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Increasing the connectivity of the greenway network in Southwest Montreal: Scenarios for enhancing the wellbeing of biodiversity and humans

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Abstract

Connectivity is the "degree to which the landscape facilitates or impedes movement among resource patches" (Taylor et al. 1993) and can be used to assess the extent to which the built environment permits wildlife and humans to move between habitats and recreational sites. In Southwest Montreal, a greenway network has been proposed to improve access to these spaces. Plans for residential development on the site of the Meadowbrook Golf Course may however, compromise the viability of this network by decreasing access to high quality habitat and public space. Connectivity for this network was measured using the effective mesh size (*meff*); a metric implemented as Indicator 2 of the City Biodiversity Index (CBI) (see poster by Asgary and Jaeger). We applied this method to assess the role of the Meadowbrook golf course for the connectivity of the greenway network in Southwest Montreal and the effect that its development would have, comparing various scenarios. Current and potential future levels of connectivity were measured for spaces used by wildlife and by urban residents. Presently, spaces available for wildlife are limited and somewhat isolated due to large distances and structures, such as roads, that impede movement between them. However, the identification of sites to be enhanced or established as habitats or recreational zones in the future exposed the possibility to increase connectivity substantially in the network. The destruction of Meadowbrook would eliminate its large potential to serve as a vital component of this greenway network in the future. It is therefore, recommended that city planners and government officials consider the possibility offered by this site before decisions regarding its fate are finalized.

Bio

In 2013, I completed a BA in Honours, Human Environment from the Department of Geography, Planning and Environment at Concordia University. Under the supervision of Dr. Jochen Jaeger, I was given the opportunity to undertake research concerning the benefit of urban greenway networks to wildlife and residents both. I am now continuing to follow my interests in the environmental field, working with Canadian Wildlife Services at Environment Canada in Ottawa, Ontario.

