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WINTER | HIVER 2010
vol.12_ no.1 | 8.00$

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Covers | Couvertures :
Cover Photo JEAN LANDRY
Photo above RYAN JAMES
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LANDSCAPES | PAYSAGES has been generously supported by the Landscape Architecture Canada Foundation. |
LANDSCAPES | PAYSAGES bénéficie d'un important soutien financier de la part de la Fondation d'architecture de paysage du Canada.

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LANDSCAPES PAYSAGES

ISSN 1492-9600

Published by | Publié par :
naylor
Naylor (Canada), Inc.
100 Sutherland Avenue
Winnipeg, MB R2W 3C7
Tel.: 204.947.0222
Fax: 204.947.2047
www.naylor.com
Publisher | Éditeur :
Robert Phillips
Naylor Editor | Rédactrice (Naylor) :
Leslie Wu
Project Manager | Directrice de projet :
Kim Davies
Book Leader | Ventes publicitaires :
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Mise en page et conception graphique :
Emma Law
Advertising Art | Art publicitaire :
Christina O'Connor

Return undeliverable Canadian addresses to:
Naylor (Canada), Inc., Distribution Dept.
100 Sutherland Ave., Winnipeg, MB R2W 3C7
Canadian Publication Agreement #40064978
PUBLISHED FEBRUARY 2010/CSL-Q0110/9796

CITY LIFE | VIE URBAINE

JULIETTE PATTERSON, GUEST EDITOR | RÉDACTRICE INVITÉE

PHOTO DENIS BERNIER

En 2004, je me lance dans le remplacement de ma toiture en asphalte et gravier par une toiture végétalisée. J'engage un couvreur dont le manque d'expérience est compensé par une enthousiasme débordant. Désastre! Après des semaines de délais, le couvreur disparait, et je me retrouve avec un toit qui coule, des plantes mortes, et un chantier abandonné au mois de janvier.

Les toits verts étaient alors peu nombreux à Montréal : personne ne voulait y toucher. J'ai bien failli abandonner…mais heureusement j'ai continué, grâce à ma mère qui ne m'a pas lâchée. Aujourd'hui j'ai un jardin sur mon toit, avec des vues magnifiques sur le centre-ville de Montréal.

Dans ce numéro, vous découvrirez les projets pilotes précurseurs de la ville de demain : l'élevage d'abeilles sur le toit d'un hôtel torontois, l'agriculture urbaine sur le campus universitaire de McGill, l'apparition spontanée d'un milieu humide sur un site désaffecté de Vancouver… Autant d'exemples qui laissent place à la nature en ville, et témoignent d'une évolution positive en profondeur de la société.

In 2004, inspired by the possibilities, I decided to turn my asphalt-and-gravel roof into a green roof. I hired a roofer with no experience but plenty of enthusiasm. It was a disaster! After weeks of delays, the roofer disappeared, and I was left with a leaky roof, dead plants, and an abandoned construction site in January.

Back then, green roofs were few in Montreal, and no one would touch it. I very nearly gave up – but my mother didn't let me! Now I have a garden on my roof, with magnificent views of downtown Montreal.

Persistence (or perhaps stubbornness) pays off – as we hope you will discover in this issue. The individual initiatives we explore here bode well for our future cities: beekeeping on the roof of a Toronto hotel… urban agriculture on the campus of McGill University…the spontaneous emergence of a wetland on a Vancouver brownfield. City dwellers are finding ever more ways to make space for nature. These stories bear witness to deep changes within society and a positive evolution of our values.

"Genius is 1% inspiration and 99% perspiration."
« Le génie demande 1 % d'inspiration et 99 % de transpiration. »

... A. EINSTEIN

1 2

WHY BIODIVERSITY WORKS

DOUGLAS JUSTICE

version française : www.aapc.ca

LE SECRET DE LA BIODIVERSITÉ

Plutôt que d'utiliser des pesticides, le Jardin botanique de l'UBC mise sur l'effet régulateur de la biodiversité. Selon le directeur adjoint Douglas Justice, le contrôle des ravageurs est en réalité une illusion écologique. « Les systèmes naturels se régularisent eux-mêmes lorsqu'ils augmentent en complexité, dit-il. Plus nous diversifions nos plantations, plus notre écosystème résiste. » La biodiversité des sols, elle aussi, est essentielle. Dans le jardin botanique, les arbres plantés dans les sols forestiers non perturbés, où la microflore et la microfaune sont probablement intactes, démontrent plus de vigueur.

Les écosystèmes sains et bien établis sont essentiellement stables et autoreproducteurs.

1 SANS UNE INTERVENTION RÉGULIÈRE, UN CHAMP CULTIVÉ SUCCOMBERA AU DÉSORDRE **2** LE FEU : UN PROCESSUS DE SUCCESSION NATURELLE OU UNE PERTURBATION CATASTROPHIQUE? **3** IL N'Y A PAS QUE LES PLANTES QUI DOIVENT ÊTRE DIVERSES. LES HABITATS AUSSI. **4** LES ABEILLES SONT SPÉCIALEMENT VULNÉRABLES AUX PESTICIDES.
PHOTOS UBC BOTANIC GARDEN

▶ A little more than a decade ago someone got the crazy idea to stop applying pesticides at the UBC's Botanical Garden. I wasn't there at the time, so I can't say whether it was an aversion to the hassle of mixing chemicals, the always sweaty struggle of donning a protective jumpsuit and rubber respirator mask, or a deeper consideration of human health and the environment. It was probably all of the above. There was never much pesticide use in the garden to start with, but herbicides were used to keep pathways and shrub beds clear of weeds, and the garden's fruit trees, vegetables and soft fruits were routinely treated with a variety of synthetic fungicides and insecticides. We use only "organic" techniques today, but outside the food garden, we've basically adopted a laissez-faire attitude to pests and diseases. We can do this because it appears that biodiversity works better than pesticides.

THAT PEST IS SOMEBODY'S DINNER

Ecosystems are defined as communities of organisms and their physical environments acting as an inter-connected unit. The more complex and extensive, the more resilient the ecosystem (think: the Atlantic Ocean or Amazonia). Such ecosystems are rich both in biodiversity and in the environments and microenvironments that support life. Resilience describes the capacity of the ecosystem to be essentially unaffected by or protected from the long-term effects of disturbance. Fire is a common form of ecological disturbance, as are pests. Under ideal conditions, the impact of any one pest is minor because other organisms compete with it for nutrients, light or space, and increasingly prey on or parasitize it as its numbers rise. In that sense, it isn't so much a pest as somebody's dinner. On the other hand, an unchecked infestation usually means that natural controls (such as predators or competitors) are not functioning as they would under normal

3 4

Established, healthy ecosystems are basically stable and self-perpetuating

conditions. It's not hard to see that if songbirds are absent from an area, insect populations rise. Established, healthy ecosystems are basically stable and self-perpetuating, able to buffer the effects of a variety of disturbances – but change is a constant, and all ecosystems adjust over time, especially after catastrophic disturbance. If the climate changes, for example, some species (like humans, cockroaches and rats) are able to adjust. Others have move to where the conditions suit them. That is, if they can.

Most environments touched by people are disturbed one way or another. Any form of gardening is, in the ecological sense, disturbance. A cultivated plot represents a highly unstable, disturbed ecosystem and the more we intervene, the worse it gets. Left alone a garden or a farmer's field soon reverts to something wild – wild not in the native sense, but in the sense of being invaded by a host of aggressive opportunists. Weeds are pioneering organisms adapted to exploiting a wide range of habitats. Gradually, the pioneers are replaced by more specifically adapted plants (primarily natives), and ecosystem complexity and biodiversity increases, until the next significant disturbance sets it back once more.

WAVES OF DISTURBANCE

Waves of disturbance wash over our cities and it often seems a battle to retain control. This shouldn't be surprising, however, as control is really an ecological illusion. In Vancouver, European chafer adults congregate near streetlights and lay their eggs in lawns nearby. The eggs hatch and the chafer grubs feed on the roots of the turf grasses. Skunks, crows, raccoons and European starlings dig up lawns in search of the chafer grubs, but there are always enough of the insects that survive to reproduce. This is the description of an ecosystem. Organisms interact and organize themselves around environments, and while this example might not be pretty (which organism is the pest, by the way?), it does illustrate the tendency of natural systems to increase in complexity, to persist and ultimately regulate themselves. In terms of the urban landscape, this is our ace in the hole; as we increase biodiversity in our plantings, the more stable and pest resistant our ecosystems become.

Garden practices should help to maintain or increase biodiversity, reduce disturbance and encourage systems to develop or redevelop where disturbance has disrupted them. It is now common knowledge that monocultures – particularly clonal monocultures – are exceptionally vulnerable to pests and disease. The corollary is that increasing the variety of plants in the landscape (and the space between similar and identical plants) makes a significant difference in reducing the magnitude and impact of pest outbreaks. Increasing the diversity of habitats, micro-habitats and food sources using different kinds of plants (including dead material), taking advantage of landforms, natural materials and built structures to create microclimates, and the elimination of pesticides will all tend to increase biodiversity. Particularly important in the urban context is protecting or creating bird habitat. Small birds, such as chickadees are surprisingly adept at keeping insects in check. Dense, twiggy shrubs, the provision of water and food sources (and keeping housecats indoors) will encourage birds and other small vertebrate predators. →

1 WITHOUT REGULAR INTERVENTION, A FARMER'S FIELDS WILL REVERT TO SOMETHING LESS ORDERLY **2** FIRE: A NATURAL SUCCESSIONAL PROCESS OR CATASTROPHIC DISTURBANCE? **3** BIODIVERSITY IS ABOUT HABITATS **4** HONEYBEES ARE PARTICULARLY VULNERABLE TO PESTICIDES
PHOTOS UBC BOTANIC GARDEN

THE INSECT-EATING VARIED THRUSH HAS FUN WITH BERRIES | LA GRIVE À COLLIER INSECTIVORE S'AMUSE AU MILIEU DES BAIES.
PHOTO UBC BOTANIC GARDEN

→ FUNGUS AND COMPOST TEA

Finally, soil biodiversity is a subject little appreciated by the lay public, but one that is now widely recognized in the scientific community as essential in plant and ecosystem health. For example, we now know that fungal associations with plant roots (mycorrhizae) are extremely common. Fully 80 percent of all plant species are known to have mycorrhizal associates. In the Botanical Garden, staff have found that planting trees into undisturbed forest soils, where the microflora and microfauna are presumably intact, results in better establishment, vigour and disease- and drought-tolerance than when the same trees are planted in prepared soils where the biota is presumably deficient. Progressive nurseries now routinely incorporate mycorrhizae into container media, as well as using compost teas which introduce beneficial organisms to the growing environment. We're still fighting with weeds in the Botanical Garden – what's a garden without weeds? – but we're seeing amazing resilience with respect to attacks by pests and diseases. We attribute that to the power of biodiversity. ■

LP

NOUVEAU!
NEW!

