

# ECO-JOURNAL

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May/June 2004

## New Partnership with Fort Whyte Centre Organic Farm Co-op Moves to City

By Jody Andrews

The spring winds of 2004 bring an exciting new development to Winnipeg. EarthShare Agricultural Co-operative, Manitoba's longest-running community-supported agricultural (CSA) enterprise, is moving its organic vegetable farm to the Fort Whyte Centre. This move takes EarthShare's farm operations from a 4.5-acre garden in Anola to a permanent 14-acre plot of land within the city limits.

### Community development

EarthShare Organic Farm will provide a site for organic fruit and vegetable production, training and employment for new Canadians and inner-city youth, as well as agro-ecology research and development. This partnership between EarthShare Agriculture Co-op and the Fort Whyte Centre will allow both organizations to build on their educational, employment and sustainable community development activities.

Started in 1990 by the Manitoba Interfaith Immigration Council and the Mennonite Central Committee, EarthShare provided a means for campesinos, who had fled El Salvador's decade-long civil war, to get back on the land in their new home country. Over the past fourteen years, EarthShare has grown from a few new Canadians growing vegetables for their families to a member co-op of 250 families throughout Winnipeg. Fourteen years later, the farm operation continues to provide training and employment for new Manitobans, primarily refugees, who have moved to Canada with agricultural backgrounds. At the new location, students from inner-city schools who take part in Fort Whyte's Greener Futures Program will also have the opportunity to help out on the farm, and assist with marketing the fruits of their labour.

Work on the farm for the employees begins in early spring with the starting of seedlings in the greenhouse, and then continues with field preparation, seeding and transplanting as the weather warms up. The employees are responsible for producing and delivering an assortment of organically-grown vegetables to members throughout the growing season. This year there

will be twenty different vegetables and five different herbs grown such as beans, beets, broccoli, cabbage, cauliflower, cilantro, corn, cucumber, dill, lettuce, melon, onion, pepper, potato, squash, and tomato. The employees will also begin planting a portion of the farm with perennials including asparagus, culinary and medicinal herbs.

### 12-14 weekly harvests

Depending on the weather, weekly harvests begin in mid- to late-June and run until the first killing frost in the fall: for a total of 12 to 14 weeks of fresh produce. Mem-

bers of the co-op receive between 4 and 8 different vegetables in their weekly basket. The selection changes over the growing season and the quantity of produce increases as more vegetables come into season.

Members of the Co-op assist with weekly harvesting, packaging and supervising of the 8 pick-up points. Members can also join the voluntary Board of Directors, or one of its committees, to assist with the management of the Co-op. Those members who are able to are asked to contribute the equivalent of one working day per season either on the farm or with the management of the Co-op. Members are also welcome to visit the farm with family and friends throughout the growing season. This year with the move to Fort Whyte, the Board and staff expect, and hope for, an increase in member participation and visits to the farm.

The move to Fort Whyte brings many other benefits as well. The tripling of acreage will allow EarthShare to take on new co-op members and expand commercial sales as well as begin selling retail at the Fort Whyte Centre. Along with the increased acreage for vegetable production, plans are in the works for turning a further ten acres into orchard over the next two years.



EarthShare members show off some of their organic produce.

Photo provided by EarthShare Co-op

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## 2004 Award-Winners Announced

The Eco-Network Steering Committee is delighted to announce the winners of the 2004 Manitoba Eco-Network Environmental Awards. Presented "in recognition of significant efforts to protect, preserve and restore Manitoba's environment", these annual awards are the environmental community's way of recognizing the commitment, creativity and diligence of our peers and colleagues.

### Group award

This year's 'group award' is to Save Our Seine River Environment, Inc. St. Boniface and St. Vital based SOS has been an active participant in the Eco-Network for more than 10 years. Members of this group are recognized as the stewards and advocates of the meandering Seine River and its surrounding ecosystems, from the entrance into the city at the south floodway to the point where it joins the Red River close to downtown.

Over the years, SOS has engaged in yearly clean ups and tree plantings, trail development, habitat improvements for the river's 28 species of fish, and most recently, the protection of the splendid and unique Bois des Esprits forest in south St. Vital. Their efforts have engaged literally thousands of citizens, including many young people, and have contributed enormously to the ecological health and wealth of Winnipeg.

### Individual award

The 2004 'individual award' is to Ian Greaves, founder and Chairperson of Campaign for Pesticide Reduction! Win-

nipeg. An avid outdoorsperson, and knowledgeable birder, Ian has been an active volunteer environmentalist for many years. He has participated on numerous committees of the Manitoba Naturalists Society, and was active with Friends of Oak Hammock Marsh. Ian is passionate about the need to reduce pesticides, especially those used for cosmetic

purposes. He is determined that Winnipeg will join the many other municipalities across Canada who have declared a ban on these products, and never misses an opportunity to speak out publicly and

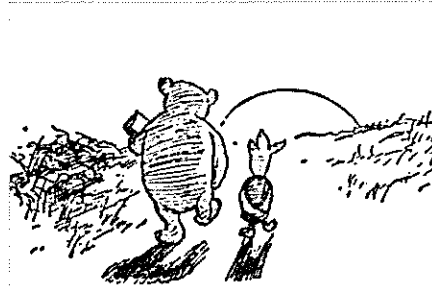
lobby for this goal. Ian is known for his thorough research, and willingness to share his broad knowledge of pesticides and pesticide-free lawn care.

### Special award

The 'special award' category for 2004 is awarded to Virden area farmer, Carl Driedger. Nominated by Lindy Clubb, Carl and his wife diversified their horse raising operation to include a company that sells and installs alternative energy driven pumps and systems.

