and recreation use. The Plateau-Cataract area includes Cataract Creek, a premier, blue ribbon, and walk-in trout -fishing stream.

Saskatchewan

Wayne Schick

Two branches of the Department of the Environment coordinate the protected areas program in Saskatchewan: Parks and Special Places Branch and the Fish and Wildlife Branch. It is delivered by field staff in five ecoregions by Integrated Resource Management Teams and by 12 Park Area Managers. *The Parks Act* and the *Ecological Reserves Act* primarily are used to designate protected lands. Saskatchewan's Representative Areas Program, Biodiversity Action Plan, Parks Program and an Ecosystem Management approach provide general direction, and Management practices are set down as part of the legislative regulation at the time of area designation.

Land use planning exercises are playing a major role in identifying new areas to fill gaps in the representation of enduring features and areas with high aesthetic, recreational, cultural and natural values. Additional work is underway to provide guidelines for the development of more detailed management plans. Research by the Forest Ecosystems Management Branch on forest lands across the province and by the Conservation Data Centre provides baselines and data that will be used to develop specific management plans for the protected lands as well as ensure that all Crown lands are managed sustainably. A Conservation Easements Program, a Wildlife Habitat Protection Act, endangered species management and other initiatives supporting biodiversity objectives in Saskatchewan are addressed more fully on the department web site http://www.serm.gov.sk.ca/.

Two major announcements were made during the 2001–2002 reporting period:

On May 31, 2001 Saskatchewan protected three areas totalling about 601,241 hectares (1,485,649 acres) in the northernmost region of the province as part of the provincial Representative Areas Network. The three sites—**north of Uranium City** (124,180 ha), **north of Fond-du-Lac** (240,345 ha) and in **the northeastern corner of the province** (236,716 ha)—were protected on an interim basis for ten years while more information about each site is gathered. These will not be park lands but land that will be set aside to keep them in a natural state. Traditional uses like hunting, fishing, and trapping will continue as before.

On March 6, 2002 The Saskatchewan Wildlife Federation (SWF) and the Saskatchewan Stock Growers Association (SSGA) welcomed the contribution of Saskatchewan's 55 provincial community pastures to the Representative Areas Network (RAN). A Letter of Understanding, signed by the Deputy Premier and Minister of Agriculture and Food and Environment and the Minister of Resource Management, recognized the contribution of the provincial community pastures to the goal of the Saskatchewan Representative Areas Network (RAN). At the same time, the Letter of Understanding recognized that good grazing practices on the community pastures' 800,000 acres (323,760 hectares) will continue and existing agreements regarding the allocation of various resources will continue to be respected. The term of the Letter is for five years.

Manitoba

Helios Hernandez

Manitoba's network of protected areas includes all sites where logging, mining, hydroelectric development and, as appropriate, other activities that adversely and significantly affect habitat are prohibited by some legal instrument. Since April 1, 2001, about 41,500 ha were added to the network of protected areas, and 764,000 ha under interim protection were given permanent protection.

Permanent protected areas designated included:

- The 178 ha **Pembina Valley Provincial Park** was created in October 2001, the first such new provincial park created since the new *Provincial Parks Act* came into force in March 1997.
- In May 2002, the interim protection of the 764,000 ha Caribou River Park Reserve was made permanent by designating it as **Caribou River Provincial Park**.
- An additional 14,100 ha in all or part of 8 existing Wildlife Management Areas (WMA) were protected from industrial development by regulation in July 2001. This brings the total of protected WMA land to over 122,000 ha in all or part of 44 WMAs.

In 2001 and 2002, discussions continued with individual First Nation communities. Some communities identified areas they wished to see protected. Initial 6-month interim protection was given to 27,300 ha within 7 new park reserves. The park reserves established in the summer 2001 were all proposed or supported in this manner and were subsequently extended for a further 5-year term of interim protection.

On September 11, 2002, the interim designation of 5 park reserves was due to lapse. One of these sites has been designated a provincial park to permanently protect a heritage site in southern Winnipeg, and the interim park reserve designation has been renewed for a further 5 years for two additional sites. Consultations are still ongoing for the remaining two sites to determine whether they should be made permanent provincial parks, renewed as park reserves for a further five years, or allowed to lapse permanently. A decision is anticipated before the end of 2002.

