



# UNWANTED INVADERS

*Invasive Species Council of Manitoba (ISCM)*

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## ISCM Gaining Momentum...

By Candace Parks and Haley Catton

The Invasive Species Council of Manitoba (ISCM) has had an exciting spring and summer. To start, the response from the first *Unwanted Invaders* newsletter was overwhelming! The ISCM received numerous requests to be added to our online list-serve from all over the country. Let's hope the trend continues for this second edition of the *Unwanted Invaders* newsletter.

May turned out to be a busy month. The ISCM met with the City of Winnipeg Weed Inspectors, which resulted in the development of an Invasive Plant Hit List, outlining nine invasive ornamental or agricultural pests of top concern for the city. Each featured plant included characteristics for identification, reasons for concern, habitat information, known Winnipeg and surrounding area locations followed by a list of online resources.

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The ISCM also met with representatives from the Province of Manitoba's Water Stewardship Division, Ducks Unlimited Canada and the Department of Fisheries and Oceans to discuss incorporating an aquatics component to the council. This is of great importance since Manitoba is influenced by ten major drainage basins from four neighbouring provinces, one territory and four US states; making Manitoba especially vulnerable to aquatic invasive threats. Recently the invasive rusty crayfish (*Orconectes rusticus*) has been discovered in the Winnipeg River system in Northwestern Ontario

*Please see ISCM on page 5*

## Western Canadian Invasive Species Forum: Winnipeg 2008

By Karen Rempel

The Rural Development Institute and the Invasive Species Council of Manitoba are organizing a forum aimed at strengthening linkages among invasive plant managers in Western Canada. The invitational forum will be held in Winnipeg on February 25<sup>th</sup> and 26, 2008. The goal of the forum is to provide a networking opportunity for key stakeholders in Western Canada to share information, discuss issues and identify mutually beneficial actions.

The complexity of management practices and the range of viewpoints between urban and rural populations suggest that there is a need to discuss and describe these issues across a range of perspectives.

Forum participants will come from across Western Canada and include field technicians, researchers, federal, provincial, regional and local policy and program managers, and members of invasive plant councils and conservation organizations.

# Aquatic Invasive Species in Manitoba – here’s the scoop

By Martin Erickson

Aquatic invasive species (AIS) are organisms not native to Manitoba waters. Once introduced to our waters, they can spread rapidly and take over, displace or even eliminate native species. Some of the main pathways in which AIS can enter Manitoba include inter-connecting canals and diversions,

transportation through recreational boats and releasing baitfish and aquarium species into our waterways. Besides reducing the variety of aquatic life in Manitoba waters AIS can require costly control measures, cause irreversible damage to aquatic ecosystems, and reduce the social economic value of lakes and rivers.

## AIS Currently in Manitoba

### Common Carp



Common carp were first caught in the wild in Manitoba at the St. Andrews Dam at Lockport in 1938. Today the common carp occurs in all southern watersheds in Manitoba and northward in the Nelson River. Carp can have a negative impact on marsh habitat as they feed heavily on marsh vegetation and increase turbidity by rooting in the substrate as they feed.

### White Bass

White bass was first reported in Lake Winnipeg in 1963 from commercial catches near Riverton. This fish species likely traveled into Lake Winnipeg via the Red River from an introduction into North Dakota in 1953. White bass populations tend to increase rapidly and by 1996 they had become the most numerous perch-like fish in samples taken from the south basin of Lake Winnipeg. They are voracious feeders and compete with native game and commercial fish species for food sources such as emerald shiners and zooplankton.



### Rainbow Smelt



Rainbow smelt were introduced into the Hudson Bay watershed through introductions into lakes in Minnesota and northwestern Ontario in the 1960s and 1970s, and were first documented in Lake Winnipeg in 1990. At present, rainbow smelt is found in the Winnipeg River, Lake Winnipeg, and the Nelson River downstream to its estuary in the Hudson Bay. This is an aggressive invading species that multiplies rapidly and competes for similar food sources preferred by native species (zooplankton and emerald shiners).

