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HABITATS

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The Future of Seabirds is in Good Hands

By Gilles Chapdelaine, Canadian Wildlife Service

For the past twenty years, Canadian Wildlife Service (CWS) activities in the areas of inventories, research and the development of seabird conservation methods have continued to increase at both the national and regional levels. Two biologists currently maintain the pace of these activities in the Quebec region.

The role of the CWS in the protection of seabirds began with the adoption and application of the Migratory Birds Convention Act in 1916. This rectified and unacceptable situation by placing the alcids, a highly specialized group of seabirds which includes such species as the Razorbill, the Common Murre and the Common Puffin, in the nongame birds category, ending age-old wildlife exploitation practices which would inevitably have led to the disappearance of these species from the Lower North Shore.

It was in this context that the Canadian government, in 1925, created ten migratory bird sanctuaries along the Lower North Shore, between Sept Îles and Blanc Sablon. The importance of these sanctuaries is enhanced by the fact that they continue to shelter a seabird community which is very representative of the Gulf of St Lawrence marine environment.

Every five years since 1925, the CWS has drawn up inventories to determine trends and changes in the seabird community of the Gulf. This monitoring system, one of the oldest in the world, has demonstrated the necessity of such counts in judging the



The Canadian Wildlife Service regularly carries out inventories and research on seabird populations in the Gulf.

success of efforts for the conservation of migratory birds. Inventories taken every five years have also served to verify the effectiveness of instituting a guarding system, and led to discussions between the team responsible for enforcement and biologists involved in seabird population inventories.

Today, the concept of monitoring seabird populations has gone beyond the context in which it was developed on the Lower North Shore. The St Lawrence system has been divided into five regions in which significant colonies of seabirds, to be inventoried every five years, have been noted. Upward or downward trends in seabird species can keep us abreast of the health of the marine environment, so, in 1967, we decided that the Bonaventure Island Gannet could serve as the bio-indicator species for this environment.

It should be recalled that the CWS, Quebec Region, has an international responsibility with regard to the Gannet, since more than 70% of the North American population nests in the Gulf of St Lawrence. In 1969, the gannet population on Bonaventure Island numbered about 20,500 pairs, a level which had not been reached since the beginning of the century. This figure had shrunk to 16,400 pairs by 1976. Along with the inventories, biologists, anxious about this decline, initiated a research program on productivity and an analysis of contaminants found in eggs.

The very low productivity at that time appeared to result from the poor hatching rate of eggs. The reason for the decline in the Gannet population was thus recognized, but the causes of such a low hatching rate remained unknown. Analysis of the eggs revealed a high rate of

contaminants belonging to a group of organochlorine compounds, including DDT and its derivatives. This data supported the hypothesis of egg contamination, a theory which was subsequently confirmed when a marked improvement in productivity was noted after the banning of DDT, which had been widely used to fight insects in agricultural and forest crops. The gannet population underwent a new period of growth, reaching a new record of 25,500 pairs in 1989.

This is a good illustration of the philosophy behind the many inventories carried out by biologists studying seabird populations. Inventories conducted out at regular intervals may detect trends, but can in no way identify the causes of these trends. For this reason, they must often be combined with research programs to measure certain parameters sensitive to changes in the environment or other environmental stresses.

Currently, all pertinent information with regard to the census of seabird colonies, even including information from the previous century, are entered in the *Banque informatisée des oiseaux marins (BIOM)*, a seabird databank. Seventeen seabird species are included in the bank, which contains not only CWS inventories, but also those of other government and non-government organizations devoted to the conservation of wildlife and habitats. Such organizations sometimes possess information which leads to a more exhaustive overall picture of the distribution and abundance of seabirds in the St Lawrence System. The data are also available to organizations wanting to protect and develop seabird habitats. However, all requests must be sufficiently explicit with regard to the reasons for using BIOM.

The impact of the fishing industry on the Alcids of the Lower North Shore region is currently of great concern to us. Fishermen in the Gulf have traditionally exploited mainly stocks of groundfish, such as cod and herring. But the ceiling on catches

and the decline in stocks have led those responsible for fisheries and fishermen to look toward other species of fish for revenue which groundfish can no longer provide. These species, described as «forage» fish, are the sand lance and the capelin.

