



Gatineau Park:

A Threatened Treasure

CPAWS Ottawa Valley

\$2.00



CPAWS is Canada's pre-eminent, non-profit wilderness protection organization.

With a network of 13 chapters, 20,000 members, over 50 staff and hundreds of committed volunteers, since 1963 CPAWS has helped to conserve over 400,000 square kilometres of Canada's most treasured wild places in parks and other protected areas- an area nearly seven times the size of Nova Scotia!

Acknowledgements

We are grateful to many individuals and organizations for their valuable contributions to this publication.

The dedicated members of the CPAWS Gatineau Park booklet committee, who provided the content:

Doug Anions
Carolyn Cahill
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CPAWS staff and CPAWS-OV board members for helpful suggestions, layout, French translation and publishing:

Ellen Adelberg
Line Bastrash
Ken Buchan
John McDonnell
Sinclair Robinson
Julie Seguin

Phil Wilson for the centrefold map and graphics support.

Sue Novotny and Allison MacAlister for layout.

The individuals who provided advice, suggestions and technical expertise:

Carol Alette
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Dan Smythe
Jean-Paul Murray
Stephen Knowles

Michel Viens and staff at the Gatineau Park office for helpful discussions and for providing us with important data.

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Publication of this booklet was made possible by the generous financial support of Mountain Equipment Co-op. Bushtukah also contributed financially to this project. Published 2008.

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Preface

Gatineau Park is a national treasure—a beautiful wilderness with extraordinary biodiversity. Sadly, the park's ecological integrity is seriously threatened by human activities both inside and outside the park.

This booklet highlights some of the qualities that make Gatineau Park so special. It explains how the park is seriously threatened, and what must be done to protect it for future generations of Canadians.

A fundamental change in management strategy is urgently required to maintain the ecological integrity of Gatineau Park. The boundaries of the park must be accurately defined in federal legislation. A legislative framework and policies appropriate to a nationally important protected area must be applied. Legislation must address the need for full parliamentary oversight, the same oversight given to all our Canadian national parks under the National Parks Act.

Gatineau Park has the potential to become a core protected area within a much larger region that protects natural ecosystems and maintains viable populations of all native species. It can serve as a model of innovative conservation

practices and sustainable land use. It is a wonderful place to offer learning opportunities so that all Canadians, and visitors to our country, can be inspired to appreciate our natural and cultural heritage. In its 2005 Master Plan for Gatineau Park, the National Capital Commission (NCC) indicated a desire to manage the park as an IUCN Class II protected area. This decision is extremely significant, but will require a

great deal of public support to be successful.

A vision shared by all interested parties is urgently needed to ensure a sustainable future for Gatineau Park and its associated ecosystems. Although its potential value as a protected area has been recognized by many over the past 100 years, Gatineau Park has not yet received official recognition from the Government of Canada.

CPAWS believes Gatineau Park deserves national park status. With your help, Gatineau Park will achieve its destiny as a nationally recognized protected area that enriches the lives of area residents and all Canadians. It will also serve as an important symbol of Canadian identity.

A National Gem

Certain natural places in Canada should be treated as treasures.

Gatineau Park is one such place. The park's 361 square kilometres (km^2), on the doorstep of Canada's national capital, is a veritable tapestry of rolling hills, valleys, forests, lakes and wetlands that is beautiful to behold. These habitats support many of Canada's native wild species. As well, the park has a long and colourful human history involving Aboriginal peoples, French explorers, fur-traders, and English- and French-speaking settlers. Evidence of this history can be seen throughout the park.

Today, thanks to the vision of early conservationists, Gatineau Park is a unique wilderness available to all Canadians. The park also provides year-round opportunities to enjoy a wide range of outdoor activities, including hiking, cross-country skiing, snowshoeing, cycling, mountain biking, camping, paddling, swimming and rock climbing, amidst this beautiful landscape.

However, the park's proximity to Canada's fourth largest urban area, Ottawa-Gatineau, puts it at considerable risk. High levels of visitation and recreation threaten the park's health from within. The development resulting from a growing regional population threatens the park from outside. Habitat loss and fragmentation are challenging healthy populations of the park's wildlife. Global climate change also threatens the stability of the park's ecosystems. Gatineau Park needs the help of not only those responsible for its management but also those who visit it and enjoy it.



The Eardley Escarpment

The rocky, wooded Eardley Escarpment rises majestically 300 m above the plains of the Ottawa River Valley. The top of the escarpment affords fine views over the Ottawa Valley, which, as the ice retreated from the last Ice Age, formed part of the vast saltwater Champlain Sea.

King Mountain (344 m) is the site of Canada's first geodetic station.

The escarpment is not only the most prominent geographical feature of the park, but also home to its most sensitive and fragile ecosystems. Its warm and relatively dry microclimate supports the greatest number of plant species of conservation concern in Quebec. The escarpment also sustains several relict populations – isolated or remnant populations of species that were once widespread in the region – like the blunt-lobed woodsia fern.

Photo: Dan Brunton

Outstanding Natural Heritage

The Gatineau Hills are remnants of Quebec's ancient Grenville (or Laurentian) Mountains, one of the oldest mountain ranges in the world. These mountains, part of the vast Canadian Shield, may have once towered as high as today's Rockies! Their hard Precambrian rock, mainly granite and gneiss, has been worn down by a billion years of erosion. The impressive Eardley Escarpment, which forms the southwestern border of Gatineau Park, is part of a major geological fault along the southern margin of the Canadian Shield. The Lusk Caves on the Eardley Plateau were formed in deposits of metamorphosed limestone (marble) lying upon the older Precambrian rock.

Gatineau Park is very popular because of its tranquility and natural beauty. However, even regular visitors may be unaware of its unusual diversity of habitats, plants and animals. This amazing biodiversity is largely because Gatineau Park lies in the transition zone between the boreal forest of the Canadian Shield to the north and the eastern temperate forest of the St. Lawrence Lowlands to the south. Species typical of both zones live in the park, resulting in an interesting blend of species not commonly found elsewhere in Canada. Gatineau Park provides habitat for 27% of all of the plant and vertebrate species found in Canada, and more than 40% of those found in Quebec and Ontario. Probably no other park in Canada of comparable size is so rich with flora and fauna.

Flora

The distribution of plant species within Gatineau Park is determined by several factors, including microclimate, topography and geology. The carbonate-rich soils common in the park support a rich diversity of plants.

Nearly 90% of the park is forested, presenting some of the most ecologically diverse woodlands in central Canada. An afternoon's walk can take the hiker through deciduous-dominated forests of sugar maple, American beech, yellow birch and eastern hemlock, then through coniferous-dominated black spruce and balsam fir forests typically associated with the boreal forest. Red and white oaks dominate along the steep slopes of the Eardley Escarpment.

Remnant stands of the park's original mature white pine forests are very rare, as most of these magnificent trees were harvested for the square timber trade in the 1800s. Similarly, small virgin stands of white spruce and balsam fir are found only in a few remote locations. Virgin stands of eastern hemlock are also rare, but can be found on some cool,



Arrowhead. Photo: Ian Whyte

north-facing slopes. Maintaining the health of these species is very important, as they contain the genetic diversity of the once-vast forests of the St. Lawrence Lowlands.

