

**Mini-BioBlitz 2009  
Livingston Nature Park  
Morden, Manitoba**

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**A Rocha - Pembina Valley  
Biodiversity Report Series  
No. 2**

**J. Paul Goossen, Larry Danielson  
and Valorie Goossen**

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*A Rocha*  
*Inspiring Change. Caring for Creation*

**January 2012**



## **About A Rocha**

A Rocha is an international Christian organization that engages in scientific research, environmental education and community-based conservation projects.

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## **Executive Summary**

A mini-BioBlitz of Livingston Nature Park was carried out on 30 May 2009 in Morden, Manitoba approximately 90 km south-southwest of Winnipeg. The 12 hour survey was carried out by experts and other volunteers. Forty-one species of plants, three mammals, 53 species of birds, and at least 63 invertebrate taxa were tallied for the 1.6 ha park. In total, the species count was 160 species. Seven recommendations are included in this report which the authors believe will be helpful in the management of Livingston Nature Park, increase the number of visitors to the Park and better inform local citizens of the Park's biodiversity. Recommendations include trail signage, invasive plant removal and production of an interpretive trail brochure.

## **Acknowledgements**

We thank the Town of Morden for permitting A Rocha to hold the mini-BioBlitz event in Livingston Nature Park. We are indebted to Dr. Terry Galloway (University of Manitoba), Shawn Dias (Manitoba Agriculture, Food and Rural Initiatives), Marilena Kowalchuk (Manitoba Habitat Heritage Corporation), Luc Blanchette and Al Schritt for sharing their expertise. We thank Bernie Freeman, Ruth Hiebert and Marilena Kowalchuk for sharing their photographic skills. We also thank Ruth Wiens, Alice Neufeld and Rose Wiebe for providing food to participants. David Weiss (Pembina Valley Containers), Carol Wilkinson (Town of Morden), and Rob Goertzen assisted with logistics (portable washrooms, loud speaker and truck, respectively). We thank Candice Hoepfner (Member of Parliament for Portage – Lisgar), Peter George Dyck (former Member of the Manitoba Legislative Assembly) and Doug Wilson (former Mayor of the Town of Morden) for their contribution to the closing ceremonies.

*Photo credits:* Jake Hiebert (all photos in Appendix 3 and 4, except the Red-eyed Vireo and White-breasted Nuthatch photos taken by Ruth Hiebert); Marilena Kowalchuk (all photos in Appendix 5 except the Riparian habitat photo taken by Bernie Freeman and Deciduous trees taken by Ruth Hiebert).

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## **1.0 INTRODUCTION**

A BioBlitz is an intense but brief survey of flora and fauna within a defined area during a 24 hour period. In 1996, a naturalist with the U.S. National Park Service introduced the term “BioBlitz”. Kenilworth Aquatic Gardens in Washington, D.C. was the location of the first BioBlitz and since then many organizations worldwide have held this type of event in a variety of habitats (Wikipedia 2011). BioBlitzes have both educational and scientific value. Public participation or attendance at BioBlitzes brings an increased awareness and appreciation for local biodiversity. The information collected by experts and the public can be used to plan environmental educational materials which in turn benefit local schools and communities. The scientific data collected provides environmental managers with distributional and point data to aid in managing sensitive lands, parks and protected areas. In this report, we document a mini-BioBlitz carried out at Livingston Nature Park in Morden, Manitoba in 2009 and make recommendations which we hope will aid in managing the property and facilitating public appreciation of local flora and fauna.

## **2.0 STUDY AREA**

The site for the 2009 mini-BioBlitz was Livingston Nature Park in Morden, Manitoba. Morden is located approximately 90 km south-southwest of Winnipeg and has a population of about 6,600 (2006). Agriculture, industry and commerce are the dominant economic drivers in this community. Livingston Nature Park is a 1.6 ha (4 acres) park located along the Dead Horse Creek in the northwest quadrant of Morden. The Park is named after Donald and Shirley Livingston, former residents in the Morden area, in recognition of their community service. The Park lies just east of the Manitoba escarpment which formed the beach edge of glacial Lake Agassiz. Two ecozones meet in this region, the aspen parkland and the tall grass prairie. The Park is comprised primarily of deciduous trees with a relatively sparse undergrowth of shrubs and herbaceous plants. Trails in the Park enable visitors to access or see the majority of the Park area. The Dead Horse Creek, which has its origin in the escarpment 11 km west of the Park, provides some riparian habitat along the western edge of the Park.



