

Wildlife in the Midnight Urban Wilderness

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Abstract

The presence of wildlife, such as beaver or coyotes, and an expectation of encountering them are seen as important parts of a wildland experience. This paper presents a naturalist's insight into the night life and wild side of Edmonton that is a departure from the marketing themes of nightlife we typically encounter. Many species of wildlife are most active at night when the majority of humans are indoors. While urban wilderness is an oxymoron, eight factors are presented that create a perception of a wilderness experience for many within the city limits. Midnight walks, combined with quiet sitting on park benches near the city's river valley, are explored for their remarkable opportunities for meeting coyotes, owls, and porcupines, and even long-distance migrants from South America. Many of these encounters are more subtle than most might expect, involving more of the auditory senses than most of us utilize. The paper concludes that wildlife is an understated contributor to our quality of life and our sense of place – at night.



Year-round resident great horned owl nesting in old magpie nest in the North Saskatchewan River Valley (photo by Edgar T. Jones).

Wildlife After Dark

The photograph was frustrating to attempt, an act of madness, but I simply had to try. It was midnight. I pressed the camera lens, fully open, against the kitchen window and tried to hold it still for a full minute exposure. In the view finder were two porcupines, each at separate bird feeders filled with apple chunks and German pretzels. Two striped skunks were also feeding beneath the backyard bird-feeding table, amicably sharing what the birds had not finished.

One winter a saw-whet owl came nightly, hunting the deer mice drawn to the bird seed. White-tailed jack rabbits and snowshoe hares are regular nightly visitors. A friend up the street has flying squirrels coming to the bird feeder at his kitchen window, and I have sipped tea in his kitchen at midnight as we watched them. Rarely observed, a population of these nocturnal squirrels lives in the mature spruce and hardwoods beside Emily Murphy Park, which is nearby.

During a walk along Saskatchewan Drive at night, it is common to meet a group of white-tailed deer, usually behind the Faculty Club on the University of Alberta campus. A great horned owl frequently sits on top of the Windsor Car Park. The great-horned owl is one of seventy-eight different bird species I have seen in my own yard (just west of the south end of the University of Alberta campus); these include five types of woodpeckers, 14 wood warblers, bald eagles, white-fronted geese, western tanagers, northern shrikes and rose-breasted grosbeaks. It was well after midnight when I finally encountered my first lynx as it stepped in front of my headlights as I left a drive-in theater on the southeast side of the city. None of this sounds like it takes place in the heart of an urban region of one million people.

The Concept of Urban Wilderness

If you wondered about the title of this paper, I will admit that urban wilderness probably is an oxymoron. Wilderness and urban are at opposite ends of the landscape spectrum. Wilderness exists out of reach of the managed forests of conservation lands, let alone the built landscape of a city. Wilderness is roadless, molded by the natural forces of nature, on a large enough scale that it cannot be traveled on foot in a single day, and those who hike there are temporary visitors. For all of our ability we cannot create wilderness. We can only protect it.

Wilderness is also a refugia for wildlife. With the exception of Alberta's Willmore Wilderness where hunting and mining are permitted, wild animals find sanctuary in wilderness from pursuit by human beings and from their economic activities. On the other hand, social scientists also see wilderness as a 'state of mind' or perception. Wall-size murals of wilderness scenes have replaced the sterile white institutional walls of many hospital emergency rooms, trauma centers and dental offices in North America because they have a proven calming effect. Better than the colour pink, I suspect, which is used in psychiatric wards. Urban children who camp out on park land within sight of the New York City skyline are having a wilderness experience. Canoeists running the North Saskatchewan River from Devon into Edmonton speak of wilderness values.

From my personal observation and studies over the years concerning people and nature experiences, the perception of an urban wilderness landscape and experience can be described by these eight attributes.