More than 1100 species of vascular plants have been documented in Gatineau Park. Notable are the more than 40 species of orchids, including showy lady's slipper, green adder's mouth, grass pink and rose pogonia. Many orchids thrive in the wet, rich environment of marshes, fens and bogs.

Aquatic Environments

As important as its forests are, it is water that underpins Gatineau Park's ecology. The park is dotted with some 50 lakes, the largest being La Pêche, Philippe, Mousseau (Harrington) and Meech. The latter three form a chain of lakes through the centre of the park and drain through Meech Creek Valley to the Gatineau River. The park also has many streams, ponds and wetlands.

Pink Lake is a fine example of a rare meromictic lake; the lake's bowl-like shape and its sheltered location prevent its waters from intermixing. At its greatest depth, the lake is almost oxygen-free, and supports an anaerobic bacterium whose photosynthetic process uses sulphur instead of oxygen. The lake, once part of the Champlain Sea, is also home to a unique freshwater population of the saltwater threespine stickleback fish.

The numerous marshes and bogs provide critical feeding and breeding habitat for many insects, invertebrates, fish, amphibians, reptiles, birds and mammals. Wetlands are



Above: A triangle floater mussel in lac Philippe. Shell length is 4-6 cm. Though rare in the park, the south end of Philippe is one the best places in the Outaouais region to observe this mollusc. Photo: André Martel

Freshwater Mussels

Seven species of freshwater mussels, with intriguing names such as creeper, fat mucket, triangle floater and eastern elliptio, have been observed in Gatineau Park lakes and rivers.

Freshwater mussels live on the bottom of lakes and rivers. Known as "nature's water filters," they ingest minute algae, detritus and bacteria, efficiently cleaning the water at the same time. Moreover, by their burrowing and crawling activities, mussels oxygenate the sediments on the bottom of rivers and lakes – as do earthworms in your garden. Mussels are essential to the biodiversity and productivity of aquatic ecosystems and are an excellent bio-indicator of ecosystem health.

Mussels are an important component of the food chain, as a food source for many species, including otters, raccoons, herons and some fish.

Fish are vitally important to the mussel's lifecycle. Mussel larvae attach themselves to fish gills or fins, catch a free ride for several weeks while growing, then detach themselves in a new locale.

among the world's most productive ecosystems, producing as much biomass per hectare as a tropical rainforest. Wetlands store rainfall then slowly release it to meet downstream needs, such as those of plants and animals during dry spells. They also serve as a natural "water treatment system," improving water quality by filtering, diluting and degrading various sediments and pollutants.

Over 50 species of fish have been inventoried in park waters. Several salmonid species such as lake trout, speckled trout and lake whitefish are native. At least 12 species were introduced by people; these include popular sport fish such as smallmouth bass, rainbow trout, and brown trout. Sport fishing is regulated through provincial legislation.

Mammals

Gatineau Park provides habitat to many mammals typical of Canada's wilderness, such as river otter, snowshoe hare, red fox, moose, coyote, wolf, beaver, raccoon, white-tailed deer and black bear. Wolverine and Eastern Cougar occur here, but are rarely seen.

Perhaps the most influential mammal in Gatineau Park is the beaver, which plays a major ecological role by flooding habitats, changing the flow of streams, and modifying plant communities. Evidence of such beaver activity is common throughout the park. Once plentiful, by 1930 beaver populations in eastern Canada had declined to low levels due to excessive harvesting for the animal's fur. To restore the local population, breeding pairs were reintroduced into Gatineau Park. Since the 1950s, beavers have once again become widespread and abundant in the park.

Some 200 black bears live in Gatineau Park. These omnivores require significant space to maintain a viable population. Forested natural landscapes and networks of protected areas are critical to the continued survival of this important native species. Bears play an important role in dispersing seeds.

The population of white-tailed deer in the park and surrounding rural areas has increased markedly in the past several decades. The species is over-abundant relative to the park's ability to sustain the population. An estimated 1200 deer were resident in the park in the spring of 2005, 50% above the park's "carrying capacity." The high number of deer is manifested in the heavy browsing of vegetation along the Eardley Escarpment, severely impacting the natural regeneration of its red and white oak forest. The main predator of deer in the park is the wolf; unfortunately Gatineau Park is not large enough, is too fragmented, and has too many disturbances to sustain a wolf population large enough to control the burgeoning deer population.

Gatineau Park was made a provincial game reserve in 1973 and is shown as the *Parc de la Gatineau Game Sanctuary* in the Conservation and Development of Wildlife Act (October 2007). This is very significant since all hunting is prohibited therein.



Wolves in Gatineau Park

Wolves require large territories in which to find a diverse and sufficient food supply. The presence of wolves indicates an ecosystem is wild enough to support a top-level predator.

There may be as many as 17 subspecies of grey wolves (*Canis lupus*) in Canada, each with varying size, coloration and other characteristics. Any wolves living in or travelling through Gatineau Park are probably eastern wolves, genetically linked to a population centred around Ontario's Algonquin Provincial Park—considered by some experts to be a separate species, *Canis lycaon*.

The wolf population in Gatineau Park is estimated at eight or fewer individuals in one or two packs. Wolves are shy of humans and rarely sighted, but evidence of their presence can be observed.

Wolves were once widespread in Canada. Centuries of hunting and eradication efforts, as well as habitat loss and a naturally low reproduction rate, have reduced their range to remote, predominantly northern areas and certain large protected areas. Wolves still exist in the Gatineau Hills due to the presence of a relatively large core wilderness area, and because Gatineau Park was designated a Provincial game reserve in 1973. Outside the park there is little protection for wolves. Trapping is permitted and wolves may still be treated as vermin. Snowmobiles and all-terrain vehicles facilitate access to remote areas, increasing the stress on wolf populations from hunting and habitat fragmentation. As a consequence, wolves are under continuous pressure outside protected areas.

Photo: Eastern Wolf, by Lori Labatt



Common Loon

A quintessential symbol of Canada's wilderness, the common loon is most likely to be sighted or heard on the larger lakes, such as La Pêche and Meech, which provide suitable habitat for nesting and an ample food supply.

Loons are sensitive to human disturbances. Their nests are particularly threatened by the wake from motorboats. They are a top predator of many species of fish, and are highly vulnerable to ecological disturbances such as shoreline development, acidification of lakes, and contaminants such as mercury and lead. The presence of loons is a good indicator of the health of a lake.

Common Loon. Photo: Dan Brunton

Birds

About 230 species of birds have been observed in Gatineau Park. The forests are alive with ruffed grouse, pileated woodpeckers, white-throated sparrows and nuthatches. The lakes and ponds provide habitat for great blue herons, wood ducks, buffleheads and hooded mergansers, while other species, such as the Virginia rail, live in the extensive cattail and sedge marshes. Many migratory song birds, including warblers, sparrows and thrushes, also nest in the park.

Eagles, hawks and owls are significant top avian predators in the park. Turkey vultures, red-tailed hawks and broad-winged hawks soar over the Eardley Escarpment, looking for prey or carrion. Vultures clean up deer carcasses left by wolves and other predators. Great horned owls and barred owls hunt along swamps and forest edges.

Species of Conservation Concern

Gatineau Park is home to 125 species of plants and animals that are of conservation concern in Quebec. Twenty-three of these species are also listed as endangered in Canada by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). This Government of Canada committee of experts assesses and designates which species are in danger of disappearing from Canada.