His solar powered off-site watering pumps have saved a considerable amount of Manitoba's waterways from the habitat damage of direct watering by stock. His systems are durable, affordable, work year round, and he provides demonstration sites for other farmers and the agricultural community to follow suit. His products supply wind and solar power to remote locations, and Carl goes all over

see "Awards ..." on page 4 ►



### Eco-Network Steering Committee, 2003-2004

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Pete Walker, Manitoba Federation of Labour, Environment Committee

# Musk ox poop + paper = art that's good for the environment

## A Recycled Paper Journey

By Heather Laird

In 1993, Cyndi Foster was a teacher in Cambridge Bay, in Canada's central Arctic. She was looking for activities she could do with her students that would spark their creativity, and teach them environmental awareness at the same time. With this in mind, Cyndi went to the Great Northern Arts Festival in Inuvik.

Among the many workshops she attended was one on recycled paper making presented by Evelyn David of Edmonton's Indigo Print and Paper. Evelyn mentioned that in some parts of Africa and India, elephant dung is processed into paper as a way of recovering the plant fibre it contains. This is a necessity because the tree population in these areas is dwindling or non-existent, and there are no other sources of wood pulp to make paper. The elephant dung makes a strong and attractive paper that is sold through the export market. Cyndi immediately recognized the similarities between the treeless plains of Africa and the treeless Canadian Arctic, and a new paper-making project was born.

### Herbivores are walking pulp mills

Back home in Cambridge Bay, Cyndi set up a small-scale paper recycling mill and set her students to work collecting musk ox dung.

There are practical reasons for incorporating animal dung into paper, even if trees are available. Conventional paper making uses large amounts of water, energy and often-harmful acids to break down plant fibres into pulp that can make paper. As Cyndi likes to point out, herbivores are "walking pulp mills." The animal's gut will break down cellulose in a natural way, and the processed pulp can be removed from the dung by boiling and soaking. As long as only dried dung from strictly plant-eating animals is used, there is little to no health hazard in making "poop paper."

The individual characteristics of each animal can contribute to the finished paper. One of Cyndi's favourite papers was made from porcupine droppings; porcupines eat pine bark, and the soaking process "smelled like a cedar sauna!" she enthused. They don't all smell that good, but the finished paper will have

no smell, since the smell is contained in oil-like compounds that will not bond with the paper.

Cyndi's first experiment with community paper-making in Cambridge Bay was a popular success, and along the way, the students got to learn about the uses of different fibres and the interactions of their local plants and animals. As well, recycled paper making was appropriate to a community where all electricity comes from diesel generators. Processing recycled paper and musk ox dung needed only three to ten minutes of electricity, where conventional paper making could take eight hours of power use.

### Just about anything organic

Cyndi eventually moved to Canmore, Alberta, where she opened a studio to make and sell this type of environmentally friendly "Earth Paper". Earth Paper has incorporated just about anything organic and plant-based, including coffee grounds, vegetable scraps, dried flowers, leaves, and fabric scraps, along with the ever-popular animal poop.

Cyndi now lives in the Interlake area of Manitoba, where she collects droppings from the local horses, cows, and her neighbour's mule to add to paper. She was featured on the CBC-TV program "On the Road Again", along with a couple who had Earth Paper wedding invitations made with contributions from their farm's horses. Cyndi also sells her paper and gives workshops through the Selkirk Art Gallery. A typical homemade paper mix starts with paper from a recycling depot, and then plants and other materials are added.

Earth Paper is unique and individual—a herb enthusiast might want to incorporate dried leaves into their paper, and a quilter could use favourite fabric pieces. Recycling paper the Earth Paper way is creative, fun, and doesn't cost the environment. Cyndi Foster offers a whole new way of looking at the paper you use and take for granted every day.

For more information, you can e-mail Cyndi Foster at [earthpaper@hotmail.com](mailto:earthpaper@hotmail.com).

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*Cyndi holds a press frame used for screening fibre into flat sheets of paper. Photo by C. Foster*

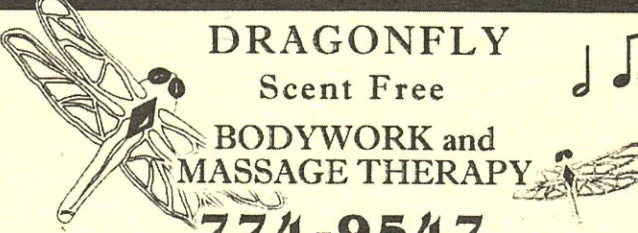
### Idle-Free Zones

for Winnipeg daycares, nursery schools, kindergartens, clinics, hospitals, museums and religious buildings

Climate Change Connection, with the support of The Winnipeg Foundation and Environment Canada's EcoACTION Program, is pleased to offer free "Idle-Free Zone" signs to child-centred spaces within Winnipeg. The Idle-Free Zone(s) will educate the wider community about the importance of responsible vehicle use, through the message "Healthy Communities Don't Idle". Please notify YOUR community places about this resource. Orders can be placed by calling 943-4836 or by e-mailing [climate.connection@mts.net](mailto:climate.connection@mts.net). Signs delivered GHG-free by Natural Cycle Bicycle Couriers.

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# What's Happening

**Sunday, June 6**—Run & Walk for Wilderness. 9am at Assiniboine Park Duck Pond Shelter. Event includes a 10K Race, 5K Fun Run, and 3K Walk. Register at any Running Room location or visit <http://www.events.runningroom.com/site/?racelid=860>. Contact [volunteer@cpawsmb.org](mailto:volunteer@cpawsmb.org) or call (204) 949-0782 for further information, to volunteer, or to donate a draw prize.

**Saturday, June 12**—Discover The Seine...on Canadian Rivers Day! John Bruce Park 1:00 to 4:00pm (Tree Planting at 10:00 am) Rain date is Sunday, June 13 same times. Contact Save Our Seine at 470-9247 for more information.

