



# The Leaflet

Newsletter of the Morgan Arboretum

Spring 2015

Signs of Stress in Wildlife	2
The Human-Wildlife Connection Through Time	3
A Tribute to our Donors	4

## The Legend of John Watson: A New Chapter Unfolds

By Jim Fyles, Arboretum Director

As we know, the Arboretum is full of mystery.

Things happen that are hard to explain: snow vanishes from parking lots; sap buckets appear as if by magic; benches arrive; grass, long one day, is short the next; trees are cut down and then cut up; piles of firewood appear; nursery beds are tended; tracks appear in the snow; and syrup flows.

Like all things of the forest, these mysteries come with a legend: the legend of John Watson.

The legend of John Watson reaches back into the mists of time. Long ago, but not far away, a woodworker crafted a wonderful tract of land. He envisioned a special place that would bring knowledge, wonder and peace to future generations lucky enough to visit. He had a son who was destined to follow in his father's footsteps to bring the vision to reality.

John was born in the house on the corner of Chemin Sainte-Marie and Pines, as close to the Arboretum as he could get. Legend has it that he arrived with a heart murmur and had to be rushed to hospital where repairs were made. Clearly, a good job was done. From the tops of trees to the depths of night, that heart has never faltered. As John tells it, however, his heart was removed completely, thus explaining his fearsome personage. But we know better. For those of us who have looked deeply into the legend, John is among our favourite confections: tough and crunchy on the outside but with a soft, sometimes even sweet, centre.

John has been a legend in his time. Epic stories are told throughout the region of the tortures he imposed on generations of woodsmen and woodswomen as he drove them to be champions in intervarsity competitions. His axe never missed its mark; neither did his bingo patties. John held a special place in the lives of his woodsmen and woodswomen and his diploma students. Many Quebec farms are prosperous today because of the wisdom dished out with the woodchips at the 6:00 a.m. practice, which kept the farm's sons and daughters out of the bar and focused on school, at least vaguely. And along the way, John's protégés helped him to feed hoards of Octoberfesting autumn-lovers in the Arboretum and to inspire crowds of spectators at the Woodsmen competitions.

*Continued on page 5*

## Farewell, John!

An epoch of the Arboretum's history is coming to a close with John Watson's retirement. Taking after his father, Bob Watson, John has managed the forests, plantations and collections of the Arboretum with great determination for some 40 years. All the while, he was moonlighting—in this case sunrising—as an [outstanding coach](#) in the Canadian Intercollegiate Lumberjack Association league, leading the Macdonald Campus teams to triumph more often than not. Many of you have gotten to know him over the years. Join us in wishing John a happy and fulfilling retirement. Your messages will be promptly forwarded to him and will be greatly appreciated.





A cozy Barred Owl by Peter Curcis (Flickr)

# Don't Stress the Wildlife

By Richard Gregson, Chair of the Friends of the Morgan Arboretum and member of Bird Protection Quebec

**T**he Arboretum is a glorious place where so many go to simply walk under the trees and relax for a couple of hours at a time. For the most part, the wildlife —which, unlike us live here 24/7— keep out of our way (apart from the begging chickadees), but that doesn't mean that they are always comfortable to have us around. It is up to us to be aware that there are things we can do, simple things, that will reduce the stress imposed by our presence.

The creatures most affected by people and dogs are perhaps the birds so this article will concentrate on them, but be aware that most of what follows also applies to the squirrels, chipmunks, deer, coyotes, raccoons, skunks and pretty well anything else that calls this place their home.

For example, in the winter months, when birders and photographers go out looking for owls and other desirable species, there is much discussion about whether or not birds are put under stress by the activity of the birders/photographers. It is taken as almost a matter of faith by most birders that there is a huge problem, and that it is almost always the fault of the guy with the big, white lens, while on the other hand many photographers will just as ardently say that they are scrupulously careful to do no harm. In the warmer months, the call of a bird or the sight of a furry tail disappearing into the undergrowth can induce some visitors, with or without cameras, to rush off to see what it is, or the furry tail may be pursued by an unleashed dog simply because that's what dogs do. At the other end of the spectrum, simply by walking along a trail without paying attention can be enough to do harm; we must be constantly sensitive to the creatures around us.