Implementation of the *Conservation Agreements Act*, passed in June 1997, has accelerated since 2000. As of April 1, 2002, the Manitoba Habitat Heritage Corporation (MHHC) held a total of 68 Conservation Agreements (CAs) covering 2928 ha. Of these, 38 CAs covering 2003 ha were acquired during 2001/02, and an additional 23 CAs covering 1343 ha were in progress as of April 1, 2002. All CAs held by MHHC are in perpetuity. MHHC also holds 871 ha of donated land, of which one 129 ha parcel was donated in 2001/02. These conservation lands contain the gamut of native habitat in Manitoba's prairie ecozone, including wetlands, habitat of species at risk, riparian areas, mixed grass prairie, and woodland.

The Manitoba Region of the Nature Conservancy of Canada (NCC) continued its activities acquiring land directly or through CA. Although a focus continued on tall grass prairie and mixed grass prairie, aspen parkland and riparian sites became of interest. In the tall grass prairie area, 324 ha were bought and 65 ha were placed under CA. The transfer to Manitoba of 178 ha of private land purchased by Manitoba Region NCC as an interim step to its designation as a provincial park was completed and the new Pembina Valley Provincial Park was designated in October 2001.

Consultations on candidate areas identified for protection continued with the Working Group on Minerals made up of representatives from industry and government agencies involved in mining continued in 2001 and 2002. Discussions and review of candidate areas also continued with the Manitoba Forestry Branch, various Quota Holder Associations and major forestry companies comprising the forest industry.

The efforts in Agro-Manitoba begun in January 2000 continued in 2001 and 2002. Discussions involving staff of Manitoba Agriculture and Food and the Canadian Prairie Farm Rehabilitation Agency focussed on Community Pastures, provincial Crown land managed by the federal agency. Discussions progressed on identifying lands acquired by private individuals and agencies for conservation and protection. Agencies include Nature Conservancy of Canada, Manitoba Naturalists Society, Manitoba Habitat Heritage Corporation, Ducks Unlimited Canada, and Manitoba Wildlife Federation Habitat Foundation Inc., and Conservation Districts. Discussions also continued with the Department of National Defence regarding protecting additional parts of Canadian Forces Base Shilo. Initial public drop-in sessions and meetings were held in early 2002 on establishing two new park reserves in southern Manitoba.

During 2001/02, the Ecological Reserves Advisory Committee recommended one site for designation as an ecological reserve, and the Committee has recommended an additional two sites since April 1, 2002. Recommended sites are undergoing review and consultation. Of the 18 previously recommended sites, two were designated as park reserves in 2001, and will undergo consultations on their ultimate designation. Community meetings were initiated at the request of a nearby First Nation for one additional site in fall 2001, and they are still ongoing. One other nominated site falls within an area that has been selected as part of Treaty Land Entitlement by a First Nation and transfer of the land to Canada is in progress.

Biological surveys for rare species and species at risk continued, as did inventories and management activities of various areas throughout Manitoba, with emphasis in tall grass and mixed grass prairie portions of the Prairie Ecozone. In April 2002, a brochure on the Ecological Reserves was published, and an ecological reserves page became active on Manitoba's Protected Areas Initiative web site, http://www.gov.mb.ca/conservation/parks/.

Ontario

Dan Paleczny

The Ontario Ministry of Natural Resources (OMNR) is currently in the third year of a four-year special funding program to implement the Ontario's Living Legacy Land Use Strategy (1999). In the strategy, 2.4 million hectares of Crown lands were identified for protection in 378 new provincial parks and

park additions, and conservation reserves. Progress includes:

- Regulation of nearly half of the new areas under the *Provincial Parks Act* or the *Public Lands Act*.
- Preparation of about 475 earth science, life science and recreational inventories (reconnaissance and detailed) and a major socio-economic study.
- Preparation of about 105 interim management direction documents and full management plans for six areas.
- An ecological monitoring initiative.
- Design of a comprehensive protected areas database.

OMNR has established the Ecological Land Acquisition Program (ELAP) to coordinate acquisition on a province-wide basis, as part of implementing *Ontario's Living Legacy*. With aggressive annual work planning, coordination and the committed effort by staff across the province, many people are working hard to make sure that this opportunity succeeds. For more information, contact Bob Davidson (bob.davidson@mnr.gov.on.ca).

