

The Ability of Forests to Adapt to Change

by *Louis Harvey*

Because of the characteristics of its vegetation, Gatineau Park is under frequent attack from various entomological and pathogenic organisms. The diversity of the Park's flora, forest species, and geographical location are such that it presents a multitude of habitats. Changes resulting from biological factors (insects and tree diseases) or the climate have an effect on the diversity of the forest's structure in the short term (ice storms, blowdown from high winds, tornadoes) or the long term (beech bark disease, spruce budworm, ash borer.) These natural phenomena can have benign or harmful effects, depending on the extent of the insect infestation, disease, or weather damage. One thing we can be sure of: the forest is a dynamic environment with an unbelievable ability to regenerate following natural disaster.

Remember the Park's trees after the 1998 ice storm*: crowns torn off, trunks broken and split - a scene of TOTAL devastation. But the ability of our forests to bounce back has proved how well they can recover, leaving almost no trace visible to the untrained eye. Between 1969 and 2005, the spruce budworm radically changed the structure of the forest. With any such evolutionary change, the impact was on the coniferous population, shifting to stands of poplar. Other organisms, such as diseases affecting the trunk (ex: Dutch elm disease), killed off a great many trees over the last 20 years and involved the loss of many elms over 200 years old. This example is a good illustration of how importing non-indigenous organisms can have a harmful impact on the environment. Let's take a look at the example of two such organisms, the Asian longhorn beetle and the ash borer, now moving into Quebec at top speed. While the insects in question are usually considered secondary in Asia where they attack already weakened trees, they become aggressive once they become established here and adapted to our climate. In their new environment, these insects cause major damage to healthy maples (Asian longhorn beetle) and ash (ash borer). Through globalization, world markets introduce their share of new insects, and

global warming contributes to the establishment of these foreign species at northern longitudes and higher altitudes. An example that clearly illustrates the problem of non-native insect species: while the gypsy moth is an exotic insect that attacks more than 25 species of tree, its main target is the oak, and it has had a major impact on oak stands in the Outaouais region. It developed, adapted, and established itself over much of the area, and, at the end of its cycle, concealed itself and withdrew to become endemic in some areas, just waiting for the return of conditions favorable to a comeback. The ability of trees to survive a gypsy moth epidemic is eloquent proof that the oaks have resisted stress and survived despite major damage to their foliage over a period of several years.



Source: NCC

The spring and summer 2005 were characterized by violent winds throughout Quebec, with occasional breakage of trees already weakened by decay fungi or dieback. But according to comments collected by Friends of the Park, very little such damage has been reported, leading us to assume that the trees in the area are remarkably resilient. I would like to mention the late spring frost of May 18 to 21 2005 which affected 50% to 80% of the foliage of tolerant deciduous trees like oak, ash, and basswood over large southwest-facing areas. Only at the beginning of the second week of June did we finally begin to see the first budding of springtime leaves. As if by magic, the oak forests recovered their springtime coats, and the harmony of new leaves burst to life throughout Gatineau Park.



Spring 2006 was punctuated by heavy rains that promoted growth in our forests. Storms were more violent and more frequent than in previous years. On July 17, thousands of hectares were hit by gusting winds that heavily damaged coniferous trees, maples, birch and poplars in the older forests. In spite of the damage it caused, however, this type of meteorological phenomenon was beneficial in that it opened up the forest canopy and allowed young trees and seedlings to grow. This year is particularly well suited to the emergence of decay fungi, every kind of foliage disease, and insect infestations, with tar spot fungus affecting poplar and ash, birch leaf miners, and spruce budworm affecting more than 48,000 hectares in the Outaouais. The climate changes and nature switches priorities according to the whims of Mother Nature, which is what makes it attractive, varied, and instructive. The ability to adapt is a fact that remains constant in time and space. ☼



Blowdown in July 2006

Note: Although Louis Harvey is a Forestry Technician at the Ministère des ressources naturelles et de la faune du Québec, this article is published as a personal opinion, and does not represent the official position of the Gouvernement du Québec. Louis was a presenter at our October 2005 Research Forum.

** see Douglas King "How to Measure Ice Storms Impact" in the Friends of Gatineau Park Newsletter, December 2005.*

Dusk at the Lake

*By Rachel Paquette,
Nature Interpreter for the Friends of Gatineau Park.*

Magical moments were spent on Philippe Lake with visitors this past summer.

Let's start at the beginning...the interpretation committee of the Friends of Gatineau Park along with the National Capital Commission (NCC) and LaFleur de la capitale staff worked really hard to get this program underway. It was set to be a guided 2-hour paddle on Philippe Lake at dusk. Canoes, paddles, life vests, program content, props, schedules, costs, publicity, water safety, interpreters...the logistics of such an event can be mind-boggling. But the motivation was strong and the end result worth working for.

Geneviève Pilon and I spent some time acclimatizing to the upcoming event with a paddle in one hand and a field guide in the other. We also toured the lake with Johanne Robin (member of the Friends of Gatineau Park) who shared her knowledge of the lake and its surroundings. She brought to light the many ideas and guidelines that were a result of the interpretation committee's brain storming for the outline of this event! When we were finally ready for the big night, June 27th...the first one is always good to get behind you!

Log excerpts:

June 27th: we wait in the car for half an hour in disbelief. There are dark, very dark clouds in the sky, a storm is eminent and no one has shown up. We will have to wait another 2 days to get rid of these first time jitters.

June 29th: Read as above ☹ because the same scenario unfolded.