Of the 125 species of conservation concern in Gatineau Park, 90 are plants—a number higher than for any protected area in the province. These include wild ginger, wild leek, blunt-lobed woodsia fern, and ram's-head lady's slipper orchid. Seven of the 90 plant species are trees: white oak, swamp white oak, eastern red cedar, black maple, common hackberry (or sugarberry), butternut and rock elm. These tree species are of particular interest because they are all near the northern limit of their natural range. Ram's-head lady's slipper and butternut are also listed by COSEWIC as endangered species. More than 40 plant species of conservation concern are concentrated on the dry, south-facing slopes of the Eardley Escarpment. For example, along the escarpment

live more than 80% of all eastern red cedar trees found in Quebec.

Three Gatineau Park fish species —margined madtom, bridle shiner and brassy minnow—are of conservation concern. The park is also home to a significant number of nationally important reptiles that are considered to be of conservation concern, including the milk snake, ringneck snake, common map turtle and blandings turtle. The blandings turtle is listed by COSEWIC as endangered.

Thirteen species of birds observed in the park are of conservation concern; these include the golden eagle, red-headed woodpecker, least bittern and loggerhead shrike. The southern flying squirrel, wolverine, eastern cougar and eastern wolf are four of the ten park mammal species of conservation concern. The loggerhead shrike, wolverine and cougar are also listed by COSEWIC as endangered in Canada.

125 species of conservation concern in Gatineau Park*

90	Plants
2	Invertebrates
3	Fish
3	Amphibians
4	Reptiles
13	Birds
10	Mammals

* Source: Del Degan, Massé et Associés Inc. (2006 draft) The Health of Gatineau Park's Ecosystems. Species of conservation concern include those species designated by COSEWIC as well as those designated by Quebec government bodies.



Amphibians

Of the 17 species of amphibians in Gatineau Park, three are species of conservation concern in Quebec: the western (striped) chorus frog, pickerel frog and four-toed salamander. The striped chorus frog is frequently active in the spring in damp meadows and swampy areas.

Amphibians eat large quantities of insects and help keep these populations in check. In turn, amphibians are eaten by many birds, mammals, fish and reptiles, thus supporting the food web. An abundance of amphibians is one sign of a healthy environment!

Habitat loss and fragmentation of populations are serious threats to amphibians. Habitat loss is primarily caused by expanding agriculture, logging and human infrastructure, especially housing and road developments. Climate change could become a major threat to amphibians in the 21st century, especially if prolonged drying trends affect temporary ponds and small intermittent streams. For many amphibians, the existence of many protected areas may mean the difference between survival and extinction.

Amphibians are exceptional indicators of environmental quality. They breathe through their moist, permeable skin, through which waterborne contaminants readily enter their bodies and accumulate in tissues. Agricultural pesticides and airborne pollutants are a particular threat, as they are readily washed or blown into amphibian habitats. The loss of an amphibian species not only represents a loss of biodiversity – it is also a warning of a damaged ecosystem.

Green frog Photo: Dan Brunton

An Emerging Vision for Conservation

Archaeological evidence indicates that Algonquin people settled in the Ottawa Valley about 4000 years ago. For millennia, ecosystems evolved naturally; this changed with the coming of Europeans. Samuel de Champlain and other French explorers arrived in the early 1600s, soon followed by trappers and fur traders. The 1800s brought huge changes to the Gatineau Hills ecosystems: the forests were extensively logged, roads were built, land was cleared for farming, and mines were dug. As the population of the region grew, so did public concern about deforestation.

Historical records indicate considerable interest in creating a park in the Gatineau Hills from the early 1900s. In his influential 1903 development plan for the Ottawa region, noted landscape architect Frederick Todd proposed a natural park. James Harkin, the first director of the newly-created Dominion Parks Branch, proposed in 1913 that Gatineau Park become Canada's first national park beyond the Rocky Mountains! In 1915 Sir Herbert Holt, chair of the Federal Plan Commission, prepared a report urging the establishment of a wilderness park in the Gatineau Hills.

William Lyon Mackenzie King, Canada's tenth and longest-serving prime minister, was a key player in the creation of Gatineau Park. Between 1903 and 1927 he purchased 231 hectares of land around Kingsmere Lake to create his private summer estate. Although there was growing public interest in conservation, it had become more difficult to establish national parks due to landowner concerns and the need for federal-provincial agreement. However, in 1927 King's government established the Federal District Commission (FDC), with powers to purchase land to create a public park in the Gatineau Hills.

During the Great Depression large numbers of hardwoods were felled for firewood, and fires raged through the hills. One very concerned resident was Percy Sparks, an officer of the Federal Woodlands Preservation League, who lead a successful lobby against the rampant deforestation. He later became the chair of the FDC's Gatineau Park Advisory Committee which sustained interest in creating a park through the 1930s and beyond.

Perhaps the most significant day in the history of Gatineau Park was July 1, 1938 when the MacKenzie King government gave royal assent to an appropriation of \$100,000 "for the acquisition of land and surveys in connection with the national parkway in the Gatineau Valley adjacent to Ottawa." This is



The ruins of Thomas "Carbide" Willson's phosphate mill on Meech Creek. Photo: Jim Fraser

believed to be the date when the creation of Gatineau Park began, as it started the process of assembling most of the publicly owned land that we have today.

Upon his death in 1950, King bequeathed his property at Kingsmere to Canada, for “a public park for the citizens of Canada ...[to] be maintained as nearly as possible in their present state, that they will be developed as parkland, and they will form a wildlife sanctuary, and will continue to have the character of a natural forest reserve.” The Mackenzie King Estate became a core element of Gatineau Park.

In 1950 urban planner Jacques Gréber produced his authoritative report, *A Plan for the National Capital*. Gréber was influenced by Percy Sparks, and his plan included many ideas from the Gatineau Park Advisory Committee. The two most important recommendations were that Gatineau Park’s area should be expanded to 330 km², and the park should be a public rather than a private reserve. Both recommendations were approved.

