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## The Nature of Cities: Perspectives in Canadian Urban Environmental History

#### Stephen Bocking

Capilano Canyon seems in a realm guite separate from Vancouver. Steep rock walls, mossy and wet; rapids and pools tracing a thin line from snowpack to ocean; ferns and Douglas firs—all remote from the suburbs that surround them. To descend into the park is to pass between two worlds: from one of humans, to another of nature. But traces within the park undermine this distinction. Cedar stumps display notches made by loggers, and in a remote corner a timber railway rots quietly away. These testify to Vancouver's history of timber-cutting, when the "forest vanished and up went the city." Around a bend in the river, Cleveland Dam's concrete bulk suddenly appears, storing and diverting the river, annexing it to Vancouver's water system. Today, though, loggers and engineers have been displaced by strollers and tourists, catered to by gentle paths and a bus parking lot. The park testifies to the evolving place of nature within a Canadian city.

These histories—of resource exploitation and urban growth, of engineered services such as water and waste disposal, of changing ideas and values relating to nature—can be told for any Canadian city. They constitute the terrain of urban environmental history, and the focus of this theme issue of *Urban History Review*.

This issue is a kind of novelty: the first collection focusing on the environmental history of Canadian cities. Each article provides a distinctive perspective on cities and their environments; collectively, they exemplify many of the questions and concerns that motivate urban environmental historians. We begin with Sally Hermansen and Graeme Wynn's account of the career of the Camosun Bog in Vancouver. It began with the last retreat of the glaciers, and the formation of a shallow lake on what is now Vancouver's Point Grey peninsula. Gradually filling with vegetation and sediment, the lake became a marsh, and the marsh became a swamp, filling with accumulated organic matter. By 200 years ago the bog had become a respite from the cedar, hemlock, and Douglas fir forests that once covered most of Vancouver: a botanical refuge for plants usually found at higher latitudes and elevations, that were able to tolerate this acidic, nutrient-poor habitat. Then came settlement and building, filling and draining, until only a remnant remained. But in the last few years some citizens—"crazy boggers"—have attempted to restore the bog to something closer to its original identity. Their restoration efforts, Hermansen and Wynn explain, raise interesting questions about efforts to bring back almost-vanished ecosystems, as well as about the place of nature in the city.

We then cross the Rockies, stopping at the Bow River in Calgary. Today the river and its park is a favourite habitat for cyclists and walkers. But as H. V. Nelles explains, it almost became a transportation corridor: a quick route through the city for trains and cars. That it did not, in spite of powerful forces urging such a corridor, testifies to the complexities of urban pol-

itics, in which committed advocates, including women's groups, as well as coalitions of elite interests, can redirect a city's development. But this was not just a matter of power politics. Chance events, shifts in attitudes towards nature and urban lifestyles, the river itself—all played parts in this history.

Joanna Dean suggests we consider the history of street trees: fragments of nature more tenuous even than bogs or rivers. In Ottawa, many were planted during the late nineteenth century and were a source of civic pride, appreciated for their beauty and shade. But by the early twentieth century they had outgrown their place and were now in the way of traffic, wires, and, indeed, Ottawa's functioning as a modern city. Horticultural experts insisted that something be done, and in this mid-twentieth-century collision between trees and the city, the trees lost, and thousands were cut down. The episode, Dean emphasizes, illustrates how and why nature, as civic amenity, can become a nuisance when it clashes with other priorities, such as order and efficiency.

Waste water, and its collection, treatment, and dispersal, has long been an important focus for historians of the urban environment. Arn Keeling recounts the history of waste treatment in Vancouver, emphasizing the central importance of scientific perspectives. Sanitary engineers enrolled nature itself, including the Fraser River, in their task, by measuring and using its capacity to assimilate Vancouver's waste. This approach, however, had its own consequences, stemming from the complex ecology of the river, and from changing attitudes towards the environment, including a rejection of the notion that nature should serve as part of the city's waste system. By the 1970s demands for wider involvement in determining how Vancouver deals with its waste—redefining this as a political, not just a technical matter—had become overwhelming.