### Rusty Crayfish

Rusty crayfish were found by federal and provincial biologists in Falcon Lake in July 2007. This species is native to streams in Ohio and was introduced to the Great Lakes by anglers who use them for bait. From the Great Lakes, rusty crayfish have spread west via inter-connecting waterways and bait bucket transfers, reaching Lake of the Woods in 1990. Rusty crayfish have also been reported in the Ontario portion of the Winnipeg River and will no doubt soon



Photo by Doug Watkinson, Fisheries and Oceans Canada

enter the Manitoba portion of the river. Rusty crayfish are prolific and can severely reduce lake and stream vegetation, depriving native fish and their prey of cover, food, and spawning habitat. They also reduce native crayfish populations.

Rusty crayfish can be identified by their larger size and brown body with rusty coloured patches on sides, and claws with black bands near tips

Also in Manitoba: **Asian Tapeworm** (see article on page 7)

*AIS story continued on Page 7*

## The PRIPS Database – A Valuable Tool Waiting for You

By Emma Balitski

Memory, it's a funny thing. What we remember is often different than what we actually experienced or saw. That's the great thing about having a resource such as the Prairie Region Invasive Species (PRIPS) database; those "memories" do not change over time nor are they lost if an individual person is no longer available.

Using available technology such as GPS and the database, it is possible to accurately keep track of the invasive species that are entering our ecosystems. This information can be then be used to monitor the invasion to determine the rate of spread, and to shed light on the vectors responsible for its spread (i.e. transportation routes, farming equipment, etc.). The mapping functions of the database can be used to determine what species are in the surrounding area of our location – valuable

*Remember: memories fade, people move on, but the database will be available forever!*

[www.crerl.usask.ca/prips](http://www.crerl.usask.ca/prips)

information that can be used to quickly take action of any new threats that emerge.

By examining data entered into the database on specific species, we can monitor what control measures have been used in different locations over time to determine the best course of action to take on a new invasion. This will ultimately result in a more accurate approach in dealing with emerging invasive species. Less trial and error will result in a

*Please see PRIPS on page 8*

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## ISCM Partners with City of Winnipeg Weed Inspectors

By Candace Parks

On May 9, 2007 Cheryl Heming and Candace Parks met with City of Winnipeg Weed Inspectors. The goal was to introduce the ISCM, its objectives and to suggest developing a collaborative partnership since inspectors can function as additional "eyes and ears" in preventing the spread of invasive plants in Winnipeg. The meeting proved successful and the Weed Inspectors suggested the ISCM draft a "Hit List" including plant descriptions, pictures and website links for approximately six to ten plant species that Inspectors could watch up for within city limits.

Species currently on the "Hit List" include:

- leafy spurge
- purple loosestrife
- European buckthorn
- Burdock
- salt cedar
- Himalayan balsam (impatiens)
- ox-eye daisy
- scentless chamomile, and
- red bartsia.

If you have any suggestions of what species should be added to the list, please provide comments to Haley at [hcatton@winnipeg.ca](mailto:hcatton@winnipeg.ca)

## Important Sources of Information on Leafy Spurge

By Wayne Digby

The Leafy Spurge Stakeholders Group (LSSG) is a broad coalition of agricultural and conservation groups and all three levels of government. When the LSSG was formed in the fall of 1998 it quickly became apparent that in addition to coordinating the “fight” against leafy spurge, one of its principle roles would need to be the provision and coordination of information about leafy spurge. In addition to the LSSG website, this information is provided in many different ways including: producer workshops, newsletters, brochures, placemats, posters, radio spots, signage, manuals, field days and tours. For your

information we have provided a brief listing of a few of the current sources of information as well as new material being developed. To learn more about these sources of information check out the LSSG website.