## What causes birds and other animals to become stressed?

There are a number of different causes of stress, but some are only important at particular seasons of

the year. Amongst the most common are:

**Predators** – Birds and small mammals are constantly on the lookout for something trying to eat them, including people. If not at direct risk, they are also trying to protect their young, their nestlings and eggs from predators like squirrels and crows.

**Environmental conditions** – Too hot, too cold, too dry, too wet, too noisy, a shortage of food. This is made all the more important when there are irruptions out of normal range such as we see when the northern owls and finches come south in winter. Everything is unfamiliar to them and it all adds to the stress they are under.

**Disease and injury** – If a bird is going to die then there is little we can do about it, but if it is seemingly coping, it may still be hindered in its ability to find food and shelter and to avoid predators and thereby it is under additional stress. How do you know the creature you are looking at is not "feeling off color" or perhaps has an injured leg or wing joint?

**Competition** – Too many animals in the area and not enough food for

*Continued on page 6*



**Maciek Zarzycki**  
Pharmacien-propriétaire

88, rue Ste-Anne  
Ste-Anne-de-Bellevue (Québec) H9X 1L8

T 514 457-5681 F 514 457-8357

affilié à




HÔPITAL VÉTÉRINAIRE ANIMAL 911

www.animal911.ca

HÔPITAL  
11400 boul. Guin Ouest  
Roxboro, Québec, H8Y 1X8  
514.685. VETS (8387)

BUREAU  
566 boul. Jacques-Bizard  
Ile Bizard QC H9C 2H2  
514.696.2004

514.685. VETS (8387)

# The Human-Wildlife Connection: Past, Present and Future

By Scott Pemberton, Project Coordinator and Naturalist

The Morgan Arboretum, as many of you reading this will know, is one of Montreal's best kept secrets. This little patch of heaven is the home to an impressive array of wild flora and fauna, but is also a haven for people from all across the city, the suburbs and the surrounding regions. The remarkable thing is that this "little patch of heaven" isn't so little at all! At a whopping 245 hectares, or 600 acres, the Morgan Arboretum is a massive green space protected first by the foresight of the Morgan family and now by the unwavering dedication of McGill University. The Arboretum is home to a large variety of falcons, eagles, owls, woodpeckers, frogs, salamanders, snakes, turtles, beetles, bees, spiders, flies, foxes, squirrels, coyotes, deer, weasels, fisher, mink, otters, rabbits, mice, ravens, mushrooms, flowers, lichens not to mention trees! This variety and abundance wouldn't exist if not for the trees.

Oddly enough the bountiful wild alone is not the most amazing thing about the Arboretum. The most amazing thing about the Morgan Arboretum is that all this nature exists right beside the city of Montreal, one of the busiest cities in North America. It seems so unlikely that a nature reserve could exist adjacent to a city known for its nightlife, bustling business centers and a booming population of 1.6 million people. It is this mixture of city and nature that raises possibly the greatest question facing human society today: How can human progress coexist with wildlife?

Like Ebenezer Scrooge in Charles Dickens "A Christmas

Carol", I prefer to examine this question by looking at the past, the present and the future of human-wildlife coexistence.

## Past

Historically, wild flora and fauna have always been threatened or completely removed by human presence and the related anthropomorphic risks of hunting and the use of fire. Recent research has shown that the sudden Australian mega faunal extinction of 50,000 to 45,000 years ago occurred shortly after humans first colonized the

previously isolated continent. A 2005 study of fossils has found evidence to suggest that the arrival of humans and the effects of their activities, hunting and landscape fires, similarly drove the North American megafauna and flora extinction process of the Pleistocene. Similar evidence exists to support the same causes for the Madagascar mega faunal extinctions of the late Holocene. Additionally, after the Polynesians settled in New Zealand 750 years ago, there were drastic ecological changes and faunal extinctions again believed to be due to their fire use and hunting. All

of these large-scale extinctions changed the ecology of whole continents and were driven by numerically small groups of nomadic humans.

## Present

The plight of wildlife and nature may be in the news now more than ever. With the current global population at an estimated 7 billion people, the human consumption of natural resources is leaving less and less room for wildlife.

Atmospheric concentrations of key greenhouse gases have increased dramatically over the 20th century as a result of human resource use. In particular, studies have shown a drastic increase in CO<sub>2</sub> emissions during the time of intense human population. There is no longer any doubt that human activities are driving the currently observed global climate change.