Therefore, for the past two years, there has been increasingly large scale exploitation of the Lower North Shore capelin. Small-scale exploitation has always existed in this region, and statistics indicate that over the last ten years, Quebec catches have been in the order of 500 metric tonnes (mt) a year, compared to the 30,000 to 35,000 mt harvested in the waters off Newfoundland. It should be noted that 20,000 to 25,000 mt are also used by Newfoundlanders as bait and fertilizer.

In 1988 and 1989, a quota of 6,000 mt was allocated to Lower North Shore fishermen on an experimental basis and, according to fisheries biologists, this proved to be a justifiable quota. However, they admit that they do not know the availability of the resource and no information on this subject exists with regard to the Gulf of St Lawrence. In the face of such a situation, we are particularly uneasy about the consequences in the short and medium term for seabird populations nesting in the Gulf, since capelin is an essential source of food for their survival and the maintenance of a high rate of productivity.

In 1990, a research program to obtain biological data on types of prey, feeding frequency and quantity of fish consumed during a season was initiated on the St Marie Islands. At the same time, a series of parameters sensitive to the availability of food in the environment, such as productivity, growth of young and attendance patterns of birds in the colonies was measured. The indicator species selected were the Razorbill and the Common Puffin. Data were also gathered on the Common Murre, but certain logistical problems prevent us from conducting an equally detailed study on this species. The research



Wingspan of a Black-Legged Kittiwake on Corossol Island (Sept-Îles Bay)

program should continue until 1992 and the next inventory of seabirds in the Lower North Shore sanctuaries should take place in 1993.

Inventories and research are also being carried out in the marine environments of the Arctic. The Thick-Billed Murre, which is in some ways the counterpart of the Common Murre of the boreal oceans, is the most abundant species colonizing Arctic waters. This bird is part of a national program supported by Quebec region biologists through studies conducted on Akpatok Island in Ungava Bay, involving the same type of research as on the Lower North Shore.

All in all, the seabird section has its share of projects and challenges. ■

An Active Force you Can Count On

by the Quebec Wildlife Foundation

The Quebec Wildlife Foundation is an active force you can count on – and we're counting on you.■

The Quebec Wildlife Foundation is a non-profit organization created in 1984 to promote the conservation and development of wildlife and habitats throughout Quebec. The Foundation, which began actual operations in early 1988, financed its first project, the acquisition of Ile aux Lièvres, on April 27 of that year with a grant of \$26,625 to Duvetnor Inc.

The Foundation carries out and funds concrete projects for the protection and development of habitats, learning and awareness.

Protection projects are aimed at guaranteeing the preservation of existing habitats, preventing the decline of habitats and ensuring the protection of sites where development is taking place.

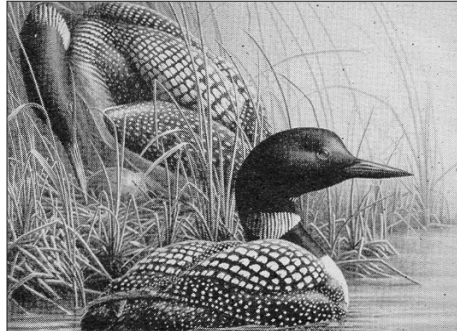
Development projects are intended to increase the natural productivity of habitats, encouraging wildlife species to feed, reproduce and rest.

Learning projects are aimed at evaluating and enhancing existing development techniques or at creating new development methods for wildlife habitats.

Finally, **awareness projects** are intended to educate the public and increase awareness of the importance of wildlife and its habitat as elements vital to our quality of life.

The Foundation is also involved with aquatic, land and wetland habitats. Over the past two years, it has invested more than \$1,500,000 in 60 projects, most of them carried out in co-operation with partners in the field, for a total investment of more than \$13,500,000.

Quebec Wildlife Foundation activities are made possible by the support of hunters, fishermen and trappers, through a contribution of \$1 or



The third edition of the stamp and limited edition print are taken from a magnificent painting by artist Pierre Leduc, showing a pair of Common Loons tending their nest.