*Leafy Spurge, the noxious weed, in flower. Photo courtesy the Leafy Spurge Stakeholders Group.*

[www.brandonu.ca/organizations/rdi/leafyspurge.html](http://www.brandonu.ca/organizations/rdi/leafyspurge.html)

Information at the LSSG Website [www.brandonu.ca/organizations/rdi/leafyspurge.html](http://www.brandonu.ca/organizations/rdi/leafyspurge.html):

- LSSG Brochure - provides overview of LSSG
- Implementing a Bio-control Program for Leafy Spurge (factsheet)
- Multi-Species Grazing of Leafy Spurge (factsheet)
- Integrated Pest Management (IPM) Leafy Spurge *Prevention and Control* (manual)
- Managing invasive species: leafy spurge control (project report)
- Leafy Spurge in Manitoba - *The Newsletter of the Leafy Spurge Stakeholders Group*

New material being developed:

- Curriculum material for Grades 4 and 7.
- Controlling leafy spurge and other weeds on right of ways.
- Leafy Spurge and Gravel Pits

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## Manitoba Hydro Tackling Leafy Spurge

By Erik Dickson

In June, 2005 Manitoba Hydro began a partnership with the Rural Development Institute (RDI) of Brandon University. This partnership provided for an exchange of information between the RDI and Manitoba Hydro, particularly in

regards to the collection of baseline information on leafy spurge infestations along transmission lines. With the assistance of RDI staff, Manitoba Hydro developed methods for surveying leafy spurge,

*Please see Manitoba Hydro on page 9*

*ISCM from page 1*

(See page 2), and Asian tapeworm has been positively identified in fish captured in Lake Winnipeg (see page 7.)

In early June, the ISCM held its Council Executive meeting in Portage la Prairie. The meeting was an excellent opportunity to catch up and discuss upcoming ISCM events. Jane Thornton introduced Emma Batliski, who was hired to create the Invasive Plant Website and Mapping Display (please see page 3 for further information).

Karen Rempel from the RDI provided a report on the Pan Western Group and the Prairie Region Invasive Noxious Weed Database and mapping Display website.

As of September, the ISCM has had a new coordinator. Candace Parks, the first coordinator of the council was presented an opportunity with the Province of Manitoba, and reluctantly left the ISCM in August. The new coordinator is Haley Catton, the 2007 project coordinator for the Manitoba Purple Loosestrife Project (see story below). Haley is excited to be involved with the ISCM and is picking up where Candace left off.

## Manitoba Purple Loosestrife Project has Record Year

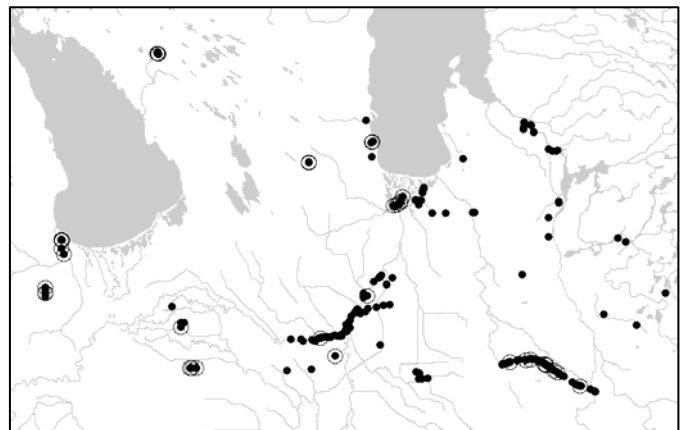
By Haley Catton

The Manitoba Purple Loosestrife Project had a very successful season in 2007. The project focuses on raising and releasing purple-loosestrife leaf-eating *Galerucella californiensis* beetles for biological control of the invasive plant. This year, thanks to some new equipment and new methods, we set a new record for Manitoba by raising nearly 85,000 beetles for release, almost triple the goal of 30,000 beetles! Beetles were released in Winnipeg, the Greater Winnipeg Water District Railway, Westbourne,

*“The success of the beetle release program relies on reports of purple loosestrife infestations.”*

Dauphin, Delta Marsh, McGregor, Oakville, East St. Paul, Lundar, Netley-Libau Marsh, Culross, Teulon and Winnipeg Beach.

*Galerucella* beetles feed and reproduce only on purple loosestrife and have been used since the 1990s to successfully control large infestations in Manitoba. They control purple loosestrife infestations over several years by damaging their



Locations in southern Manitoba where purple loosestrife was found (black dots) and *Galerucella* beetles were released (hollow circles) by the Manitoba Purple Loosestrife Project in 2007.

leaves and stems enough to weaken the plants and prevent flowering. Their high reproduction rate also creates a wild population of beetles that may travel to other infestations. An excellent example of this was seen in Dauphin this summer, where thousands of plants were completely devoured by beetles that migrated from an initial release in the area over 10 years ago. Dauphin was also an example of the success of combining biological control with diligent spraying in drier spots, as there was almost no purple loosestrife to be seen in that community.