*Red-bellied Woodpecker sampling sunflower at the bird feeder by Mathias Mutzl*



**Innovative Installation Systems for  
Ceramic and Natural Stone Tile**

Schluter Systems (Canada) Inc.  
21100 chemin Ste-Marie, Ste-Anne-de-Bellevue, QC H9X 3Y8  
Tel.: 514-459-3200 | Fax: 877-667-2410 | email: info@schluter.com  
[www.schluter.com](http://www.schluter.com)

*Continued on page 7*

# Donors

The MAA gratefully acknowledges these individuals and organizations who supported its mission in 2014-2015 through their generous contributions of money, plants, equipment and services. In addition to the donors listed below, 48 individuals have contributed donations of less than \$50 for a total of \$1,176. The sum of every dollar invested has an impact on the perpetuity of the Arboretum.

<b>MUNICIPAL</b>	CHARLES & JENNY ANDERSON	FRANCINE GELINAS	ROBERT & DIANNE ROBINSON	TREVOR H. CARON
	GEOFFREY ANDERSON & ALICE HAVEL	BARBARA GRAVES	COLIN ROSS	HELEN CARROLL
SAINTE-ANNE-DE-BELLEVUE	DAPHNE ARDELL	GEORGE & BARBARA GUILLON	JOHN & ALINE ROWEN	REBECCA CROLL & ADAM LEBLANC
	AINO ARIK	MEREDITH & JUDY HAYES	YSABEL RUPP	MARIE-BELLE & NORMAN CUNNINGHAM
<b>CORPORATION</b>	IAN & VERA ASTON	DAVID & JUDY HOLLAND	DON & JEAN SANCTON	HEIDI DALLENBACH
	DOMINION & GRIMM	CATHY & RICHARD JACKSON	PIERRE SAUVE	HENRY DEFALQUE & MARIE-CHANTAL WANET
ECHO POWER EQUIPMENT	ROBERT & KAREN BAZOS	MAURICE & JUDITH JAQUES	IAN SCOTT	PENELOPE & CARL DEXTER
FPINNOVATIONS	DANIELLE BEAUDRY	CHRISTL JEMELKA	ROBERT SCULLY	KELLY DOHERTY & RICHARD HOY
JARDIN CLEROUX	CAROLINE BEGG	PENELOPE KAMICHAITIS	ARTHUR & MARION E. SHAMA	ANITA & KEITH DUNN
MDA CORPORATION	HANS BERGER	FRED & VANDA KAYSER	BARBARA SHAPIRO	JOAN ERZINGER MEYER
MORI NURSERIES	BARBARA A. BLACK	DEBORAH & BENJAMIN KEMBALL	JEANNINE SIMON YOUNG & RICHARD YOUNG	ROD & MAUREEN FALLON
PEPINIERE CRAMER NURSERY	CAROLE BOUCHER & PAUL BILODEAU	WAYNE KILBOURNE	NICK THORNE	HUBERT GENDRON
SCHLUTER SYSTEMS CANADA	JACQUES L. BOUCHER & ELAINE CHUBRY	EMIL KOLLER	JIM & MARILYN TOOLEY	DOROTHY GLOUTNEY
<b>PLATINUM</b> x ≥ \$1000	BONNIE CAMPBELL & GILLES DURUFLE	HELEN & VLADIMIR KURGANSKY	WILLIAM & ALBINA TRETIAK	LINDA & DAVID GOODMAN
	BRUCE CASE & PATRICIA RILEY	RICHARD LAFLEUR & MANON BERNARD	NICOLE & JEAN TROTTIER	JILL GOWDEY
WILMA BROWN	LAUREL CHAUVIN-KIMOFF & R. JOHN KIMOFF	NANCY LLOYD	JEAN-RENE VAN BECELAERE & BRIGITTE AUZERO	INGE & PERTTI HAAPAMAKI
ANDREA DE GOSZTONYI	SUSAN CHILDS	IAN & MARNEY MACDONALD	GEOFFREY WEBSTER	EDITH HAMMELBECK
ALISON HACKNEY	HILDA COLLINS	BARBARA & DON MACDUFF	GREG & DALE WEIL	BARBARA HERMON
ROBERT JOHNSON	MICHAEL & KIM DAVIDMAN	HELEN MACONOCHE	MICHAEL & MARGARET WESTWOOD	RALPH & KAREN HOSKER
PETER MACARTHUR	ANDRE DE L'ETOILE & GUYLAINE BRUNET	CATHERINE MAIN-OSTER & JOHN OSTER	KEITH & MAUREEN WOOLNOUGH	MAUREEN HOWLETT
PATRICE PELLERIN & SHEILA SUZUKI	JOHN G. DENNETT	JIM & BARBARA MARCOLIN	HENRY B. & MELODIE YATES	SANDRA HUTCHINSON & PHILLIP MARCOVITCH
<b>GOLD</b> \$500 ≤ x < \$1000	HÉLENE DESPAROIS & JOSEPH BLAIN	KRISTIN MCLEISH & JOHN MORLEY	<b>BRONZE</b> \$50 ≤ x < \$100	ALEXANDRA JENKINS
	EVA DI DOMENICO	DOUGLAS MCRAE & ANDREA DE GOSZTONYI		EDWARD P. JONES
CHARLES A. CASEY	KEVIN DOHERTY & PATRICIA-ANNE SILLS	DAVID & CLAIRE MOLSON	WILLIAM ABBA	SANDY KEARNEY & JEAN-LUC TASCHEREAU
WALLACE DENVER	JOHN D. DOREY	EDOUARD MONTPETIT	STEPHEN AMI & LINDA HINK	WERNER & LOUISE KELLER
BARBARA FOWLER	BRUCE & PEGGY DOWNEY	COLIN MURRAY	DONALD & PATRICIA BAIRD	URSULA & ERICH KRAYER-KRAUSS
INGRID A. KAGEYAMA	SHAN EVANS & RAMAN NAYAR	ANNE PALLEN	ERIC & PATRICIA BENDER	BEVERLEY KYLE & ROBERT MARIEN
CAROL LAPPIN	CLAUDETTE FOURNIER & MOHAMMED GHARBI	GEORGE PANCIUK	TREVOR & BARBARA BISHOP	MARGUERITE LANE & ERIC PARSONS
ARNOLD ZWAG & STEPHANIE HAMEL	JIM & HELEN FYLES	RICHARD & JANE PICKERING	CHANTAL BOUTHAT	LENORE LEWIS & GERALD VAN DER WEYDEN
<b>SILVER</b> \$100 ≤ x < \$500	PAUL & SHARI GAGNÉ	CARL POMERANTZ & RONDA FISHER	ELIZABETH BROADY	MILTON LILLO
	SHIRLEY GAVLAS & PIERRE MARTIN	ANDREW PORTER	MARILYN CAMPBELL	
MARGOT ADAIR	HELENE QUAID	HELENE QUAID	KERR & DARLENE CANNING	
	CONNIE ROBERTS	CONNIE ROBERTS		