**June 18 to 20**—International Festival for Peace at the International Peace Gardens. A great intergenerational (family, youth, elder) event celebrating our victories and encouraging each other in the struggle. It draws about 1/2 and 1/2 from Manitoba and North Dakota. Truly a community experience. For details contact Lynn McLean at 772-2072 or [lblean@mts.net](mailto:lblean@mts.net).

**Late June/Early July**, 5 consecutive weekends—Straw Bale Construction Workshop. Many hands, small and big, can partake in the creation of a straw bale garage. No fee, simply an exchange of knowledge and community collaboration. Please indicate your interest so that we may plan construction. Speakers on Solar and Wind Energy, Radiant Floor Heating, Straw Bale Slab Foundation, Wall-Bearing Structures and Post and Beam Construction, etc. Contact Colette at [syf@mts.net](mailto:syf@mts.net)

**Sunday, June 20**—Concerned Residents of Winnipeg (CROW) Spring Potluck Picnic 3-6pm at the Alloway Ave. Greenspace. Learn about CROW's plans and campaigns. Bring

food, dishes and a lawnchair. Please be scent-free. Contact 229-9613.

**June 24 and 27**—Compost Workshops! If you have tried composting and haven't had any luck or would like to know how to get finished compost faster, register for one of the Compost Action Project's upcoming Advanced workshops. Call the Compost Infoline at 925-3777. Workshops will be held at the compost demonstration site on McGee Street between Ellice Ave. and St. Matthews Ave. Thursday, June 24—6:30pm—7:15pm Sunday, June 27—1:00pm—1:45pm.

**Saturday, July 24**—Manitoba Naturalists Society "Natural Garden Tour". Tickets for this self-directed tour of nine gardens are \$10. Call 943-9029 for more information.

**July 17 & 18**—Old Time Settlers' Picnic at Oak Hammock Marsh. Join us for a great weekend of music and entertainment just like in the good ol' days as we reenact a traditional settler's gathering. Featuring old time market, demonstrations by local artisans, voyageur canoe excursions in the marsh and horse-drawn wagon rides. Live bands and dancers are sure to make you sing and swing! Call 467-3300 for more info.

**August 21 to 27**—Youth Activist Retreat. A week-long retreat designed to teach young people aged 16-20 about building caring and responsible environments in their high school, university, workplace, and in the broader community. Workshops and field trips to improve your organizing skills and learn about social, political and economic issues. The retreat is free. Contact YAR at 944-9408 or visit [www.youthactivistretreat.org](http://www.youthactivistretreat.org).

## Awards Presentations at June 10 AGM

*continued from page 2....*

Manitoba making volunteer presentations to communities, soil and water associations, greenbelt program participants, and any other organizations or communities that are interested in benign power sources.

Congratulations to all of the Award Winners! (For a complete list of all previous award winners, please visit our website: [www.mbeconetwork.org](http://www.mbeconetwork.org)).

The 2004 Awards will be presented at the Annual General Meeting of the Eco-Network, taking place on June 10, at 2-70 Albert Street. The business meeting (for Member Groups) begins at 7:00 pm. The awards and dessert reception will begin at approximately 8 pm. Please let us know (947-6511) if you plan to attend.

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## Local Farmers Markets (Organic & Conventional Produce)

**St. Norbert Farmers Market**—From June 26 until the end of September. Saturday's from 8:00 till 3:00 and Wednesdays from 3:00 until dusk. Location is 3514 Pembina Highway.

**The Red River Ex Market**—Every Saturday from July 17 to September 25. Open from 8:00 until 2:00. Features market gardeners, artisans and crafters. Located at the Exhibition Park, Portage Ave. at the Perimeter.

**Exchange District Farmer's Market**—Saturdays from 9:00am to 3:00 pm, August 7—September 25. Located at Old Market Square.

Organic Food Council of Manitoba and Manitoba Agriculture are planning an Organic Farm Tour for sometime in the summer. All details are yet-to-be determined, but it will be informative, and a lot of fun! Please contact John Hollinger, Organic Agriculture Specialist at Manitoba Agriculture, Food and Rural Initiatives at (204) 745-5643 or [jhollinger@gov.mb.ca](mailto:jhollinger@gov.mb.ca) if you want to participate.

# Protecting Rare Plant Habitats

By Doris Ames, Native Orchid Conservation Inc.

Native Orchid Conservation Inc. was founded in April of 1998, and we now have approximately 150 members. We are a non-profit organization whose mission is to protect unique mini-ecosystems and their plant communities, specifically native orchids.

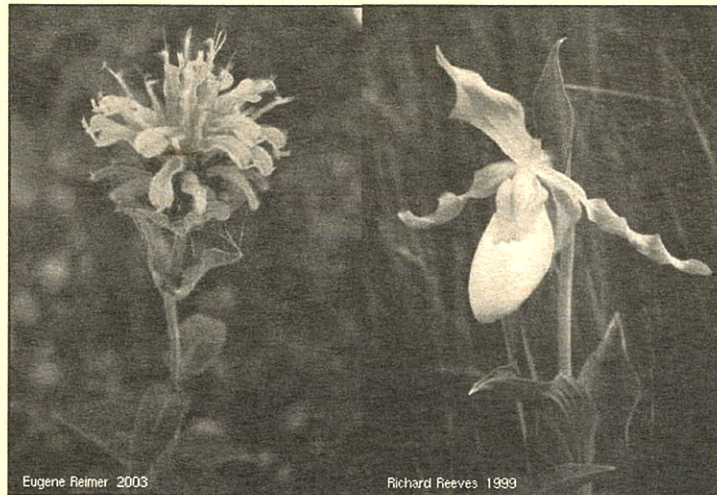
## Botanical surveys

Our conservation work involves conducting botanical surveys to find native orchids and their habitat as well as other rare plant species. At present we are conducting surveys in northern and western Manitoba including the Riding and Duck Mountains. This July we intend to survey areas in Grand Rapids, Thompson and Churchill for native orchids as well.