*Please see Purple Loosestrife on page 6*

## Potential Threat to MB Forests: Asian Longhorn Beetle

By Jon Leferink

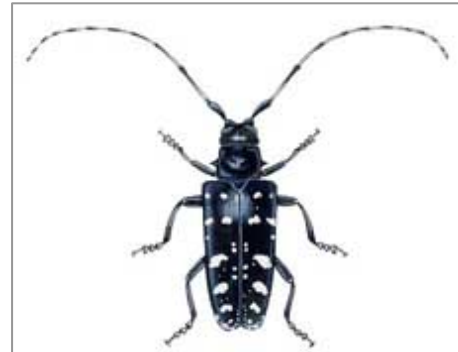
The Asian longhorn beetle (ALB) (*Anoplophora glabripennis*) is a potentially serious, exotic, invasive pest of hardwood trees in North America. There have been a number of introductions of ALB into North America since 1996; one into Canada, but none in Manitoba. Introductions occur through wood products imported from China or Korea.

ALB can infest a range of hardwoods including

*"All introductions in North America have been virtually eradicated."*

many shade trees. Potential host species in Manitoba include Manitoba maple, sugar maple, elm and some poplar and willow. Infected trees develop yellow leaves and eventually die.

The adult ALB is a large, mainly black beetle with about 20 whitish dots. It measures about 20 to 35 millimetres (1–1.5 inch) long, and seven to 12 millimetres (0.3 – 0.5 inch) wide. Its horns or antenna are longer than its main body. Each antenna segment is black with a whitish base. ALB larvae feed inside branches and trunks – younger larvae feed mainly inside sapwood and older larvae make large feeding tunnels in the heartwood.



*Asian long horned beetle (photo courtesy of US Forest Service)*

All introductions into North America have been virtually eradicated. Since 2003, the only introduction into Canada (near Toronto) is being eradicated by the Canadian Food Inspection Agency (CFIA). This process includes removal and destruction of hundreds of infected trees and thousands of trees around the infected area.

ALB could be potentially devastating to both ornamental and commercial hardwood tree species in Manitoba. Increased trade with China and Korea has increased the possibility of introduction of this invasive pest in Manitoba through dunnage, crates and other wood products. Anyone finding trees that appear to be infected with ALB, should contact the CFIA or call the Manitoba Tree Line at 204-945-7866.

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### *Purple Loosetrife from page 5*

During my travels throughout Manitoba this year, I have learned that purple loosetrife remains a significant problem in our province. In particular, I have noticed that many homeowners still have purple loosetrife in their yards as ornamental plants. I would like to remind weed supervisors to let homeowners in their areas know the dangers of growing purple loosetrife and to ask them to remove their plants.

The Manitoba Purple Loosetrife Project will continue in 2008, when we hope to set yet another record in beetle numbers. However, the success of the beetle-release program relies on reports of purple loosetrife infestations, since the program does not have the time or resources to do extensive surveying. We appreciate any and all reports of purple loosetrife sightings in Manitoba, and if you see it next year, please call 204-981-5387 (summers only), or email us at [info@invasivespeciesmanitoba.com](mailto:info@invasivespeciesmanitoba.com).

## Asian Tapeworm found in Manitoba Fish

By Joel Hunt

Dr. Terry Dick from the University of Manitoba has found Asian tapeworm (*Bothriocephalus achelignothii*) in young of the year emerald shiners sampled from the Red River and its outlet area, and adult walleye, sauger, pike and goldeye in Lake Winnipeg. Emerald shiners are the main forage fish for Lake Winnipeg walleye and sauger.

The Asian tapeworm was originally discovered in China in grass carp in 1934. It has since been reported in every continent, except Antarctica, and is known to infect 102 species of freshwater fish. This parasite does not infect humans.

The adult tapeworm is found in the intestine of fish which acquire it by ingesting zooplankton that harbour the infectious larvae. The zooplankton is parasitized by ingesting the free swimming form of the tapeworm that hatches from eggs expelled through feces of infected fish.