# Donation Amounts

Commemoration:	\$4,305	Trail Improvement Fund:	\$3,712	For a total of:
Arbo 50 Endowment Fund:	\$5,653	Road Improvement Fund:	\$2,150	\$27,152
Benefactor & Sustaining:	\$7,313	General:	\$4,019	Thank you!

TRACY H. & JOHANNAH LLOYD

LOIS MAEDER-ALVES & PETER ALVES

ISABEL MAICAS

JEAN MARIER & LISA POTHIER

WAYNE & JANET MCCARTNEY

CLARE & THOMAS MCFARLANE

DONALD MCGERRIGLE

GAIL MCLEOD-GERMAIN & PATRICK GERMAIN

NORMAN MILLER & GARRETT PHALEN

KARINE MONGRAIN & MATHIEU GELINAS

LOUISE MORIN & SERGE LAPORTE

FRED & MARNA PENNELL

CHARLOTTE SCHMID

PAUL SIDNEY & LYSON ROY

TOBBY & LYNNE SKEIE

SHIRLEY SKILLING

DOUG SMITH

DANA SMITH & MARY RIGGIN

ROBIN & CATHERINE STEWART

MARGUERITE STRATFORD & JEAN LALONDE

EDMOND TASCHEREAU

BOB & SUE TAYLOR

MARLENE & SAUL TICKTIN

DAWSON TILLEY

DAVID & PATRICIA TURNER

SUZANNE VALLEE

LEON VAN DER ROEST

MARTHE & ALAIN VERRON

MARY VITOU

MICHAEL & LILLY VONNIESSEN

DOUGLAS & CONNIE WALKINGTON

MARY WELLS

*Continued from page 1*

John is a man of the woods. Nobody is quite sure where that firewood comes from. Or how sap buckets bloom in March. Or why the syrup that follows is the best there is – certainly to those of us who rush to buy it as soon as a new crop is rumoured. The man of legend is in it all, here one moment, and vanished into the woods the next, much like the other cryptic creatures that inhabit the Arboretum.