\$2 taken when they buy a permit. The Foundation also relies on the contribution of companies such as Alcan, Hydro Quebec and the *Confédération des caisses populaires et d'économie Desjardins*, recognized as sponsors of the Quebec Wildlife Foundation for their financial support of its activities.

Finally, the Foundation counts on the participation of the public, which provides support through membership, use of the Visa Nature credit card, and the purchase of stamps and limited edition prints for the conservation of wildlife habitats.

The third edition of the stamp and limited edition print are from a magnificent painting by Quebec artist Pierre Leduc, featuring a pair of Commons Loons tending their nest. The stamp is on sale in *caisses populaires* or from the Wildlife Foundation for \$6.00. A sheet of four stamps is also available for \$24.00. The print, limited to 1,500 copies, is available from the Wildlife Foudation at a cost of \$185.00 (plus tax). All these items will be on sale until March 31, 1991.

Endangered Spaces Campaign and the Quebec Context

By Nathalie Zinger, World Wildlife Fund (Canada)

Sustainable and equitable development have become the watchwords of the 1990s. Any strategy aimed at integrating conservation and the economy must have two inseparable components – integrated management of the territory and sustainable use of natural resources on the one hand, and the protection of biological diversity as «nature's capital» on the other.

It was in this context that the World Wildlife Fund initiated, in September 1989, its **Endangered Spaces** campaign to offer a complete national and regional vision of the problems of protecting natural sites, and to bring local activities into a global perspective.

The objective of the **Endangered Spaces** campaign is to preserve Canada's biological diversity by protecting at least one representative sample of each of the country's natural regions by the year 2000. Thus, in compliance with the recommendations of the World Commission on Environment and Development (the Brundtland Commission), the objective is to ensure the preservation of 12% of Canada's land and water. In addition to the ten-year timetable, the focus of this objective is adequate protection and representativeness of natural regions.

A year into the campaign, only the governments of Canada, Ontario and Manitoba have supported the objectives and agreed to complete their respective networks of parks and protected sites by the year 2000. In the first status report of the **Endangered Spaces** campaign, Monte Hummel, chairman of the World Wildlife Fund, thus explained the limited tangible results in the protection of natural sites across

the country as stemming from the «dynamic inaction» of governments. In contrast, more than 150 non-governmental organizations have supported the Canadian Charter of Natural Sites and more than 200,000 individuals have signed it.

This charter explains the importance of protecting biological diversity through the creation of a network of representative sites, stresses the urgency of acting before the end of the decade and proposes a series of measures necessary to ensure the protection of these natural sites.

In 1984, the Quebec Department of Recreation, Fish and Game published a map of the natural regions of Quebec, which serves as a frame of reference for the **Endangered Spaces** campaign. Of the 43 natural regions identified, only 10 are adequately represented by national parks, conservation areas and ecological reserves. In Quebec, sites protected by law make up less than 0.5% of the province.

The lack of integration between the parks network of the Department of Recreation, Fish and Game and the ecological reserves network of the Department of the Environment makes it difficult to evaluate the representativeness of the other natural regions. Thus, 6 natural regions are partially represented by recreation areas, several ecological reserves and a series of other territories defined as protected. Moreover, no federal or provincial parks or ecological reserves exist in the 27 other natural regions, 20 of which are in Northern Quebec.

Although the legal protection of these sites is ensured, their integrity could be threatened by poor use of territory, failure to maintain facilities, the

absence of integrated management, inappropriate zoning and, in certain cases, overexploitation.

This brief survey of the state of protection of natural spaces in Quebec would be incomplete, however, without mention of two important announcements. First of all, in April, a federal-provincial agreement was signed to create the Saguenay marine park. In addition, the Department of Recreation, Fish and Game announced that 20 sites north of the 49th parallel were being set aside as potential parks. These two factors are among the highlights of the first year's **Endangered Spaces** campaign.

