



Manitoba Conservation Data Centre Celebrates Its First Birthday

The Manitoba Conservation Data Centre is one year old on July 4, 1995 and that means Manitoba is one year closer to having a centralized, up-to-date database that tracks locations, trends, and endangerment status of provincial plants, animals, and natural communities.

And for a region 650,000 km² (251,000 miles²) large, containing a rich habitat that supports a wide range of species, this is no small feat.

Getting Started

The Centre began last year with 5 staff, 3 computers, and a cosy workspace in the provincial Land Information building. Three scientists – a Zoologist, a Botanist and an Ecologist – developed 3 listings in their respective disciplines of probable Manitoba species or communities.

The Centre focused initially on the southern portion of Manitoba, because it is most impacted, has been most researched, and has the greatest potential for habitat loss.

By consulting existing provincial lists, local experts, relevant literature, and available research, these scientists are developing the most complete and comprehensive pool of information about Manitoba plants, animals, and natural communities to date.

The Bigger Picture

The Manitoba Conservation Data Centre uses a standardized database called the Biological Conservation Data System (BCD) developed by the U.S. based, CDC-founding organization, The Nature Conservancy. As a newer member of the existing 85 plus CDC's, or Natural Heritage Programs, in North, Central, and South America,



the Manitoba CDC contributes to a network that can potentially guide future development in the Western Hemisphere towards preserving biodiversity.

Carol Scott, Manager of the Manitoba CDC, emphasizes this point. "The Conservation Data Centre," says Carol, "is a significant contributor to the International Biodiversity Initiative as a decision support system to guide sustainable development in Manitoba." ❁

MANITOBA CDC ACHIEVEMENTS OF THE PAST YEAR

Zoology

- ❖ Ranked close to 1000 Manitoba vertebrate animals (fish, amphibians, reptiles, birds, mammals) for their degree of endangerment
- ❖ Completed joint project with the Manitoba Remote Sensing Centre gathering Burrowing Owl data from across the prairie provinces and merging it with satellite imagery

Ecology

- ❖ Established a standardized provincial list of 184 natural communities in conjunction with other provincial experts

Botany

- ❖ Updated and expanded the provincial vascular (ferns and fern allies, conifers, flowering plants) plant list by over 40 taxa (species, subspecies, or variety)

General

- ❖ Gained one short-term, grant funded employee
- ❖ Published two editions of newsletter, BioNet
- ❖ Developed a volunteer program which extends the capabilities of the Centre
- ❖ Provided experience that directly helped two volunteers find employment

GIS MAPPING COMES TO MANITOBA CDC

A Geographic Information System (GIS), or electronic-based mapping program, is being custom-designed to work with the Manitoba Conservation Data Centre's current licensed database.

The Manitoba CDC now uses a standardized program created by The Nature Conservancy in the United States called Biological and Conservation Database (BCD).

Once in place, the new system will improve the Centre's data management, analysis and the delivery capability.

The Manitoba CDC's current method, consistent with that of all 85-plus CDCs, is to manually mark species or community locations for quick and easy reference on National Topographic System (NTS) maps.

With the advent of new and better GIS technology, the Manitoba CDC can improve current mapping methods. Plotting a location on a map will be as simple as using a mouse to point and click.

What GIS Will Do

GIS can layer different types of maps (eg., roads, hydrology, soil), called thematic layers, on top of a base map, much like piling different transparencies on top of one another to obtain desired details.

This capability will increase the speed of data entry and the analytical potential of the Manitoba CDC, and thus improve client service.

The Nature Conservancy is very interested in the outcome of this project. If all goes well, it is hoped other CDCs will want the new GIS program. Until the new system is proven, the Manitoba CDC will continue using the paper map method. ✿

GIS Project Specifics

Projected Completion Date:

Mid-August, 1995

Application Designer:

Linnet Geomatics International

GIS Software:

ArcInfo 3.4D Plus and ArcView 2.0c

Hardware:

Pentium 90 mhz IBM compatible

Did You Know That Native Tall Grass Prairie . . .

- Is one of the rarest natural communities in Manitoba?
- Is one of North America's most endangered ecosystems, with an estimated 98% habitat loss?
- Once covered a 6,000 km² area in Canada, almost entirely in Manitoba's Red River Valley?
- Has a remaining area of about 2000 hectares (less than 3% of historical area)?
- Remains in fragments, mainly contained in the Tall Grass Prairie Preserve, near the towns of Tolstoi and Gardenton?

Several conservation groups have combined forces under the name of the Critical Wildlife Habitat Program to protect it. The Nature Conservancy of Canada, one of the Manitoba CDC's initial partners, is spearheading a public awareness and fundraising campaign to purchase more Tall Grass Prairie. ✿

RANKING THE ENDANGERMENT OF MANITOBA'S NATURAL COMMUNITIES

Manitoba CDC Ecologist Jason Greenall has recently completed describing the characteristics of 150 of 184 natural communities found on the Manitoba CDC's community list.

