



Fall 2014

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The Leaflet

There is nothing like those lazy days of summer

by Jim Fyles

Director of the Morgan Arboretum

Today, as I write, summer is in full hum. Resting in a pool of silver maple shade, I am bathed in humid air and the summer fragrance of fields and woods. The soft breeze carries news from a thousand insects pattering about their daily lives, taking advantage of the heat and summer's profusion of flowers. Outside of my pool of shade, the sun presses down, everything subdued by its brightness, except the hum.

On this day, walking into the woods is like entering a cave. After the brightness, it takes a minute for eyes to adjust. The hum rises in pitch. The fragrance changes. The pace slows. The rest of the world drops away, a bit more with each step. In the green light, the peacefulness is so thick you can almost breathe it in. Away from it all, the Arboretum is at its best in summer: a lazy place for a lazy day with nowhere to be and nothing pressing.

But look beneath this surface of calm and you will find the Arboretum staff – and a maelstrom. The summer is short and there is so much to do, even for almost a dozen people: weed the nursery, cut the grass, meet with the film people, plan renovations to the chalet, organize a purchase order, measure tree growth, do an activity with visiting day campers, plant shrubs on the pipeline, find photos for the calendar, fill in the paperwork for a new truck, tune up the generator, check for Bobolinks in the hayfield, set out the mosquito traps, trim the bushes, cut the grass again, worry about the wet patches in the road, order gravel, fill in time sheets, communicate with Canada Summer Jobs, plan for vacations, coordinate gate keepers, keep an eye on the tree trimmers, run transects to see if there are any ticks, follow up on tardy memberships, pester the Director for an article for the newsletter, take reservations for visiting groups in the fall, meet with the LBP School Board folk to discuss class visits, plan an interpretive activity, empty the garbage cans, cut firewood, fix the door, respond to queries from accountants, check the prices of cameras, answer the phone, send an email, answer the phone again, tell a visitor about the trails, record a complaint about an unruly dog, answer the phone again, check tree growth, cut the grass, check the account balance, write an article for the newsletter, make a signage plan, respond to a request about ferns, plan for the Emerald Ash Borer, send an email, receive six, look for 'danger' tape to put around a nesting area, think about fall activities, cut the grass again, make sure everyone gets paid, check if the Monarchs have arrived, worry about

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Great Horned Owl raises young

By Richard Gregson
Chair of the Friends of the Morgan Arboretum

This year, probably very few visitors to the Arboretum realized that, from late winter into late spring, they were walking or skiing within just a few feet of a Great Horned Owl's nest. On the other hand, the owls themselves seemed unconcerned by the passing groups of people, although you can be certain that the parents were watching closely.

The Great Horned Owl (*Bubo virginianus*) is our largest owl species, with a length of up to 25 inches and a wingspan of between three and five feet. It is a regular breeder in the Arboretum. Highly efficient nocturnal hunters, these owls seek out anything that is not likely to fight back: small rodents, hares, squirrels, skunks and birds as large as geese, including even other large raptors. Great Horned Owls have a powerful beak and formidable talons; they use the latter to kill their prey by severing the spinal cord. They have also been known to use these weapons to defend their nests from perceived threats, including

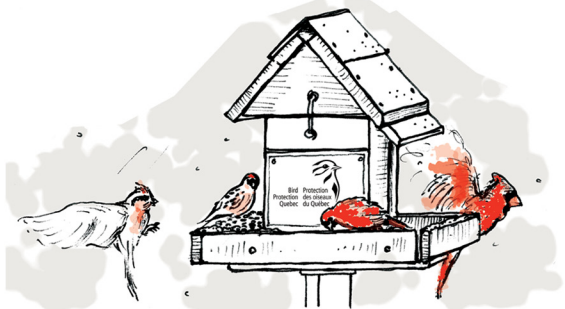


Illustration : Nature Artistica

The birds of the Arboretum are fed by



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any humans who get too close, although this has never been a problem in the Arboretum. Great Horned Owls do not build their own nests but instead refurbish nests built by other large birds, usually raptors such as Red-shouldered Hawks. The clutch of two or three eggs is incubated by both parents for about four weeks before they hatch. The young, who remain in the nest for another six weeks, are covered in white, downy feathers, and look quite different from their parents.