In 1986, the Department of Recreation, Fish and Game declared a moratorium on the creation of new parks in Southern Quebec. This moratorium has an impact on the opportunity for ensuring adequate representation of at least five natural regions where the pressure for development is growing quickly, and greatly diminishes the chances of protecting, in many cases, the last natural sites in Southern Quebec. An argument frequently used to justify this moratorium is the lack of funds to develop additional parks and make build the reception facilities which would make them accessible to the public. However, considering the urgency of protecting these natural environments, the creation of new protected sites could be undertaken with no immediate obligation to prepare development plans, which could be spread out over a period of ten to twenty-five years.

An overall strategy for the protection of natural spaces in Quebec is becoming increasingly urgent. The harmonization of a network of complementary protected sites would ensure the adequate representativeness of Quebec's natural regions. Co-operation among the government bodies concerned is of primary importance.

Non-government organizations also have an important role to play in preserving Quebec's biological diversity. They possess a rich knowledge of natural environments and local issues and are able to develop viable solutions at the local level. They can make their concerns known to legislators and complete the process they have begun by supporting the Canadian Charter of Natural Sites and helping to collect signatures for the petition.

The **Endangered Spaces** campaign has issued a formidable challenge. Governments, supported by many of the players involved in this cause, cannot evade the issue if they hope to begin the next century on a foundation of sustainable and equitable development.

For further information on the **Endangered Spaces** campaign, contact Nathalie Zinger, Quebec Regional Co-ordinator, at the QLF, 1822 Sherbrooke Street West, Montreal, H3H 1E4, (514) 933-7767. ■

More than 60 Groups Committed to Habitat Conservation

By Thérèse Drapeau, Environment Canada



About sixty groups responded to the Canadian Wildlife Service's invitation to participate in the 3rd Workshop on Habitat Conservation, held in October.

«Our work has certainly paid off!» exclaimed Jean Cinq-Mars, the Canadian Wildlife Service's Quebec Director. Looking around at the more than 60 groups signed up for the 3rd Habitats Conservation Workshop held on October 27 and 28 near Quebec City, he recalled that when the St Lawrence Action Plan first began, in 1988, the number of groups working for habitat conservation could be counted on the fingers of one hand.

These workshops, organized for the third year by Environment Canada's Canadian Wildlife Service, are information and consultation meetings aimed at non-government groups committed to habitat conservation or the enhancement of their activities in this field.

About thirty speakers from the public and private sectors were on this year's program. Divided into workshops, the groups attended technical presentations on habitat conservation and enhancement procedures, relevant government acts and bills, and the financial, administrative and practical aspects of habitat conservation.

Corporations and organizations such as the Quebec Wildlife Foundation, Hydro Quebec and Shell Oil also presented their assistance

programs, while several groups and municipalities described the implementation of habitat conservation and improvement projects.

The workshop also provided the occasion for launching a *Répertoire des programmes d'aide* (directory of assistance programs), containing a great deal of pertinent information on the financial resources and techniques available from various government and para-governmental organizations. This document, funded by Environment Canada, the Quebec Department of Recreation, Fish and Game and the Quebec Wildlife Foundation, had been requested by groups taking part in previous workshops.

The success of the 3rd Workshop on Habitat Conservation is a perfect illustration of a concept which is often brought into disrepute these days – partnership. As Jean-Pierre Gauthier, Director General of Environment Canada's Conservation and Protection Service in Quebec, indicated in this opening remarks, «Both sides here have something to offer; consequently, we can truly begin to speak of a partnership.» ■

News in brief

Erosion Problems on the St Lawrence Islands between Montreal and Sorel

By Denis Lehoux, Canadian Wildlife Service

On November 9, the St Lawrence Centre, the Canadian Wildlife Service (CWS), the Canadian Coast Guard and the consulting firm Argus signed a funding agreement to improve documentation of the erosion problems facing the St Lawrence Islands between Montreal and Sorel.

The study, which will be submitted in March, will map all the islands being actively eroded in this sector, identify the mechanisms responsible for the phenomenon, carry out the recommended stabilization techniques and suggest pilot projects to be put forward next year.

Current CWS data reveals that nearly 75% of the islands in this sector are experiencing erosion problems that nearly 75% of the islands in this sector are experiencing erosion problems and that 25% of them are facing the problem on 30% or more of their shoreline. The islands most severely

affected, some of which are of great value to wildlife, are located within 600 metres of the Seaway and are directly influenced by ships' wakes. The work which has just begun, following the funding agreement, is thus responding to an urgent need.