Jason stalled at 150, because little information is available on the remaining 34 natural communities.

A typical description contains the community name, dominant plant species, other abundant or diagnostic species, soil type, and drainage.

Most of the undescribed communities are sparsely vegetated types, such as cliffs, mudflats, and beaches, and are not currently a priority.

Jason has ranked relative endangerment of about 70% of the 150 described natural communities.

For each community, the estimated number of occurrences, as well as the estimated total area are key considerations when ranking.

Other factors considered are the range of the community in the province, possible human threats to its continued existence, and the number of protected communities.

The natural communities are given a numeric rank between 1 and 5 to indicate relative endangerment. These numbers are prefixed with the letter "S", to denote that the ranking is provincial.

A ranking of *S1* indicates the community is critically imperilled because of extreme rarity or factors that make it especially vulnerable.

A ranking of *S5* indicates the community is demonstrably widespread, abundant, and secure within the province. Jason's rankings will be reviewed by other provincial experts. ✿

BioNet

is published by

The Manitoba Conservation Data Centre.

Editor: Roberta Anderson

1007 Century Street, Winnipeg, Manitoba

Canada, R3H 0W4

Phone: (204) 945-7743 Fax: (204) 945-1365



Printed on 100% recycled paper

SKILLED IMMIGRANTS ASSIST MANITOBA CDC

The Manitoba Conservation Data Centre has had a distinctly European flavour for the past six months, as five new Canadians have come weekly to improve their English language knowledge and learn Canadian work techniques as part of the *English for Integration and Job Market Preparation* course at Red River Community College.

"Their enthusiasm and optimism was inspiring . . ."

Highly trained in disciplines like forestry and biology, these recent immigrants from the former Yugoslavia have made a valuable professional contribution to the Centre.

Their scientific background allowed them to quickly meet or exceed Manitoba CDC standards and work with minimal supervision and training.

Staff were impressed by the dedication, diligence and high quality work of these volunteers.

"The Bosnians' benefit to myself and the CDC went far beyond the

work that they were doing," says Manitoba CDC Zoologist Dr. Jim Duncan. "Their enthusiasm and optimism was inspiring, considering all the hardship they have been through."

The People

Stevan Sobat, who has a Master of Science in Forestry Engineering from the University of Sarajevo and has written or co-authored over 20 scientific writings, worked on plant and animal species mapping at the Manitoba CDC.

Miroslav Vrebac, another Forestry Engineer trained in Bosnia, worked as assistant botanist at the Centre. Nadira Cardzic worked as an assistant zoologist at the CDC, using her biology background, which includes teaching high school biology and working in an immunology lab.

The two other volunteers, Samir Sehoul and Vinko Maroti, moved to other workplaces that better suited their qualifications.

The Experience

The Bosnian volunteers and the scientists of the Manitoba CDC found that they shared the common language of biology—Latin—which accelerated understanding and often

bridged the Serbo-Croatian—English language barrier.

The Bosnian volunteers have discovered that Yugoslavia and Canada share many plants and animals of the same genus but different species. They also found that Manitobans use different work methods and a higher level of computer technology.

The Bosnian volunteers feel that they have benefited from their experience at the Manitoba CDC, including an improvement in their English language skills.

As their English improves, the volunteers hope to find employment related to their experience. ✿

Our Dedicated Supporters

Donors

As a unique public/private non-profit partnership, the Manitoba CDC depends largely on donations to provide operating funds.

In this time of budget constraints, the Manitoba CDC is grateful to have a diverse group of farsighted, community-minded donors who realize the importance of maintaining biodiversity. These donors are listed on the back page of this publication.

Volunteers

Another important component to the Manitoba CDC's successful operation is volunteer participation.

Volunteers perform tasks like data transcription, data entry, and mapping, all of which enable the

scientists to focus more fully on research.

The Manitoba CDC has a diverse group of volunteers ranging in age and education levels, including science students, English language students from the former Yugoslavia, high school Co-op students exploring career options, and conservation-minded people wanting work experience.

Once peaking at 15, there were many days when volunteers outnumbered the staff.

Volunteer membership ebbs and flows as people move on, but each person leaves their mark. Each personality and unique perspective added to the Manitoba CDC helps create a dynamic and interesting atmosphere. ✿

New Publications



Iacobelli, Tony, Kevin Kavanagh and Stan Rowe. 1995.

A Protected Areas GAP Analysis Methodology: Planning for the Conservation of Biodiversity.

World Wildlife Fund, Endangered Spaces Campaign, Toronto, Ontario.

A discussion of principles, standards and explanation of the processes used in GAP analysis methodology.