Since 1999, we have been conducting research into the effects of selective cutting on understory plant growth and regeneration especially native orchids. We are writing a report on this work at present and it should be available on our website soon. Some of the findings

are interesting and lead us to want to continue monitoring this site for some years to come. We are also working on publishing a field guide to the orchids of Manitoba, as none exists at the present time.

For some time now we have been working to secure protected status for the Brokenhead Wetlands about 50 miles north of Winnipeg. This proposed ecological reserve would be 820 hectares in size. Part of this wetland contains a rare rich calcareous fen and this wetland is home to 28 species of native orchids and many other rare plants. We are now part of a committee chaired by the Brokenhead Ojibway Nation, which was formed to protect this wetland. Achieving protected area status in southeastern



*Rare plants, such as this Bergamot (left) and spectacular orchids, need protection. Photos by Eugene Reimer and Richard Reeves*

Manitoba is difficult because there are so many stakeholders involved, but we are encouraged by recent progress and hope to see it protected soon.

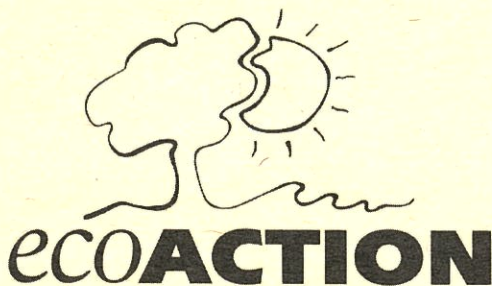
Loss of native orchid species and their habitat is a significant environmental problem in Manitoba, as it is all over the world. Habitat loss is the primary threat to native orchid species. Most of the 36 species of native orchids in Manitoba grow in wetlands or in the boreal forest and their numbers are generally believed to be declining. We have already lost 70% of our wetlands and much of our forests because of agriculture, resource harvesting and extraction and housing development.

## Habitat protection and public education

It is imperative that we set aside large amounts of their habitat now in order to protect these plants from disappearing. They also need to be protected from human activities like being picked and being dug up for transplanting into gardens. Public education is the best way to achieve this and we try to work this into all our activities.

To this end, we give talks on orchid conservation to horticultural groups and other plant lovers. We build portable displays, which we take to environmental events and shopping centres where people can see them and learn about native orchids and the need for their conservation. We also contribute articles on orchid conservation and our work, to periodicals and newsletters, and seek to cooperate with other like-minded groups to protect the environment. We run field trips to areas with large populations of native orchids so that people can see these plants in their natural habitat.

Please view our website at [www.nativeorchid.com](http://www.nativeorchid.com). It contains information about our projects and activities as well as photographs and information about Manitoba's native orchid species and other rare plants. It also lists the dates of our 2004 field trips and information on becoming a member, if you would like to join us.



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# Co-operative Garden Keeps Growing

*continued from page 1....*

The orchard will include apples, cherries, raspberries, blueberries and strawberries.

Being located within the city limits will also allow employees to take advantage of the burgeoning farmers' markets in the area and provide the Co-op with a higher profile in Winnipeg. The move has already brought the employees the benefit of a more than 60% reduction in their daily commute—from 2 hours to 40 minutes.

## Research partnership

The proximity to the U of M is also allowing for the development of a research partnership with the Agro-Ecology Program. Professors, staff and students from the program will be performing field experiments on integrated pest management and other areas of research related to organic production as well as providing EarthShare employees with information and advice on organic farming techniques.

Perhaps the most important benefit is the opportunity to grow and develop EarthShare's operations in conjunction with the friendly, professional staff and volunteers at the Fort Whyte Centre. Since the planning for the move began last summer, the Fort Whyte staff members have been extremely supportive and as excited about it as EarthShare's staff and members. Since the employees of EarthShare began working on site in April, the staff members of Fort Whyte have been very welcoming and have gone out of their way to assist however they are able.

Achieving the full potential of this relocation will depend on the contribution of the employees, members and volunteers of both organizations, as well as the assistance of interested individuals and institutions. EarthShare and Fort Whyte have committed to providing one-third of the capital budget

requirements of the project and are currently seeking the remainder through private donations, foundation grants and government program funds.

## Sowing the seeds

Over the next six months, besides growing vegetables, EarthShare employees will be assisting local contractors in the construction of a 6' wildlife exclusion fence, a straw bale farm headquarters, and two greenhouses. Working with volunteers from the Co-op and the community-at-large, the employees of

EarthShare and Fort Whyte hope to sow the seeds necessary for many years of bountiful harvest.

To join, assist, or learn more about the EarthShare Co-op, call Fredy Perez at (204) 977-1000 ext. 292 (Monday to Thursday, 9am-12pm).

**ECO**



*At the original EarthShare farm in Anola. Photo provided by EarthShare*

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# Successful Small Farms in Southwest MB

By David Neufeld

The following article is from the introduction to *Successful Small Farms: A Study of Successful Small Farms in Southwestern Manitoba*, commissioned by the Agriculture Committee of the Turtle Mountain Development Corporation. A number of small farm operators in the Turtle Mountain area were interviewed to find out what makes them sustainable and profitable in the agriculture industry. The goal of the study is to develop case studies and financial models from the interviews.

David M. Neufeld, Boissevain area farmer, and Chair of the Agriculture Committee wrote this introduction to the study report:

## A living on less land

Welcome friends, to a visionary piece of work.

Our aim is to attract more people to live and work on the land in our community. We want to highlight ways for people to make a living off of less rather than more land.



*Small farmers are not just surviving, they are also proving to have important contributions to make to the future of farming*

Please first, though, consider our collective dilemma. We as a prairie society want to continue growing and raising quality food for ourselves and for export, but we're steadily making it more difficult for our children to become farmers. Our rural population is shrinking and the goods and services we offer each other are becoming fewer. This state of affairs is not entirely of our own making, but it looks like it's up to us to turn the situation around.