July 4th: There is a severe weather warning for the area with risks of winds up to 90 km/h...we cancel from the disappointed comfort of our homes. I guess the third time isn't always a charm.

July 6th: We are off ... the lake is flat, and we have 6 boats filled with interested and interesting people ...

Each night was different. Different size groups were seen, from a single canoe to 12 of them floating along. Very young children attended and not so young adults. Some were new to outdoor events and some were nature adepts, some had never canoed and some paddled like pros, some were from the area and others from overseas.

Gatineau Park showed off its beautiful gifts. We saw deer, great blue herons, loons, cedar waxwings, a

multitude of dragonflies, frogs and of course the magical dependable trees, shrubs, plants and water vegetation.

Some nights went off without a splash and some well... one evening 2 participants did end up in the lake. Geneviève and I towed them to the shore. Spirits were unblemished even if clothes and other belonging were soaked.

Calm nights were welcome especially after Mother Nature's consecutive surprises at the beginning of the season. But, well into July we had 9 canoes set to go, all were in the lake when....*kaboom*...the sky was dark, except for the occasional bright zigzags that is...well it goes without saying that the evening ended quickly but safely. We were all a bit disappointed because by this time we knew how much fun we were missing. But there was no going back the decision was sound and we were all going to be safe.

The season did end with a boom, no not thunder but a full event 12 canoes on the water (others were turned away), the evening and the season was over...it was mid-August and we returned in the setting sun. ☀

Gatineau Park - On the Path of History

By Jean-Philippe Rbeault

The expression “sustainable development” would certainly have raised eyebrows amongst 19th century industrialists. In those days, the logging of white pines and the mining of iron, molybdenite and mica might well have forever deprived us of the land we now know as Gatineau Park. Nor should we forget agriculture, which shaped many of the Park's landscapes, especially the Meech Valley.

In 1903, the Ottawa Improvement Commission must have included a few visionaries and nature lovers amongst its members when it suggested limiting industrial development north of Hull to create instead a vast park. In fact, that year the young Minister of Labour, William Lyon Mackenzie King, himself decided to acquire a first parcel of land on Kingsmere Lake.

The idea continued to move ahead when 1913's “Holt Commission” again championed the concept of a national park and recommended the acquisition of between 30,000 and 40,500 hectares. The recommendation, however, was in vain. The outbreak

of the Great War had the government focusing on other priorities.

The idea of a park resurfaced a final time in 1934 as a way to halt intense post-Depression commercial logging in the forest. In fact, groups such as the Ottawa Ski Club and the Federal Woodlands Preservation League (then chaired by lawyer Sparks) persuaded the federal government to acquire 10,000 hectares in the Gatineau hills. Three years later, the Federal District Commission got government approval and (finally) began acquisition of 16,000 hectares.

At the time of its official creation in 1938, Gatineau Park covered too small an area compared to some earlier proposals. World War II slowed land acquisition and development. As well, it was necessary to wait until the French urbanist Jacques Gréber prepared the national capital region development plan at the end of the 50's to see a new recommendation of 33,000 hectares for the Park. Again in vain. At his death in 1950, Mr. Mackenzie King made his contribution to the project by leaving it 231 hectares, land he had purchased during his lengthy political career. Obviously this fine contribution was not enough to significantly increase the size of the Park.

In 1959, the National Capital Commission (NCC) provided the decisive boost. Following a readjustment of the cadastral map, the Park's area increased the following year to 35,600 hectares, almost 60 years after the plan was first conceived! Today the size of the Park, 36,131 hectares (or 361km²), is much larger than that of other Outaouais Valley parks like Plaisance Park (28 km²) but still smaller than that of the Papineau-Labelle wildlife reserve (1,526 km²)

Should conservation efforts be extended to other parts of the Outaouais Valley, or be concentrated on expanding the Park? Only 1,7% of the Outaouais territory is protected, although the goal for all of Quebec is 8%. The Canadian Parks and Wilderness Society (CPAW) feels that an additional 3,000 km² merits protection, including 10 sites judged essential according to the 14 criteria. The Society suggests sites in the Pontiac area such as the Dumoine River watershed and the Noire and

Coulouge Rivers. Also, along the hills of the Lake Vert sector, some sections of the Gatineau River, Mount O'Brien, the Poisson Blanc and 31 Mile Lakes sector, and the Lake Coeur peninsula. As for Quebec's ministère du Développement durable, de



William Lyon Mackenzie King in 1922.
Source: National Archives of Canada

l'Environnement et des Parcs, it seems they may have good news to share this fall. To be continued! ☼

Canoe Raffle

On November 3, Michelle Bois-Clark travelled with her husband from Manitoulin Island (in Lake Huron, Ontario) to pick up her prize.

Hers was the selected ticket from 2,008 entered into the raffle. She and her husband were off to Trailhead, one of the sponsors, to pick



up car roof straps, and to Bushtukah, another of our sponsor, to get paddles sized to their height. Michelle said she was very excited by her lucky win of the prize that is a fundraiser in support of research in the Park.

Trying on one of two lifejacket which was donated by Mountain Equipment Co-op and Paddle Sports, she looked forward to their family enjoying many pleasurable outing in the waters near their Bayfield Sound home. Revenues from the raffle will support the Cameron-Purenne Research Fund. ☼

The Friends of the Gatineau Park is a registered charity dedicated to offering activities and literature that enhance public appreciation and enjoyment of the heritage of the Park.

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