1. Extensive wild green space that has not been excessively cleared is present.

2. There is a framing or containment of your visual horizon. The river valley excludes most else when you are on or near the river. Nightfall blankets out all but the most illuminated areas.
3. A withdrawal from the hectic pace of industrial, media, computer and automotive technology. To enter anything, you must first leave something else behind.
4. A suspension of time set by clocks, freedom from rigid schedules, and entering into a new flow of time set by nature.
5. Reduction or absence of traffic and other industrial sound intrusion. Litter, garbage, habitat damage and pollution register as human presence and must be absent.
6. Discovery of a sense of the primitive. A primal connection to exploration and physical skills is needed. The campfire experience is very memorable.
7. An absence of humans. Small numbers of human encounters are not a distraction and are reported as a comfort, especially when they are sharing similar activities.
8. An expectation of seeing wildlife and the presence of wildlife. Seeing beaver was the most frequently reported highlight of wilderness canoeing experiences on the river.

[Wildlife and the Night Lecture](#)

For twenty years, from January to April, I taught a university course on wildlife biodiversity and ecology, with a three-hour evening lecture in buildings overlooking the Saskatchewan River Valley. This offered a unique opportunity to step outdoors with 200 students when my lecture reached the subject of the saw-whet owl. We would exit together into the night, stand beside Saskatchewan Drive facing the river valley and listen for the 'whip-whip-whip-whip' calls of the owls.

Even more unusual was that we almost always heard them, sometimes three at a time. Their song is easy to imitate and one or more would occasionally be persuaded to fly into the spruce trees in front of us in response to our imitations of their calls, or into one of the bare elm trees near the street light where the entire class would see them. When the class formally ended, some would linger as long as the owls co-operated, and some would accept an invitation to see the nocturnal flying squirrels at a nearby biologist's bird feeder. Hearing or seeing your first saw-whet owl is a memorable event, and the conversation reflected this. Most had no idea that you could meet saw-whet owls within the city, nor would they ever have thought to pause and listen for them. We are not an outdoor nocturnal species – evening hockey games, casinos, street walkers, and nightclubs notwithstanding. Only poachers and naturalists search for wildlife after dark.

Habitat, Food and Movement Corridors

Urban wildlife require adequate habitat, which includes shelter of old hollow trees, windbreaks or spaces beneath people's porches, like the skunks and porcupines who winter under my own front porch. Homes and neighborhoods near the river valley, and its complementary series of forested ravines, are favoured and these natural watersheds offer movement corridors into the very heart of the city. They are effective enough to allow infrequent visitors such as lynx, black bear, mule deer, moose, elk, and even the occasional mountain lion. Mature white spruce, on the north-facing slopes of the river valley, are southern fragments of the boreal forest. Balsam poplar and trembling aspen develop hollow boles at the young age of fifty years or so and when made accessible by woodpeckers, are ideal nesting and roosting holes for the saw-whet owls.



Infrequent visitors to Edmonton through the North Saskatchewan River Valley are elk, lynx, black bear, moose, and mountain lion (photo by Ross W. Wein, 2001).



The back alleys of older neighborhoods have trees and shrubs that provide habitat for many wild species (photo by Ross W. Wein, 2004).

Ambient temperatures are warmer in winter within the city because of our collective energy output. Food availability is more favourable because of the horticultural diversity, including hawthorne, mountain ash, oaks, privet hedges and other plantings that invite wildlife to our yards. The profusion of mountain ash trees in Edmonton has caused a concentration of wintering Bohemian waxwings in world record numbers. Snowshoe hares are more comfortable in the thick shrub cover of our yards. White-tailed jackrabbits, whose advantage lies more in speed than stealth, prefer open sports fields and the hard packed snow of neighborhood streets. They feel safer in our neighborhoods since coyotes are less likely to pursue them into the labyrinth of human habitat.

In contrast, some wild animals prefer a routine that takes place in the absence of humans. Porcupines would have little or no chance to cross city roads safely during daylight hours. Behavioral shifts in wildlife movements favour the low contact hours. At least one wildlife example in Edmonton has demonstrated to me how quickly

such nocturnal shifts can occur.