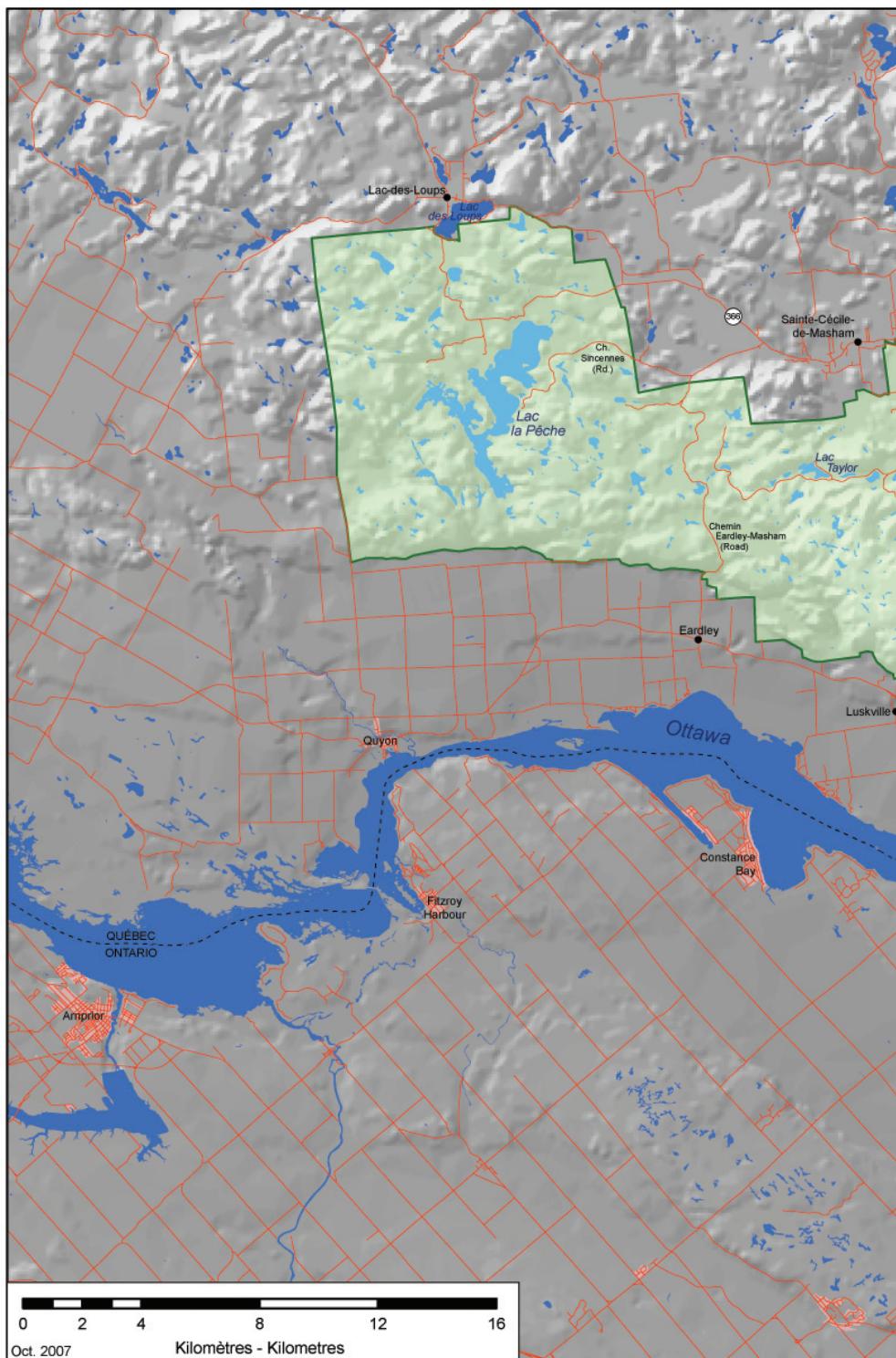
In 1958 a large portfolio of federally owned lands in the Ottawa-Gatineau region including Gatineau Park were placed under the control of the National Capital Commission (NCC). The NCC is a federal Crown corporation that operates at arm’s length from the federal government. Gatineau Park is managed much the same as other lands under the NCC’s mandate. The National Capital Act gives the NCC sweeping powers to manage, develop and even sell public lands as it sees fit.

Gatineau Park’s tentative status as well as incremental development within its boundaries have long concerned conservationists and area residents. The Ottawa Valley chapter of the Canadian Parks and Wilderness Society (CPAWS), then the National and Provincial Parks Association of Canada, was formed in 1970 in response to a plan for Gatineau Park that reversed decades of policy aimed at preserving the park. The concerted efforts of CPAWS and others were instrumental in halting this plan. CPAWS continues to actively support protection of park ecosystems through appropriate legislation. A 2006 Decima Poll of Ottawa residents showed that 82 % were in favour of making Gatineau Park a national park.

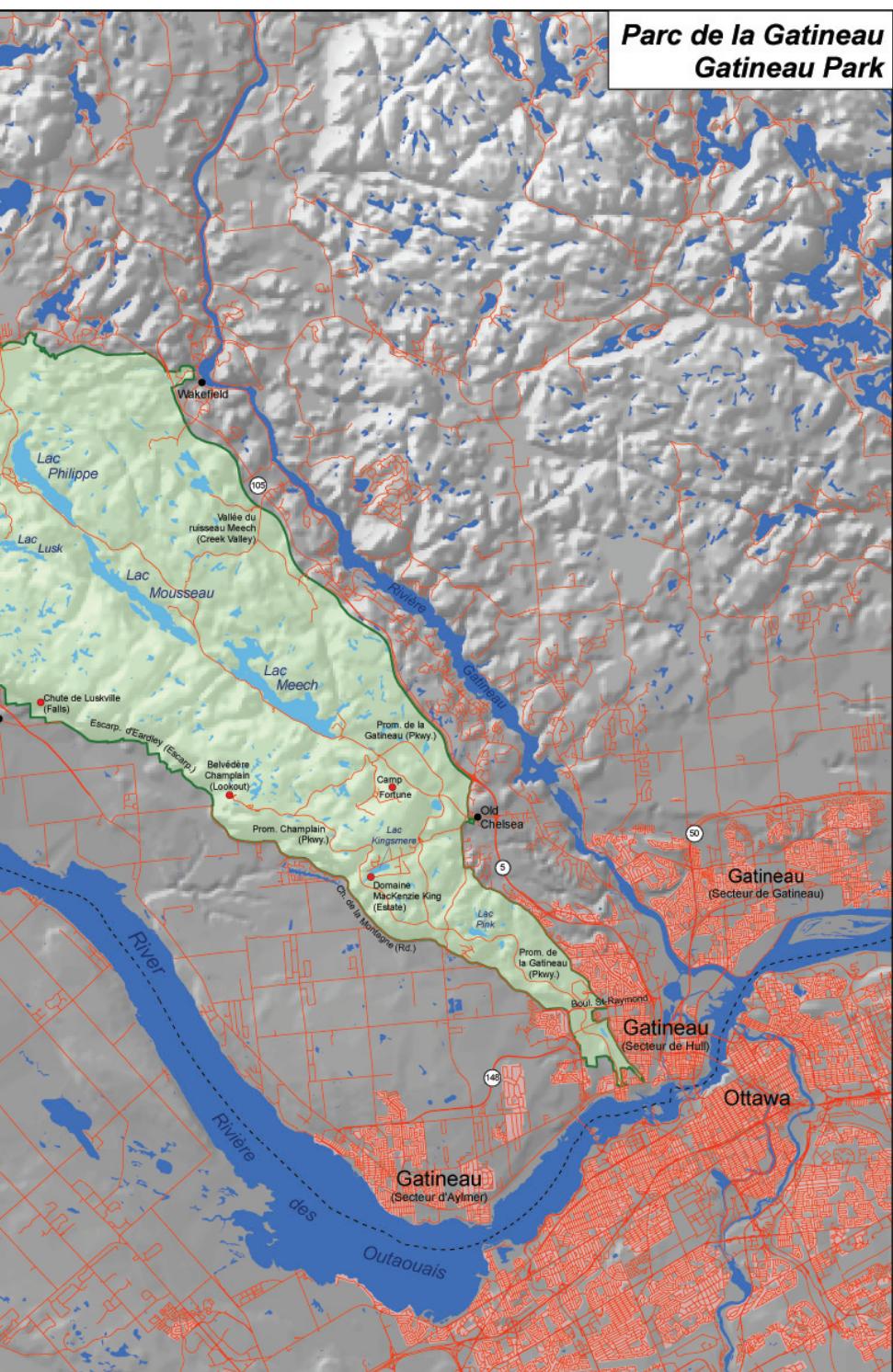
Even though Gatineau Park still does not have full legal status as a protected area, over the past century it has gained this status in the mind of the public. All Canadians expect Gatineau Park to be treated as though it were a national park, and managed with the same degree of diligence.