## The next generation

It has always been the task of agrarian societies to prepare the next generation of farmers—often against tough odds. Agrarian societies all over the world are vulnerable to being manipulated and undervalued by those who wield power. There have been countless peasant revolts and revolutions as workers of the land have resorted to violence to protect their way of life and to insist on fair returns for their labour. It seems we're choosing a different way of protest. We're telling our children not to farm. Contrary to our deepest desires, we're sending them to the cities and small towns to do anything but grow food for a living.

The reasons behind this shift are numerous and complex. In a nutshell, most farm families want to have less debt, more income and more leisure time to be with family. Most of us feel the only way we can succeed is by farming more land and buying larger equipment. The price of land remains high due to the resultant competition for land. The costs of equipment and inputs are steadily rising, and the prices we're offered for the crops we grow are essentially staying flat. This means we have more debt, less income and leisure time when all is tallied up. Why would we encourage our children to do this? There are options that appear to be more promising.

## Rural population losses

We increasingly hear each other comment on our loss of near-by neighbours. Forty years ago, every half section of arable land had a homestead and a family with at least three children. In our municipality, we've lost half of our population in the last four decades. With the loss of population, our smaller towns are losing businesses, schools, churches, hospitals and ice rinks.

We're not only losing people and institutions from the land and small towns, though. We're losing knowledge of the land and what it requires to sustain living communities. We're losing hope for the future and consequently we're losing belief in our own worth and resourcefulness. If our children are to grow food we want them to do it with passion and a strong sense of ownership—not as employees of distantly managed firms.

The up side is that we're gaining farmers from more congested and regulated countries—like England, Holland and Germany. These immigrants see our big spaces and relatively low land prices as being their ticket to a more progressive,



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see "Successful Small Farms ..." on page 8 ►

# Successful Small Farms

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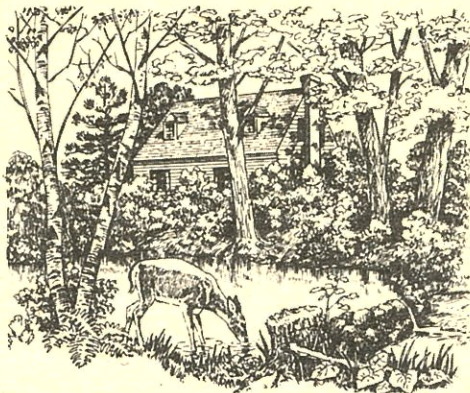
hassle-free life. We appreciate the enthusiasm and diversity this adds to our mix. There's plenty of room for immigration. But we should not let it distract us from the bigger questions, such as: How do we make sure the profits from farming stay close to home so that we can confidently encourage our own youth to farm? And how do we establish the farming of this land as a co-operative effort?

## Seven times the gross income

Canadian farmers today are generating seven times the gross income they generated in 1970. But our net income has stayed the same. History has shown that nobody—governments, churches, universities or benefit concerts—will turn this situation around unless rural communities give the lead. With this document, we're adding a rare voice to that leadership—a collection of small farmers from one region.

They don't profess to have all the answers to our dilemma. In fact, just about every one of them laughed when we suggested they might have something to show the world. You'll be hard pressed to find fancy equipment on these yards and

you may not be too impressed at first glance by their annual incomes, but you may be impressed with their values, their financial ratios and stability.



They're not your out-front-raising-a-ruckus kind of leaders. Rather, they prefer to lead by example if we care to look their way. We invite you to read the stories and decide for yourself if these farmers are successful—in the contexts of their communities, and in the context of what we want prairie agrarian society to be for our children, grandchildren and the world. Enjoy!

Want to learn more? The stories in this report are an interesting read. We have a copy available for loan in our

library here at the Manitoba Eco-Network, or you can obtain your own copy by contacting: Turtle Mountain Community Development Corporation, Box 368, Boissevain, MB R0K 0E0. Copies cost \$10 each, plus \$2.75 for postage, and cheques should be made out to TMCDC-Ag.Committee. You can also email at [turtlemountain@mts.net](mailto:turtlemountain@mts.net) or phone 1-800-497-2393.

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## Our Selection Never Stops Growing!!

# Help Survey Manitoba's Dragonfly Species

by Lindy Clubb

We've all looked up to watch helicopters in the sky, but how often have we noticed the helicopters of the insect world in the air around us? Dragonflies and damselflies together make up the order Odonata, an ancient and distinctive insect group. I've admired the acrobatics of the blue darners that hover over my country garden many times, but I didn't know much about them.

## Mosquito hawks

These flying insects have primitive features and more specialized body parts for manoeuvring and catching prey. Yes, dragonflies are predators; they just don't breathe fire. They can spot flying prey and plot a course to intercept from 20 meters away. They didn't earn the nickname "mosquito hawks" for nothing!

Dragonflies have been clocked at more than 50 kilometres per hour and can make a 90-degree turn at full speed without banking. Their vision is spectacular. Their eyes have up to 25,000 lenses to bring them close to a 360-degree view. They merit a closer look, or, as Manitoba Conservation says, "Since the dragonfly monitoring has been in place, 11 species have been documented for the first time (in Manitoba), bringing the total found in Manitoba to 94. They include black tipped darners and cobra clubtails."

## Public participation survey

The Manitoba Dragonfly Survey is a project of the Wildlife and Ecosystem Protection Branch of Manitoba Conservation, and they offer a very complete package of free information for this public participation survey. What's the survey all about? Since they spend part of their life cycle in water, dragonflies are an indicator species for assessing habitat and water quality in a variety of wetlands, riparian forests, and lakeshore habitats around the globe.