LP a pour politique d'imprimer les articles dans la langue où ils ont été rédigés. Dans ce numéro, même nos auteurs québécois ont choisi d'écrire en anglais. Notre solution : nous vous proposons des articles avec mise en page complète sur le Web! Merci beaucoup à nos bénévoles Natalie and Ryan James ! Et dites nous ce que vous en pensez !

Cliquez sur l' HYPERLIEN «http://www.aapc.ca»

At LP, it is our policy to print articles in the language in which they are written, together with a summary in Canada's second language. Now – thanks to stalwart volunteers Natalie Walliser and Ryan James – our Web presence has taken a giant step forward! Instead of text-only translations, we're offering selected stories in striking layouts online. Let us know what you think!

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1 OSPREY WITH FLOUNDER **2** PURPLE MARTIN WITH DARNER DRAGONFLY **3** CRIMSON MEADOWHAWK DRAGONFLY IN THE MARSHES
4 PIED-BILLED GREBE ON THE WEST POND **5** VIEW OF THE WEST POND IN WINTER, LOOKING NORTH TO THE COAST MOUNTAINS
1 BALBUZARD AVEC UNE LIMANDE À QUEUE JAUNE **2** OUEST HIRONDELLE NOIRE AVEC UN ANISOPTÈRE **3** SYMPETRUM ROUGE-SANG DANS LES MARAIS **4** GRÈBES À BEC BIGARRÉ SUR L'ÉTANG **5** VUE DE L'ÉTANG DE L'OUEST EN HIVER, AVEC LA CHAÎNE CÔTIÈRE EN ARRIÈRE-PLAN
PHOTOS JOHN LOWMAN: USED WITH PERMISSION | UTILISÉES AVEC LA PERMISSION

THE DENIZENS OF MAPLEWOOD FLATS:
ABUNDANT LIFE ON A BROWNFIELD SITE

PATRICK MOONEY PHOTOS JOHN LOWMAN

UNE VIE FOISONNANTE SUR UNE ANCIENNE FRICHE INDUSTRIELLE

Avant 1995, les ornithologues amateurs du Wild Bird Trust de Colombie-Britannique avaient enregistré 208 espèces d'oiseaux à Maplewood Flats à North Vancouver. En 2004, le nombre d'espèces avait grimpé à 231. Cette augmentation remarquable de la biodiversité est venue en partie des processus naturels, mais aussi grâce à la restauration des zones humides.

Le site comprenant à l'origine un habitat terrestre (27,5 ha) et les vasières intertidales dont un marais salin restauré (96 ha). En 1997, la création d'une zone humide d'eau douce de 7 hectares a commencé. Une fois terminée, cette zone humide a provoqué des augmentations importantes dans la diversité aviaire et son excavation a fourni la terre d'un réseau de sentiers surélevés et d'une prairie sèche pour l'habitat des rapaces. Aujourd'hui, le site témoigne de la puissance de la planification, de la conception et de la gérance pour créer des lieux biologiquement diversifiés et porteurs de vie dans le paysage urbain.

Metro Vancouver, like many urban regions, still supports a high species richness, including remnant populations of rarer species. In winter, Vancouver has the highest diversity of birds in Canada. The Fraser River delta alone supports half a million birds each year and that number climbs to 1.4 million birds during migration. These populations exist despite the fact that this area has lost most of its wetlands since European settlement began.

WHEN WETLANDS ARE ADDED

Prior to 1995, birders of the Wild Bird Trust recorded a total of 208 bird species at Maplewood Flats in North Vancouver. By 2004, the count of bird species at Maplewood Flats had climbed to 231. How did this remarkable increase in biodiversity come about? It was due to the combined forces of human disturbance, natural processes like biotic succession, ecological restoration and stewardship. By adding wetlands to replace historically reduced habitat, Maplewood Flats could support greater numbers of wetland species.

Maplewood Flats, which is on Burrard Inlet, is owned by the Vancouver Port Authority and the District of North Vancouver and leased by Environment Canada for its Pacific Environmental Science Centre. The site, originally intended to become a port facility which was never built, was created by dumping 1.5 - 2 metres of fill over the existing mud-flats to raise the elevation above tide levels. Thereafter, the area was used for log sorting, and to barge gravel from a nearby pit. When industrial activity ended, the land was left largely undisturbed. Gradually, plants colonized the site – a mixture of grassy meadows and forests of red alder, black cottonwood and Himalayan blackberry – and in time, significant bird populations moved in.

Today, Maplewood Flats is a Provincial Wildlife Management Area operated by the Wild Bird Trust of B.C., a local NGO dedicated to the protection of birds and their habitats, on the principle that all wildlife must benefit. It contains 27.5 hectares of terrestrial habitat and 96 hectares of intertidal mudflats, including a restored salt marsh.

A WETLAND IN THE MAKING

In 1997, the Wild Bird Trust asked me to design and supervise the installation of an artificial freshwater wetland at Maplewood Flats. Since the supply of freshwater was insufficient to establish a marsh, we regraded the site to direct surface runoff to a proposed 7-hectare wetland site and in the summer, supplemented this with groundwater pumping. The excavation was lined with clay, much of it from on-site excavations. Plans included the installation of a small adjustable weir to control water levels in the wetland and plantings of cattails and bulrushes. The wetland excavation itself provided the fill used to establish a raised trail system and a dry meadow for raptor habitat.

FAST FORWARD NINE YEARS

The new wetland soon met its goal of increasing avian diversity. Nine of the newly recorded birds were marsh-related species like redhead duck and sandhill crane. Many species which had been occasional visitors now stayed to nest, among them wood duck, marsh wren, pied-billed grebe, Virginia rail and American coot.

FROM MARTINS TO MINK

The coastal subspecies of purple martin also breeds at Maplewood Flats, thanks in large part to an artificial nest box program. In the early 1980s, this species was reduced to only 10 breeding pairs in British Columbia. Maplewood Flats was the first B.C mainland site to support an artificial nesting colony, now estimated to support 47 breeding pairs. The wetlands host more than 20 species of dragonflies and damsel flies – an important food source for the purple martins.

Due to the mixture of habitat types at Maplewood Flats, this man-made brownfield site now boasts a rich biological diversity. As well as birds and insects, the site is home to mink, otters, black bear, black-tailed deer, coyotes and voles. Surrounded as it is with suburban homes and light industry, the Flats are the constant resort of walkers, naturalists, wildlife photographers and children, providing much needed environmental education, recreation and respite to the urban dweller. They are testament to the power of careful planning, design and ongoing stewardship to create biodiverse and life-affirming places in the urban landscape.

1

THE SEARCH FOR THE PERFECT PRAIRIE LAWN

INGRID THIESSEN

UNE PELOUSE IDÉALE POUR LES PRAIRIES

On ne peut pas cultiver le pâturin des prés sans irrigation en Saskatchewan. Il faut donc se tourner vers une espèce de graminée qui foisonne sans pesticides ni engrais et qui n'a pas besoin d'être tondue souvent. C'est ce que l'on obtient avec une plante indigène appelée Boutelou gracieux *(Bouteloua gracilis)*. Celle-ci résiste à la sécheresse, n'a pas besoin d'engrais et n'atteint pas plus de 150 à 200 mm de hauteur. L'auteur examine à la fois ses aspects positifs (y compris l'épaisseur et la couleur) ainsi que les inconvénients de cette graminée de saison chaude.

NOT ENOUGH RAIN

In most places in Saskatchewan, it is not possible to grow a Kentucky blue grass lawn without irrigation. The yearly precipitation in Saskatoon and Regina is 350-384 mm compared to Winnipeg's 514-530 mm. Consequently most parks and open spaces make a clear distinction between rough dryland grasses and irrigated mown lawns.

Many landscape architects have been specifying dryland mixes composed of native grasses, and even though this can be a hard sell to clients and contractors, we are making real progress. The next frontier is using native grasses as a turf grass species.

Of course, drought tolerant plants such as juniper and paxistima make excellent turf grass alternatives. Another trend – which I find disquieting – is the extensive use of gravel and stone. In my own Regina neighbourhood, almost every street has at least one gravel lawn. But neither option is acceptable for those who want a traditional lawn for such things as informal background games.

LAWNS OF THE FUTURE

Water, of course, is not the only hurdle. Prairie lawns of the future will need to be conservation-friendly, able to thrive without pesticides or fertilizer, and preferably, require little mowing. What might this lawn look like? Perhaps like our native plant, Blue grama *(Bouteloua gracilis)*. In the USA, several cultivars are used as lawn alternatives. This grass can outperform other contenders such as crested wheatgrass for drought tolerance, and it needs no fertilizer. Better yet, it grows only 150-200 mm (6 in. - 8 in.) high.

THE LONG AND SHORT OF IT

Using grasses based on height first came to my attention when I contacted Nora Stewart who (at that time) was president of the Native Plant Society of Saskatchewan (NPSS) and ran a native seed nursery. (Nora's new book will be reviewed in an upcoming issue.) Nora suggested planting a mixture of mostly low growing grasses to reduce the need to mow. Those original mixes did work for areas of

2

I can imagine a 100 percent Blue grama lawn intermixed with an early blooming bulb or forb...
J'imagine une pelouse à 100 % en boutelou gracieux avec un bulbe à floraison précoce ou une herbacée non graminoïde...

rough grass, but were too patchy for a lawn. Interestingly, it was in seed nurseries such as Nora's that the idea of using Blue grama or other native grasses as a lawn alternative first germinated. In this context, where individual species are watered to produce seed and mown to harvest the seed, single species could be closely examined.