Significant US Contribution to Eastern Habitat Joint Venture

By Raymond Sarrazin

The Eastern Habitat Joint Venture (EHJV), the largest wetlands conservation program in Eastern Canada, has just received \$1,913,500 in funding from the United States government, through the Migratory Bird Conservation Commission. Quebec will receive \$482,500 of this important sum.

The EHJV is part of an international program known as the North American Waterfowl Management Plan, signed by Canada and the United States in 1986 in the wake of declining waterfowl populations and the loss of wetlands throughout the continent. The objective of the EHJV, created in 1989, is to protect 1.8 million hectares of wetlands in Eastern Canada over the next fifteen years.

This international effort will result in the acquisition of 2,500 hectares of important habitats in Eastern Canadian wetlands, the protection of more than 32,800 hectares of wetlands through long term agreements and the re-establishment of the quality of 1,730 additional hectares of marshland.

What do you know about the Floristic Habitats of the St Lawrence?

By Chantal Dubreuil, Quebec Department of the Environment

Like fauna, flora require a favourable environment in order to reproduce and grow. For each species or group of species, there exists a particular habitat which unites all the biophysical parameters indispensable to its development, something which may be called a floristic habitat.

There are a great number of diverse floristic habitat along the St Lawrence. It is very easy to become familiar with those which are most common and most representative of the various regions of the St Lawrence, and to recognize which ones harbour rare plants. All that is required is to consult a new publication entitled «Portrait de la flore et de la végétation du Saint-Laurent», prepared as part of the St Lawrence Action Plan.

If you want to protect or improve a natural site, or find out whether your site is likely to contain rare plants, this publication may interest you. However, since it is a comprehensive work, it does not contain detailed information on your region.



Nearly 75% of the islands between Montreal and Sorel are experiencing erosion problems.

For further information or a copy of the publication, contact the Direction de la conservation et du patrimoine écologique of the Quebec Department of the Environment, at 2360 chemin Ste-Foy, Sainte-Foy, Quebec, G1V 4H2, (418) 644-3355.

Environment Recognition Program

By Thérèse Drapeau,
Environment Canada

Contact among conservation groups, government organizations and private foundations has been extremely stimulating for several years and the role of non-government groups is shaping up to be very important in habitat conservation.

Without the support of these groups and their commitment to concrete projects at the local and regional levels, it would be impossible to attain large-scale conservation objectives such as those set out in the St Lawrence Action Plan or the North American Waterfowl Management Plan.

For this reason, the Canadian Wildlife Service decided to set up a program to provide public recognition for habitat conservation activities of non-government groups. Each year, a committee will select winners from among groups nominated by private foundations and national and regional conservation organizations. We will consider each impact of the group's activities on the protection of habitats in Quebec, its involvement in the community and the originality, permanence and scope of its projects.

The Canadian Wildlife Service, in co-operation with partners in the program, will present winners in the various categories with an official certificate and a symbolic gift. ■

Act Now!

Environmental organizations, municipalities, RCMs and private foundations interested in informing readers of the *Habitats* bulletin about their habitat conservation project may do so by forwarding their texts to us by the following dates:

- February 8, for the issue to be published in April;
- July 2, for the issue to be published in September.

The texts should be accompanied, where possible, by photos or slides.

All organizations are invited to share with us their experiences in the various areas of habitat protection or to send us information about their project for site management, development for the public, fauna management or habitat acquisition.

For further information, contact Francine Hone, at the Canadian Wildlife Service.

Important Reminder

March 1, 1991 is the deadline for submitting projects under the Habitat Management and Acquisition Assistance Program. For further information and to receive guidelines, contact Francine Hone at the Canadian Wildlife Service.

HABITATS is published and distributed free of charge by the Canadian Wildlife Service to facilitate exchanges of information between the various groups and individuals interested in habitat protection.

Those who wish to take part in this exchange and share their experiences in the various aspects of habitat protection may do so by writing articles and sending them to Francine Hone, at the Canadian Wildlife Service.

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The opinions expressed herein do not necessarily reflect the view or policies of Environment Canada.

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