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Talk title:
Life on our doorstep: urban ecology and evolution

Bio: Marta Szulkin is an urban evolutionary biologist, head of the Wild Urban Evolution & Ecology Lab and associate professor at the Centre of New Technologies, University of Warsaw, Poland. Her research group investigates the effects of the Anthropocene at the individual level, by examining biological variation occurring on a gradient of environmental change starting in primeval forests and leading all the way up to urban cores.

Marta Szulkin studied biology at the University of Warsaw (1998-2004) and obtained an MSc in Integrative Bioscience from the Department of Zoology, University of Oxford, in 2003. In years 2004-2008 she studied for a DPhil as Christopher Welch Scholar at the Edward Grey Institute (Dpt of Zoology, University of Oxford), supervised by Prof. Ben Sheldon. Marta was Magdalen College Research Fellow by Examination (JRF) from 2007 to 2011 (University of Oxford), and Marie Curie Fellow in CEFE CNRS in Montpellier, France, from 2012 to 2015. She started her own research group at the Centre of New Technologies, University of Warsaw, in 2016.

Abstract: By 2050, 7 out of 10 people will be living in urban areas. Urban space is thus of intrinsic interest to humans worldwide, biologists included. It is also an environment with radically altered ecological dynamics relative to original natural habitat. Here, I will present evidence illustrating the profound effects of urbanisation on wildlife. First, I will set the scene by discussing methodological strengths and challenges of capturing environmental and biological variation in an urban setting. Second, I will show how city life affects the phenotype, microbiota and fitness in a gradient of urbanisation in the city of Warsaw, Poland, and discuss estimates of selection differentials quantified in low and highly urbanised environments. Third, I will discuss the concept that urban environments represent globally replicated, large-scale disturbances to the landscape, thereby providing an ideal opportunity to study parallel evolution in natural populations. By using great tits (*Parus major*) and blue tits (*Cyanistes caeruleus*) as study systems, I will present data on the effect of urbanisation in a suite of biological traits measured in a replicated framework of 8 cities. Finally, I will close off by discussing how cities represent a fascinating frontier for investigating parallel evolution across the Tree of Life.