THE CONTENDERS

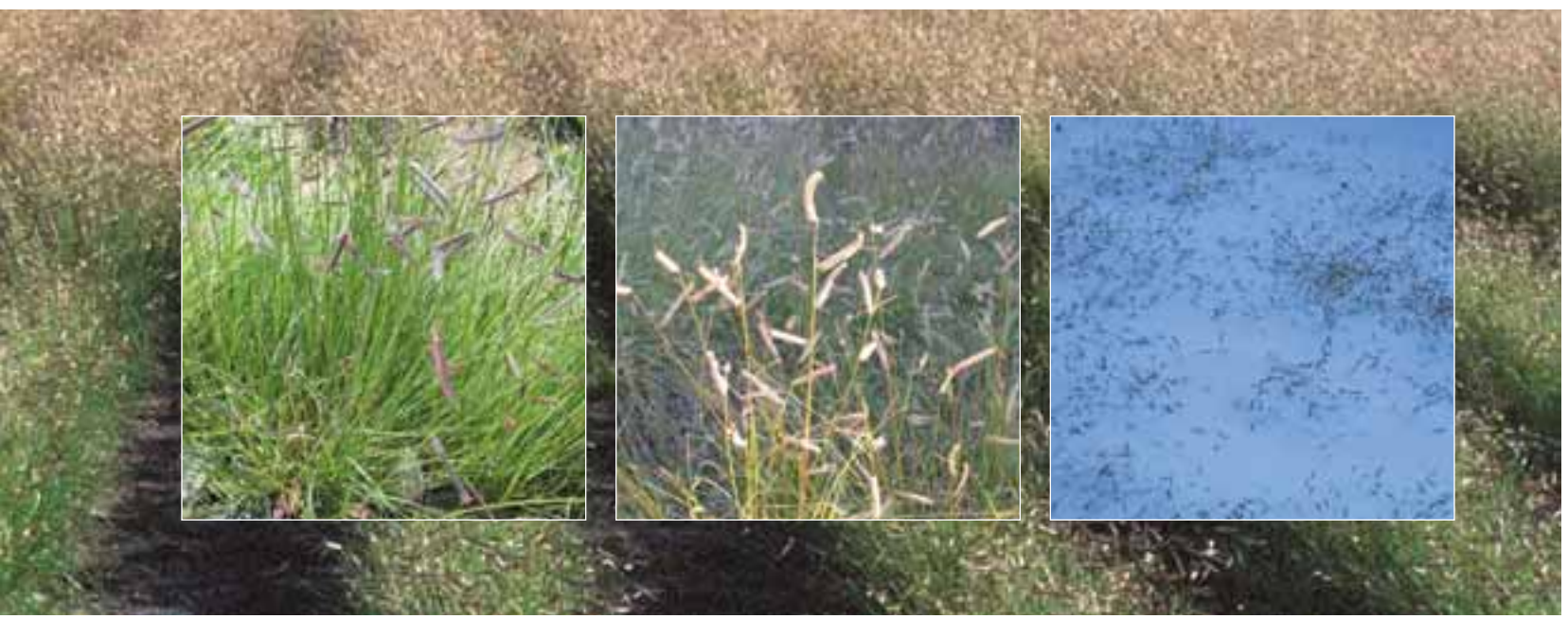
Blue grama, mat muhly (*Muhlenbergia richardsonis*) and June grass *(Kohleria macrantha)* are all native plants that need a second look as turf grass alternatives. In the past, these grasses have been dismissed for good reason: their seed has been difficult to obtain and costly, they are slow to develop in their first year, they are not shade tolerant, and they don't have that bright golf course green look we all seem to want. But consider the positives. Blue grama will cover the ground to prevent weed encroachment. Though it is not truly rhizomatous like Kentucky blue grass, it does have short rhizomes and if seeded thickly enough it will create a turf grass look. Some like the seed heads, and others find a once-a-year mowing is all that is required to keep it looking like a regular lawn albeit with a hint of blue. It is also easy on the feet. And most agree that Blue grama is a much nicer colour than other native contenders like the much-touted Buffalo grass.

Blue grama's biggest drawback – but at the same time its strongest attribute – is that it is a warm season grass. It is slow to green-up in spring, but will look great in the heat of summer. A study done by the Prairie Turfgrass Research Centre in the 90s showed that Blue grama did extremely well under severe drought conditions in the Medicine Hat area.

Studies of native grasses for urban uses at the University of Manitoba a decade ago compared native grasses under three mowing heights. The most surprising discovery was the consistent high quality of Blue grama. And on a smaller scale, NPSS Executive Director Chet Neufeld has planted a 50-50 mix of June grass and Blue grama to even out the cool and warm season grasses. Chet laments that no one has experimented with sedges, which are often shade tolerant, short and grass-like.

I can imagine a 100 percent Blue grama lawn intermixed with an early blooming bulb or forb which later disappears – ideally, our native crocus, but in an urban lawn, it could very well be Tarda tulips or Siberian squill. I can also imagine that one day the water may be turned off in our irrigated parks. We need to be prepared with a proven alternative.

1 BLUE GRAMA IN LATE FALL **2** BLUE GRAMA FIELD PLOT IN MID-JULY: FIRST YEAR IN THE FOREGROUND; THIRD YEAR BACKGROUND **3** FLOWERING STAGE, LATE JULY **4** SEED STAGE, LATE AUGUST **5** BLUE GRAMA SEED HEADS IN SNOW | **1** BOUTELOU GRACIEUX À LA FIN DE L'AUTOMNE **2** CHAMP DE BOUTELOU GRACIEUX À LA MI-JUILLET : PREMIÈRE ANNÉE À L'AVANT-PLAN; 3E ANNÉE DERRIÈRE **3** FLORAISON, FIN JUILLET **4** GRAINES, FIN AOÛT **5** TIGES PORTE-GRAINES DANS LA NEIGE
PHOTOS 1 INGRID THIESSEN **2-5** NORA STEWART



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154 BIRD SPECIES AND COUNTING...

VICTORIA LISTER CARLEY

154 ESPÈCES D'OISEAUX ET PLUS

Au cours des 20 dernières années, Victoria Carley a testé dans son jardin un ensemble de principes écologiques qui peuvent être bénéfiques à la faune. Elle exhorte les jardiniers à tenir des listes d'observation, et elle leur propose des principes inspirants et parfois surprenants. Ses résultats à ce jour : un jardin urbain remarquablement diversifié, une liste d'observation de 154 oiseaux, et des observations régulières d'autres créatures utiles et belles comme les papillons morios et la couleuvre brune.

We all know how to spot a wildlife garden in the city. It is the one with a little split rail fence. Birds do not need this visual cue: they do not make the same aesthetic value judgments as people do. They are just as happy in a formal garden full of ornamental plants as they are in a pseudo-rustic oasis.

FORGET THE 'PLANTS FOR WILDLIFE' LISTS

Over the last 20 years I have used my garden as a test patch to see which plants I like and which plants like me. Plants which are planted only because they attract birds or butterflies have been, for the most part, under performers. But with close observation, I've determined some basic principals which can make any style of garden wildlife beneficial.

What birds need first is shelter – but they are just as a happy with a privet hedge as a dogwood hedge. Shrubs which have been consistently and heavily pruned, such as hedges, will have a dense, twiggy structure. Their interior is sheltered from the wind and the leaves and twigs caught in the crotches usually include a good supply of bugs and seeds. If, by chance, the shrub has fruit, it is a bonus.

FEASTING IN GANGS

The single most successful plant I have for wildlife is a Rosa blanda. Throughout the winter, the mocking bird comes to it daily, as do cardinals and over-wintering robins. It provides cover and fruit . On the other hand the fruit of the sumac is usually gobbled up by a gang of starlings in a one-day feeding frenzy. Perhaps this is because of the sumac's very open branching structure which provides almost no shelter, so it is only in a flock that the birds feel safe.

Along our sideyard we have a row of espaliered crabapple trees with persistent fruit, alternately red and gold. Occasionally I see cedar waxwings or other birds eating the crabapples but for the most part the squirrels get there first – and they eat the red ones first! It may be that the red fruit is sweeter but more likely, it is because the red fruit ripens before the yellow, and it is easier for the squirrels to extract the seeds from the softer fruit.

A plant which is on almost every "Plants for wildlife" list I have read is Highbush cranberry but I have not seen birds eating the fruit until well into the winter when other fruit is scarce. Then, it is partially rotted and very soft, increasing its sugar content. I am reliably informed that birds are also better able to digest this acidic fruit in spring when they have a good source of protein, such as pollen, nearby.

Most of us have observed birds eating forsythia blooms in spring, but early flowering plants such as pussy willows and some of the Viburnums are also very important to bees. We may not want bugs and bees around when we are eating in the garden but they are the main food source of many birds: we will not have flycatchers, swallows and nighthawks without bugs.

Nous savons tous comment repérer un jardin faunique dans une ville. C'est celui avec une clôture de perches.

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BANISH LEAF BLOWERS

Being overly tidy will reduce the diversity of insects. They need piles of leaves, damp spots and other undisturbed areas to breed. This can be hard to achieve within the normal regime of garden maintenance – which is another argument against leaf blowers. Leaf blowers not only remove the leaves which are the insects' food source: they also dry out the damp spots and soil surface making a less conducive environment for insects.

The garden's built form can also be adapted for wildlife. Nooks and crannies in retaining walls are extremely useful for hibernating snakes and butterflies. In early April, I begin to see the mourning cloak butterflies, for example, because they hibernated as adults in a wall or under tree bark. I am very proud to say that I have little brown snakes because I have a nice warm wall for them and a good supply of slugs. And this brings us back to plant selection: hostas are beneficial to snakes because they are a primary food source for slugs.

I have a "yard list" of 154 bird species which I think is really pretty good: we list approximately a third of all the bird species ever listed in Ontario. That said, nothing I plant will encourage the birds into my view as much as my location. When we were looking for a new house we wanted to be sure to have a good yard for birds. In Toronto and most of Ontario, that means along the edge of ravines and river valleys. I am on the edge of a river valley where there is ALMOST continuous tree cover for several miles. People in suburban or exurban areas may have a harder time of it: no matter how much they enhance the amount of tree cover and food in their patch, planting an island of 'plants to attract birds' will be of limited benefit. Fortunately for urbanites, cities are rich in both quantity and diversity of plants and the island effect is unlikely.

When it comes to birds, "plant it and they will come" may not work. Plant your garden so you enjoy being in the landscape and you may linger long enough to notice that the birds are there.

We all know how to spot a wildlife garden in the city. It is the one with a little split rail fence.

