Urban ecology: getting past fragment restoration

<u>Dr Margaret Stanley</u>¹, Dr Cheryl Krull⁴, Sam Lincoln¹, Dr Al Glen², John Innes³, Sam Heggie-Gracie¹
¹Centre For Biodiversity & Biosecurity, School Of Biological Sciences, University Of Auckland, ²Landcare Research, ³Landcare Research, ⁴AUT

There is a global trend toward urbanisation, and Australasia is no different, with nearly 90% of New Zealanders and Australians living in towns and cities. While urban areas are often considered of low biodiversity value, this is far from true. Furthermore, it is the perceptions and values of urban-dwellers that most influence decision-making around how areas outside of cities are managed. Therefore, the often limited experiences city-dwellers have with nature can have a huge effect on environmental outcomes. To date ecological restoration in cities is most often focussed on the small proportion of remaining habitat fragments, away from people, rather than the larger urban matrix itself. We demonstrate the importance of the surrounding urban matrix on the composition of birds in Auckland forest fragments, where the abundance and richness of native birds is strongly influenced by noise, isolation and human density, as well as pest control intensity within the fragment. While remnant habitat fragments are critically important for urban biota, intensification of housing and infrastructure in cities means there are very limited opportunities to create and restore new habitat fragments. So how can we improve the matrix? We demonstrate that vegetation complexity, particularly the presence of a shrub layer, can strongly influence native bird composition in the Auckland urban matrix. We will discuss opportunities to increase biodiversity outside of urban fragments, by sharing spaces and connecting people with nature.