Potential impacts include intestinal function, reduction in growth and reproductive capacity,

reduced swimming capability and secondary bacterial infections. Young of the year minnow species are especially susceptible to infection and mortality.

This discovery is a message about the risks and potential consequences of transferring fish species across basin boundaries. Although it is not possible to predict impacts, if any, to the Lake Winnipeg fish community based on the current preliminary information, a significant increase in mortality of the most important food source to Lake Winnipeg walleye and sauger would likely have a destabilizing effect on the ecosystem.

*“Potential impacts include ...reduction in growth and reproductive capacity.”*

Current studies are focusing on 1) distribution of the parasite in Lake Winnipeg in emerald shiners and, 2) the possible route of entry into Canada.

*AIS from page 2*

### Future Threats

AIS in close proximity to Manitoba Waters include:



**Zebra Mussels (shown above)**  
**Asian Carp**  
**Spiny Waterflea**

### What Can We Do?

Unfortunately, once an invasive species has established in an area, it is usually there to stay. However, an ounce of prevention is worth a pound of cure, and we can all help reduce introductions of AIS into or within Manitoba by following this advice:

- Remove mud and vegetation from boats prior to transport
- Drain all water from boats including bilge, bait buckets and live wells
- Wash boat equipment and dry in sun for 5 days
- Never release live baitfish in lakes and rivers
- Never release or flush aquarium fish

## Newfoundland Gets Tough with Invasive Alien Plants

By Costa Kasimos and Joy Barfoot

Visitors to Newfoundland are often surprised by the complimentary car wash as they try to board the ferry off the Island...until they realize that only the bottom of their car was washed. This service is one of many programs across the country designed to tackle the multi-billion dollar problems associated with alien species; in this example, to contain the Golden Nematode (a pest on potatoes).

Recently, the federal government created the Invasive Alien Species Partnership Program with goals that include; the prevention of new invasions; early detection of new invaders; rapid response to new invaders; and the management of established invaders through containment, eradication, and control. It is through this program that Joy Barfoot and Costa Kasimos of the Memorial University of Newfoundland Botanical Garden are creating an army of volunteers to deal with the issues surrounding invasive alien plants in Newfoundland and Labrador.

Newfoundland and Labrador's climate, and Newfoundland's isolation as an island, has limited the extent of the problems caused by invasive alien plants. However, over 35% of the province's plant species are alien! While there are plenty of weedy

aliens that can take over our gardens, it is the aliens that threaten Newfoundland and Labrador's natural ecosystems that Joy and Costa are most interested in.

Joy and Costa are working on an awareness and education campaign to help stop the spread of invasive alien plants. Through workshops, presentations to the public and government officials, and public displays they encourage people to learn about new garden species before they plant them. In addition, the importance of buying from knowledgeable local nurseries is emphasized, especially using nursery grown native plants as ornamental. They also teach people how to prevent the introduction of new plants into natural habitats by using gardening techniques. The "Eyes Across the Province," a web-based monitoring program ([www.mun.ca/botgarden](http://www.mun.ca/botgarden)), is used to track the spread of alien invasive plants. Outdoor enthusiasts and nature lovers are encouraged to report sightings of "green aliens" from across Newfoundland and Labrador. By involving the general public, it is hoped that the green invasion can be slowed and controlled, thereby preserving Newfoundland's natural heritage.

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### *PRIPS from page 3*

more efficient use of personnel, biological, chemical and mechanical resources, and most importantly, money.

Currently, the PRIPS database is up and running and some data is being entered. However, there is the need for more organizations to realize the value of this resource and to start using it. Forms are

available for use to standardize data collection, and to facilitate the entry of the data. The website is user friendly and a tutorial will soon be added to assist new users.

*Remember: memories fade, people move on, but the database will be available forever!*

*Hydro from page 4*

including the collection of GPS waypoints. These GPS waypoints were combined with other GPS data to build province wide maps of leafy spurge infestations and the spread of this noxious weed. Throughout the summer of 2005, staff from Manitoba Hydro surveyed approximately 675 kilometers of right-of-ways on 15 transmission lines primarily in south-western Manitoba. Leafy spurge was found at least once on 12 of the 15 transmission lines primarily in the immediate area surrounding the city of Brandon.