### **3.0 METHODS**

The Livingston Nature Park mini-BioBlitz was held on 30 May 2009 over a 12 hour period instead of the standard 24 hours. As this blitz was a pilot effort, it was decided that a shorter time-frame was more appropriate. An open-air tent was used as the headquarters for the event. Observations began at 0300 h and were completed by 1500 h. A trail camera was used to supplement general observations made by participants. Nomenclature for bird names follows the American Ornithologist's Union Check-list of North American Birds (American Ornithologists' Union 2011), for plants, Scoggan's (1957) Flora of Manitoba and for mammals, Banfield's (1974) The Mammals of Canada. Scientific names for plants, birds and mammals are listed in Appendices 1, 2 and 3, respectively.

### **4.0 RESULTS**

#### 4.1 Flora

Forty-one plant species were observed in the Park (see Appendices 1, 5). Included were four tree species, 11 shrubs, two vines, 16 forbs, one sedge and one horsetail. Six species not native to North America were identified: Smooth Brome, Leafy Spurge, Creeping Charlie, Tartarian Honeysuckle, Common Burdock and Common Dandelion. Given the early stage of growth for some species, plant identification was challenging and species identification was made with the best judgment of the observer.

#### 4.2 Fauna

4.2.1 Invertebrates – At least 63 invertebrate taxa were found during the mini-BioBlitz. Unfortunately the taxonomic breakdown of these species is not available.

4.2.2 Fish - Fish were not sampled during the BioBlitz.

4.2.3 Amphibians and reptiles - No amphibians or reptiles were observed.

4.2.4 Birds - In total, 53 species of birds were documented during the BioBlitz (see Appendix 2, 4). Of these, most (75%) were songbirds. Species such as the Canada Goose and the Ring-billed Gull, although identified during the mini-BioBlitz and possibly in flight near the Park, are not considered typical birds to be encountered in the Park. Two non-native species were recorded – the European Starling and the House Sparrow.

4.2.5 Mammals - Only three mammals were recorded for the Park (see Appendix 3). A Red Squirrel and an Eastern Cottontail rabbit were the only medium-sized mammals seen. A White-tailed Deer was observed at or near the edge of the Park and probably the same deer was photographed by a trail camera in the Park.

## **5.0 DISCUSSION**

This brief survey of biodiversity in Livingston Nature Park resulted in a tally of at least 160 species. Undoubtedly, this is a small fraction of the diversity of life which inhabits the Park. There are several reasons why we believe the diversity is greater than what was observed during the blitz. The late, cool spring temperatures of 2009 probably played a role in reduced invertebrate activity and also held back the growth of many forbs. Invertebrates are the most diverse faunal element on the planet and many more species should have been encountered in this survey. Bloom dates for some flora occur later in the summer and identification of forbs is difficult early in the season. More effort, particularly of the Dead Horse Creek, would have contributed to a higher bio-inventory. Mammals were also underrepresented in the survey. As we did not set traps for microtines, we no doubt missed these small mammals which most certainly should occur in the forest litter and grassy areas.

The mini-BioBlitz ended with closing ceremonies at 1500 h on 30 May. Federal, provincial and municipal officials offered words of support, in person or through correspondence.

## **6.0 RECOMMENDATIONS**

We hope the following seven recommendations will be helpful to the Town of Morden in its management of Livingston Nature Park, in increasing the number of visitors to the Park and in informing local citizens of the Park's biodiversity.

Recommendations:

1. Develop an interpretive pamphlet to enrich the visitor's experience in the Park and aid in gaining a greater appreciation and understanding of local fauna and flora.
2. Post a trail map at the south entrance of the Park (Parkhill Drive) to provide visitors with a visual guide to the various trail options in the park including length of trails.
3. Name trails and post signage to help guide visitors through the Park.
4. Remove invasive plant species, including Leafy Spurge and other noxious weeds (e.g., Common Burdock).
5. Carry out additional floral and faunal surveys during all seasons to establish a more comprehensive list of the Park's biodiversity.
6. Encourage local schools to take their students to the Park and learn about the Park's ecosystems and its biodiversity.
7. Leave dead trees or snags, which do not pose a public safety hazard, to provide habitat for wildlife.

## **7.0 LITERATURE CITED**

American Ornithologists' Union. 2011. Check-list of North American birds. Retrieved 12 November 2011 from <http://www.aou.org/checklist/north/full.php>.

Banfield, A.W.F. 1974. The mammals of Canada. National Museum of Natural Sciences, National Museums of Canada. University of Toronto Press. 438 pp.