VICTORIA RECOMMENDS:

Birds of Toronto, a guide to their remarkable world. *City of Toronto Biodiversity Series. Published by Toronto and Livegreen Toronto. A beautiful, well-researched publication extensively illustrated by numerous photographers, Robert Bateman and Barry Kent MacKay. Includes discussion of Toronto's Bird Flyways Projects. www.toronto.ca/lightsout/flyways.htm*

1-4 FROM VICTORIA CARLEY'S GARDEN **5** CEDAR WAXWING
1-4 DU JARDIN DE VICTORIA CARLEY **5** JASEUR D'AMÉRIQUE
PHOTOS VICTORIA LISTER CARLEY. BIRD-FRIENDLY DEVELOPMENT GUIDELINES, CITY OF TORONTO **5** BIRD-FRIENDLY DEVELOPMENT GUILDELINES, CITY OF TORONTO: MARK K. PECK

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SUS AUX BARDANES!

Lorsque le nouveau campus riverain du Nova Scotia Community College a spécifié un mélange de fleurs sauvages pour la zone située sous un bosquet d'arbres bien établi, la décision n'a pas été prise à la légère. Le CBE vise la norme LEED Or. Les plantations ont cependant souffert de complications majeures : certains des chardons atteignaient deux mètres et demi. Puisque le collège a fait de la biodiversité la pierre angulaire du site, il a embauché le cabinet d'architectes paysagistes de Gordon Ratcliffe pour les travaux préparatoires (tels que l'enlèvement de deux camions de bardane) mais aussi pour améliorer l'esthétique, protéger les terrains contre la migration des semences et préserver la diversité écologique.

1 NSCC SUMMER STUDENT SAMANTHA FIELDEN DWARFED BY BURDOCK **2** NSCC OVERLOOKS HALIFAX HARBOUR | **1** L'ÉTUDIANTE SAMANTHA FIELDEN À CÔTÉ D'UN BARDANE **2** LE NSCC SURPLOMBE LE PORT D'HALIFAX
PHOTOS SUE SIRRS

BURDOCK BE GONE!

SUE SIRRS

The new Waterfront Campus of the Nova Scotia Community College (NSCC) sits on a beautiful site overlooking Halifax Harbour. The grounds, formerly part of the Nova Scotia Hospital which was built in the later 1800s, boast an established grove of courtyard trees, all carefully protected during construction. On most campuses, the area below the trees would be traditional mown lawn – but not at NSCC. Instead, a wildflower mix was specified for this area and most of the remaining grounds.

The decision was not made lightly. Two buildings occupy the site. The first one, completed in 2007, pursued a LEED Silver certification. The second, the Centre for the Built Environment (CBE) which will open to students in September 2010, is targeting LEED Gold with innovative features including permanent exterior living walls, interior biowalls and a green roof with five trial zones.

EIGHT-FOOT SQUATTERS

The wildflower planting, however, suffered from complications with seed mix, soil and weather which formed less than ideal conditions for seed germination. Since the campus had decided not to mow – in part to meet the requirements for the LEED sustainable sites credits – opportunistic species like coltsfoot, white sweet clover and burdock soon moved in. With a pesticide by-law in place since 2000, Halifonians are long past the idea of the perfect lawn, but this was different. By the summer of 2009, some of the thistles were eight feet tall (2 m). Something needed to be done.

With the average plant height around three feet (1 m), the property stood out in stark contrast to Dartmouth's manicured public spaces. Neighbours expressed concern. Some thought the property looked uncared for. Others cited safety issues. Large plants bordered sidewalks and parking areas, limiting visibility across the property. Maintenance staff were keen to get out their lawnmowers!

BURDOCK BY THE TRUCKLOAD

In response, the College hired Gordon Ratcliffe Landscape Architects, and what began as an initial contract for site work evolved to include a management plan to minimize the spread of seed. Work crews removed the burdocks (two truckloads!) as well as marsh woundwort, greater hawkweed, Japanese knotweed and coltsfoot. But they spared a wide variety of plants: aster, goldenrod, Queen Anne's lace, plantain, multiflora rose, coneflower, black-eyed Susan, raspberry, blackberry, dandelion and many grasses were given room to roam.

TAMING THE WILD GARDEN

Ratcliffe recommended strategic mowing at the entrance to the Campus and adjacent to pathways and parking areas, to send a clear message that the property was being cared for. He also recommended interpretive signage to explain the initiatives. With careful work, LAs set out to enhance the site's aesthetics and protect the grounds from seed migration, while above all, maintaining ecological diversity.

Not only has the NSCC made biodiversity the site's cornerstone; it is also hiring a horticulturalist to manage the plant and landscape issues – a particularly important addition as the green roof and living walls are established in the near future. ■

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URBAN EGGHEADS

REPENSER LA VILLE, UNE POULE À LA FOIS

FLAVIE HALAIS

english version: www.csla.ca

RETHINKING THE CITY, ONE HEN AT A TIME

Vancouver residents can now collect fresh eggs in their garden every morning, thanks to a new regulation allowing them to own chickens at home. This is a long-awaited victory for the city's urban activists, who already have developed networks and resources to share knowledge with poultry-loving urban dwellers.

C'est un plaisir tout simple, mais qui leur était jusqu'ici interdit. Les habitants de Vancouver peuvent désormais ramasser des oeufs frais chaque matin dans leur jardin, grâce à une nouvelle réglementation qui leur permet de posséder des poules à domicile. Alors que l'élevage de volaille en milieu urbain a longtemps été considéré comme insalubre – de nombreuses maladies sont transmises par les oiseaux, comme la grippe aviaire – de plus en plus de villes nord-américaines réintroduisent cette pratique, avec modération. Vancouver est la première grande ville canadienne à franchir le pas.

À Vancouver, l'initiative est venue directement des habitants. Certains élevaient des poules de manière illégale depuis des années au risque de se voir attribuer une amende. Un arrêté a finalement été voté au mois de mars 2009, et son contenu devrait être finalisé sous peu. (Un projet de règlement a été soumis à la consultation en octobre 2009.)

Les adeptes soulignent que cette activité n'est pas forcément économique, mais qu'elle permet d'obtenir des oeufs frais (une poule pond en moyenne cinq oeufs par semaine), produits on ne peut plus localement, et de bien meilleure qualité que leur équivalent acheté en supermarché. Déjà, des entreprises inventives comme Britain's Omelet Ltd. produisent de mignons petits poulaillers que l'on peut facilement acheter en ligne à www.omlet.co.uk.

POULETS 101

Heather Havens, surnommée la « Chicken Lady », élève deux animaux chez elle à Surrey. Selon elle, élever des poules à domicile est bénéfique pour la communauté tout entière. « Les voisins pensent qu'ils sont vraiment amusants. Les enfants sont intéressés, et ils produisent du fumier pour le compost », déclarait-elle dans un article paru sur le site de la CBC en février dernier.

Havens s'applique à transmettre ses connaissances aux habitants de la région. Elle a ainsi animé un atelier visant à leur enseigner les rudiments d'une activité pas toujours très glamour – comment extirper un œuf bloqué du corps d'une poule, par exemple! Havens encourage les résidents à s'organiser en réseaux et à s'entraider, en s'occupant par exemple des poules des voisins quand ceux-ci sont en vacances. Elle les incite également à confier des tâches d'entretien à leurs enfants, un excellent moyen de les responsabiliser. Autant de pratiques qui permettront de resserrer les liens sociaux. Les poules pourraient bien apporter à Vancouver beaucoup plus que des œufs frais!

Des questions ?
Essayez des sites comme
www.friendsofhens.com
www.chickensinvancouver.com
www.omlet.ca

KIDS, DOGS, HENS AND (REAR) THE EGLU IN HAPPY USE | ENFANTS, CHIENS, POULES ET (DERRIÈRE) L'EGLU BIEN UTILISÉ
PHOTO COURTESY OMLET LTD: LYDIA LEXIS

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THE SWEETEST HOTEL IN TOWN

BEES ON THE ROOFTOP OF TORONTO'S FAIRMONT ROYAL YORK

RYAN JAMES

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UN HÔTEL BOURDONNANT D'ACTIVITÉ

Des milliers d'abeilles bourdonnent sur le toit de l'hôtel Royal York à Toronto, dans six ruches florissantes entretenues par la Coopérative apicole de Toronto. En 2008, leur première année, les abeilles ont gagné le ruban bleu pour leur miel à la Royal Winter Fair. Cela témoigne d'une nourriture riche et variée dans un rayon de 5 km. L'auteur examine la relation symbiotique entre les jardiniers de la ville, les agriculteurs et l'abeille. Il explore aussi la dynamique qui permet aux insectes de s'épanouir dans la ville.

Thousands of bees are set up in penthouse suites at the Royal York and they won't be checking out any time soon. Why leave when you can flourish and openly multiply at such a fine establishment? In their first year, 2008, they started with three hives on the roof over the fifteenth floor. In that same year their honey took the blue ribbon at the Royal Winter Fair. Professional tasters agree: these bees have got a good thing going.

HOT SPOT NEAR THE WATERFRONT

The bees have got a sunny oasis on one of the greatest urban heat-islands in the country and heat is essential for the vitality of any hive. Warmth in the morning is particularly important for getting the hive up and running each day, and the city's latent heat allows a hive to extend activities into the shoulder seasons. Heat can become a problem on the hottest days of the year, but bees have got a solution for that. During the dog days of summer, worker bees stationed at the hive's entrance beat their wings to provide steady ventilation.

Otherwise the hives are positioned in a relatively calm spot where a substantial parapet wall shelters

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What is a bee to eat when there is no meadow in sight? | Que peut bien manger une abeille lorsqu'il n'y a pas un seul pré en vue ?

the bees from strong winds. Even so, the bees still have the advantage of the moderating winds from Lake Ontario. In this, their second year, there are now six hives thriving on the roof, all well tended by the Toronto Beekeeper's Co-operative.

BEE-FRIENDLY BUFFETS

What is a bee to eat when there is no meadow in sight? The closest buffet for the bees is the rooftop kitchen garden some 25 metres away. The kitchen staff is cultivating herbs, vegetables, grapes and edible flowers and the bees are encouraged to forage as they please.

A short flight down fifteen stories brings the bees to street level. Grand hotel that it is, the Royal York is always decked out with lavish planters and in the spring there are innumerable street trees in bloom, running in all directions across the regular grid that defines Toronto. Not far off, this grid opens on to the rail yard. The tracks become stripes of blossom throughout the growing season as successive waves of wildflowers and weeds come and go.