The legend is at its best when John has the attention of a crowd. Whether a tour group, a plant sale client, a visitor in search of a trail, or all of CBC radio, John excels at engaging and informing. He loves the Arboretum and loves to talk about it. And so the legend lives on.

We may never know where the real John stops and the legend starts. But we know that the legend has emerged from one who knows and loves the Arboretum like no other, who has crafted and cared for, managed and manicured the vision as it was conceived. We owe a great debt to this legendary figure.

As I write, John is preparing to write a new chapter in his legend: retirement. With hours of owed overtime, he will launch this chapter just as the sap begins to flow. And we will miss him, especially his crusty exterior with the soft centre. Having listened to many stories and remembrances over the past weeks as we have recalled life with John, I know that the legend will live on.

## Senneville is back on board!

Thank you to the Village of Senneville for reinstating its support of our membership for the coming year (2015-2016). Senneville residents will benefit from a 33% discount on their membership fees, while Sainte-Anne-de-Bellevue residents get a 20% break, as they did last year. Please pass the word on to your neighbours and friends about our subsidized memberships. Cheers to those who plead in favour of better support for forest conservation!

We wish John a very long, productive and happy retirement. He says that he will be enjoying sleeping in on those early mornings when the snow calls out to be cleared, or when the sap buckets groan and spill over. Somehow, I don't believe him. And who knows? According to legend, the snow will mysteriously disappear and the syrup will flow. 🍯

PRÉSERVATION DES ARBRES MATURES  
CARE AND PRESERVATION



Élagage/Pruning  
Fertilisation/PHC  
Haubanage/Tree Guying  
Plantation & Evaluation

Jesse Bouchard-Nestor  
Arboriculteur certifié  
certified arborist  
QU-0102A



WWW.ARBORFOLIA.COM  
514.457.7555

RÉSIDENTIEL - MUNICIPAL - INSTITUTIONNEL



Continued from page 2

them all; the need to find, claim and hold territory or attract a mate. Happens to most birds every season but those that are less successful, maybe because they are younger and lack experience, are under particular stress. A bird stressed by competition doesn't need a too-close photographer or birder or simply noisy walker not paying attention to add to their problems.

**Disturbance** – Just by being there we cause animals to be wary. Walking along in noisy, chattering groups, swinging a stick at the undergrowth, wearing overly-bright clothing and letting our children squeal or our dogs off-leash and away from our sides, going off-trail ... all of these behaviors contribute to adding stress to the wildlife and are so easy to avoid.

All these small but constant stressors add up and can contribute to birds and mammals being less successful in their chosen habitat/environment than might otherwise be the case.

### **What general signs does a stressed bird show?**

A really stressed bird or mammal will do the obvious. You get too close and it's off and away, but just because it doesn't always depart in a hurry doesn't mean that it is not more than a bit worried about something, and probably about you. Some of these signs are quite subtle and they vary with species and season but, as well as rapid flight, you should be aware of and look for such things as a bird suddenly freezing and pausing what it was doing, signs of aggression or the utterance of alarm calls, twitchy motions and diversionary behaviors such as atypical preening. If you see any of these behaviors, you should back off slowly and immediately.

A very interesting posting was published in the blog by Christian Arturo, an owl specialist who lives in Winnipeg and works for Bird Studies Canada. I would recommend that anyone going out to look at owls read this in detail, but I will summarize his findings below.<sup>1</sup> Although these points were developed with special relevance to owls, they in fact apply equally to almost all the birds you will happen across in the Arboretum at any time of the year.