MacKenzie King.
Photo: Library and Archives Canada



Parc de la Gatineau Gatineau Park





Stresses on the Park

Over the centuries humans have impacted the landscape of Gatineau Park. We have done so by hunting, trapping, logging, farming, mining, and more recently by residential, commercial and recreational development.

These stresses generate a cumulative impact on the environment that is greater than the impact of any one or more individual stresses, degrading the park's ecosystems.

Some Concerns of Park Users

To provide ideas and perspectives, CPAWS interviewed a cross-section of park users who enjoy the park in many different ways, are concerned about park use, and have diverse notions for park protection. Common to them all was a love for the park and a strong interest in keeping it healthy.

Several of these park users are quoted in this booklet. CPAWS would like to thank all who participated in these interviews.

Photo: Janet Glendenning

Recreational use

Gatineau Park's natural beauty, its diverse recreational opportunities, and its proximity to Ottawa-Gatineau make it very attractive and accessible. The park currently draws an estimated 1.7 million visits annually, making it one of the most popular parks in Canada.

Visitors to Gatineau Park can participate in a wide variety of recreational activities. In spring, summer and fall they can access 165 km of hiking trails (90 km open to

cyclists), 20 km of paved recreational pathways, seven self-guided interpretation trails, a mountain bike trail network, 14 picnic areas, six public beaches, two campgrounds and a number of canoe-camping sites. In winter they can enjoy 200 km of cross-country ski trails, 25 km of snowshoe trails, a downhill ski area and a biathlon training centre.

Recreational activities are concentrated in the south of the park. This area includes much of the park's internal road network, many of its most important cultural attributes, and major recreational infrastructure including Ski Camp Fortune. Recreational use is also concentrated around or adjacent to Pink, Meech, Philippe, Taylor and La Pêche lakes, and Luskville Falls. These areas of intense recreational activity, as well as the entire ecologically sensitive Eardley Escarpment, experience considerable ecological stresses from recreation. Increased recreational use during peak visitation periods (e.g., Fall Rhapsody) further stress the park's ecology.

Whether strolling, hiking, mountain biking, rock climbing, cross-country skiing, paddling or swimming, every visitor has an impact on the park — trampled plants, compacted soil, erosion, spooked wildlife, litter, sunscreen washed into the water. Such seemingly small impacts, when multiplied by a million or more visitors each year, can cause considerable ecological change.

In addition to permitted activities, several inappropriate or unauthorized activities take place in the park. Snowmobiles, all-terrain vehicles (ATVs), and motorboats with two-stroke engines generate air, water and noise pollution, and stress wildlife and other park visitors. Cutting and using unofficial trails fragment and damage ecosystems and disturb wildlife. Bush parties leave a legacy of litter and tree damage.

During Fall Rhapsody, motor vehicle traffic is bumper to bumper, making me concerned about the various impacts.

Lise Meloche, skier, trail runner, cyclist, paddler, hiker

To help safeguard Gatineau Park's natural heritage, visitors must be cognizant of the impacts their activities can have on nature. All visitors should take individual responsibility to minimize their "ecological footprint."

Recreation and Tourism Infrastructure

Gatineau Park has considerable infrastructure and facilities to support recreation and tourism, and more are planned.

The heaviest concentration is at Camp Fortune, where alpine skiing, cross-country skiing events, biathlon training, mountain biking and now aerial adventuring are available. Facilities include a ski lodge and chalet, a biathlon shooting range, and extensive parking areas. Large swaths of woodland have been cleared for ski lifts, downhill runs, cross-country ski training circuits and access roads. The Camp Fortune area no longer offers a wilderness experience.

The historically significant Mackenzie King Estate has been developed as a tourist attraction, detracting from its character as the private retreat of the former prime minister. Controversial developments include the vast and treeless parking lot, paved and lit walkways, and a wide new access road.

The Philippe and Taylor lakes area has been extensively developed to support car-camping, picnicking, canoeing and swimming, but for now still retains a reasonably rustic ambience.

Scenic, pastoral Meech Creek Valley is presently zoned for "agrotourism and conservation," and could be extensively developed with tourism-related infrastructure including inns, stores and restaurants, and associated roads and parking lots. This type of development demonstrates an increasing emphasis on commercial activity in the park by creating artificial attractions. In addition, the extension to Autoroute 5 will bring more traffic into Meech Creek Valley.



Boulevard des Allumettières under construction, Fall 2007. Photo: Doug Anions

Roads and Traffic

Forty km of parkways and more than 60 km of local municipal roads cut into or through Gatineau Park. The road network is concentrated in the south, closest to the urban center. In the past 25 years several new roads have been built, including the high-speed St. Raymond Boulevard, which bisects the park, and a new access road to Mackenzie King Estate. The long-fought extension to McConnell-Laramée Boulevard, now known as Boulevard des Allumettières, cuts a wide swath through the park near Lac des Fées and opened to traffic in late 2007. Autoroute 5 is presently being extended along the eastern boundary of the park. Many other roads have been widened or otherwise upgraded. Unfortunately, even more roads are planned. Looming as a further threat to the park's ecological integrity is the potential extension of Autoroute 50 through the park south of Pink Lake.

In addition to negatively impacting visitor enjoyment of the park, roads and road traffic have many serious ecological impacts. In Gatineau Park, the two most serious are wildlife fatalities and habitat fragmentation.

Wildlife fatalities: Animals large (deer) or small (mice), swift (coyotes) or slow (frogs) are routinely killed along roads, as a drive along any rural road illustrates. Most vulnerable are amphibians, snakes and turtles. Their life cycles often require them to migrate between wetland and upland habitats, and thus to cross roads. Higher traffic speeds result in higher mortality rates. A springtime walk along the roadways of Gatineau Park provides evidence of the high road mortality of frogs.

Habitat fragmentation: Roads (as well as electricity corridors and other rights-of-way, and even trails) interfere with animal movement, separating populations and reducing genetic diversity. By cutting through and breaking up continuous tracts of habitat, roads reduce the amount of interior habitat available to species. The resultant smaller tracts of habitat may not be large enough to support some species. By opening up the forest canopy, roads create a new microclimate that may extend up to 200 m on either side of the roadway.

These large strips of land along the roadsides will be sunnier and drier than the interior of the forest, and will favour weedy species that do not thrive in an intact forest. The habitat created by a road may also be more vulnerable to invasive species of plants or animals. The extensive network of roads in Gatineau Park has severely reduced the amount of interior habitat in some areas of the park and has seriously damaged their ecosystems.

Drivers are going faster and there is more commuter traffic, actually creating a morning and evening rush hour in spring/summer/fall.