Following the surveys of 2005, it was recommended by staff from Manitoba Hydro to begin a trial biocontrol program for leafy spurge using flea beetles. In July, 2006, staff from Manitoba Hydro and the RDI traveled to North Dakota to harvest flea beetles. Manitoba Hydro released 15,000 beetles along a transmission line that runs from Brandon to Winnipeg at five separate sites. These sites are remotely located along a right-of-way in the northern portion of Spruce Woods Provincial Forrest.

The same year surveying protocol for pre and post release of flea beetles was established by Manitoba Hydro with the assistance of the RDI as well as staff from CFB Shilo. In the spring of 2007, these sites were revisited to determine if the flea beetles had any success. While limited progress was noted at the sites so far, evidence was found of the beetles hard at work including stunted and dead stems and a halo effect at one of the sites. The presence of beetles at the sites proved that they survived the winter.

It was decided that the populations at these sites should be boosted to help establish a larger beetle population to provide greater biocontrol. In July of 2007, staff from Manitoba Hydro, the RDI and CFB Shilo once again traveled to North Dakota to collect flea beetles. This year Manitoba Hydro returned with



*Leafy Spurge biocontrol flea beetle (photo courtesy of North Dakota State University)*

approximately 65,000 beetles which were distributed onto the sites from last year. These sites will continue to be monitored to determine the beetle's success and hopefully to become future sites for beetle harvesting within the province. So, when you drive past those transmission lines on the highway remember that there are more than linemen hard at work out there.

Thank you to Beth Peers and the RDI and Carmen McNabb at CFB Shilo for their help with establishing this program. A big thank you to Tim Finley and Derrill Fick both Weed Officers with the North Dakota Department of Agriculture for helping arrange beetle collection trips the past two years.

## Invasive Species Council of Manitoba

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**Website:**

Coming soon...

## Who/What Is the ISCM?

The ISCM is a non-profit organization providing a centralized and coordinated province-wide leadership body adopting a collaborative approach to the prevention, early detection, management and potential eradication of invasive species in Manitoba. The ISCM was formed in December 2006, and already has over 100 stakeholders.

The executive of the council is:

**Cheryl Heming (Chair)**, City of Winnipeg

**Garth Ball**, Manitoba Conservation

**Wayne Digby**, Leafy Spurge Stakeholders Group

**John Johnston**, Manitoba Weed Supervisors Association

**Ron Moss**, Prairie Farm Rehabilitation Administration  
(Agriculture and Agri-Food Canada)

**Wendy Ralley**, Manitoba Water Stewardship

**Karen Rempel**, Rural Development Institute, Brandon  
University

**Lisette Ross**, Ducks Unlimited Canada

**Jane Thornton**, Manitoba Agriculture, Food and Rural  
Initiatives

The ISCM coordinator is Haley Catton.

*Do you...*

*Want to be included on the ISCM  
Unwanted Invaders mailing list?*

*Have any story ideas or  
feedback our newsletter?*

*Email Haley at*

*[Hcatton@winnipeg.ca](mailto:Hcatton@winnipeg.ca) with the  
details...*

The ISCM 2008 calendar "*Manitoba's Invasive Species: Unwanted Invaders*" will be available in December. This attractive and informative calendar will be available for free! Email Haley at [Hcatton@winnipeg.ca](mailto:Hcatton@winnipeg.ca) to arrange for your copy.

## Upcoming Events

**December 4-5, 2007** - Manitoba Grazing School, Brandon, MB

**December 5-6, 2007** - Canadian Food Inspection Agency Workshop on Canadian Invasive Plant Framework, Winnipeg (Invitation Only)

**February 19-20, 2008** - The Manitoba GreenShow, Winnipeg

**February 25-26, 2008** - Western Canadian Invasive Species Forum, Winnipeg (Invitation Only)

**March 25-26, 2008** - Integrated Brush Management Conference



## New Date, New Show!

**Landscape Manitoba** Presents  
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**Call 1-866-383-4711 for More Information**

**February 19-20, 2008 Victoria Inn, Winnipeg**