David Duke and Douglas Baldwin take us to the smallest settlement considered in this issue: Cobalt, in northern Ontario. They show how a small population is nevertheless capable of massive environmental impact, when its sole focus is on rapid and intensive mining. After the discovery of silver in 1903, the resulting scramble caused regional devastation, and a town surely as incoherent and unsanitary as any in Canadian history. Their account also illustrates the ties between cities and regions: while the urban appetite for silver had distant environmental ramifications, they were undoubtedly invisible to those driving the demand for this metal.

Urban consumption is the focus of Matthew Evenden's analysis of wartime efforts to conserve electricity. This was a national imperative: reducing domestic and commercial electricity use would preserve it for war industries. His account also provides insights into the formation of consumption itself as a chief function of cities, and the foundation of their strongest ties with their regions. As he demonstrates, efforts to reduce urban electricity

consumption had limited success. This outcome helps us to understand how and why the postwar domestic economy of urban consumption would eventually compel massive investment in hydroelectric production, and transformation of many rural valleys.

Consumption is now inherent in the shapes of cities themselves. Their postwar transformation, especially the expansion of low-density, automobile-dependent suburbs, has generated unprecedented demand for both land and energy. This is the context of Christopher Fullerton's account of regional planning in Ottawa. The 1950 Gréber plan for the national capital embedded a reliance on highways and dispersed development. In contrast, the 1974 plan formulated by the Regional Municipality of Ottawa-Carleton sought to limit urban expansion and encourage greater use of public transit. These plans therefore embodied evolving ideas about urban form. As Fullerton recounts, they also epitomized the changing politics of urban planning: greater demand for public participation, and the redefinition of planning itself as a process of intensive negotiation between a wide range of interests. Thus, ideas about the urban environment were inseparable from ideas about how urban decisions should be made.

#### The City: A New Environment for Historians?

These essays exhibit a diversity of historical approaches and forms of evidence, from reconstructed past ecologies (derived from fossil pollen, among other traces), to archival records of political controversies, to visual records of environmental and technological change, including maps, plans, and photos. This array testifies to the interdisciplinary character of urban environmental history, drawing on the natural sciences, the history of science and technology, and the history of urban politics and culture. This is, as the papers in this issue confirm, a fascinating area of study, and an essential element of Canadian history.

It is interesting, therefore, that Canadian environmental historians have most often begun their work only after reaching the city limits. Thus, we have accounts of logging, mining, and fishing; of national and provincial parks; or of attitudes towards wildlife and the identity of regions. Together, these works testify to a focus on rural and wilderness issues.<sup>2</sup> The contrast with American environmental history is evident: the work of established scholars like Martin Melosi and Joel Tarr, among many others, as well as the proliferation of environmental histories of specific cities: Chicago, Los Angeles, New Orleans, New York, Pittsburgh, and St. Louis, among others.<sup>3</sup>

And yet this impression is also deceptive. There is a growing body of work in Canadian urban environmental history. Some examples include Ken Cruikshank and Nancy B. Bouchier's study of the environmental history of Hamilton Harbour, Jennifer Read's work on pollution control in the Great Lakes, studies of the history and historical geography of Vancouver, and work by Montreal historians on that city's environmental history.<sup>4</sup>

An apparent lack of Canadian urban environmental history may also at least partly reflect the disciplinary structure of history in Canada: contributions to key themes in urban environmental history—the relations between cities and regions, the patterns and effects of urban development, the formation of urban natural areas, and the promotion of public health through sanitary and other services—have been produced, but under other rubrics. Consider work on a single city—Toronto. Study of the relations between cities and resource-rich regions, as an element of the staples approach to Canadian economic history, and put in order by J. M. S. Careless's concept of "metropolitanism," was evident decades ago in D. C. Masters's interpretation of the growth of Toronto in terms of exploitation of its hinterland.<sup>5</sup> More recent work has examined the city itself. This includes Richard Harris's study of suburban development and home ownership, John Sewell's account of the impact of modern planning, Richard White's work on the postwar expansion of sewer and water supply systems, Heather MacDougall's history of the public health service, and a recent collection of essays on Toronto's natural areas.<sup>6</sup> In addition, studies of the politics of public utilities, the technology of water and sewer systems, the many abandoned garbage dumps scattered across Toronto, the role of technical expertise in the planning and provision of services, and the transformation of the waterfront collectively provide a foundation on which environmental historians can build. Historians surveying the city's history have also not failed to consider its environmental dimensions.8

Thus, there is now the opportunity for Canadian environmental historians to build on this foundation, applying the distinctive perspectives of their field, including a focus on the reciprocal relations between humans and the rest of nature. Below I discuss how the historians in this issue have taken up this opportunity, pursuing themes that interest urban environmental historians.