Craig Storey, skier

Invasive Species

The invasion of harmful non-native species is second only to habitat destruction in terms of impact on natural landscapes. In Canada's national parks, invasive species have been the main cause of changes in species composition. Roads are the primary pathway for the inadvertent introduction and spread of non-native plant species into parks. People also introduce, deliberately or inadvertently, non-native plant and animal species without an understanding of the consequences.

In Gatineau Park, 37 plant species have been documented as non-native. Ten of these are considered to be "extremely invasive." These include the infamous wetlands alien, purple loosestrife, and the lake-carpeting Eurasian water-milfoil. Both of these species severely threaten and reduce the diversity of native aquatic vegetation. Milfoil, which is currently present in at least La Pêche and Philippe lakes, may also impact populations of fish species. Boating activity is a factor in the proliferation of these two highly invasive species. In woodland habitats, garlic mustard threatens native plant species.



Purple Loosestrife. Photo: Ian Whyte

The introduction of non-native fish species has disrupted the natural ecology of many Gatineau Park lakes, and is likely responsible for the decline and loss of some native species. Sport fish species that have been introduced include northern pike, smallmouth bass, rainbow trout and yellow perch. Other species such as white sucker, pumpkinseed and fathead minnow, were likely introduced as bait fish. Although not yet present in the park, the extremely invasive zebra mussel remains a looming threat to the park's aquatic ecosystems.

Gatineau Park is now home to several species of invasive birds, notably the European starling, American crow, common grackle and brown-headed cowbird. These opportunistic and competitive species are most common in open areas and forest edges, and often displace native species. The park's extensive road network and urban encroachment have facilitated the proliferation of these species.



Lac La Pêche. Photo: Doug Anions

Water Quality

The bodies of water in Gatineau Park benefit from the natural buffering effect of limestone in the surface substrate. Because of this, acidification due to acid precipitation is less of a problem than in more northerly areas that have mostly granitic bedrock. The large lakes in the park have moderately alkaline pH, and so are relatively well buffered. Many of the smaller lakes have only slightly acidic to neutral pH, despite significant exposure to acid precipitation. Nevertheless, acid deposition is an important concern due to its cumulative effects on forest soils, and because invertebrates, fish and amphibians are affected by even gradual changes in pH. Other airborne pollutants such as lead can accumulate in aquatic systems and affect food chains.

The park lakes with road access (e.g., La Pêche, Philippe, Meech, Kingsmere and Pink) are more exposed to human activity and development, and are showing signs of increased nutrient loading. High phosphorus levels are often caused by poorly functioning septic systems. This can lead to increased primary productivity and eutrophication, with its many negative impacts. The incidence of Eurasian water-milfoil and cyanobacteria (blue-green algae) may be higher in nutrient-rich ecosystems. Several native species of fish, such as lake trout, depend on oligotrophic (low nutrient) conditions, and may be disappearing from Meech Lake.

Urbanization and Development

Urbanization is the single greatest threat to the ecological integrity of Gatineau Park. The park is too small to ensure the long-term viability of certain species. Without a comprehensive land-use strategy for surrounding lands, the viability of Gatineau Park is in jeopardy. An additional 20,000 people are expected to populate the park periphery by 2020.

A critical problem for Gatineau Park is the absence of a buffer zone between the park and adjacent development. Because development has been allowed to proceed up to the park boundary, certain species that are sensitive to human presence avoid the park's outer edges. This, in effect, shrinks the size of the park in terms of its value to these species. Conversely, large resident mammals such as moose and bear are increasingly seen in suburban Gatineau where expansion is steadily reducing the remaining buffer.

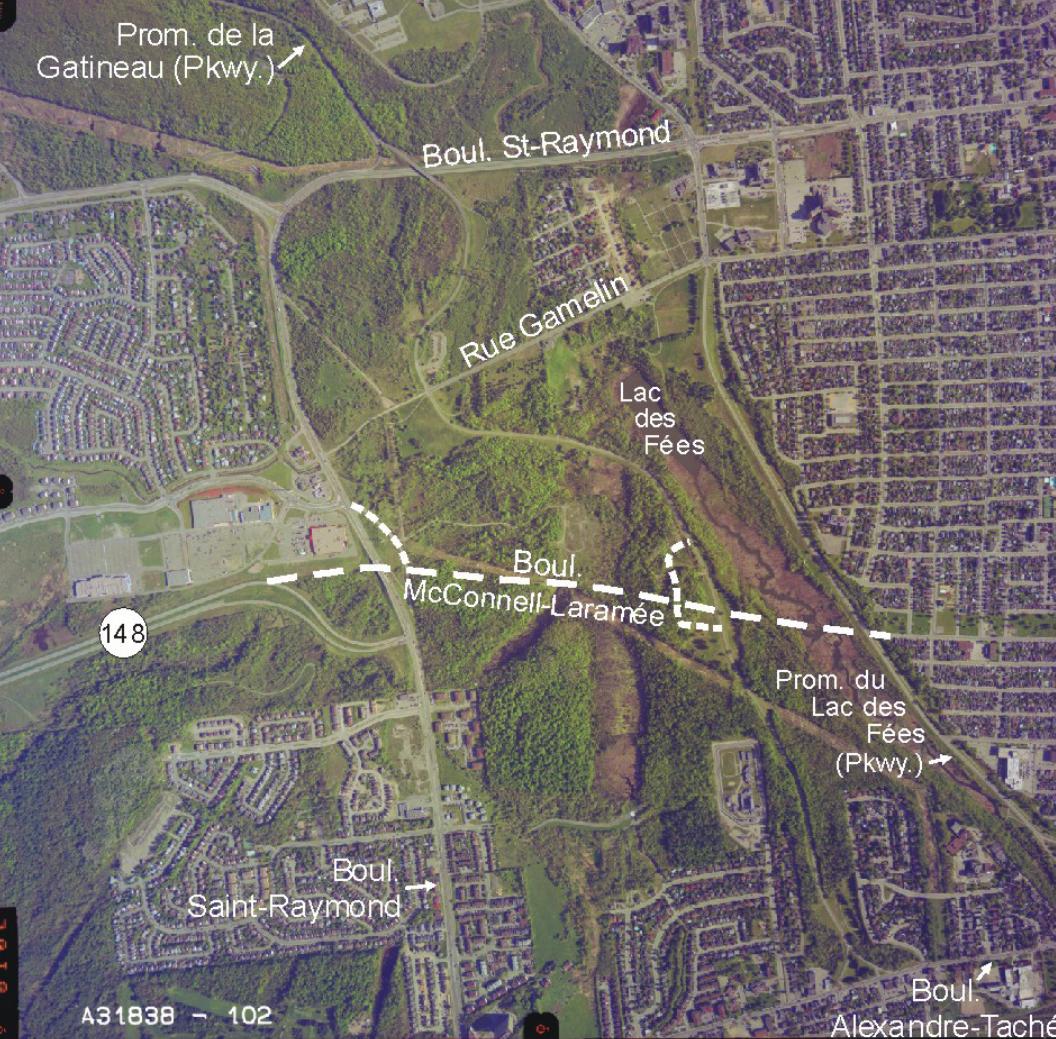
Urbanization has consumed a considerable amount of the natural and agricultural lands around Gatineau Park, as well as ecological connectivity from the park to these lands. This threatens those species, notably large predators such as wolves and bears, that require a range larger than the park itself can provide. With increasing urbanization comes the very real threat that these species will eventually disappear from the park. Also, urbanization begets road development and the resultant stresses of habitat fragmentation and wildlife fatalities.