Beyond this, bees will cover a five kilometer-range searching for food. This easily encompasses the Lower Donlands on the waterfront and the bottom of the Don Valley that runs through the city –a particularly rich feeding ground. The Toronto Islands are closer than that, though bees would rather not fly over open water.

The spring crop of honey that comes from the Royal York hives is light and pale, though still full of flavour. The fall crop is thick and dark, like molasses. These seasonal changes are a direct response to the blooms that populate the city from one month to the next.

A FRIENDLY COMPACT

If the honey benefits, so do local plantings and nearby farms – although you've got to reach the outer limits of urban sprawl to find a farm today. One hundred years ago the Greater Toronto Area and indeed the southern Ontario landscape was covered by farms of modest scale. Every other farmer kept a beehive or two. Now what you'll see are vast monocultures, machined by farmers cultivating thousands of acres. These farmers are not likely to tend a beehive or two.

Yet if you're a farmer with acre upon acre of canola in bloom, and you're relying on wild bees to pollinate your crop, then you may have a problem. Although there are roughly 200 species of bees in the region, wild bees tend to graze around the periphery of a monoculture and then move on, looking for something different. Domestic honey bees are one of the few species that can be counted on to forage over a monoculture from end to end and everywhere in between. Some farmers will actually bargain with beekeepers to have hives stationed near their fields – if not permanently, at least while the crops are in bloom.

HONEY DRIPPING WITH FLAVOUR

If the dedication of the domestic honey bee is valuable to farmers, the growers at the Royal York appreciate this too. The year that the bees moved up to the roof there was a marked improvement in the yield of their kitchen garden. And for the bees, the urban environment isn't such a bad place. The greenery and blooms may be scarcer among the concrete, but conditions on the ground vary widely and the plants that flourish are bound to follow suit. This makes for a healthy varied diet, and honey dripping with award-winning flavour.

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1 THE BEES' NEIGHBOURHOOD INCLUDES UNION STATION **5+6** MEMBERS OF THE TORONTO BEEKEEPER'S CO-OPERATIVE **2-8** ON THE ROOFTOP | **1** LES ABEILLES ONT NOTAMMENT POUR VOISINE LA GARE UNION **5+6** MEMBRES DE LA COOPÉRATIVE APICOLE DE TORONTO **2-8** SUR LE TOIT
PHOTOS RYAN JAMES

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THE EDIBLE CAMPUS: URBAN GREENING AT MCGILL

VIKRAM BHATT

version française : www.aapc.ca

CAMPUS COMESTIBLE

En 2007, deux ONG ont approché l'Université McGill, à la recherche d'un nouvel emplacement pour leur jardin sur les toits. Les toits accessibles étant rares, le Minimum Cost Housing Group (MCHG) de McGill a proposé un jardin de plain-pied dans un espace sous-exploité près de l'entrée principale de l'Université. En plus de donner de l'importance au projet, cette solution permet de transformer un lieu de passage commun en lieu de rencontre. De 120 mètres carrés en 2007, le jardin a doublé de taille et produit des quantités importantes d'aliments frais et bioliogiques, illustrant comment une communauté peut revivifier sa ville en exploitant un espace négligé.

1 LA TERRASSE INITIALE **2** LE PROFESSEUR VIKRAM BHATT DANS LE JARDIN DE 2007 **3** PHOTOMONTAGE DU JARDIN PROPOSÉ **4** LE PLAN DU SITE PRÉPARÉ PAR LES ÉLÈVES DU MCHG **5** UN ESPACE ACCUEILLANT QUI N'A RIEN PERDU DE SON UTILITÉ **6** ENTREPOSAGE HIVERNAL DES JARDINIÈRES

Design professionals have paid considerable attention recently to the greening of rooftops, as if they were the next Holy Grail. They are indeed important, but our urban environment is replete with underutilized open spaces on the ground. These neglected spaces are essentially urban "orphans". Many are hard surfaced, exacerbating problems such as water runoff and heat island effect. Yet many are also easily accessible targets for urban greening.

THE ROOF OR THE PLAZA?

In 2007, two NGOs approached McGill looking for a new location for their rooftop garden. Alternatives is a development-oriented NGO that is involved in urban greening abroad and at home. Santropol Roulant runs a meals-on-wheels program bringing freshly made food to mobility-impaired Montrealers. For several years, they had run a rooftop garden, but when the building and its roof needed renovation, they lost their main food growing location.

The group discussed the issue with the Minimum Cost Housing Group (MCHG), a research unit of McGill's School of Architecture that has done extensive work on urban agriculture projects around the world. A rooftop site was difficult to find, since costs can be high. Many flat roof buildings are not strong enough to support a new green roof; others lack easy access to the roof and most do not have guard rails. Why not locate the garden on ground level, we said? There are few students on campus in the summer growing season and since the project would involve volunteers working with underutilized institutional spaces, a garden could serve as a powerful model of urban greening.

A THROUGH-PLACE OR A TO-PLACE?

With the staff of the Office of University Services, we considered several easily available locations on the lower campus of McGill. Sunshine studies helped to identify places with between five to eight hours per day of sunshine, or more. We finally chose a site near the main entrance of the University: a most public plaza surrounding a typical 1960s concrete tower. Not only would this site give the project due prominence; the garden would also help convert a bleak plaza from a through-place into a to-place.

It was critical to maintain easy circulation for pedestrians traversing the plaza. The MCHG team developed proposals that showed that the garden, overlaid on existing surfaces, would not interfere

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Designers ... can help communities adopt such neglected urban orphans ...
Les concepteurs... peuvent aider leur collectivité à adopter ces orphelins urbains

with the site's functioning, but would in fact enhance the public realm. Others worried about security of the crops. I suggested that, after all, the garden was on the campus of the University. By placing it on a heavily-frequented pedestrian route, we might actually reduce the chances of vandalism and theft. We would also incorporate posters informing passers-by of the garden's purpose. To my surprise, our NGO partners accepted this idea and to every one's greater surprise, to date, the self-policing has worked

To keep costs down, we first used recycled plastic containers converted into growers. (Since then, Alternatives has developed slightly fancier growing kits from the same containers.) Our semi-hydroponic system is low maintenance and requires minimum watering. The containers are easy to assemble and move. Every spring, they are laid out and organized in varying fashion; within weeks, new plantings transform the bleak grey plaza into a welcoming garden attracting occupants of surrounding buildings. Garden festivals draw large turnouts, and indirectly garner new volunteers.

BASKETS OF PRODUCE

In the first year of operation, the Edible Campus project comprised a 120-square metre container garden. In season, it supplied 30 percent of the daily fresh produce needs of the Santropol Roulant Kitchen, which supplies daily meals to about 80 clients. During the last two years, the garden gradually expanded to almost double the original growing area. It not only met the daily needs of the kitchen in season, but we were able to distribute fresh produce baskets to about 20 needy families. Next year, we have plans to expand further and make full use of the potential growing area around the plaza.

The Edible Campus has demonstrated how productive planting can be woven into urban spaces without diminishing their functionality. Designers play an important role in this process by helping communities adopt such neglected urban orphans. We can turn around our cities by exploiting underutilized space.

1 INITIAL TERRACE **2** PROFESSOR VIKRAM BHATT IN THE 2007 GARDEN **3** PHOTOMONTAGE OF THE PROPOSED GARDEN **4** THE SITE PLAN PREPARED BY MCHG STUDENTS **5** A WELCOMING SPACE WITH ITS FUNCTIONALITY UNDIMINISHED **6** WINTER STORAGE OF PLANTERS. SPECIAL THANKS TO LEILA FARAH FOR HELP WITH PHOTOS AND FRENCH TEXT.
PHOTOS 1,5+6 V. BHATT **2+3** MCHG 4 LEILA M FARAH

ON LANDSCAPE ECOLOGY

JULIETTE PATTERSON SPEAKS WITH | PARLE AVEC **RICHARD FORMAN**

version française : www.aapc.ca

SUR L'ÉCOLOGIE DU PAYSAGE

Richard T. Forman est souvent considéré comme le père de l'écologie paysagère, c'est-à-dire l'écologie de vastes espaces vus du ciel. Avant que les écologistes ne s'intéressent aux modèles d'espace et aux paysages avec une forte empreinte humaine, il s'est lancé dans la première étude sur l'effet de la taille des parcelles sur la diversité des espèces en s'appuyant sur les boisés bien établis du paysage agricole du New Jersey.

Pionnier dans l'établissement de liens entre la science et les modèles d'espace pour emmailler la nature et les humains sur le terrain, Richard Forman a une formation ancrée dans l'écologie des forêts, des plantes, des mousses et des oiseaux. Dans Landscape Ecology *(1986), lui et Michel Godron ont fait la première synthèse de l'écologie du paysage moderne et élaboré le modèle de matrice-parcelle-corridor pour comprendre les modèles d'aménagement du territoire. Son ouvrage primé,* Land Mosaics, *a paru en 1995.*

En 1995, le professeur Forman a commencé à collaborer avec l'industrie des transports et les biologistes pour jeter les bases d'une nouvelle discipline qu'il explore dans son livre Road Ecology *(2003). Son intérêt envers les régions urbaines a commencé à se concrétiser par un ambitieux projet de planification et un livre pour la ville de Barcelone qui soulignaient l'importance des systèmes naturels dans leurs régions urbaines.*

Il est professeur d'écologie du paysage à l'Université Harvard, où il donne des cours à la Graduate School of Design de même qu'au Harvard College.

RICHARD FORMAN EXPLAINING BALD CYPRESS AND ALLIGATORS IN A FLORIDA OAK-PINE HAMMOCK | RICHARD FORMAN EXPLIQUANT LES CYPRÈS DES MARAIS ET LES ALLIGATORS.

I sat on a log in one of my woods and...a terrible thought hit me. I had ignored what was *around* the woods

J'étais assis sur une souche dans l'un de mes boisés, et là j'ai eu cette pensée terrible : j'avais oublié de tenir compte de ce qu'il y avait *autour* des boisés...

Richard T. Forman is often considered the father of landscape ecology, the ecology of large areas as seen from an airplane window. In an era before ecologists focused on spatial pattern and landscapes with a heavy human imprint, he launched into the first rigorously designed test of the effect of patch size on species diversity, using old-growth woods in the New Jersey agricultural landscape.