Scoggan, H.J. 1957. The flora of Manitoba. National Museum of Canada Bulletin No. 140. Ottawa. 619 pp.

Wikipedia. 2011. BioBlitz. Retrieved 29 November 2011 from <http://en.wikipedia.org/wiki/BioBlitz>.

## **APPENDICES**

**Appendix 1.** List of plants seen in Livingston Nature Park on 30 May 2009.

<b>Common Name</b>	<b>Scientific name</b>
<b>Trees</b>	
Bur Oak	<i>Quercus macrocarpa</i>
American (White) Elm	<i>Ulmus americana</i>
Manitoba Maple (Box Elder)	<i>Acer negundo</i>
Green Ash	<i>Fraxinus pennsylvanica</i>
<b>Shrubs</b>	
Willow	<i>Salix sp.</i>
Currant or Gooseberry	<i>Ribes sp.</i>
Wild Rose	<i>Rosa sp.</i>
Choke Cherry	<i>Prunus virginiana</i>
Wild Plum	<i>Prunus americana</i>
Hawthorn	<i>Crataegus sp.</i>
Saskatoon (Service Berry)	<i>Amelanchier alnifolia</i>
Alder-leaved Buckthorn	<i>Rhamnus alnifolia</i>
Red-osier Dogwood	<i>Cornus stolonifera</i>
Western Snowberry	<i>Symphoricarpos occidentalis</i>
Downy Arrow-wood	<i>Viburnum rafinesquianum</i>
<b>Vines</b>	
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
Wild Cucumber	<i>Echinocystis lobata</i>
<b>Forbs</b>	
Nodding Trillium	<i>Trillium cernuum</i>
Star-flowered False-Solomon's Seal	<i>Maianthemum stellatum</i>
Wild Lily-of-the-valley	<i>Maianthemum canadense</i>
Wood Nettle	<i>Laportea canadensis</i>
Wild Columbine	<i>Aquilegia canadensis</i>
Buttercup	<i>Ranunculus sp.</i>
Wild Strawberry	<i>Fragaria virginiana</i>
Avens	<i>Geum sp.</i>
Canada Violet	<i>Viola canadensis</i>
Downy Yellow Violet	<i>Viola pubescens</i>
Snakeroot	<i>Sanicula marilandica</i>
Sweet Cicely	<i>Osmorhiza sp.</i>
Cow-parsnip	<i>Heracleum lanatum</i>
Northern Bedstraw	<i>Galium boreale</i>
Sweet-scented Bedstraw	<i>Galium triflorum</i>
Lindley's Aster	<i>Aster ciliolatus</i>

**Appendix 1 (cont'd)**

<b>Common Name</b>	<b>Scientific name</b>
<b>Horsetails and sedges</b>	
Horsetail	<i>Equisetum sp.</i>
Sedge	<i>Carex sp.</i>
<b>Non-native</b>	
Smooth Brome	<i>Bromus inermis</i>
Leafy Spurge	<i>Euphorbia esula</i>
Gill-over-the-ground (Creeping Charlie)	<i>Glechoma hederacea</i>
Tartarian Honeysuckle	<i>Lonicera tatarica</i>
Great Burdock	<i>Arctium lappa</i>
Common Dandelion	<i>Taraxacum officinale</i>

**Appendix 2.** List of birds identified in or near Livingston Nature Park on 30 May 2009.

<b>Common Name</b>	<b>Scientific name</b>
Canada Goose	<i>Branta canadensis</i>
Wood Duck	<i>Aix sponsa</i>
Mallard	<i>Anas platyrhynchos</i>
Killdeer	<i>Charadrius vociferus</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Mourning Dove	<i>Zenaida macroura</i>
Great Horned Owl	<i>Bubo virginianus</i>
Common Nighthawk	<i>Chordeiles minor</i>
Ruby-throated Hummingbird	<i>Archilochus colubris</i>
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
Least Flycatcher	<i>Empidonax minimus</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Blue Jay	<i>Cyanocitta cristata</i>
American Crow	<i>Corvus brachyrhynchos</i>
Purple Martin	<i>Progne subis</i>
Bank Swallow	<i>Riparia riparia</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
House Wren	<i>Troglodytes aedon</i>
Swainson's Thrush	<i>Catharus ustulatus</i>
American Robin	<i>Turdus migratorius</i>
Gray Catbird	<i>Dumetella carolinensis</i>