Gulls are typically active by daylight. The Franklin's gull is a common summer-breeding gull in agricultural areas around Edmonton. I noticed several years ago that a local population of Franklin's gulls moved in at night to feed on popcorn and food scraps between the cars parked at the drive-in theater on the Northeast side of the city. They shifted to become nocturnal to favour an available food supply in a lighted area after midnight.

Night hawks are a night-flying member of the whippoorwill and nightjar family, and are a regular feature of cities where they incubate their pair of eggs on the gravel and tar roofs of downtown buildings. Their nasal calls of "peent" and booming dives are a common night sound as they hunt the midnight sky for insects. When I hear them outside a movie theatre or downtown restaurant, I feel it is worth sharing the event with others nearby by pointing out how the nighthawks hunt the midnight sky for insects. I note that, with their long graceful wings, they travel to their wintering grounds as far away as the Pampas of Argentina and back again, migrating over the Bahaman Islands, the Greater Antilles and Central America. Completing this journey twice a year, they are far more traveled than most Edmontonians. If one of us ever walked that far we would be greeted by the media, flowers and praise at our City of Champions welcome sign. Downtown visitors often seem bewildered when so much is unexpectedly placed before them.

[Midnight Walks and Late Night Bench Watches](#)

Midnight excursions are a long tradition for naturalists. I have led night walks with park visitors into forests throughout my career. In recent years, while an advisor to the National Parks of Thailand, I convinced them to offer night naturalist talks and

walks which featured an incredible mixed symphony of insect sounds, rarely seen night animals and the possibility of having the thrill of seeing first hand the giant atlas moth, the world's largest, which is not uncommon near the lights of the park buildings. These sightings were dismissed by the staff as commonplace while visitors thrilled to the opportunity. Now it is a regular feature of the campground program. We forget the magic of midnight and the wonders of what might seem commonplace because we see it frequently. This is called *parochial perception* and is demonstrated in the attitudes toward coyotes and magpies. Eastern visitors excitedly ask, "What was that magnificent blue, black and white bird with a very long tail?" and unfortunately receive a reply of, "Oh that, that's only a magpie." Can you imagine the interpretive guide in an art museum saying, "Oh, that, that's only a Rembrandt"?

Night excursions meet nature at its finest: howling with timber wolves in Alberta's Caribou Mountains; listening to bugling elk in the mountain national parks; entering the deafening chorus of great plains toads in the grasslands. Coming across the night movements of tiger salamanders on rainy, dark highways in the Bow Valley west of Calgary is a mixed blessing when large trucks are racing by. Compassion demands that you sprint for the salamanders, conscious of their innocence, and rescue those you can from their inevitable fate. Few drivers even see them, let alone slow down for them. I used to display a bumper sticker that expressed my philosophy. It read, "I brake for turtles, frogs and large leaves."

Midnight walks are a long tradition for me and my Labrador Retriever. We meet jackrabbits every night and showshoe hares less frequently. Neither the midnight skunks nor porcupines expect to meet dogs and people, so we try to keep the encounter to the lowest level of anxiety possible for all, giving them a wide berth. There are

many benefits to post-midnight walks. These include the absence of people, low levels of ambient traffic sounds, wonderful views of the aurora borealis, and starry skies, much enhanced by the reduced glare of the modern, energy efficient, blue street lights the city had the wisdom to adopt. I love the park benches overlooking the river valley, especially when sheltered from traffic sounds. From there I savour the harmonics of the coyote howls and cup my ears to better hear the whistled notes of the saw-whet owls or the groupings of four to six hoots of the great horned owls.

There is a fine patch of old-growth spruce along the Keillor bike path. A barred owl recently moved into this old forest. Barred owls are fussy about where they call home, as are the pair of goshawks who nest nearby, and the three-toed woodpeckers who can be found there in winter. On several occasions I have heard the distinctive hoot of this barred owl, matching the phrase “who cooks for you; who cooks for you,” and each time it was savoured as a special reward. I give a pretty good barred owl imitation, but I never chose to call to this one. I feared he might sense some anxiety in believing another barred owl was near, posing some threat to his territory or mate. On a midnight walk through Mahogany Hammock in the Florida Everglades, I called to a perched barred owl. The male attacked us from behind in a silent aerial assault in defence of this competition for its mate. The person next to me sank to his knees as it raked his head with its talons as it flew by. Then the pair of owls stood side by side, each calling aloud in their wild courtship voices to reinforce their pair bond. They gazed defiantly down on us as I worked to stop the bleeding. Now I prefer to simply listen unobtrusively and with more tranquility.