Ontario Parks and the Nature Conservancy of Canada (NCC) recently signed a new three-year agreement for the securement of protected areas. Land valued at $9 million will be secured for protection. The agreement follows the highly successful Ontario Parks Legacy 2000 partnership, which resulted in the acquisition and protection of more than two-dozen properties covering in excess of 11,000 hectares between 1995 and 2001. It also incorporates the NCC-OMNR Community Conservancy Program that operated between 1999-2002 and resulted in the securement of nearly 11,500 ha valued at about $11 million. Assistance in securement also came from the Ontario Nature Trust Alliance and the Eastern Habitat Joint Venture. Contact Fred Bishop (fred.bishop@mnr.gov.on.ca) or Jim Duncan (james.duncan@natureconservancy.ca).

OMNR's successful Natural Areas Protection Program (NAPP) also came to a conclusion in March with the acquisition of 700 hectares of land at a value of about $3 million on the **Niagara Escarpment** and at **Lake Ontario's Lynde Marsh**. Since the program's inception in 1998, 104 properties have been acquired, amounting to 4,890 hectares valued at about $14.7 million. A detailed five-report on the program is available. Contact Jane Atkinson (jane.atkinson@mnr.gov.on.ca).

The Ontario Natural Heritage Information Centre (NHIC) is collaborating with the Nature Conservancy of Canada, the Ivey Foundation, Ontario Parks and other government and non-government organizations on the creation of a conservation blueprint for terrestrial and aquatic biodiversity on the Canadian side of the Great Lakes. The project follows the eco-regional planning methodology developed by The Nature Conservancy (U.S.) that is being applied across the continent. An aquatic ecosystem classification system is also being developed for the aquatic analysis. A network of complimentary sites on the landscape will be identified to create the conservation blueprint. Contact Kara Brodribb, (terrestrial) (kara.brodribb@mnr.gov.on.ca) or Gord Wichert, (aquatic) gordon.wichert@mnr.gov.on.ca).

A Natural Heritage Strategy (draft) for OMNR's Southcentral Region will guide business planning and operational delivery of natural heritage activities. It will also help inform and complement the related activities of many other groups involved in natural heritage protection in southern Ontario. Contact Stuart Mallany (stuart.mallany@mnr.gov.on.ca).

A three-and-half year effort to prepare a comprehensive class environmental assessment for Ontario's provincial parks and conservation reserves entered its final stages with submission to the Minister of the Environment for approval. Prepared in accordance with the *Environmental Assessment Act*, the Class EA provides a new consultation and evaluation process for most activities. It also provides guidance related to monitoring, evaluation and reporting. Contact Dan Paleczny (dan.paleczny@mnr.gov.on.ca).

The Oak Ridges Moraine Conservation Plan was filed as a provincial regulation in April 2002 to guide development on the environmentally sensitive **Oak Ridges Moraine**. This east/west ridge of land runs 160 km through south-central Ontario and provides groundwater for over a quarter of a million people in the most urbanized area of Canada.

The plan contains many ambitious objectives including the maintenance and enhancement of connectivity of natural systems, promotion of landform conservation principles into development proposals, and the preparation and implementation of watershed plans. Contact Fred Johnson (fred.johnson@mnr.gov.on.ca). The conservation plan is available at: http://www.mah.gov.on.ca/oakridges-moraine/conservation_plan-e.pdf.

The Conservation Land Tax Incentive Program (CLTIP) encourages private landowners to protect provincially significant features that occur on their properties. For the 2002 program year, approximately 40,000 eligible landowners were contacted, and about 40% replied, protecting about 197,000 ha of land. Eligible lands include provincially significant wetlands and areas of natural and scientific interest (both earth and life science), endangered species habitat and areas designated as 'escarpment natural' under the Niagara Escarpment plan. Contact Fiona McKay (fiona.mckay@mnr.gov.on.ca).

Since 2000, more than $6 million in funding has been invested in the provincial Species at Risk Program as part of *Ontario's Living Legacy*, in the following areas:

- Developing a provincial strategy.
- Providing legal and policy protection.
- Co-ordinating conservation, protection and recovery actions with a variety of partners.
- Increasing public awareness and participation.
- Working to prevent the further decline of species and their habitats.
- Promoting stewardship activities with landowners, stakeholders and Aboriginal communities.

Almost 50 per cent of all species designated as nationally endangered or threatened in Canada are found in Ontario. More than 65per cent of these species at risk may be found in Ontario's provincial parks. Recovery Teams have been established for more than 30 threatened or endangered species. Contact Sue Russell (sue.russell@mnr.gov.on.ca) or visit www.OntarioParks.com/sar.html.