#### Nature

At first an advantage, then obliterated: this can serve as one account of nature in the Canadian city. Settlements have tended to be established near good land and other resources, on sheltered harbours or accessible travel routes, and at suitable building sites. Then came the obliteration: wetlands and waterfronts filled in, rivers straightened, streams transformed into sewers, and woodlands and farmland reduced to shopping malls and subdivisions. Even the groundwater below and the climate above were altered.

But narratives of domination barely begin to capture the complexity of urban nature. The prominence of parks—Stanley in Vancouver, High in Toronto, Mount Royal in Montreal—testify to the view, prevalent by the nineteenth century, of nature as an essential urban amenity. More recently, efforts to "naturalize" parks (creating habitats suitable for species other than sports teams), and to "daylight" streams long buried in pipes, exemplify increasing interest in urban nature. Parks, however, have

never been just about nature. These landscapes (Central Park in New York is the most famous) are also artifice, embedded with diverse political and social implications and meanings: the definition of leisure as a personal priority and a civic responsibility; the emergence of landscape design as an arena of expert authority; the designation of certain areas as public spaces, democratic in spirit but often exclusionary in practice; and the realization by elite groups that green areas can do very nice things indeed for property values.

The diverse meanings of nature have been especially evident in suburbs. These realms of tiny patches of privatized nature embody not just an approach to planning, but a set of ideas and images about family and community life, and the separation of home and work. For many, this "middle ground" between city and country is the promised land; writers and activists have also noted its destructive environmental consequences.<sup>9</sup>

In this issue several authors consider the history of urban nature. Inevitably, this history is partly about nature diminished. The Camosun Bog was eroded by filling, draining, and other development as Vancouver grew, and the bog was forced to compete with other land uses. Its restoration now depends on the commitment of local volunteers. For much of Calgary's history, the Bow River was derelict space, a place to discard things of no value, or a site for land uses that never had much. It was, perhaps, no surprise that a convenient transportation conduit was once the best use that could be envisaged. In Ottawa, street trees, themselves replacing the forests that once occupied this space, were clipped and cut almost out of existence. The Fraser River became a disposal site for Vancouver's sewage, functioning as a "flushing machine," while in Cobalt, nature was scoured, burned, or drained, for the sake of a few veins of silver.

But these accounts also illustrate how nature was not just a space for narratives of domination. The bog wrote some of its own history: through ecological succession, it sometimes surprised those attempting to restore it. The Bow carried in its potential for flooding the capacity to veto plans for its banks. Ottawa's trees in their rampant growth set the stage for conflict with the city's machinery. The Fraser defeated with its own complexity engineers' attempts to enrol it within their schemes for waste treatment.

Throughout these histories, nature has been treated as a nuisance, an obstacle, even (in the case of the bog) a health menace. Perceptions of the value of nature have had diverse consequences: from the Fraser becoming part of a waste-treatment system (until this conflicted with the river's environmental and symbolic value), to, more benignly, the shores of the Bow landscaped and protected as an essential leisure resource—what Nelles describes as "wearable art" for Calgary, its curves and greenery now in harmony with the downtown's hard-edged verticality. Nature in abstract forms is also evident, as a greenbelt around Ottawa, functioning not through what it is, but through what it is prevented from becoming; and as

flows of electrons—the only link between wartime energy users and distant dams and rivers.