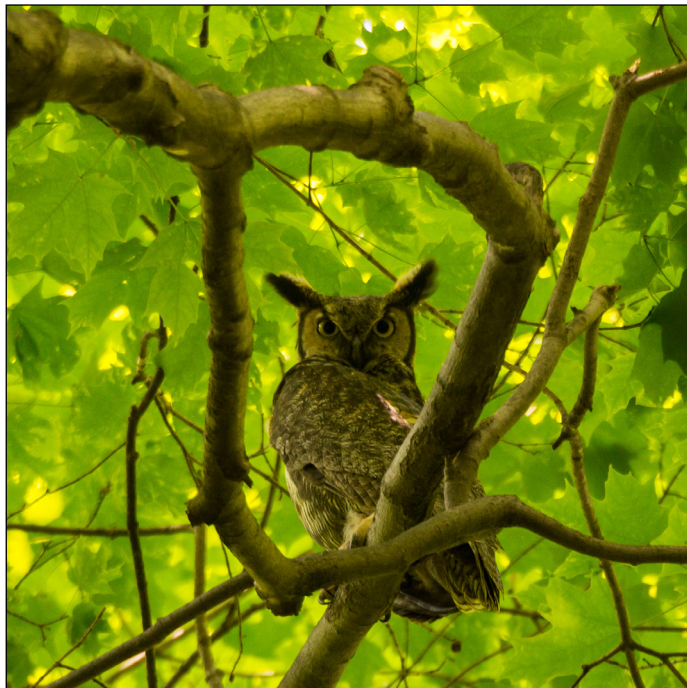


A curious young prince considering the photographer from it's observation tower by Richard Gregson

This year, the owls' large nest was high up in a tree right

beside one of our busiest trails, discovered only when the tips of an adult's tail feathers were seen sticking out over the edge of the nest. The angle of view made it impossible to see what was happening inside.

Since the adults were so evidently attached to the site, we assumed young had hatched but had no evidence until quite late in May, when a large-eyed white juvenile was seen peering over the edge. By this stage, the youngster was well developed and growing rapidly. Subsequent visits revealed the curious face of the young owlet and occasionally the adult, perched on a nearby branch and glancing back and forth between its offspring and the person below. So, at least



An attentive parent by Michel Bourque

one owl fledged, although we will never know if there was a second owlet as only one was seen at a time. A week or two into June, a tremendous and prolonged rain storm battered this area for over 24 hours and, shortly afterward, the adults and their young owlet decamped.

The Arboretum contains owls of several species. In addition to the Great Horned Owl, we have nesting Barred Owls, North-

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ern Saw-whet Owls and Eastern Screech-Owls. Long-eared Owls also make rare appearances, although they are usually only heard hunting the edges of the forest at night, and Great Gray Owls can be found some years in winter. For obvious reasons, the Arboretum does not publicize the presence or location of owls and especially of their nests because we do not want them disturbed. However, if you ask a local birder, you, too, might be fortunate enough to be in the presence of one of these enigmatic and beautiful creatures. 🌿

Continued from page 1

them, lay out the calendar, send the newsletter text to be translated...take a few days off... and look toward the fall.

Sometime around Labour Day, an imperceptible change of air signals that fall is easing its way into the Arboretum. The Monarchs still flit but seem to have Mexico on their minds. Mushrooms arrive overnight. Seeds take the place of flowers. The woods are still in the warmth of Indian Summer, everything waiting for the summer hum to transform into the autumn swish of leaves underfoot.

On a day like this, walking into the woods is like entering a cave: one that glows gold and auburn in the slanted rays. With the woods wrapped in color, light and an autumn aroma, the rest of the world drops away, a bit more with each step. In the golden light, the peacefulness is so thick you can almost breathe it in. The Arboretum is at its best in autumn: a lazy place for a lazy day with nowhere to be and nothing pressing. 🌿

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An overview of the 2015 calendar