A new project to prepare habitat mapping guidelines is underway. Intended for province-wide application, the new guidelines will aim to define and map species at risk habitat for a variety of applications

and purposes. Contact Bill Crins (bill.crins@mnr.gov.on.ca).

The Parks Research Forum of Ontario (PRFO)—a cooperative venture between Ontario Parks, Parks Canada and the universities of Waterloo, York, Trent, Guelph, and Western—has signed a new three-year agreement. Partner contributions in the order of $59,000 a year (total for all partners) will enable PRFO to continue its successful annual conference program that draws together academic, government and non-government interests. Contact Chris Lemieux (hrc@fes.uwaterloo.ca).

Quebec

Olivier Pfister

In 2001–2002, the Ministère de l'Environnement began the preparation of a blueprint law on protected areas to update all the legislation pertaining to protected areas. This Act will reinforce the ministry's role and responsibility regarding the preservation of Québec's natural heritage. Meanwhile, the ecological reserves 2002–2007 program will involve a major development of the ecological reserves network in the next five years.

The government of Québec has set up two programs aimed at establishing a large-scale network of protected areas on private lands in the coming years. These programs, whose budget may reach $21 million, will be developed in partnership with private organisations. Candidate area identification studies and surveys were conducted for two ecological reserves, several areas covering more than 10,000 km^2 within the North Shore of the Saint-Lawrence and 4 proposed national parks of Québec.

Peat bogs in the **Plain of Lotbinière**, woodlands on the **Island of Montreal** and exceptional forest ecosystems were also investigated to identify potential candidate areas. Some 1,396 hectares were designated as planned ecological reserves in 2001–2002 and more than 595 km^2 were designated as National Parks of Québec. More than 800 km^2 of habitat were designated by the Société de la faune et des parcs du Québec (FAPAQ) during that time and private organisations acquired more than 1,800 hectares for conservation purposes.

In November 2001 the Ministère de l'Environnement, through the St. Lawrence Vision 2000 Program, finalized the acquisition of the **barachois de Bonaventure** at the mouth of the Bonaventure River. Several studies were conducted within the ecological reserve network, while surveying and activities aimed at establishing the limits of those ecological reserves were also carried out.

Nine species were added to the list of threatened and vulnerable species in Québec and recovery plans were implemented for four species. The Société de la faune et des parcs du Québec (FAPAQ) has officially designated the **Gaspé Peninsula**'s population of caribou (*Rangifer tarandus*) as vulnerable.

A major initiative was undertaken in 2001–2002 by the Ministère de l'Environnement aimed at incorporating information regarding the natural communities of plants found within the ecoregions of the **St. Lawrence Lowlands** and the **Appalachian Mountains** into the Centre de données sur le patrimoine naturel du Québec [Québec natural heritage data centre (CDPNQ)]. Also the Ministère de l'Environnement provided financial and technical assistance for the preparation of eco-regional plans to identify important conservation sites within the ecoregions of the St. Lawrence Lowlands and the Appalachian Mountains following a methodology developed by the data centre.

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En 2001-2002, le ministère de l'Environnement a entrepris l'élaboration d'un nouveau cadre législatif sur les aires protégées destiné à faciliter la planification et l'implantation d'un réseau diversifié d'aires protégées au Québec. Ce même ministère a, à partir du printemps 2001, travaillé à l'élaboration de la programmation quinquennale des réserves écologiques 2002–2007. Cette programmation devrait amener un développement majeur du réseau des réserves écologiques dans les cinq prochaines années.

Le gouvernement du Québec a, pour sa part, mis sur pied deux programmes afin de développer un réseau d'aires protégées privées de grande envergure au Québec. Ces programmes, dont le budget pourrait atteindre 21 millions de dollars, seront développés en partenariat avec des organismes de conservation. Des études de caractérisation du territoire et des inventaires biophysiques ont été complétés pour deux réserves écologiques, quatre projets de parcs nationaux du Québec ainsi que pour plusieurs sites situés sur la Côte-Nord et s'étendant sur plus de 10,000 km^2.

