



Seminar:

Evolution of Life in the Urban Jungle

Prof. Dr. Marc Johnson – University of Toronto Mississauga (Canada)

Cities are not the traditional domain of an evolutionary ecologist. From one perspective, cities are the most highly replicated and largest scale unplanned experimental evolution project of all time – there are literally 1000s of cities throughout the world. If you want to study how founder events, population bottlenecks, gene flow and changes in natural selection affect genomic and phenotypic evolution – cities are an ideal real-life laboratory. And, they are in our own backyards! From another perspective, cities are the single most important drivers of local and global environmental change which defines the Anthropocene. With 54% of the Earth's human population now living in cities, and an increasing rate of global urbanization, understanding urban evolutionary ecology is at the core of many challenges now facing conservation of species and habitats, sustainability of cities and human health.

For these reasons, an increasing amount of work in our lab focuses on urban evolutionary ecology. This work seeks to understand how cities, towns and villages drive adaptive and non-adaptive evolution at genetic, genomic and phenotypic levels. We are also interested in how this evolution may feedback to affect the ecology of populations, communities, ecosystems and human health, which has been called eco-evolutionary dynamics. Our models for this work are common plants such as white clover (*Trifolium repens*) and spotted touch-me-not (*Impatiens capensis*), but we are rapidly expanding the scope of this work, both spatially and in terms of the organisms we work on.

DATE: Wednesday September 12, 2018 - 11 AM

Location: KOL 00.04, Charles Deberiotstraat 32, Leuven