Development also occurs on the approximately 2% of Gatineau Park that is privately owned. This land involves some 200 properties which come under the jurisdiction of the municipalities of Chelsea, Gatineau, La Pêche, and Pontiac, not the NCC. The largest holdings are highly vulnerable to subdivision development. Most recently the municipality of Chelsea approved an 18 house residential development on Carmen Road, south of Highway 105. Approvals such as these involving the park are routinely met with strong opposition. In the past the government has intervened to stop such projects from proceeding.

Most private ownership is concentrated along the Meech Lake, Kingsmere Lake, and Chemin de la Montagne corridors. For many reasons, residential development does not conform with the zoning in Gatineau Park. More and bigger homes and associated boat houses have a permanent footprint. When trees are felled to make way for roads, driveways, yards and patios, erosion is inevitable. Runoff and waste water threaten water quality and aquatic habitats. Gardens, bird feeders and backyard composters attract wildlife, which often come into conflict with humans. Private ownership and development also affects the publics ability to fully enjoy the park due to access

[One of my main concerns about the park is that development around the margins is increasing. Pressures are building.]

Geof Burbidge, naturalist, geologist, birder, photographer



restrictions.

While urban encroachment is a grave concern, development within Gatineau Park itself is also a significant stress. These developments include new or expanded infrastructure to accommodate the increasing visitation, such as roads, parking lots, buildings, trails and ski lifts. The “institutional zone” along Boulevard Cité-des-Jeunes includes a government training centre, two colleges, a secondary school, and a municipal sports centre – all uses of park land extraneous to the park’s mission.

Above: The southern portion of Gatineau Park is embedded within the City of Gatineau and dissected by many roadways. The recently opened boulevard McConnell-Laramée has been renamed boulevard des Allumettières.

Aerial photograph reproduced with the permission of the National Air Photo Library, Mapping Services Branch, Natural Resources Canada.

Climate Change

Climate change will impact Gatineau Park's ecology both directly and indirectly in the coming decades. Projections for the Ottawa-Gatineau region suggest increased climate variability as well as more precipitation, heat waves and freezing rain events. Rising temperatures will force species to shift their ranges northwards, stressing species adapted to cooler temperatures and significantly altering both the extent and composition of ecological communities. As habitat becomes less suitable for some species, habitat loss will likely increase their risk of extinction, and a "greater park ecosystem" approach to park management will become critical.

Two other serious threats of climate change are the increased risks of wildfires and species invasions — for example, forest insects. Both will threaten biodiversity and the health of ecosystems. In addition, the park is expected to face increased stress through indirect effects of climate change. For example, as the winter season shortens, annual visitation is projected to increase, intensifying recreational stresses.

Ecosystem protection is an important buffer for climate change. Intact forests sequester carbon, reducing greenhouse gas emissions.

The park seems like somebody's house that's been left open, in that there's a lot of trust that we'll look after it. But maybe if there were more information on how to care for it, how it is being cared for, and how our use of the park could endanger it, this would make us more careful as we move around.

Jon Stuart, hiker, trail runner, skier

A Landscape View

Small, isolated protected areas like Gatineau Park have limited ability to conserve biological diversity because development around the park does not allow sufficient habitat for large predators. The most effective way to protect biodiversity is through a network of protected areas, each surrounded by a buffer zone, with connectivity between protected areas and sustainable land uses on these intermediate lands. When protected areas are connected, wildlife can migrate into and out of the protected areas to access food or secure nesting or denning sites.

The only viable way to counter the threat of urbanization around Gatineau Park is to plan and manage the surrounding landscape so critical lands and waters outside the park are protected from development and wildlife can roam between these lands and the park. While connectivity still exists across the rural landscape in many areas, such as along the Eardley Escarpment, it is rapidly disappearing in others.

CPAWS Landscape Conservation Initiatives

CPAWS has two active programs addressing ecological connectivity between protected areas across landscapes.

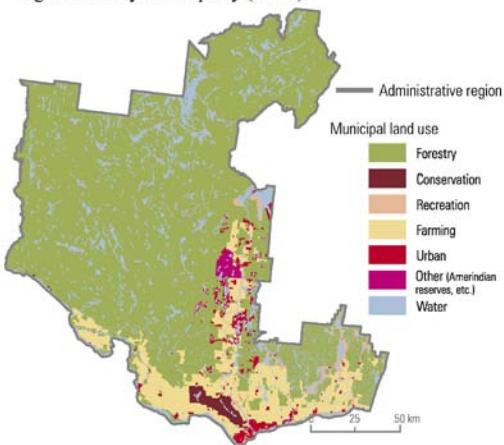
Best known is the very successful **Yellowstone to Yukon** (Y2Y) program centered in Alberta and stretching thousands of kilometres along the Rocky Mountains from Yukon to Wyoming. The Y2Y ecoregion facilitates the movement of large mammals such as grizzly bears and wolves between protected areas.

The Algonquin to Adirondacks (A2A) program strives to provide protected habitats and ecological connectivity between Ontario's Algonquin Provincial Park and Adirondack State Park in New York.

To be successful, landscape conservation programs require achievable goals and very close cooperation between conservation groups, government agencies and landowners.

Municipal land use

Municipal land use, obtained from the L'ATINO group (2004), corresponds to that established by the Outaouais regional county municipality (RCM).



Tardiff, B., G. Lavoie et Y. Lachance, 2005. Atlas de La Biodiversité du Québec

The NCC's stated vision is to preserve and support "viable levels of all the indigenous [native species] populations that were present in 2006," and to increase "key species populations, especially species considered to be at risk." To do this requires management of the greater ecosystem – in other words, planning and supporting conservation across a very large surrounding landscape. Unfortunately, the NCC presently does not have the capacity to do this. Moreover, Quebec conservation laws and hunting regulations provide little protection for predators that require large ranges, such as bears and wolves, in the regions surrounding Gatineau Park. National Park status for Gatineau Park would help to develop a greater

ecosystem management approach, which would address the conservation needs of large predators and other wildlife.

Other opportunities for maintaining a healthy ecosystem should also be considered. For example, designating the Gatineau Hills as a UNESCO biosphere reserve would encourage local residents and organizations to develop, promote and organize projects linking conservation with social and economic development in the region. Currently Canada has 13 such biosphere reserves, including Charlevoix and Lac St. Pierre in Quebec and Niagara Escarpment and Thousand Islands - Frontenac Arch in Ontario.

Park Management and Protection

Gatineau Park is a park in name only – it lacks the legal protection given to national and provincial parks. Protection is an especially complicated matter because the park’s boundaries have not been legally established under the National Capital Act, or any other federal legislation. Despite this, the government of Québec has registered Gatineau Park as a protected area under the Natural Heritage Conservation Act. Senate Bill S-210 would have for the first time confirmed formal, legal boundaries – a necessary measure for long-term conservation. This bill died with parliamentary prorogation in September, 2007. However, it has been reintroduced.