#### Services

In the daily life of urbanites, the environment is probably encountered most often out of the tap and down the sewer. Urban environmental historians as well have tended to focus on services such as water supply and waste disposal, and their effects on water, air, and land. Melosi, Tarr, Elkind, and others have shown how these services constitute responses to the challenges of livability implied by concentrated humanity: ever more intensive efforts to find or manufacture pure water, and a continuing quest for the "ultimate sink" for waste products. These efforts have been shaped by evolving knowledge of the chemistry and biology of water (from miasmas to bacteriology to ecological concepts), by the shocks administered by typhoid and cholera epidemics, and by the evolution of municipal government itself, including formation of an administrative capacity to build and operate these works, and a legal capacity to regulate private activity, as well as by the efforts of marginalized communities to gain access to these services. 10 Through engineering works, the meaning itself of water has been transformed: pure water is no longer a product of nature, but a manufactured commodity. In explaining these developments, historians apply many forms of evidence and interpretive strategies, drawn from environmental history, the history of technology, and urban political history.

This narrative, defined on this continent primarily by American historians, cannot be applied uncritically to Canada. Differing forms of relations between municipal and senior levels of government, including the significant role played by provinces in urban governance, must be considered, as well as the role played between 1909 and 1921 by the Commission of Conservation in asserting a link between sanitation, public health, and social reform. 11 But as Keeling explains, watertreatment experts in Vancouver were also well integrated within a continental community of sanitary engineering, sharing with their American colleagues concepts such as the assimilative capacity of water, that combined scientific and normative ideas about nature as a component of waste-treatment systems. His account provides a valuable perspective on how general technical concepts and associated values were applied within specific geographic and environmental conditions.

Other papers in this issue also consider this element of urban environmental history. Baldwin and Duke survey the sanitary challenges created by the near-instant creation of the boomtown of Cobalt, and the consequences of its inability to respond. Several authors also describe the extension of municipal responsibility over elements of civic life: from establishing parks for leisure activities, as along the Bow River in Calgary, to maintaining Ottawa's street trees, to planning Ottawa's development so as to ensure efficient provision of services, including public transit. Keeling and Fullerton also illuminate the relations between services and the scale of municipal government. In

the formation of regional governments—the Greater Vancouver Sewerage and Drainage District, and the Regional Municipality of Ottawa-Carleton—can be seen how local government was reshaped to conform to the spatial logic of urban networks, from sewer pipes to bus lines.

#### Regions

It is a classic narrative in Canadian history: surveys and exploitation of land and waters, growth of regional resource economies, and emergence of cities as centres for gathering, transforming, and distributing commodities. Vancouver/wood, Calgary/oil: symbiotic pairings like these constitute dominant features of the nation's economic history. This history also ties cities to the transformation of the countryside: conversion of local agriculture from staples to perishables, formation of metropolitan-centred networks of transportation and economic control, and destruction of rural environments and communities to meet urban needs, as when valleys are flooded to generate electricity.

For environmental historians, William Cronon's Nature's Metropolis: Chicago and the Great West is the most influential account of these city-country relations. In interpreting the relation of Chicago to its western hinterland, Cronon noted not just the material relations, but the ideas, that bind a city to its surroundings. During the last sixty years, these ideas have been transformed: once viewed primarily in terms of material resources, the countryside is now also a site for the appreciation of nature and for recreation. One consequence has been its reshaping to conform to urbanites' expectations, whether of a wilderness that excludes humans, or of a comfortable "second nature" with cottages and lodges and campsites. These expectations—what Hays described as the "urbanization of nature" often now clash with the priorities of rural dwellers, generating conflicts about environmental protection, resource extraction, and the divergent values that can result when landscapes are experienced through work or through play.<sup>12</sup>

The relations between city and region are evident in the papers presented in this issue. The urban destiny of the Bow River, as transportation conduit or as park, depended in part on the possibility of floods from upstream. In Vancouver, engineers' plans entailed, in effect, piping sewage to the edge of the city, to be assimilated by the Fraser Estuary, continuing a tradition of viewing the country as a repository for what the city rejects. In Cobalt, the environmental transformation involved in extracting resources to meet urban desires for silver became graphically evident. Evenden's account of wartime electricity conservation reminds us that rural environments could sometimes be of little concern to people in cities. Power dams may block rivers and flood valleys, but when the priority was to keep electrons flowing from rivers to riveters, the issue became strictly one of expanding supply and managing urban consumption. Finally, Fullerton's account of Ottawa's greenbelt reminds us that drawing the line between city and country can itself be a matter of debate: is it to be done by developers and market forces, or by the plans and sanctions of government? And indeed, the distinction between city and region often seems ambiguous. When distant and apparently pristine lakes and streams are regulated as integral parts of a big city's water system—as in the Catskills supplying New York, or the North Shore watersheds supplying Vancouver—the distinction melts away.