Noss, Reed. 1995. **Maintaining Ecological Integrity in Representative Reserve Networks: A Discussion Paper.**

World Wildlife Fund Canada, Toronto and World Wildlife Fund USA, Washington.

Discussion of the Endangered Spaces Campaign as a means of conserving Canada's biodiversity.

Scott, G.A.J. 1995. **Canada's Vegetation—A World Perspective.**

McGill-Queen's University Press, Montreal and Kingston. 361 pp.

Description of vegetation in relation to physical geography. Provides an overview of all major vegetation types in Canada, often using Manitoba as an example.

Tischendorf, J.W and F.R.

Henderson. 1994. **The puma in the central mountains and great plains—a synopsis.**

Blue Jay 52(4): 218-223.



Many Thanks to Our Volunteers:



We Couldn't Do it Without You!

Ecological Data Tech:
Jeff Turner

Publicist: Roberta Anderson

Assistant Botanist:

Miroslav Vrebac

Stevan Sobat

Assistant Zoologists:

Allan Benoit

Nadira Cardzic

Susan MacLean

Ric Nash

Donna Derenchuk

Kelly Hamilton

Rosemary Jackson

John Wherrett

Congratulations to former volunteer Tanya Dixon, who is employed for the summer banding birds at Delta Marsh.

New Faces at the CDC

**Staff...
Administrative Assistant:**

Elaine Weiss joins the CDC from the Wildlife Branch, Department of Natural Resources.

Managed Area Specialist:

Rosemary Trachsel's status recently changed from volunteer to staff member thanks to a work experience program grant.

Assistant Zoologist:

Monika Pietrowicz is employed by the Manitoba Naturalists Society to prepare data for the upcoming Birds of Manitoba Book.

Volunteers...

Managed Area Specialist:

Kelly Hamilton, fresh from a year of teaching English in Japan, joins the CDC for experience in her Geography studies.



The Manitoba Conservation Data Centre was initiated by 4 partners:

- ❖ Manitoba Museum of Man and Nature
- ❖ The Nature Conservancy of Canada
- ❖ The Nature Conservancy (United States)
- ❖ Manitoba Natural Resources

&

has been generously supported by

Our Donors...

1994

- ❖ Manitoba Hydro
- ❖ Canadian Wildlife Service
- ❖ Ducks Unlimited Canada
- ❖ Ensis Corporation Inc.
- ❖ Dominion Tanners, A Division of United Canadian Shares Limited
- ❖ Gendis Inc., Sony of Canada
- ❖ De Fehr Foundation Inc.
- ❖ Kleysen Transport Ltd.
- ❖ The Wawanesa Mutual Insurance Company
- ❖ Cargill Limited
- ❖ James Richardson & Sons Limited
- ❖ Centra Gas Manitoba Inc.
- ❖ Shell Environmental Fund
- ❖ Gray Owl Fund
- ❖ Northern Forest Owl Symposium Award Fund
- ❖ Manitoba Wildlife Rehabilitation Organization
- ❖ Manitoba Peregrine Committee
- ❖ Manitoba Naturalists Society
- ❖ Falconbridge Limited

1995

- ❖ Inco Limited, Manitoba Div.
- ❖ Falconbridge Limited
- ❖ Gray Owl Fund
- ❖ Canadian Wildlife Service
- ❖ Manitoba Hydro
- ❖ Manitoba Naturalists Society
- ❖ The Nature Conservancy (Minnesota Chapter)
- ❖ The Wildlife Society, Manitoba Chapter
- ❖ Nature Saskatchewan

Manitoba Conservation Data Centre Staff

1007 Century Street, Winnipeg, Manitoba, CANADA, R3H 0W4

Fax: (204) 945-1365

Manager: Carol Scott:

Phone: (204) 945-2911

Carol manages all aspects of the CDC including: human resources, budgeting, program supervision, policy development, and evaluation.

Administrative Assistant: Elaine Weiss **Phone:** (204) 945-7743

Elaine provides support services for all staff and volunteers.

Botanist: Elizabeth Punter

Phone: (204) 945-7469

Elizabeth compiles and evaluates existing distribution and status information about all plants, identifies information gaps, and designs field inventory projects to fill them.

Ecologist: Jason Greenall

Phone: (204) 945-2912

Jason develops and applies a classification system for Manitoba natural communities, evaluates existing distribution and status information, identifies information gaps, and designs field projects to fill them.

Information Manager: Ken Donkersloot **Phone:** (204) 945-6998

Ken is responsible for computer operations within the CDC data management system, as well as compiling and evaluating managed areas of Manitoba.

Zoologist: Dr. James Duncan

Phone: (204) 945-7465

Jim compiles and evaluates existing distribution and status information about vertebrate and invertebrate animals, identifies information gaps, and designs field inventory projects to fill them.