Citizen and school groups, teachers, nature societies and individual volunteers have been recruited for monitoring projects that contribute data and specimens to a scientific network. In turn, the collections result in atlases, field guides, and contributions to an international database. As well, the surveys provide information for ecological studies, and specimens for taxonomic studies.

## Who could resist?

You may discover broadwinged, spreadwinged or pond damselflies; darners, clubtails, cruisers, emeralds or skimmers among the dragonflies, and such intriguing possibilities as identifying ruby meadowhawks, chalkfronted corporals, wandering gliders, blue dashers, ebony boghaunters, boreal snaketails, or paddle tailed darners. Who could resist?

The intense curiosity our scientists (and our children) have to learn more about these gorgeous winged predators is contagious. Since the dragonflies prey on mosquitoes and deerflies, those awful pests of both humans and wildlife, it seems like a good investment to monitor their range, their abundance and the security of their future. And, of course,

protecting the habitat that supports such beneficial insects is essential to the protection of the species.

Want to get involved? Call or write to Jim Duncan, Wildlife Branch, Box 24, 200 Saulteaux Crescent, Winnipeg, Manitoba R3J 3W3, phone (204) 945-7465, or email [jduncan@gov.mb.ca](mailto:jduncan@gov.mb.ca).

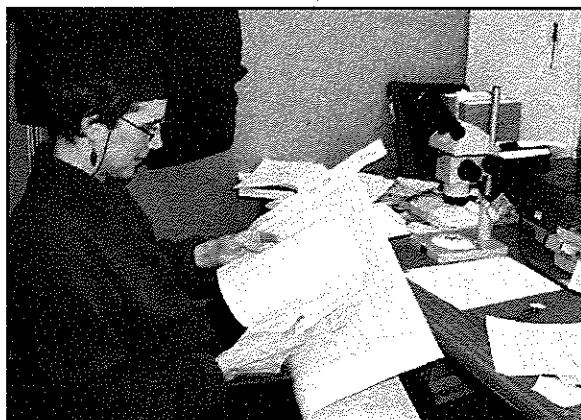
You can also visit the department's website at [www.gov.mb.ca/conservation/wildlife/involved/dragonfly.html](http://www.gov.mb.ca/conservation/wildlife/involved/dragonfly.html)

## You Can Also Survey Frogs, Worms, and more!

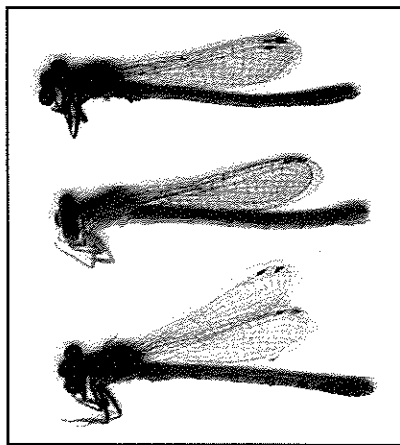
There's a federal/provincial program called Naturewatch, sponsored by the Canadian Nature Federation that collects trend data from volunteers in various locations across Canada. Frogwatch, Plantwatch, Icewatch and Wormwatch contribute data to Environment Canada via their website at [www.naturewatch.ca](http://www.naturewatch.ca), or you can fill out the forms or booklets the program organizers provide.

It's simple and easy, gets folks out to the wilds, woods, and bush around their cottages, and is a lovely way to connect with what your world has to offer in the way of frogs calling, plants blooming, worms digging and ice forming. Try it. It works. And they give you free bookmarks and frog posters. Share the good news and the monitoring opportunities with your friends and families, please.

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*Marjorie Hughes examines data from the survey*



*A variety of Eastern Red Damselflies*

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# Review of the Issues in Manitoba Pesticides Update

By Glenda Whiteman, Concerned Residents of Winnipeg (CROW), Inc.

Momentum seems to be building in Manitoba towards reduction of pesticide use. This is not just a local phenomenon, as currently 68 municipalities across Canada have adopted pesticide by-laws—including Toronto, Montreal and Halifax—in spite of intensive lobbying by the lawn care industry. In fact, even globally there is reason to celebrate, as May marks the phase-out of twelve persistent organic pollutants under the Stockholm Convention. According to the Pesticide Action Network North America, "Our world just became a safer place."

## Weed and insect control

However, we must not allow our celebrations for the victories to prevent us from keeping our eyes open to the big picture. So what can we do on the local level? First, be aware. There are essentially two pesticide debates happening in Manitoba as summer approaches: weed and insect control. This review will attempt to provide an update of each.

Winnipeg and Capital region residents ought to be aware of some changes to the Mosquito Control Strategy for 2004. The City and Province have made an effort to improve their notification system. Residents can request to be notified by phone or e-mail of insect control operations in their neighbourhood. E-mail requests must come from the e-mail address at which one wishes to be notified. Residents (including apartment dwellers and renters) can also request buffer zones around their property.

Since 2002, these buffer zones no longer provide protection from applications of larvicide, nor for fogging for West Nile virus, should another "imminent health emergency" be declared.

To register your opposition to pesticide use and protect your home, request a buffer zone and/or notification from both Insect and Weed Control Branches, at: [insectcontrol@winnipeg.ca](mailto:insectcontrol@winnipeg.ca) and [kcoates@winnipeg.ca](mailto:kcoates@winnipeg.ca). Please cc [CROWinc@mts.net](mailto:CROWinc@mts.net).

## Dursban and malathion still in use

The City continues to use Dursban (chlorpyrifos) for larviciding in outlying areas, as well as the less toxic *Bacillus thuringiensis* (Bti) in residential areas, although they generally do not release all the data that would confirm where Dursban is used. Dursban has been linked to effects on the nervous, cardiovascular and respiratory systems, and residue can persist in the human body for long periods of time, causing delayed symptoms. The City continues to use Dursban on boulevard elm trees and on private property for elm bark beetle control.