Thank you to all photographers who shared the best of their work



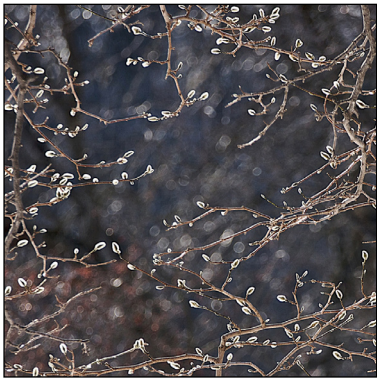
01 Peter Stubley



02 Tom Kingsbury



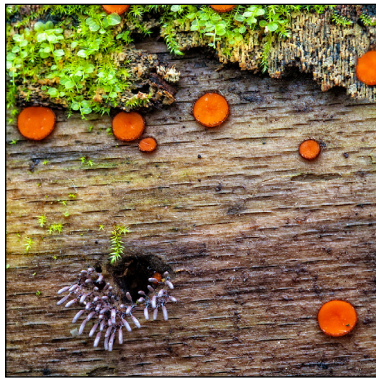
03 Michel Bourque



04 James Cornish



05 Paul Scheiwiler



06 Manon Boily



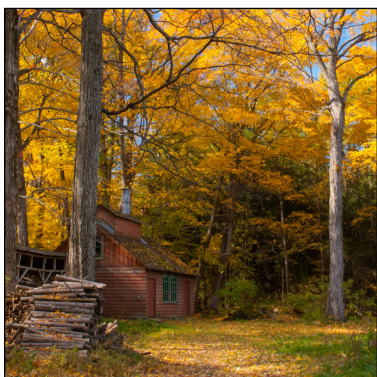
07 André Rouleau



08 Max Kagayama



09 Meredith Flannery



10 Michel Bourque



11 Michel Bourque



12 Frans Lecluse

Research at the Arboretum Summer 2014

By Mariana Di Mauro and Scott Pemberton
Naturalists

When McGill University acquired the Morgan Arboretum property in 1945 it was established as a place for teaching and research related to woodland resources. It is also a location for public outreach and recreation. This blend of scientific and public use is the epitome of Nature Conservation – the practice of protecting natural habitats for the sustainable use by people and wildlife alike. In order to responsibly manage this natural area, research must be done to properly understand the ecosystem. This summer, the Arboretum is becoming an exciting place to work with several brand new projects and many returning projects which examine plants, insects, amphibians and mammals.

Providing housing for bats

Quebec’s bats are facing serious trouble with no solution in sight. White-Nose Syndrome, identified by a white fungus that grows around the muzzle of the bats, is decimating populations across North America. The Morgan Arboretum is proudly joining the Canadian Wildlife Federation’s “HELP THE BATS” campaign by putting up bat boxes and monitoring them monthly. Individuals can also join this citizen science campaign by installing bat boxes at home. No bats have been observed in the Arboretum boxes yet but monitoring will continue and we hope to see bats using them soon! Thank you to the West Island Explorers Scouts for their generous donation of home-made boxes.

Studying the conditions of tree growth

For the third consecutive summer, Ar-



boretum researchers are measuring tree growth on 200 of our trees. Dendrometers, small metal bands wrapped around tree trunks, expand with the tree growth and display the tree’s diameter. This study is examining which factors (soil properties, light access, nutrients, water availability and climate) impact tree growth, and to what extent. With dendrometers on birches, aspens, pines and spruces researchers can study a diversity of species. It isn’t called an ARBOretum for nothing!

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<p>Saturday, October 4, 2014 Bilingual, from 10 am to 12-noon</p> <p>Fiery Foliage</p> <p>Take part in a walk to discover the natural phenomena behind leaf colour change.</p>	<p>Saturday, October 11, 2014 In English, from 9 am to 12-noon</p> <p>Put Your Garden to Rest</p> <p>Take a morning to learn about how to prepare your favorite garden plants for the long winter ahead.</p>
<p>Sunday, October 5, 2014 In English, from 12-noon to 4 pm</p> <p>Oktoberfest</p> <p>Come for an enjoyable day at the Arboretum and find out about research projects happening here.</p>	<p>Saturday, November 1, 2014 Bilingual, from 7 pm to 9:30 pm</p> <p>Nocturnal Rummage</p> <p>Come and discover the secret life of those nocturnal creatures which we seldom see.</p>

Snooping on ticks and Lyme disease

Lyme disease, which was not even truly recognized in Quebec before 2006, is rising in the southern region of the province. Transmitted to humans from Black-legged (or Deer) Ticks, this disease can cause arthritis, neurological problems, cardiac arrest and in extreme cases: death. That’s why researchers at the Arboretum have started a tick monitoring protocol. The study involves drag nets to capture ticks and trail cameras to monitor the activity and numbers of both White-Tailed Deer and White-footed Mice. Deer are a common host for ticks and the mice act as a reservoir for the bacteria that causes Lyme disease.

Remember to check yourself and your dog(s)

for ticks after visiting any nature park, since Lyme disease (which is only transmitted in about 1% of tick bites) can only be transmitted if the tick remains engorged on the skin for more than 24 hours.