My dog grows restless at my tendency to linger on my favourite night benches, but I find that these are excellent spaces for reflection, centering and escape. Reflection comes easiest after

midnight. The curtain of nightfall, the same moon, and the same constellations seem to unite years as well as geography. A sense of place and time is less precise, more universal. A midnight tarry on a bench for quiet introspection is as important as the walk itself. Finding my favourite benches empty is also more likely after midnight, as is the opportunity to have memorable nature encounters. Some refer to it as “Seton sitting,” after the Canadian pioneer nature writer, Ernest Thompson Seton. His counterpart in New York’s Catskill Mountains, John Burroughs, also maintained that if you sit still in the woods long enough, the best of nature will come to you.

Spring Nights and Long-Distance Migrants

Below my favourite bench, along the riverside walking trail south of Hawrelak Park, is a small woodland pool. In spring a mixed chorus of wood frogs and boreal chorus frogs, the latter sounding like a finger nail running along the teeth of a comb, can be heard at night, and this announcement strips the pool of its vernal privacy. Both frogs are harbingers of spring, as are the Canada geese honking overhead. Birds migrate at night, mostly unseen. As tundra swans pass, their ghostly white apparitions can sometimes be seen dipping low to the street lights the way an albatross skims the ocean waves. When you listen during spring and fall, you’ll hear them. Each year I await the midnight bird migration, never visible, only audible. Now the peeps of sandpipers and slurred notes of songbirds punctuate the darkness: short notes, at a pitch close to two kilocycles, very audible to our ears, about three octaves above middle C. This incredible migratory event involves one-third of the continent’s songbird population, perhaps three billion songbirds, most weighing about the weight of a ball-point pen, all travelling to somewhere in the boreal forest. About

two-thirds of these neo-tropical migrants are returning from Mexico, Central America, or South America.

About 140 of the 288 species of migratory birds that breed in the North American boreal forest pass over Edmonton through the night. Three-fourths of North America's waterfowl numbers rely on the boreal for a portion of their lives. Ruby-crowned kinglets seem to lead the parade here, in mid-April with a particular rush in late May.

One cannot help but be concerned about these invisible small birds – for their vulnerability, the great expenditure of energy, the risks of navigation, and the prospect of sudden death when they crash into tall buildings. Ovenbirds are a declining ground-nesting wood warbler. This is a bird of the night in more ways than its migration. Its familiar territorial song from the hardwood forests where it nests increases in volume with a phrase which sounds like “teacher, teacher, TEACHER.” But the real mystery happens at night. It gives a completely different song in a night flight in the manner of a skylark. Few naturalists have ever heard it, and I have heard it less than a dozen times. No other warbler seems to do this. Henry David Thoreau, while living on Walden Pond, knew the ovenbird and its daytime “teacher” song, but he was haunted by a night song that was mentioned frequently in his diary as belonging to a “mysterious midnight warbler,” whose identity he never discovered. His friend Ralph Waldo Emerson cautioned him that he should never learn the source of this mystery or he might lose all passion for living.