Birds may give vocal signs of alarm and stress if you get too close, all the more so if they have a nest. You owe it to the birds to be able to distinguish the alarm calls from

the normal “communication” calls—you may owe it to yourself, too, as some birds will, albeit very rarely, attack you if all else fails.

The birds may look as if they are not worried by your presence but there can be changes in their posture that should indicate otherwise. For example, the Eastern Screech-Owl will become more elongated (tall and thin). Check the eyes too, especially in species that have yellow eyes. You may think its eyes are closed and that it is quietly dozing but, if there is any hint that it is squinting at you through a narrow slit, then it is certainly stressed by your approach.



*Great Gray Owl with rictal bristles up showing nostrils Photo: Tambako the Jaguar (Flickr)*

This one is a bit specialized and involves owls and you will need binoculars. Great Gray, Boreal and Snowy owls have their own way of showing concern. To quote from Arturo's text: “Look closely at the rictal bristles (the long thin feathers at the base of the bill). These feathers normally fall over the nostrils to protect them from dust but they are raised here leaving the nostrils clearly visible. This clue may be subtle and is not always easy to see under field conditions, but it is a key indicator! If you see this behaviour, back off immediately! An owl in this state of alert may seem to be “frozen” and may remain motionless for quite a long period but never mistake that lack of action for tolerance—this owl is not happy and could even choose to attack.”

There are a good number of owls in the Arboretum and people always want to see them—that is understandable but take a look, take a quick photograph and move on.

Other species of birds have similar responses—subtle, but present. For example, look for fluffing of feathers to make the bird seem larger, postural changes with shoulders raised and wings “ready” for use, nervy movements and the emitting of alarm calls.

### **Do all birds react badly to stress?**

That depends on so many things but it does seem that some species are better able to handle stressors than others are. A very interesting paper by Lendvai et al.<sup>2</sup> reported that “Species with larger brains relative to their body size show lower baseline and peak glucocorticoid

levels than species with smaller brains... Because a large brain is a major feature of birds that base their lifetime in learning new things, our results support the hypothesis that enhanced cognition represents a general alternative to the neuroendocrine stress response.”

In other words, we might assume that larger, brighter birds can cope better than small and not so clever birds ... or, maybe crows can take it better than warblers. But for all that—look for the signs mentioned above. Larger-brained species are generally able to learn from situations and adapt once they find they are not at risk, or are at a low level of risk, whereas other, dumber, birds just beat a retreat every time and pay the price if it happens too often.

The Smithsonian summarized the findings of this group thus: “ ... for birds at least, stupid is as stupid does whereas the gift of intellect keeps perpetually giving.”<sup>3</sup>

### **But I just want to see the bird ... I don't mean it any harm!**

How many times do we hear that self-serving excuse? Yes, of course we do all want to see the bird and most of us are too readily inclined to put our needs ahead of theirs. In an ideal world for birds we would probably not go near them (not going to happen in the real world – right?) but there are some things we can all do to minimize stress and conflict.

Never forget that the bird does not know that you don't mean to harm it. It has survived this long by assuming anything bigger than it is probably sees it as a potential meal and it acts accordingly. Move smoothly and quietly and be prepared to stop; keep your voice low and your

children quiet. When you see a bird, examine it first with your binoculars from a distance and try to determine if it is stressed by your presence, or by something you may not be aware of. Always assume it is stressed until you are sure it is not. If you decide to approach then do so at an angle rather than walking directly towards it. Raise your binoculars slowly and particularly raise your camera slowly and smoothly. Many birds

are scared off by a big bit of glass staring at them (as they see it). Have suitable optics and cameras so that you do not have to get too close in the first place. Once you have seen what you want to see, then back off carefully or continue along the trail and get out of the bird's territory.

### **In summary**

Remember that it is not only humans that cause stress to birds, so you don't need to feel guilty all the time and assume that the signs of stress you have identified are necessarily in response to your presence. There might be a squirrel creeping up on their eggs for example, but we don't want to make matters any worse for the birds than they already are by our own actions.

Just pay attention to the behaviour, the attitude and the calls of every bird and other creature that you see and assume it is stressed until you can demonstrate otherwise. Don't get too close. Don't get closer than you are too soon or too rapidly and be prepared to back off. When you have seen your fill move along. Keep quiet and try to avoid large groups.

