Ruth Rivkin, PhD Student
Marc Johnson Lab

The effects of urbanization on the ecology and evolution of species interaction

Urbanization leads to dramatic shifts in the ecology and evolution of species and their interactions with one another. Cities often contain habitats that are more fragmented and degraded than nearby rural sites. This environmental change can alter the ecology of species interactions and can feedback to influence evolutionary processes in urban populations. In this seminar, I discuss the impact of urbanization on the evolutionary ecology of species, using two case studies to demonstrate the role that urbanization can play on altering species interaction. I will share my findings from a study on effects of urbanization on mutualistic interactions between Brassica rapa and its pollinators in Toronto, ON, and the effects of urban development on antagonistic interactions between Darwin’s finches and Tribulus cistoides on the Galápagos Islands. These studies found that urbanization alters interactions between plant species by influencing pollinator dispersal and predation rates of finches. Together, these results demonstrate the sensitivity of urban species interactions to environmental change, an effect which is occurs even at the earliest stages of development.