Thousands of sandhill cranes fly over day and night, very audible from high elevations due to tracheas convoluted like a French horn, heading to the Mackenzie Delta and other regions of the Arctic; they return south about the third week of September. The voices of the songbirds; thrushes, vireo's and wood warblers are more subtle, far more difficult to recognize from their flight calls than when they sing

in their breeding territories. However, migration biologists, concerned with the decline of songbirds in winter in the tropics (neotropical migrants), now digitally record these calls and submit them to sound spectrographic analysis for “fingerprints” and identification. This technique was pioneered by professors at Cornell and Ohio State universities in the 60’s. If the Wright brothers and their fellow pioneers of flight stole the magic of the birds and their domain of the sky as has been claimed; then it might also be said that the audiospectrogram stole away a bit of the mystery of these passing midnight visitors over our cities. In fact, this migratory phenomenon is so complex that the answers only raise a multitude of new questions. I still listen in wonder as I hear them pass over. There are nights when I set my spotting scope on a tri-pod and focus it on the full moon. Sitting on one of the overlook benches, staring at the moon’s reflective light you can see the birds streak by. The night sky is far from empty of life. Their magic is greater than ever.

[Coyotes in the City](#)

Both of my Labrador Retrievers often came across evidence of their wild cousins and occasionally met them face to face, each intently fixed upon the other. There was always excitement when they met another dog, any dog, of any breed, but coyote encounters were like none other. Something passed between them, holding them transfixed, that was not visible to me. It was penetrating, captivating, intense. My dog’s mane would rise, his posture stiffen, the shoulder sometimes trembling. It didn’t pass when the coyote would turn and fade into the bush. Not right away. It was primal. Such channels linger once opened. Coyotes are one of the wildlife treasures of the city. My best reward, on a par with watching a rippling display of aurora borealis, is hearing the yips and howls of the coyotes. A passing siren of an ambulance, fire truck or police vehicle is often enough to trigger

them into a howling party. I watch the reactions of people who stop and listen; people are always invigorated by the sounds.

The coyote's voice is the signature sound of the prairie, along with the western meadowlark. In a similar way the howl of a timber wolf and the wail of a loon are signatures of the boreal forest – the two voices most desired to be heard by tourists visiting Canada's northern lakes and tourism destinations. Wolves are no longer a regular resident close to Edmonton. At least we still have coyotes, but we need to cease hostilities in our relationship with them. As many heard in the opening narrative of the 2003 adventure film *X2: XMEN UNITED*, "sharing the world has never been humanity's finest attribute." Coyotes slide among the shadows and are called the "trickster" by indigenous people, untamed and untameable by their nature, here in a landscape that is orderly, civilized, occupied and hostile to invaders. It is they who still lay claim to the wild parcels of the city after the midnight hour. And for those of us who take time to pause on a park bench at night their harmonies define the "urban wilderness."

Wildlife is under the radar for most citizens who live, work in or visit our city. There is much more to the wild side of Edmonton than most ever imagine. In summer most neighborhoods with reasonable tree cover will have at least twenty-five nesting bird species, and a stroll into the river valley could reveal an additional 28 or so. In winter the Christmas bird count is one of the largest in the world, often with over 1000 people participating in pursuit of about sixty over-wintering species in Edmonton. About 54 species of mammals (not including human beings) occur within Edmonton's city limits when we count the shrews, pocket gopher and the two species of bats that spend the winter in our attics. Nearly all of these, except four species of squirrels, are more typically active at night.

The presence of wildlife is an asset and, like city parks and treed

wild green space, an indicator of our quality of life. And each and every night excursion into the outdoors offers its own unique reward. A cricket song you never before noticed; a glimpse of a low-flying silver-haired bat, the perfume of the flowering May tree or hawthornes; the glitter of fairy-like fireflies; the luminescence of forest fungi; the faint trace of a sound that reveals the presence of an invisible northern flying squirrel; a large polyphemous moth attracted to the light behind a window. There is always something you have not experienced, thought about or expected. We marvel at the new wildlife encounter and celebrate the familiar like a return visit from an old friend, such as when a lone white-throated sparrow seems to awaken in the night to announce himself, unprovoked by any rival, with the richness of his “Oh, dear sweet Canada, Canada, Canada.” It is best that we remember the words of Henry David Thoreau, who reminds us that “A man is rich in proportion to the number of things he can afford to let alone.”

Further Reading

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Further information about artificial-light ecology is available at www.urbanwildlands.org, www.darksky.org, and www.towerkill.com.