Increased public awareness is the purpose of the City's TEEM project that will see youth at community events and at randomly selected homes throughout the city teaching techniques to reduce mosquito breeding. A change in the program this year is that help will be available for seniors or others incapable

of doing the physical labour required to eliminate mosquito-breeding sites. Contact the Bug Line at 986-3210 to request a TEAM audit of your yard.

## Malathion fogging in open spaces

Another change this year is the purchase of mobile equipment to fog open spaces such as parks and golf courses with the mosquito adulticide, malathion. The City hopes this measure may reduce the numbers of adult mosquitoes and thus reduce the need to fog in residential areas.

I hope it doesn't lead to an increase in the cancer clusters that have been shown to exist around golf courses.

As the lawn-care debate and corresponding pesticide by-law movement sweeps across Canada, we can expect this issue to become more prevalent in the media in Winnipeg. Organisations in the province will soon be asked to join a Partnership for Pesticide By-laws, a coalition of groups requesting a cosmetic pesticide by-law in Winnipeg, organised by Campaign for Pesticide Reduction! Winnipeg and CROW, Inc. Individuals wishing to assist in this process can contact [crowinc@mts.net](mailto:crowinc@mts.net) to get involved.

## Organic lawn care alternatives

As well, we can eliminate pesticides in our own yards and encourage our neighbours to do the same. Organic lawn care workshops are provided by the Manitoba Eco-Network. One can proudly display a Pesticide Free Naturally lawn sign with the purchase of a lawn care information kit, available from CROW for \$5.

Remember how effective your voice is. Let your politicians know how you feel. Fogging with adulticides is ineffective at best, and at worst may increase our risk to West Nile virus ([www.cche-info.com](http://www.cche-info.com)). Continued use of lawn-care chemicals for cosmetic reasons reduces our immune system functioning, in other words, our ability to defend ourselves from the risk of West Nile virus, not to mention putting us at risk of cancer, dermatologic, chronic neurological and mental health effects. Request an end to these practices today.

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"Look, no bugs!" Illus. by David Henry

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# Manitoba's Digital Elevation Data

by L. Laliberte, Eco-Network GIS/Mapping Centre

A Digital Elevation Model or DEM, consists of a range of elevation points representing a number of ground positions at regularly spaced intervals. A typical DEM contains three data values including x and y coordinates that represent a location on the earth's surface, often specified as latitude x and longitude y, and a third value, z, that corresponds to a height in metres or feet above sea level.

In 2000, NASA launched the international Shuttle Radar Topography Mission (SRTM) which consisted of a specially modified radar system that flew on board the Space Shuttle Endeavour. The radar bounced signals off the earth's surface, which were received by two onboard antenna systems; computers at a ground facility in order to produce three-dimensional (3-D) images then combined these signals. Over the course of eleven days, this mission obtained elevation data on a near-global scale and in the process generated the Earth's most complete high-resolution digital elevation model.

In 2003, the Canadian portion of this data was released to the public. Recently, the Manitoba Geological Survey has converted this data for the province of Manitoba into a format that can be easily integrated into Environmental Systems Research Institute's (ESRI) 3D analysis software. The Manitoba Eco-Network's GIS/Mapping Centre now has a copy of this data set.

## Uses of the DEM Data

The SRTM digital elevation data along with ESRI's 3D Analyst software allows GIS users to extend mapping beyond the traditional two-dimensional (flat) surface. It provides analysis and visualization tools that enhance the understanding of space, and the sense of the place that surrounds us.

Some of the common applications involving DEM data include displaying the slope and its direction (or aspect) of a given landscape area, in order to aid in understanding sunlight and wind exposure on the terrain. Users can also generate hill shades as an easy way to enhance the perception of depth in any two dimensional surfaces. The software will also create contours, or lines of equal elevation, in order to delineate areas with the same surface height. Using ESRI's 3D Analyst GIS, users can navigate simulated fly-throughs over and around a

3D surface and then export the resulting animation for playback in other video applications.

Finally, one of the more powerful applications involving DEMs is the ability to "drape" or place on top of a generated 3D surface, other GIS data layers. This is very useful in enhancing GIS data such as watersheds that are reflected in the elevation and slope of the land. Watersheds visually come to life when their boundaries are delineated and the volume of water flow and its direction are modeled.

## 3D Elevation Model of Manitoba

While the traditional two dimensional map of Manitoba is extremely useful in looking at various themes, (such as road networks, provincial parks, lakes and rivers, populated places and geological features, to name a few), a different visual understanding of the landscape can be generated using DEM data.

For example, this inset map has been produced as a quick example of viewing the 3D landscape of Manitoba, with such elevation components as the Red River Valley, Assiniboine River, Hudson Bay Lowlands and Baldy Mountain noted. It should be stressed that the image has been vertically exaggerated (stretched) in order to overcome the limited elevation change in Manitoba, a range of only 832 metres. For some amazing full color 3D views and animations of Manitoba see the Geological Survey website at: <http://www.gov.mb.ca/itm/mrd/geo/3dmodel/index.html>

