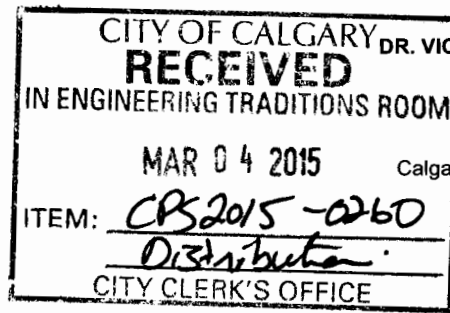




DR. VICTORIA CAMPBELL-ARVAI

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March 3, 2015

Mayor Nenshi and Members of the Standing Policy Committee on Community and Protective Services
The City of Calgary

c/o
City Clerk #8007
The City of Calgary
P.O. Box 2100, Station "M"
Calgary, Alberta T2P 2M5

Dear Mayor Nenshi and Members of the Standing Policy Committee on Community and Protective Services

Re: Biodiversity Strategic Plan, CPS 2015-0260

I am writing in support of the City of Calgary's 10-year Biodiversity Strategic Plan: "Our BiodiverCity." As a citizen of Calgary and as a University of Calgary postdoctoral research associate working in the area of coupled human and natural systems (e.g., urban biodiversity), I was invited to serve as a stakeholder in the development of this strategic plan document. The plan, an effective combination of large-scale systems thinking and on-the-ground concrete projects and initiatives, will serve the citizens of Calgary well in moving us toward a successful integration of biodiversity, ecosystem function, and the needs of a growing and dynamic city.

The world's population is expected to increase by 2.3 billion over the next 30 years, with the majority of this growth occurring in urban centres. While cities presently account for <3% of the earth's surface, urban areas are expected to triple in size by 2030 to accommodate the needs of a growing population. Within Canada, the location of population growth follows these same patterns, with over 80% of Canadians residing in urban areas. Calgary mirrors these trends, with projected population growth to be absorbed through the expansion of suburban development and concomitant increase in the amount of land area occupied by the city, as well as housing densification in the urban core.

As such, cities can present a significant threat to biodiversity and ecosystem function. Urban expansion destroys and degrades habitat, increases predation and competition, and inhibits ecosystem function. These trends are exacerbated by the fact that urban expansion often occurs in ecologically sensitive and unique habitats, e.g., grassland and riparian ecosystems. Our city, however, can make significant positive contributions to the viability of animal and plant populations and the health and resilience of our urban ecosystems. For example, backyards, urban gardens, greenways, and parks can provide important habitat for animal and plant populations, and this importance is enhanced through efforts to ensure connectivity and movement between these smaller habitat patches.

Yet, the question remains. *Why* should we work to integrate healthy biodiversity into a fast growing city? The answers are compelling. Besides our commitment to ICLEI's Local Action for Biodiversity Initiative, we should strive to make biodiversity a part of how Calgary grows and evolves because biodiversity contributes to human health and well being in countless ways.

While it is beyond the scope of this letter to recount all of these benefits, I will touch on a few categories of biodiversity benefits that speak directly to my personal and professional experience.

First, healthy urban biodiversity provides important 'ecosystem services' to human society, e.g., flood mitigation, temperature & climate regulation, and pollination of food crops (as an aside, honey produced from the rooftops of buildings in downtown Paris are sold and used in local businesses in that city). It would be prohibitively expensive, if not impossible, to replace these natural services with human-created ones. On a smaller scale, use of native plants in parks, urban greenspaces, and backyards can reduce overall costs because they require little to no maintenance once established (in other words, are self-sustaining).

Second, biodiversity builds community and social capital. Urban greenspaces (from nature reserves to downtown 'pocket' parks) can serve as a point of pride for communities and are integral to the development of community identity. Having an opportunity to spend time outside in the company of others has been shown to increase and enhance social connectivity, and contribute to improved and enriched quality of life for residents.

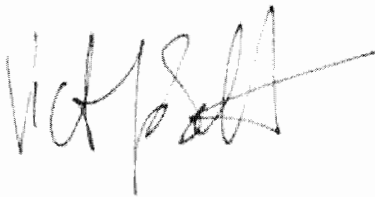
Third, urban biodiversity provides considerable psychological benefits. A great deal of research has shown that spending time in natural areas like forests and parks can lower our physiological stress response and improve our attention. Indeed, arriving at a local urban park like the Inglewood Bird Sanctuary can provide a breathtakingly immediate respite from the hustle and bustle of the city (not to mention the opportunity to see and hear an incredible variety of songbirds). The popularity of the 'The High Line' park in a dense urban core like Manhattan is also testament to the restorative power and draw of these spaces.

Fourth, urban biodiversity can enhance learning, development and educational opportunities for children (and university students). Considerable discussion and research is directed at addressing 'nature deficit disorder, and urban greenspaces can also provides children opportunity for unstructured play and exploration. I can speak from personal experience of the importance of observing natural ecological processes out of doors can enhance student learning significantly and considerably (not to mention sparking a lifelong interest and passion for environmental and social sustainability). Last, I argue that we should maintain and enhance urban biodiversity because it has *intrinsic* or *existence* value. Moreover, sharing our city with biodiversity can be seen as a reflection of our empathy and our inherent and deep-rooted desire to connect with nature, the natural world, and other living things.

The City of Calgary's Biodiversity Strategic Plan incorporates a large-scale vision of integrating biodiversity and natural systems into the everyday functioning and long term planning of the city. This systems approach is complemented by specific actions and initiatives relating to: (i) improving ecological literacy and engagement around biodiversity, (ii) identifying and protecting key habitats, connective corridors, and ecological processes, (iii) mitigating degraded habitat and removing invasive species, and (iv) addressing key legislative and regulatory challenges to these initiatives. This Plan is an important first step in ensuring a resilient and biodiverse Calgary that provides improved quality of life and opportunity for its citizens and reflects the city's unique ecological and social heritage.

I hope that the City adopts the Biodiversity Strategic Plan and its recommendations.

Sincerely,

A handwritten signature in black ink, appearing to read 'Victoria Campbell-Arvai', with a stylized flourish at the end.

Dr. Victoria Campbell-Arvai
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