Des études ont également été menées en vue d'identifier des sites d'intérêt pour la conservation au sein des tourbières de **la plaine de Lotbinière**, des boisés de **l'île de Montréal** ainsi qu'au sein de nombreux écosystèmes forestiers proposés comme écosystèmes forestiers exceptionnels (EFE). Le ministère de l'Environnement a continué à assurer le développement du cadre écologique de référence. Quelque 1,396 hectares ont été désignés comme réserve écologique projetée en 2001–2002 et plus de 595 km^2 ont été désignés comme parcs nationaux du Québec. La Société de la faune et des parcs du Québec (FAPAQ) a, de son côté, constitué plus de 800 km de territoires en tant que refuges et habitats fauniques tandis que des organisme privés ont acquis plus de 1,800 hectares à des fins de conservation.

En novembre 2001, le ministère de l'Environnement, par le biais du Plan d'action Saint-Laurent Vision 2000, a finalisé l'acquisition du **barachois de la rivière Bonaventure** en Gaspésie. Plusieurs recherches ont été entreprises au sein du réseau de réserves écologiques de même que des activités d'arpentage et de signalisation.

Neuf espèces ont été ajoutées à la liste des espèces menacées ou vulnérables au Québec et des plans de rétablissement ont également été mis en place pour quatre espèces. La Société de la faune et des parcs du Québec (FAPAQ) a officiellement désigné le caribou -population de **la Gaspésie**- (*Rangifer tarandus*) comme espèce vulnérable.

Le ministère de l'Environnement a entrepris un travail majeur en 2001–2002 en vue d'incorporer, dans le CDPNQ, des données concernant les communautés naturelles floristiques que l'on retrouve sur le territoire des éco-régions **des basses-terres du Saint-Laurent** et **des Appalaches**. Le ministère de l'Environnement a également fourni une aide technique et financière à Conservation de la nature-Québec en vue de préparer des plans de conservations éco-régionaux afin d'identifier les principaux sites présentant un intérêt pour la conservation selon la méthodologie développée par les centres de données.

New Brunswick

Vince Zelazny

The Natural Areas Section of the Crown Lands Branch, Department of Natural Resources and Energy (NRE) administers the protected areas program in New Brunswick. A group of five full-time professional/technical and one secretary-receptionist is responsible for identification and management of protected natural areas on Crown land, and works collaboratively with the province's two major land trust organizations to promote protection of private lands (the Nature Conservancy of Canada, Atlantic Region, and the Nature Trust of New Brunswick). In addition to protected natural areas, the program also has oversees the Canadian Heritage Rivers program in New Brunswick, and liaises with the New Brunswick Trails Council and with trail user groups.

In May 2001 the Minister of Natural Resources and Energy announced the government's intention to protect 10 new sites covering approximately 150,000 ha. This tripled the total area under protection in the province. At the same time the Minister committed the government to completion of a protected areas strategy by 2005. One component of the strategy is the development and implementation of a new *Protected Natural Areas Act* by 2003.

The Minister's announcement also promised the development of a committee structure to oversee management of the protected areas system. Local advisory committees, a senior-level Provincial Protected Natural Areas committee, and a Scientific advisory committee are envisaged and will be identified in the anticipated legislation. NRE has made preliminary inquiries among scientists regarding the possible configuration and functioning of a Scientific Advisory Committee.

The program has worked to deal with a large number of pre-existing commitments within the areas announced by the Minister. These include campsite, timber, and mining leases, mineral claims, utility corridors, natural gas pipelines, roads, and hydroelectric infrastructure including dams, Christmas tree plantations, and agricultural areas. Preparations were made for legal boundary line surveys, and fine tuning of boundary line locations and mapping was carried out. NRE officials held several public meetings were held to communicate with residents of local areas affected by Protected Natural Area designations.

The ten new sites include **Black River** (3946 ha), **Caledonia Gorge** (2856 ha), **Canaan Bog** (20,726 ha), **Canoose Flowage** (3990 ha), **Grand Lake Meadows** (11,616 ha), **Jacquet River Gorge** (26,026 ha), **Kennedy Lakes** (14,537 ha), **Loch Alva** (21,925 ha), **Mount Carleton Extension** (11,863 ha), and **Spednic Lake** (25,887 ha). The selection methodology for these ten sites is consistent with CCEA recommended approaches, and the sites were chosen as sites representative of New Brunswick's seven ecoregions. With the Minister's announcement, these areas became closed to forest harvesting, prospecting, staking and mineral exploration, construction, and any new development.

A team of university and high school students was recruited by NRE to carry out a stratified sample focusing on vascular flora and soils in these ten newly announced Protected Natural Areas.