Two major concerns in recent years are the loss of public parkland through various property disposals, and the development of private lands within the park’s boundaries, especially along Meech and Kingsmere lakes. Currently, no law or policy prevents the NCC from selling public land, developing properties, nor from pursuing activities that are contrary to the goal of conservation for Gatineau Park. Development and planning decisions are at the NCC’s discretion.

However, the NCC’s 2005 Gatineau Park Master Plan indicates a growing commitment to conservation-first management. The NCC proposes to manage Gatineau Park as an “IUCN Category II” protected area.² Category II protected areas are managed primarily for ecosystem protection and for recreation. National parks in Canada are managed to these standards. The Quebec government plans to protect 8% of the land in the province by 2008. In the Outaouais region, areas being considered for formal protection include the Dumoine and Noire rivers, and an area near Lac Poisson Blanc.

These Quebec and NCC initiatives are encouraging. They have the potential to promote landscape-scale conservation in the region encompassing Gatineau Park. A mosaic of interconnected protected areas would contribute greatly to maintaining the park’s native biodiversity. But will these initiatives come to fruition? Unfortunately these proposals are not supported by legislation or policy direction. Gatineau Park needs sound legislative protection and clear land use policies which recognize the fundamental importance of ecological integrity.

Park protection initiatives must be scientifically based. Situated as it is near several universities, Gatineau Park is ideally located to tap into a wealth of scientific expertise in conservation biology. While researchers have undertaken some important work, a more systematic approach to research and monitoring is needed.

²The World Conservation Union (IUCN) is one of the largest conservation organizations in the world. Its system of categories for protected areas based on levels of protection for ecological resources is internationally recognized for its scientific credibility and practical application.

Conclusion

Gatineau Park is one of the most treasured and visited parks in Canada, and a place of great beauty and vast natural diversity. It exists thanks to the vision of several early conservation pioneers and the dedication of committed organizations and citizens. It is loved by thousands.

The future of Gatineau Park, as we know it and love it, is in doubt! The park is being threatened by many stresses, including rapid urbanization and habitat fragmentation. These stresses are significantly altering the park's ecology. To guarantee its long-term viability, the park must be managed with a greater ecosystem approach. This requires the active cooperation of the various stakeholders around the park, including private landowners, municipal authorities and the Quebec and federal governments.

Gatineau Park should be given legislated protection along the lines of the National Parks Act. This would best guarantee the long-term ecological future of this magnificent landscape.



What you can do

Write to the NCC

- Express your concerns and request that the NCC take appropriate action. The list of recommendations on the following page can be used as a guide.

Write to the federal minister responsible for Gatineau Park, and the Federal Minister of Environment

- Let them know how you feel about legislated protection and national park status for Gatineau Park

For names, postal addresses, e-mail addresses, and assistance in composing your letter, visit the CPAWS Ottawa-Valley website at www.cpaws-ov-vo.org

Barred owl. Photo: Dan Brunton

Recommendations

To the Government of Canada:

- Define Gatineau Park boundaries in federal legislation.
- Establish Gatineau Park as a national park under the National Parks Act.

To the National Capital Commission:

Strategic

- Develop an education program to inform park visitors of the stresses on the park and what they can do to minimize their ecological footprints from specific activities.
- Develop a program to involve park visitors in park stewardship (e.g., invasive species control, litter removal, trail maintenance, biological inventories, water quality monitoring, etc.).
- Engage park users and user groups in providing input on park issues (e.g., conservation, recreation, development plans, transportation).
- Establish an environmental science monitoring advisory committee.
- Examine possibilities for expanding the park.

Operational

- Oppose any large-scale development, private or public, in the park.
- Ensure no new roads are built in the park.
- Acquire critical or ecologically sensitive lands around the park to serve as a buffer.
- Acquire private property in the park from willing sellers.
- Do not sell any park land.
- Initiate an independent study of the park's greater ecosystem.
- Manage the park using a greater ecosystem approach.
- Develop a green transportation plan.
- Increase funding for enforcement of park regulations.
- Increase funding for conservation biology research and monitoring.

Further Reading

- Andrews, J. David. Gatineau Park: An Intimate Portrait. Ottawa: Dynamic Light Productions, 1994. *Beautiful photographs, information about the park's plants and animals and its natural and human histories.*
- Del Degan, Massé et Associés Inc. The Health of Gatineau Park's Ecosystems. Ottawa: Report presented to the National Capital Commission. Dec. 2006. *A comprehensive state-of-the-park assessment.*
- Del Degan, Massé et Associés Inc. Biodiversity Monitoring on National Capital Commission Land: Summary. Ottawa: Report presented to the National Capital Commission. Sep. 2006. *A brief but informative summary of the vast biodiversity in Gatineau Park*
- Fletcher, Katharine. Historical Walks: The Gatineau Park Story. Second Edition. Quyon, Quebec: Chesley House Publications, 1997. *A hiking guide that interweaves the human and natural history of the park.*
- Lothian, W.F.A Brief History of Canada's National Parks. Ottawa: Parks Canada, Environment Canada. 1987. *An historical overview of our national park system.*
- National Capital Commission. Gatineau Park Master Plan. Ottawa. May 2005. *A large blueprint outlining the NCC's management plans for the park. (A summary report is also available.)*
- New Woodlands Preservation League. Protecting Gatineau Park: What is to be done? Brief submitted to the National Capital Commission Review Panel. Oct. 2006. *Some historical perspectives plus management options.*
- Panel on the Ecological Integrity of Canada's National Parks. "Unimpaired for Future Generations"? Conserving Ecological Integrity with Canada's National Parks. Vol. I (A Call to Action) and Vol. II (Setting a New Direction for Canada's National Parks). Ottawa, Public Works and Government Services. 2000. *A comprehensive review of the issues of ecological integrity and park management.*

Web Resources

- **Canadian Parks and Wilderness Society (CPAWS)** www.cpaws.org
Information on park and conservation issues and initiatives across Canada.
- **CPAWS, Ottawa Valley Chapter** www.cpaws-ov-vo.org
Information on Gatineau Park and other Ottawa Valley conservation initiatives.
- **Club des Ornithologues de L'Outaouais** www.coo.ncf.ca.
Local organization many of whose activities take place in and around Gatineau Park.
- **Gatineau Park** www.canadascapital.gc.ca/gatineau
The NCC's official park website, with a wide range of resources and information.
- **IUCN – The World Conservation Union** www.iucn.org
Conservation issues and initiatives around the world.
- **Nature Conservancy of Canada** www.natureconservancy.ca
Protecting ecologically significant lands by acquisition or conservation easements
- **Nature Québec** www.naturequebec.org
Information (in French) on a wide range of conservation issues in Quebec.
- **Ottawa Field-Naturalists' Club** www.ofnc.ca
A local organization concerned with conservation and the natural history of the region.
- **Parks Canada** www.parkscanada.pc.gc.ca
The official web portal to Canada's national parks, with access to a wide variety of information.
- **Quebec Biodiversity Atlas** www.mddep.gouv.qc.ca/biodiversite/atlas-en.htm
From the Quebec government, information on threatened and vulnerable species.
- **Ottawa River Keepers** www.keeper@ottawariverkeeper.ca
An organization dedicated to maintaining the health of the Ottawa River Watershed.

Further Information

Canadian Parks and Wilderness Society,
Ottawa Valley Chapter (CPAWS-OV)
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613-232-7297

