

Using camera traps and citizen science to monitor wildlife in urban areas.

Victor Anton¹, Dr. Stephen Hartley¹, Dr. Heiko Wittmer¹, Andre Geldenhuis¹

¹*Victoria University of Wellington*

Urban ecologists require robust monitoring tools that take into account the heterogeneity, dynamism and complexity of urban areas to understand wildlife interactions. However, monitoring in urban areas is often restricted by logistic and social challenges (i.e. technological limitations, access to private properties, privacy related issues and vandalism). Camera traps have the potential to overcome some of these challenges but the number of camera trap studies conducted in urban areas is still low compared to other ecosystems. Camera traps may provide information on the presence and distribution of multiple species; untangling our knowledge on those multi-species interactions (i.e. predation, avoidance and mutualism) that govern the dynamics of urban ecosystems. The main disadvantage of camera trapping is the large amounts of data that researchers need to analyse. Despite the improvements in automated animal recognition, human validation is still required to analyse camera trap data, especially to identify species with similar morphological features. Citizen science, involving the general public in research, is an ideal approach for analysing camera trap data. The accuracy of volunteers to classify photographs from camera traps seems to be species-specific and needs to be taken into account. We deployed motion activated cameras within Wellington, New Zealand to test camera trapping as a method for monitoring multiple species in urban areas. Specifically, we developed an online tool, www.identifyanimals.co.nz, to investigate the uptake, accuracy and efficiency of citizen scientists for analysing camera trap data collected from urban areas and to determine whether camera trapping is a reliable and feasible method for monitoring multiple species in urban areas of New Zealand.