**Appendix 2 (cont'd)**

<b>Common Name</b>	<b>Scientific name</b>
European Starling	<i>Sturnus vulgaris</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Black-and-White Warbler	<i>Mniotilta varia</i>
Tennessee Warbler	<i>Oreothlypis peregrina</i>
Orange-crowned Warbler	<i>Oreothlypis celata</i>
Nashville Warbler	<i>Oreothlypis ruficapilla</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
American Redstart	<i>Setophaga ruticilla</i>
Magnolia Warbler	<i>Setophaga magnolia</i>
Blackburnian Warbler	<i>Setophaga fusca</i>
Yellow Warbler	<i>Setophaga petechia</i>
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>
Blackpoll Warbler	<i>Setophaga striata</i>
Yellow-rumped Warbler	<i>Setophaga coronata</i>
Canada Warbler	<i>Cardellina canadensis</i>
Chipping Sparrow	<i>Spizella passerina</i>
Clay-colored Sparrow	<i>Spizella pallida</i>
Song Sparrow	<i>Melospiza melodia</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Common Grackle	<i>Quiscalus quiscula</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Baltimore Oriole	<i>Icterus galbula</i>
House Finch	<i>Carpodacus mexicanus</i>
Pine Siskin	<i>Spinus pinus</i>
American Goldfinch	<i>Spinus tristis</i>
House Sparrow	<i>Passer domesticus</i>

**Appendix 3.** List of mammals documented in Livingston Nature Park on 30 May 2009.

<b>Common Name</b>	<b>Scientific Name</b>
Eastern Cottontail	<i>Sylvilagus floridanus</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
American Red Squirrel	<i>Tamiasciurus hudsonicus</i>



Red Squirrel



Eastern Cottontail

**Appendix 4.** Selected photographs of birds take in Livingston Nature Park during the 2009 mini-BioBlitz.



Mallards



Great Crested Flycatcher



Red-eyed Vireo



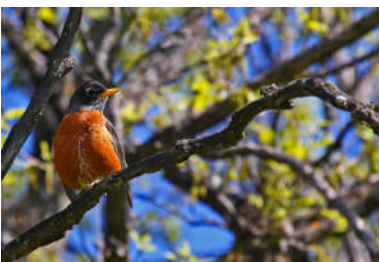
Bank Swallow



White-breasted Nuthatch



Swainson's Thrush



American Robin



Black-and-White Warbler



Chipping Sparrow

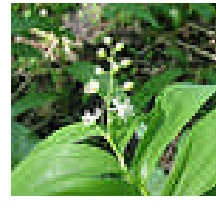
**Appendix 5.** Selected photographs of plants and habitats take in Livingston Nature Park during the 2009 mini-BioBlitz.



Nodding Trillium



Canada Violet



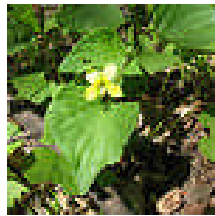
Star-flowered False-Solomon's Seal



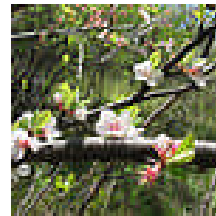
Sweet-scented Bedstraw



Downy Arrow-wood



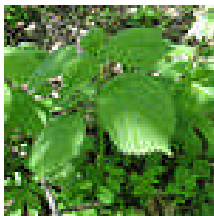
Downy Yellow Violet



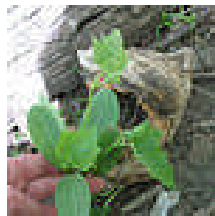
Plum



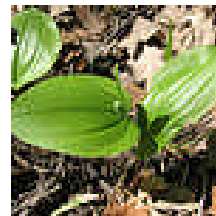
Wild Columbine



Wood Nettle



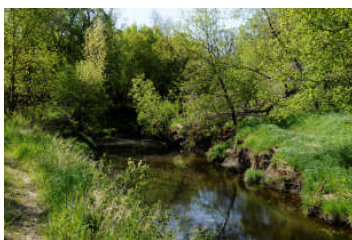
Wild Cucumber



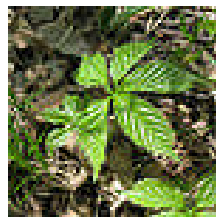
Wild Lily-of-the-valley



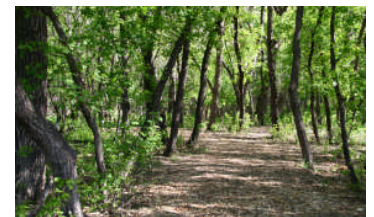
Leafy Spurge



Riparian habitat



Virginia Creeper



Deciduous trees