Remember that, for the most part, the wildlife in the forest copes with our presence, but it is so easy to do something silly and thereby cause them stress. Simply moving through the forest in a state of awareness is really all we need to do. Remember, we are the invited visitors into their home. 🌿

---

<sup>1</sup> Blog Christian Arturo, Sunday Dec. 7, 2014, Signs of stress in owls, [Link](#)

<sup>2</sup> Proceedings of the Royal Society B (2015), 282

<sup>3</sup> The Smithsonian “Bigger-brained birds keep their cool under pressure” [Link](#)

---

*Continued from page 3*

### **Future**

The Population Division of the United Nations Department of Economic and Social Affairs estimates that the global human population will reach 9.3 billion by the year 2050 (United Nations 2011). With this drastic increase in human population, water, food and energy will be in high demand. Currently oil, gas and coal, three non-renewable energy sources that are relied upon for human energy needs, have known reserves estimated to disappear by 2049, 2079 and 2209 respectively. The prospect of vanishing fossil fuel reserves will lead to new exploration sites perhaps in previously untouched natural areas and may even occur in protected wildlife reserves.

After such a bleak look at the past, present and future of human interactions with nature you might be excused for

*Continued on page 8*

33, rue St-Pierre  
Ste-Anne-de-Bellevue (Québec)  
H9X 1Y7  
Tél.: (514) 457-5731  
Fax: (514) 457-5731

MARCHÉ J. RAYMOND RICHARD  
ET FILS INC.



**MARCHÉ RICHELIEU**

Planting  
Pruning  
Tree Support  
Evaluations and more...

Plantation  
Élagage  
Haubannage  
Évaluation et plus...

**514 457-7555 ARBORFOLIA.COM**

The birds overwintering at the Arboretum are fed by:

Bird Protection Québec  
Protection des oiseaux du Québec

[www.birdprotectionquebec.org](http://www.birdprotectionquebec.org)

Continued from page 7  
thinking that the Morgan Arboretum is a figment of my imagination or that a healthy nature reserve filled with life couldn't possible exist next to 1.6

million people. But I assure you the Morgan Arboretum is very real, and it exists as it does because of the dedication of people. The same organism responsible for all the damage mentioned above.

whole minutes? Not even movies can do this anymore. The people of Montreal understand their connection to nature. That's what gets skiers out in any weather all winter.

Ron Thomson, a famous South African Wildlife Manager, wrote in his 1992 book *The Wildlife Game*: "The future of the world's wildlife lies no longer in the hands of qualified ecological scientists or practicing wildlife managers. The future of the world's wildlife now lies in the hands of the first World Public." I, for one, think nature is in pretty good hands. 🌿

## Morgan Arboretum Association

Established in 1952



**Dedicated to forest conservation and environmental education**

### Morgan Arboretum

21,111 Lakeshore Road P.O. Box 186  
Macdonald Campus  
Sainte-Anne-de-Bellevue, QC, H9X 3V9

**Tel.:** 514-398-7811

**Fax:** 514-398-7959

**Email:** [morgan.arboretum@mcgill.ca](mailto:morgan.arboretum@mcgill.ca)

**Web Site:** [www.morganarboretum.org](http://www.morganarboretum.org)

### THE LEAFLET

is published in English and French, twice a year in April and September

English revision:

**Betsy McFarlane and Jenny Anderson**

French translation:

**Anne-Marie Pilon**

Cover page photograph:

**Barry Soleman**



**IMPRESSION NUMÉRIQUE, ENSEIGNES et GRANDS FORMATS**

Brochures ■ Dépliants ■ Cartes postales ■ Accroches-portes ■ Affiches  
Cartes de souhaits ■ Pochettes ■ Cartes d'affaires ■ Autocollants  
Calendriers ■ Signets ■ Enseignes ■ Coroplaste ■ Bannières rétractables  
Stand pour bannières ■ Présentoirs ■ Oriflammes ■ Drapeaux-plumes  
Chevalets de trottoir ■ Cadres lumineux ■ Habillage de véhicules

 **Infografilm**  
IMPRESSION NUMÉRIQUE ET GRAND FORMAT

[www.infografilm.com](http://www.infografilm.com) • **COMMANDEZ EN LIGNE!**

**450 200-2002**

1694, boul. de la Cité-des-Jeunes, Les Cèdres (Québec) J7T 1K9