The Nature Trust of New Brunswick has completed a botanical survey of the **upper St. John River** (from the Maine border to Perth-Andover). Properties of high conservation value were identified. Two new locations of the endangered Furbish's lousewort were found.

The Nature Trust of New Brunswick received two donations of land, both in coastal southwestern New Brunswick. **Dick's Island** is a small (1.5 ha), but important seabird nesting site located near St. Andrews. The second donation consists of a group of seven undeveloped islands and a mainland coastal parcel, totalling 34 ha, all located in the **L'Etang estuary** not far from St. George. Each of the Nature Trust's 17 protected properties continued to be monitored by a preserve steward from the local community.

From the first project in New Brunswick in 1989 to March 31, 2002 the Nature Conservancy of Canada (NCC) has secured over 2700 acres (1090 ha) of ecologically sensitive land, with just over 700 acres (280 ha) secured from April 1, 2001 to March 31, 2002. Key areas include shorebird habitat at **Johnson's Mills**, Piping Plover and waterfowl habitat at **Tabusintac**, and estuarine habitat at **Musquash**. NCC land is stewarded by staff and volunteers to ensure the ecological integrity of the land is maintained. A shorebird interpretive centre is opened every summer at Johnson's Mills to educate the public about the shorebird migration and on the importance of not disturbing the birds while they are roosting on the beaches at high tide. Certain other properties have walking trails, which are used by local schoolteachers for natural history and conservation education

NRE has contributed data and in-kind support to an international and inter-provincial conservation planning effort being led by the Nature Conservancy of Canada and The Nature Conservancy, Northeastern Region. The objective of this ecological mapping exercise is the development of a "conservation blueprint" to guide government and conservation agencies in making decisions regarding land acquisition, stewardship, and land use.

Newfoundland & Labrador

Sian French

No substantive changes to either the *Wilderness and Ecological Reserves Act* or *Provincial Parks Act* occurred during 2001–02. The **Main River** was declared a Canadian Heritage River in July 2001. The Main River is valued for its incredible natural heritage and recreational values. A 95 km^2 corridor around the river will be designated as the first Waterway Provincial Park in the province.

Parks and Natural Areas Division, Department of Tourism, Culture and Recreation is working with the Friends of Burnt Cape, the Nordic Economic Development Association and the Town of Raleigh to develop a Concept Plan for an Interpretation Centre and a promotional natural history brochure. An annual Tour Boat Operator Workshop was conducted with individuals operating tour boats within **Witless Bay Islands Ecological Reserve**, and Parks

and Natural Areas Division staff worked with the Marine Mountain Zone Corporation and Canadian Wildlife Service on a Habitat Stewardship Guardian and Education program. This work consisted of public education, hiring and training Piping Plover Guardians, research, monitoring and restoration of habitat.

Parks and Natural Areas Division in cooperation with the Wilderness and Ecological Reserves Advisory Council and other government agencies conducted a Public Meeting in October 2001 to gauge public support for the proposed **Grand Bay West Ecological Reserve**. This Reserve is proposed primarily to protect the piping plover, an endangered species, sand dune habitat, and shorebirds. Two site visits were conducted to conduct shorebird surveys, including piping plover surveys, to collect botanical information and to document the level and type of human activity within the study area. The Wilderness and Ecological Reserves Advisory Council remains active in providing advice on reserve establishment and management.

Ecological Area surveys were conducted during the following periods in 2001:

- June and August 2001—Site visit and risk assessment of Long's Braya (*Braya longii*) within a candidate ecological reserve on the Northern Peninsula with the Braya Recovery Team
- August 2001—Basic site reconnaissance of the Main River Watershed and other candidate watersheds on the eastern side of the Northern Peninsula that are proposed as ecological reserves
- August 2001—Botanical assessment of a forested area within the **Serpentine Lake Public Reserve**
- October 2001—Aerial survey of 3 candidate reserves in Central Newfoundland
- October 2001—Habitat assessment, floral and faunal observations and disturbance assessment of the proposed Grand Bay West Ecological Reserve in southwest Newfoundland

A number of other external studies relating to the seabird ecological reserves and fossil ecological reserves were initiated or continued during 2001-02.

CCEA Executive Board 2002

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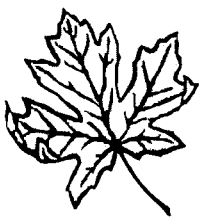

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