A pioneer in linking science with spatial patterns to interweave nature and people on the land, Richard Forman's scholarly roots are in the ecology of forests, plants, mosses and birds. In Landscape Ecology *(1986), he and Michel Godron first synthesized modern landscape ecology and elaborated the patch-corridor-matrix model for understanding land-use patterns. He published the award-winning* Land Mosaics *in 1995.*

In 1995, Professor Forman began collaborating with the transportation community and wildlife biologists to build foundations for a new field, explored in Road Ecology *(2003). His interest in urban regions began to gel in an ambitious planning project and book for Barcelona, Spain, that highlighted the importance of natural systems in their urban regions. A worldwide analysis then led to the book,* Urban Regions *(2008).*

He is Professor of Landscape Ecology at Harvard University, where he teaches in the Graduate School of Design and in Harvard College.

After you started your career studying forest ecology in Central America, was there an 'ah ha' moment when you realized ecologists and land use planners should be speaking to each other?

There were two little epiphanies along the way. The first was in 1976 in New Jersey: I had just finished studying the effect of forest size on biodiversity. I sat on a log in one of my woods and all of a sudden a terrible thought hit me. I had essentially ignored what was *around* the woods: the bean fields, hedgerows, corn fields, and marshes and roadsides. I had focused on content and ignored context. At that point I became a landscape ecologist.

The second little epiphany was about eight years later when the folks here at Harvard started talking to me. I had spent the first half of my career with ecologists in Wisconsin and Rutgers; I wasn't sure I really wanted to come to this place. But someone said to me, "You ecologists describe and analyze things and we planners and landscape architects tell society what makes good sense." That hit a chord in me. I could still be a hard-core scientist, but I could identify principles for professionals who make them useful for solving societal problems. That would add a quantum leap to the significance of my papers and books.

If you were to boil down your message and give us the fundamentals, what particular methods would make the most difference in allowing wildlife and human uses to co-exist?

I am not a designer…I am better at synthesizing ideas and principles that planners can use. But you can start with the patch-corridor-matrix model. If you are in an airplane looking down over the landscape and you were to drop a pin, it would fall into one of three possible areas: a patch, a corridor, or the background matrix. They are the building blocks of the landscape... Corridors can be wide or narrow, straight or curvy, discontinuous or continuous. Patches can be big or little, elongated or compact, have squiggly margins... It's a simple spatial language that's in some ways an over-simplification, but it gets the mayor on board, scientists on board, geographers and landscape architects on board. You can apply it to your neighbourhood park, to the city, or all of Quebec.

Why so much emphasis on understanding the spatial patterns of a particular landscape?

Because it tells us the movements and flows across the landscape: where water is flowing, how wildlife is moving, where people are going…If caribou are moving into your site from the east or if a ton of people are coming in from the west… you want to know that! The landscape is a living system, and like all living systems, it has structure and it changes. It's like time-lapse photography, or turning a kaleidoscope: you have one little mosaic and you turn it and there is another… and then another.

As a landscape architect, I tend to see the landscape more as a collection of related objects rather than as a connected whole.

That is exactly right. I actually say that [at the Harvard Design School] and people don't like it! …Designers and planners arrange objects. And that's fine. The →

As a society, we are effectively designing against biodiversity over and over again.

→ question is, where do you start? By arranging a nice design? I would start by saying, "Where are the movements and flows? Where is the water moving?… In which direction?… What happens in a huge rain?... Where is the wildlife moving?… Where are the people moving?" Maybe everybody comes to lunch on the picnic bench…or the elk come charging down the mountain in the fall. Start with the flows and then arrange objects consistent with the flows. Ignore those flows and you are going to keep fighting nature…and there will be a brutally high maintenance budget. Roads that wash out, or sewer lines that burst, are vivid examples.

But can the principles of landscape ecology really alter our probable future of natural depletion and species extinction? Shouldn't we rather change our lifestyle?

There are many ways to effect change. One way is for governments to pass laws, but in the proverbial midnight session, they can also rescind them. In Boston, and probably in Montreal, there are countless suburbs and overlapping counties… everyone has a government and wants to be a stakeholder. You end up taking a long time to get a decision, which becomes a minimalistic compromise.

Lifestyle modification is important. I've been driving a Prius since a year after they came out, and I bought a property two blocks from a train station. But lifestyle issues, as you know, bump into other issues that sometimes override them, like economics.

To me, the solution lies in the pattern of land use. If you get a pattern that makes good sense and has public support, it's going to persist. It's really hard to replace a neighbourhood park with a high-rise if the park's being used.

But can city leaders be convinced to look at land use patterns?

In Barcelona, the mayor and head planner wanted to avoid American sprawl. They wanted to protect their water source, and not have to truck water in from another river system. Remember, proximity is economic value. Proximity reduces cost. Proximity is money. And if you protect the water supply with surrounding vegetation, it also provides very strong biodiversity benefits too.

The Barcelona leaders said my *Land Mosaics* book was the only model that made sense to them. So we came up with spatial patterns and solutions for the greater Barcelona region. They loved the word 'greater'. I think they found the regional and the environmental dimensions most useful. Five years later, some things have been done, a lot haven't…but it was a chance to see the big picture. Go piece by piece and you end up with a fragmented world.

So we need to focus on regions, not cities?

The city does not make sense anymore. What makes more sense is to think of the urban region, an area of some 80 to 100 kilometers in radius around the urban center, that includes the ring-around-the-city or zone of influence. Look at the flows going in and out. How far out is produce being brought into the city? How far out are people going to recreation sites on the week-ends?

Of the 38 regions you studied in your latest book, *Urban Regions: Ecology and Planning Beyond the City,* did any create sustainable relationships between the city and its surroundings?

None have created a sustainable land mosaic, but there are good patterns. Bucharest and Edmonton are compact cities without much sprawl. The African cities are probably the best in urban agriculture...as is Havana, where urban agriculture skyrocketed almost overnight when the Soviets stopped subsidizing their exports.

Market gardening in an urban region makes economic sense. In Barcelona, at five in the morning a hundred pickup trucks filled with strawberries, artichokes, cherries and vegetables drive through the warren of roads in the city. When people wake up, every market and every restaurant has fresh vegetables and fruits… without the transportation costs of bringing stuff from Imperial Valley, California.

Connected greenway networks such as those in Minneapolis-St. Paul provide recreation and wildlife movement, and protect water bodies. An emerald network of large parks around the city, like some of the Korean cities, or perhaps around Berlin and Toronto, is a really powerful idea.

But can biodiversity really thrive in green spaces so close to large populations?

Portland, Oregon has a huge forest park: it's the only North American major city that has bears, elk, eagles, trout and salmon right in the city. In the Tiergarden in Berlin, which was replanted with native species after the Second World War, there's a meadow with some rare species in it. But these are exceptions. Urban parks may contain a facsimile of nature, and it's not likely they will sustain interior species.

Let me say something about Canberra, Australia because it's probably the closest of the 38 cities to one that works for people and nature. It was planned and designed by Walter and Marion Burley Griffin about a century ago. Five town areas are separated by wide green corridors with native eucalyptus, birds, and kangaroos and wallabies hopping around. Inside the residential areas though, the vegetation is different: mostly mowed grass and English trees: predictable, uniform, designed.

It sounds a bit like Ottawa.

Perhaps so. There is very little sprawl, and connected greenways of native Australian plants. It is a delight. Still, some people complain it is too planned, even boring.

But it works – so you're saying nature will cut through if we let it?

The highest biodiversity is found in the neglected sites of a city...the little places between a railroad and a highway or a stream where the mowers couldn't get. As a society we are effectively designing against biodiversity over and over again. We're managing against it, mowing against it, and cutting it down, and that's devastating to think of.

As a minimum, there should always be a few sites just bulging with nature, a richness of native plants and animals to behold. These are stepping stones for species around the city, so the pollinators or butterflies and birds and other animals can go from spot to spot.

If you walk up Divinity Street from the Harvard Graduate School of Design to the Herbarium, you pass institutional shrub patches of a single species, and at the end see a spot traditionally planted with an amazing array of plant species. In the summer it is full of flowers, butterflies and bees, pollinators and birds. I went out with my watch, and measured the length of time that passers-by stopped to look at these bits of nature. For the institutional, designed shrubs by the buildings, the average length of time was ten seconds; by the little high biodiversity spot it was nearly two minutes. People would just stop and appreciate nature. Another little epiphany? Serious ecology is needed both for nature and us. ■

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1

SHARING THE STREETS

JON WOODSIDE

version française : www.aapc.ca

2

DES RUES PARTAGÉES ET SÛRES

Certains concepteurs arrivent à faire partager la même surface par les automobilistes et les piétons. Ce qui est surprenant, c'est que ces rues partagées peuvent être plus sûres que les rues de quartier conventionnelles. L'auteure s'est entretenue avec Katie Breshears, une AP LEED du programme primé Porchscapes, d'Habitat pour l'humanité, afin d'explorer le concept, notamment les principes de conception des rues partagées, les statistiques de sécurité et les avantages connexes. L'auteur examine aussi d'autres idées et plans similaires dans les villes canadiennes.

As a recent graduate just entering landscape architecture, I was inspired to discover that LAs who plan walkable communities need not wage war on the automobile. Not only can autos coexist with pedestrians: some designers are fitting both onto a single surface.

Forcing people and cars together sounds anything but safe, so I decided to contact Katie Breshears. Katie is a LEED LA on Habitat for Humanity's award-winning planned development, Porchscapes, where I was first introduced to the concept of shared streets.

Surely sharing the roadway vastly increases risk, I said. Increasing risk is the point, Katie explained. Sharing the roadway "causes an uncertainty and forces [drivers] to slow down."

SLOWER SPEEDS MEAN SAFER STREETS

Designers provoke that uncertainty using surprisingly simple cues, says Breshears. The streets begin with "a distinct gateway". Designers use plantings or set buildings closer to the road "so that people know they are entering into a space in which they need to act differently." Thereafter, the street is carved into short intervals by incorporating shifting patterns of on-street parking, plantings and landscape furniture.

Whereas the conventional approach to road design places space and visibility at a premium, the landscape of a shared street is designed to deliberately encroach upon the carriageway. Proponents of shared streets argue that where design is accommodative, the implicit signal to drivers is that speeding is acceptable. Speeding quickly eliminates the margin of safety, making all accidents potentially lethal. Countries have attempted to curb speeds in different ways, Breshears says. "In America the solution was speed bumps." But in many parts of Europe, transportation planners looked to shared streets.

On a shared street, the roadway "is treated as a room in which the drivers are guests," says Breshears. And keeping the carriageway fragmented between rooms makes it less possible to accelerate to dangerous speeds.