The Royal Astronomical Society
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Saturday, October 4, 2014

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Saturday, October 25, 2014

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Securing the Monarch’s main food source

Monarch butterflies have grasped international attention due to their beauty, vast migration patterns and more recently as a result of their global decline. The larva of this vibrant species thrives on the leaves of the milkweed despite the toxic latex which this plant produces. This milkweed diet gives the Monarchs (both larvae and subsequently the adults) a chemical defense against predators (i.e. birds). Since milkweed is growing in abundance here, the Arboretum staff has set up a Monarch Way Station to preserve this optimal habitat and to monitor this threatened butterfly’s presence in the Arboretum.

Trapping mosquitoes and tracking the West Nile virus

It is no secret that mosquitoes take over the Arboretum in the spring and early summer and that bug spray acts only as a slight deterrence to their attack. This, in conjunction with the increased number of cases of West Nile virus in Canada, struck our naturalist, Chris Cloutier’s, interest enough to study the pesky insect. By setting up mosquito traps in various habitats ranging from volunteers’ backyards in some local suburbs (Baie D’Urfé and Sainte-Anne-de-Bellevue) to ones in the sugar maple and beech stands at the Arboretum, Chris hopes to identify the distribution of different species of mosquitoes in this area. This may provide insight into where species that host the West Nile virus is the most likely to be found.

This in turn will allow the Arboretum to inform the public and provide them with important preventative measures. Unfortunately, while Chris will be removing a couple of hundred thousand “mozzies” from the wild, this will hardly dent the total population!

Inventorying mushroom diversity

The Arboretum might be better known as the FUNGa-retum because while the trees are on prominent display, the fungal life here is plentiful but better hidden. Every year Renée Lebeuf and André Paul of the “Cercle des mycologues de Montréal” record the mushroom inventory in the Arboretum. They identify all the different

species of mushrooms and determine if there are rare species on the terrain, and there are! Over the years, they have found that the Arboretum is one of the most diverse sites for fungi known in the province.

Investigating the salamander’s population genetics

Today the theory of evolution is widely accepted as the driving force for the changes that we see in the natural world. Integral to evolution is the concept of genes – the molecular unit of all living organisms, and gene expression - how genes impact the

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characteristics of an organism. France Beauregard of Université de Montréal is studying genetic variation within the Blue-Spotted Salamander, a species which lives in a wide variety of habitats and whose development is strongly influenced by the quality of their environment. This study is attempting to determine how gene expression makes salamanders succeed in their different habitats.



*The Monarch caterpillar under surveillance
by ashockenberry (Flickr)*

Resisting Emerald Ash Borer

Our ash trees are under fire! No, not actual forest fires, ash trees across Canada are being threatened by the Emerald Ash Borer (EAB), a green beetle that is rapidly gaining a foothold in the Montreal area. The EAB infestation may wipe out all of the island’s ash trees in the next five to ten years. The Arboretum will be applying the TreeAzin injection treatment on some specially selected trees, in the hopes that these candidates can survive until a long term solution for EAB is discovered. TreeAzin is injected under the tree’s bark, directly into the conductive tissue where it is then carried upward throughout the tree naturally. Effective for two years a TreeAzin

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treatment kills the infested larvae, reduces egg viability on the tree and has been shown to reduce female EAB fertility.

Understanding squirrel's and chipmunk's behavior

Studying how various species react to different environments can shed some light on how certain species forage and coexist. Since 2003, a group of students from the Université du Québec à Montréal (UQAM) have been carrying out a research project at the Arboretum studying the behavior of the Red Squirrel, the Eastern Grey Squirrel and the Eastern Chipmunk. Under the supervision of Dr. William Vickery the research team is attempting to understand and predict how a species' optimal behavior would shift with changes in the environment. This is being done by creating artificial food patches set up in a variety of forest types found in the Arboretum. Through this research they hope to determine how these species evaluate their environments and how foraging behaviors may affect coexistence between the three species.

Nature is facing more threats than ever with global climate change, pollution and urbanization. Furthermore, some experts think that humans are suffering from "Nature Deficit Disorder" – behavioral problems associated with lack of exposure to nature and overexposure to electronics and video screens. The research at the Arboretum aims to unveil secrets that can help our government protect our valuable species, inform the local public about the nature they see every day and get all ages excited and re-interested in nature. Clearly, we could use some more time in nature, and nature could definitely benefit from some more human help.

ATTENTION: With such exciting projects happening at the Arboretum, there are traps, feeders, cameras and other funny looking research equipment set up on the grounds. We encourage visitors to take a look at the equipment, but please refrain from touching or interfering in any way. A species' existence may be on the line! And a graduate student's career certainly is! 🌿

Arboretum

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Morgan Arboretum

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Bottom Forest edge by **David Inglis**

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Fall forest scene by **Paul Scheiwiller**

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