## Upcoming Events

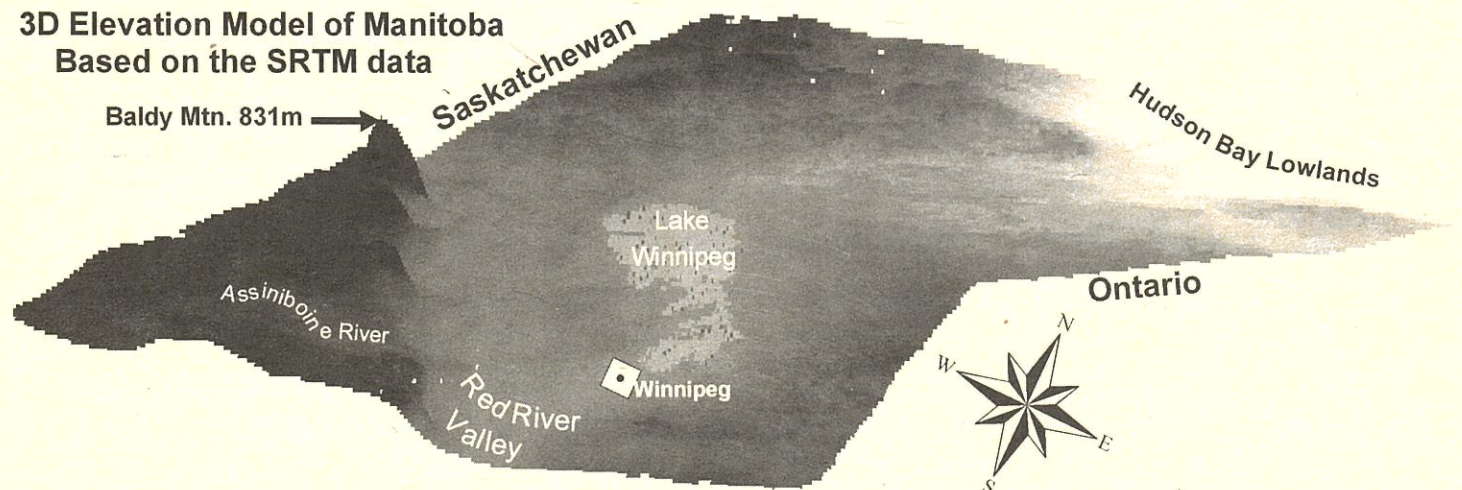
On June 12th, the Manitoba Eco-Network GIS/Mapping Centre will be conducting GIS/Mapping exercises during the Save Our Seine (SOS) celebration of Canadian Rivers Day, Saturday June 12th 2004 in John Bruce Park. One of the exercises will be the application of 3D visualization methods to the Seine River watershed, including draping GIS data, production of hill shades, and simulated fly-throughs.

## Sources

Further information about the SRTM dataset can be obtained by visiting the NASA Jet Propulsion Laboratory website at: <http://www2.jpl.nasa.gov/srtm/index.html>

**ECO**

## 3D Elevation Model of Manitoba Based on the SRTM data



# Lawn Off Drugs-2004!

Manitoba Eco-Network is pleased to announce that the Organic Lawn Care Education Project is up and running for another season. Promoting healthy yards and teaching alternatives to pesticides, the workshops offered through this project have proven popular with homeowners.

Support from the Province of Manitoba's Urban Green Team, the Federal Government's Summer Career Placement program, and the City of Winnipeg's Parks and Open Spaces Division has allowed us to hire two students to implement this summer's project. They are Michelle Osadczuk, an environmental science and biology major at University of Winnipeg, and Tim Hoover, an electrical engineering student at the University of Manitoba. Both are enthusiastic about educating people on organic methods of lawn care as they believe strongly that pesticide overuse is a major environmental concern in Winnipeg.

The project will, as usual, offer free public workshops at locations all around the City of Winnipeg. Most venues are Winnipeg Public Library branches—offered free of charge as part of our partnership with the Library. Over June and July, for a complete list of dates and locations, please check the MEN website at [www.mbeconet.org/projects\\_lawncare.asp](http://www.mbeconet.org/projects_lawncare.asp).

The project also offers workshops in the workplace over lunch hours, and informative displays at community events. If you are interested in booking a workplace seminar, or a display for

an event in June or July, give Tim or Michelle a call at 947-6511. We also want to thank Councillor Gord Steeves for a per capita grant of \$100 to assist with overhead costs.

## Additional Gardening Resources

Copies of "How to Get Your Lawn and Garden Off Drugs", by Carole Rubin, are available in the Manitoba Eco-Network's Alice Chambers Memorial Library. The following is condensed from a book review by John Hollinger, Organic Agriculture Specialist at Mb. Agriculture.

Originally published in 1989, this 100-page handbook is sub-titled "Pesticide-Free Gardening for a Healthier Environment". Ms. Rubin focuses on organic techniques, but alternative "least-toxic" treatments are also outlined in the event that pests become unmanageable. Rubin inspires the reader towards the healthy and sustainable care of lawns and gardens by encouraging foresight, energy and creativity as important inputs.

The organic approach to lawn and garden care that is described in this practical, "how-to" book consists of six basic

principles: Soil preparation; Plant Selection; Tolerance Levels; Proper Maintenance; Monitoring; 'Least-Toxic' Pest Management.

These basic steps provide the homeowner with healthy soils in a way that respects and assists the balance of nature. Whatever this book costs, it's worth ten times the price! **ECO**

## Workshop Schedule (to date)

**Tuesday, June 8**—St. James/Assiniboia Library, 1910 Portage Ave. 7:00–8:00 pm

**Monday, June 14**—St. Vital Library, 6 Fermor Ave. 7:00–8:00 pm

**Tuesday, June 15**—West Kildonan Library, 365 Jefferson 7:00–8:00 pm

**Monday, June 21**—Osborne Library, 625 Osborne St. (In Fort Rouge Lesiure Center) 7:00–8:00 pm

**Thursday, June 24**—Munroe Library, 489 London 7:00–8:00 pm

**Tuesday, July 6**—Cornish Library, 20 West Gate 7:00–8:00 pm

**Monday, July 12**—River Heights Library, 1520 Corydon 7:00–8:00 pm

**Tuesday, July 13**—Pembina Trail Library, 2724 Pembina Hwy. 7:00–8:00 pm

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*Group members are entitled to nominate representatives for a position on the Eco-Network Steering Committee. Group membership is open to any non-governmental, non-profit group which has as one of its objectives the enhancing or furthering of environmental quality, protecting the environment or environmental education.*

A supporting membership includes a subscription to **Eco-Journal** as well as notice of events and regular updates on issues and is open to any individual.