3

It sounded like a dream: a landscape where careful design coaxes out our best behaviour. | C'était comme un rêve : un paysage où la conception soignée suscite nos meilleurs comportements.

1 + 3 MONTREAL'S DULUTH STREET, WHILE NOT STRICTLY A SHARED STREET, SHARES MANY OF THE CONCEPTS **2** PORCHSCAPES OVERALL SITE PERSPECTIVE: HABITAT FOR HUMANITY'S PLANNED DEVELOPMENT WON A 2008 ASLA AWARD FOR PLANNING AND ANALYSIS **4** PORCHSCAPES SOUTH SHARED STREET

1 + 3 LA RUE DULUTH DE MONTRÉAL PARTAGE BEAUCOUP DE CONCEPTS AVEC LES RUES PARTAGÉES **2** VUE D'ENSEMBLE DU PROJET PORCHSCAPES : CE DÉVELOPPEMENT PLANIFIÉ D'HABITAT POUR L'HUMANITÉ A GAGNÉ UN PRIX DE PLANIFICATION-ANALYSE DE L'AAPC EN 2008 **4** LA RUE SUD PARTAGÉE DE PORCHSCAPES

PHOTOS 1 + 3 JEAN LANDRY **2 + 4** COURTESY KATIE BRESHEARS

To a new recruit like me, it sounded like a dream: a landscape where careful design coaxes out our best behaviour. Yet Breshears says that "studies in Germany, Denmark, Japan and Israel show that there are over 20 percent fewer accidents on shared streets and over 50 percent fewer severe accidents compared with standard residential streets."

BEYOND SAFETY

Shared streets push the envelope on our traditional understandings of how roads serve the community. For example, the Porchscapes designers introduced stormwater infiltration plantings to break up the roadway alignment. This sustainable system allowed them to maintain the pre-development hydrologic regime. As well, although the project has not yet been built, designers believe they can cut costs by 40 percent by eliminating costly curbs, gutters, pipes and catch basins.

The shared streets' configuration also makes them more welcoming public spaces; they allow a smoother transition between public and private space. Not only does this encourage a more efficient use of space, where houses sit closer to their front property line; it also increases the number of eyes on the street.

WHERE SHARED STREETS WORK

The shared street concept was initially based on the work of the Dutch traffic engineer Hans Monderman who constructed "woonerfs" in areas with a critical mass of bikes and pedestrians. Monderman kept his minimalist roadways free of traffic lights, road signs, sidewalks and general clutter, but since then, shared streets have developed a wider applicability.

Katie Breshears identifies several existing street typologies that are appropriate for shared streets including "streets along a park edge, downtown square, or residential neighborhood." In fact, Montreal traffic engineer, Zvi Leve, sees many points of similarity between shared streets and Duluth Street in the Plateau neighbourhood of the city. And Dylan Reid, Co-chair of the Toronto Pedestrian Committee, points to the University of Toronto campus as an unofficial example.

The idea, says Reid, is gaining traction. The firm Planning Alliance is promoting a minimalist shared street for Toronto's Front Street, and the city's recent official walking strategy calls for experimentation with the idea. Reid feels that downtown streets with heavy pedestrian activity, narrow roadways and slow traffic would be excellent candidates, particularly "where traffic movement is still necessary for circulation or local businesses."

Shared streets, of course, pose challenges. Planners need to consider access for emergency vehicles: continuous shared streets are usually limited to road lengths of less than 600 meters. And narrow streets fragmented by trees, bollards and changes of alignment could be a nightmare for snow-ploughs, unless snow can be piled in pockets of open space. But even snow falls may be an advantage, says Reid. Snow piles slow traffic and often invite pedestrians off the un-ploughed sidewalks to share the road.

4

RIGHT UP WHOSE ALLEY?
REVITALIZING A [NOT QUITE] FORGOTTEN SPACE

ERIC MAJER

What happens when we start to intervene and … mark these spaces in formal, even designated gestures?
« Qu'arrive-t-il si on commence à intervenir [et] baliser ces espaces en gestes formels, voire délibérément *conçus*? »

REVITALISER UN ESPACE [PRESQUE] OUBLIÉ

Pour *Verte Ruelle*, un comité de voisins – incluant architecte Eric Majer – s'implique pour récupérer un espace dominé par l'automobile et faire revivre l'une des ruelles typiques de Montréal. L'allée de 14 pieds de large fend un bloc entier; on y a creusé de longues bandes de deux pieds de large et plusieurs insertions centrales de 40 pieds de long. Terre et plantes (plus de 500) ont remplacé 3500 pieds cubes de béton et d'asphalte. Pour s'assurer la participation des voisins, le projet devait satisfaire diverses attentes; c'est pourquoi on a visé à la fois l'image pittoresque d'un jardin urbain et un modèle de communauté verte progressiste. Ce faisant, *Verte Ruelle* sert maintenant de modèle pour d'autres sections de la ville.

version française : www.aapc.ca

Some would argue that all back alleys are – to a greater or lesser extent – green. The informal and abandoned quality of these places inevitably ends up hosting a surprising variety of plant life, literally emerging from the cracks, or overflowing from adjacent gardens, leading one to imagine an improbable scenario of nature eventually conquering entire civilizations built in concrete. These humble urban landscapes spark a childhood nostalgia in which the raw materials for such fantasy are already present.

What happens when we start to intervene, and take deliberate measures to mark these spaces in formal, even *designed* gestures? There has been much discussion recently about the potential to revive Montreal's ubiquitous back alleys. This summer, my fellow neighbours and I realized one such project.

BANISHING CONCRETE

This 14-foot (4 m) wide alley, traversing an entire 660-foot (200 m) long city block comprising some 90 households, was excavated in long, 2-foot wide

1-3 THE VERTE RUELLE **1** LA VERTE RUELLE
PHOTOS 1 + 3 (COMPOSITE) ERIC MAJOR ARCHITECTE; **2** MARCELLE BASTIEN

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The traffic calming effect...led to a reappearance of children in the alley
« [...] l'intervention a calmé la circulation, ce qui a ramené les enfants dans la ruelle. »

bands along both sides, as well as in several 3-foot x 40-foot long central insertions. 3500 cubic feet of concrete and asphalt were replaced with earth, with over 500 new plants.

The project responds to several ecological imperatives: combating heat absorption in hard-surfaced urban areas, promoting bio-diversity and indigenous plant life, reclaiming space otherwise dominated by the automobile, reducing storm-water runoff into civic waste-water infrastructure. In this light, the project is in line with Environment Canada's mandate to ''green'' rather than to ''beautify''. In the context of a traditional but evolving neighbourhood, we found that this environmental objective could be most effectively implemented, by appealing to both the picturesque image of an *urban garden*, as well as to a more progressive *green community* model. Optimistically speaking, such a project needs to satisfy the expectations of a varied population in order to ensure its involvement, which in turn can make the project a valid prototype for other parts of the city.

THE UNSEEN

On a basic level, one must accept the idea of *change*. The alley has a long utilitarian history as a place to park and repair cars, dispose of trash and possibly hazardous substances. Increasingly negative attitudes associated with such practices, as well as a removal of City garbage collection and cleaning services, created an ethos of *a place to be unseen*, in which discarded furniture and miscellaneous objects appear and disappear mysteriously, and litter accumulates.

While this almost medieval psychological detachment from what happens behind one's fence is completely at odds with the project's basic premise, the idea of a multi-purpose service corridor is not. Vehicular accessibility, equally defended by the City and the alley's residents, imposed strict criteria in terms of plant selection, particularly in the central insertions. Miniature shrubs and evergreens were favoured over conventional ground covers, in order to maintain a year-round presence. Definite indications of a cared-for space, including signage, translated to a sense of propriety and surveillance, while the traffic calming effect of the intervention led to a reappearance of children in the alley.

Planted insertions were pushed towards the alley's extremities, in an almost defiant denial of the practical challenges of the heavier traffic, the likelihood of vandalism and garbage accumulation at the junction with cross streets. The intention was to maximize the project's visibility, asserting a public dimension.

AN INVITATION TO LOITER

This apparent invitation to loiter caused some concern. The unknown extent and evolution of the planting, possibly creating undesirable hiding places, was countered by a deliberate attempt to select indigenous plants of exceptional visual characteristics (colourful, overtly flowering, or having winter interest) and easily tamed into that more urbane image of a kempt landscape. That a critical mass of residents committed to the alley's upkeep is another reassuring factor.

Despite two years of simmering ideas and planning, the first appearance of chalk lines and heavy equipment in our otherwise tranquil lane proved to be a wake-up call, reminding residents what this space – either green or grey – meant for them. This seemingly un-loved place was not forgotten after all. However, the process of mobilization and communication amongst neighbours led to an incredibly positive social environment that fundamentally changed my day-to-day perception of living in this slice of this block in this city.

The Verte Ruelle *project, situated in Montreal's Plateau district, was entirely organized by a committee of residents including the author, and funded through grants from* Soverdi *and Environment Canada's* Eco-Action *program.*


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BEYOND THE BRICK WALL | AU DELÀ DU MUR DE BRIQUES

version française: www.aapc.ca | english version: www.csla.ca

1 JULIETTE PATTERSON est architecte-paysagiste à Montréal. Sa pratique intervient sur des commandes diversifiées, allant du toit planté à la gestion des zones humides en ville. L'intention commune est d'intégrer les processus naturels et la nature dans la ville. Elle a récemment participé à l'élaboration d'un plan directeur d'un nouveau quartier écologique pour la Ville de Montréal. www.catalyseurbaine.com j.patterson@catalyseurbaine.com

2 NEIL DAWE is the president of Tract Consulting Inc. in St. John's, Newfoundland. He has been involved with maintenance planning for a good few years. neil@tract.nf.net

3 VIKRAM BHAAT is a Professor of Architecture at McGill University where he also directs activities of the Minimum Cost Housing Group, an independent research unit, responsible for developing a series of Edible Landscape projects around the world. Additional information can be found at www.mcgill.ca/mchg; vikram.bhatt@gmail.com

4 SUE SIRRS is a principle with Outside! Planning and Design Studio in Halifax, a small firm dedicated to leading edge work in environmental planning and landscape architecture. She has worked on several projects at the NSCC Waterfront Campus over the last six years. suesirrs@yahoo.com

5 JON WOODSIDE is a recent graduate from the MLA program at the University of Guelph and a LEED AP. jkwoodside@gmail.com

6 ERIC MAJER runs a Montreal-based architecture firm working on projects in Ontario and Québec. His formative professional experience in Copenhagen sparked a particular interest in urban design and multi-disciplinary practice. eric.majer@videotron.ca