#### **Contests**

Conflicts between city and country are matched by contests within cities themselves. Interminable negotiations over cleanup of the Sydney tar ponds in Nova Scotia; debate over whether corn or condos should sprout on the outskirts of Toronto; arguments over a provincial proposal to twin the Trans-Canada Highway into Vancouver—such debates are, in part, disputes about distributing the costs and benefits of urban life and economic activity. They also relate to more general questions, such as the right balance between automobiles and public transit, and the relative roles of the state and economic actors in determining the shape of a city.

Urban conflicts also relate to unequal wealth and power, and thus inequalities in access to amenities and protection from hazards, as a large, predominately American environmental justice literature attests. <sup>13</sup> Cruikshank and Bouchier have demonstrated the complexities in a Canadian context. In Hamilton an inequitable distribution of industrial hazards and environmental amenities stemmed from the city's natural features, its social and economic geography, and the divergent economic interests and political influence of communities. They also described how planners seeking a more "rational" organization of the city exacerbated these inequalities, rendering disadvantaged neighbourhoods more vulnerable to industrial hazards, while obstructing their access to amenities. <sup>14</sup>

The articles in this issue discuss contests over several urban environments: a bog, the Fraser and Bow rivers, suburbs and traffic in Ottawa, even evening store hours. A few trends emerge, confirming the work of other environmental historians, while demonstrating how these trends are the products of countless local contests. For example, increasing environmental awareness was manifested in efforts to protect the Fraser River, restore a bog, and reduce traffic in Ottawa neighbourhoods. A second trend has been the expanding responsibilities of civic administration—a consistent theme in urban history. In the environmental realm its chief consequences have included the increasing role of government as mediator between urban residents and their surroundings, as natural areas are managed, water and waste are treated, and greenbelts are designated.

A chief instrument by which civic administrations, like other levels of government, have sought to manage, even eliminate, contests over the urban environment, is technical expertise. For several decades—especially during the period of high modernism—experts enjoyed enormous influence, expressed through actions ranging from quantifying attributes of the urban environment, such as a river's capacity to absorb pollution, to develop-

ing a comprehensive plan for a city, as Gréber did for Ottawa in the 1940s. More recently, another trend has prevailed: an increasing distrust, even dismissal of technical expertise, and a demand for public participation in decisions.

Collectively, these papers remind us that these trends—the rise of environmental concerns, and the rise and fall of the authority of expertise—are given form and substance through the unfolding of local controversies. This was evident in how experts, and the dominant interests they served, were challenged in several different ways. In Vancouver, environmentalists assembled ecological information demonstrating the impact of conventional sewage treatment. In Ottawa, citizens noted the unexpected consequences of expert plans, including traffic congestion. They were concerned about particular neighbourhoods, but the broader issue was the fundamental one of twentieth-century cities: the conflict between cars, and the ideal they represent of unimpeded mobility, and the contrasting idea that urban life gains its meaning through countless planned and unplanned encounters between people. Another basic issue was at stake in Calgary: the opposition by various groups, including the Local Council of Women, to the railway and highway planned for the Bow River challenged the assumption that expert decisions always serve the public interest. Together, these episodes exemplified how, as Nelles observed, change may become evident only when a seemingly conventional proposal—for a sewage-treatment plant, or another highway-encounters unexpected opposition.

This issue has sought to capture an image of Canadian urban environmental history. As these articles demonstrate, excellent work has been accomplished. Most of the stories of Canada's urban environments, however, remain to be told.

#### Acknowledgement

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