7 VICTORIA LISTER CARLEY specializes in residential design. Although she does not consider herself an ornithologist, Victoria and her husband John were Celebrity Birders for the 2009 Baillie Birdathon, spotting 102 species in one day in Toronto's public spaces, and raising a record sum for the organization. carley.la@sympatico.ca

8 PATRICK MOONEY is an Associate Professor in the School of Architecture and Landscape Architecture at the University of British Columbia. His teaching, research and consulting emphasize the maintenance of biological diversity in urban ecosystems and the theory and design of therapeutic landscapes. mooney@interchange.ubc.ca

9 DOUGLAS JUSTICE is Associate Director and Curator of Collections at UBC Botanical Garden, and teaches in the Landscape Architecture program at UBC. He co-authored the *Jade Garden* with Botanical Garden staff (2005), and the booklet *Ornamental Cherries in Vancouver* (2009) with the Vancouver Cherry Blossom Festival. Douglas is currently working on a tree book for local landscape designers. douglas.justice@ubc.ca

10 INGRID THIESSEN, who has worked in Regina since 1995, is particularly interested in exploring urban issues, native plants and design principles. She has a MLA from the University of Manitoba. ingridthiessen@sasktel.net

11 FLAVIE HALAIS, française d'origine, est journaliste pigiste à Vancouver. Son travail porte sur le développement durable et les questions de collaboration, d'entrepreneuriat social, de design et d'urbanisme. flavie.halais@gmail.com; www.flaviehalais.com

12 RYAN JAMES had a grandfather who was a beekeeper with two enormous vats of honey in his cellar. Ryan's memory is that he hardly ever took advantage of these unguarded vats. Special thanks to Mylee Nordin and her collaborators at the Toronto Beekeeper's Co-operative (torontobees.ca). ryan@groundworksdesign.ca; ryan@basterfield.ca

> DESERVING NATIONAL HONOUR The brilliant planning and analysis work for Point Pleasant Park in Halifax, which took a National Honour Award in 2009, was recognized in the summer Awards issue of LP – but we sadly report that not all of the deserving recipients were named. The award-winning entry was actually a 3-way submission from Ekistics, NIP paysage and Halifax Regional Municipality. LP sincerely apologizes for the incomplete listing and – in case your summer issue isn't handy – we asked NIP paysage to supply a new image of the remarkable concepts in the comprehensive plan. The image above illustrates the Fort Ogilvie Complex, and is an example of work which the CSLA Jury lauded as a "savvy shepherding of ecological and cultural forces." www.aapc.ca

> DU NOUVEAU SUR LE SITE DE L'AAPC! Lisez votre article de LP préféré dans un beau PDF en couleur et en français sur le Web! LP a pour politique d'imprimer les articles dans la langue où ils ont été rédigés. Dans ce numéro, même nos auteurs québécois ont choisi d'écrire en anglais. Notre solution : nous vous proposons des articles avec mise en page complète sur le Web!
Merci à nos bénévoles : Natalie Walliser and Ryan James ! | Cliquer sur www.aapc.ca.

> BIG NATURE, BIG FRIENDS It is important to note that without the tireless efforts of Friends of the Spit over several decades there would be no "Big Nature" for the Landscape Architects to work with and celebrate. ("Big Nature" by James Corner, Richard Kennedy and Mark Schollen, Fall/Automne 2009) Had Friends of the Spit not advocated for a car-free natural environment, Mr Corner et al would have been working with an existing golf range, numerous marinas, a large multi-use building and vast areas of parking. It is therefore gratifying to see our work embraced at last.
Friends of the Spit | Garth Riley, Co-chair | rileygv@yahoo.com | www.friendsofthespit.ca

> DIVERSE AND DYNAMIC Congratulations on the Awards of Excellence issue! It was wonderful to sit back and savour all the diverse and dynamic work being created across our country. Thank you also for the acknowledgement of our work in Iqaluit and John Laird's thoughtful remarks. I am honoured to receive this award and share the success with several people: Jo Hodgson; Josepee Teemotee; the Iqaluit Square trainees; George Noseworthy, Kurt, Charlie, and their colleagues at Nunavut Excavating; Stephen, Gino and Gilles at Kudlik Construction; Sal Hodgson; Nick Newton; Rosalie Martin; and Lee Horner.
Mary Crnkovich | Touch Stone Masonry | Ottawa

> AN UNKIND CUT Our photograph of Michael Hough (Fall 2009) should have been credited to ©2009 PIERRE BÉLANGER/JACQUELINE URBANO. The photographers' names appear on our on-line version of LP, but unfortunately, the credit was a victim of automatic page trimming in our printed book. Sincere apologies.

> SHARING MICHAEL I just read the interview of Michael Hough by Pierre Bélanger and was hoping to link to it online. Could you post it? I look forward to being able to share it with the LAs out there. Thanks for all your efforts – this was a particularly good issue.
Jacob Mitchell | Jacob.mitchell@utoronto.ca
The Editor responds: We have posted both the original story, and a French translation of the interview.

> THREE STRIKES It is with a very red face that the Editor in Chief apologizes (fervently) to three LA luminaries whose names were incorrectly printed in The Last Word, Fall 2009. The three names, which are almost as familiar to the editor as her own, included Cecelia Paine, Cornelia Hahn Oberlander and Jim Floyd.

CONTINUED FROM PAGE 42

→ the maintenance crew and sitting down with them to review designs?

In planning school, I developed a model for a Maintenance Management System for Parks and Recreation agencies. This knowledge was eventually used to inform the design and development of a complete maintenance system for the Grand Concourse Authority, St. John's in 2003. The effective maintenance system has been a success, in part, because it is based on several principles.

Maintenance budgets are enriched as new product is added. A long-term capital replacement fund is in place. Deferring maintenance is avoided, so that it does not lead to additional capital expenditures.

THE PRINCIPLES

Maintenance crews are up-to-date with the latest equipment and technology. Technology is embraced; GIS, GPS and handheld computers make coordinated maintenance programming a reality.

Maintenance supervisors and staff have maintenance calendars and checklists; their practices are continuously reviewed and updated.

THE TOP TEN

And finally, remember the maintenance-free landscape does not exist. Fellow designers might want to check my Top 10 (and counting) Rules of Good Landscape Maintenance.

1. Use local materials and construction techniques where possible.
2. Include lots of local species in your palette of plants.
3. Do not specify materials /elements that are difficult to replace, upgrade or repair.
4. Use the rule of three in design no matter how big the project; no more than three types of everything (benches, lights, garbage cans, etc.).
5. Naturalizing saves money and is sustainable.
6. Utilize new products in design that can reduce maintenance costs without sacrificing construction quality.
7. Carefully review construction details to identify maintenance problems.
8. Try to build to the highest quality to lessen maintenance.
9. Create a maintenance impact statement (MIS): tasks x frequency = cost.
10. Advise your client not to build new infrastructures if funds are not allocated upfront to maintain them.

1 2, 3, 4

THE MAINTENANCE-FREE LANDSCAPE DOES NOT EXIST

NEIL DAWE

IL N'EXISTE PAS DE PAYSAGE SANS ENTRETIEN

Neil Dawe propose des arguments solides en faveur d'un système de gestion de l'entretien (SGE) exhaustif pour tout projet conçu. Il livre son Top 10 des règles de bonne gestion du paysage, ainsi que les principes essentiels qu'il a utilisés dans le développement de son système primé par l'AAPC pour la promenade Grand Concourse à St. John's, Terre-Neuve (2005).

I recently attended the ASLA Conference in Chicago where a number of contemporary topics emerged. Grouped loosely, these concerns included sustainability, integrated transportation planning, urban forestry, climate change, downtown revitalization and … maintenance planning? I was intrigued by the inclusion of maintenance planning in this family of themes and checked the prospectus. While each of the other themes were covered in formal topic-specific presentations, little was offered by way of defining and describing the very maintenance of landscapes – which is what our profession is recognized for generating!

1 BOWRING PARK IN TOP FORM **2,3+4** GOOD MAINTENANCE PLANNING IS PEOPLE-CENTERED | **1** LE PARC BOWRING EN PLEINE FORME **2, 3+4** UNE BONNE PLANIFICATION DE L'ENTRETIEN EST AXÉE SUR LES FACTEURS HUMAINS
PHOTOS 1-4 COURTESY NEIL DAWE | COURTOISIE DE NEIL DAWE

SINS OF OMISSION

Frankly, I thought this was inappropriate. I harkened back to an ASLA conference held in Los Angeles a few years ago where I was introduced to Pershing Square Park – a place considered to be at the forefront of good urban design. I was understandably keen to visit the park. I did. What a disappointment. The park was in hard shape: empty, dirty and ill-kept. Thankfully, if the current imagery on the web gives a true picture of existing conditions, the park has happily recovered. But what did the park need? I would suggest "sustainable maintenance."

Many designers have a legitimate worry that places they create will, over time, fall into disrepair. Many acknowledge the need for better maintenance but feel powerless to have an immediate and sustained influence over the long-term. One solution is to understand maintenance a little better.

MAINTENANCE AS PART OF DESIGN

Ultimately, a comprehensive Maintenance Management System (MMS) is the best choice: the designer needs to know how to successfully integrate long-term maintenance into an MMS. Maintenance must become a part of the design program and the site assessment must include an interview with the folks responsible for maintenance.

A concrete example of this thinking was ably provided by Mark Rios, FAIA, FASLA, at the CSLA/OALA Congress in Toronto this past summer. As part of his design program for his Chess Park in Glendale, California, he placed giant chess pieces in the landscape and left small rooms in the structures to support daily programming and daily maintenance. Simple to do, but often not done. Some 25 years later, the place is in excellent shape.

MAINTENANCE AND MATERIALS

To design we must Plan, Program, Design, Build and **Maintain**. Maintenance must be considered at every step of our process. We must determine who is ultimately responsible for maintenance, and integrate this information even as we choose our materials. We need to consider what the proposed frequency and quality of maintenance will be and whether there is a capital replacement fund in place to sustain the project.

HAVE WE INCLUDED THE BASICS?

None of this is complicated but it is absolutely critical. Have we included the basics: access to storage (small tools and supplies), power and water? Have we considered maintenance equipment maneuverability? Is our planning people-centered, including

CONTINUED ON PAGE 41 →

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