

## **The influence of sugar-water feeders on the welfare and social structure of New Zealand native birds in urban gardens**

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Feeding birds in backyards is a popular pastime in New Zealand with more and more people providing sugar water to support native birds. However, little is known about how this practice might affect bird behaviour and health. I aim to investigate the potential risks of sugar-water feeding in urban areas. The main concerns are that inadequate feeder hygiene may lead to pathogen transmission, and that sugar-water feeders may lead to changes in social structure and behaviour.

During my fieldwork in 2018-2019, I will compare native birds species that are frequent visitors to sugar-water feeders (tui, bellbirds and silvereyes) in gardens in Auckland and Dunedin. The difference in latitude is likely to influence disease prevalence and bird welfare during the winter.

Furthermore, the presence of bellbirds in Dunedin (compared to Auckland) will increase our understanding of interactions among native species at garden feeders. Thanks to the generous support of the Birds NZ Research Fund for the sampling and travelling aspect of my research, I aim to explore different hygiene procedures for various types of feeders used by householders and the potential for pathogen transmission by undertaking disease sampling. I will also assess the welfare and body condition of visiting birds, and determine how feeders affect bird social behaviour, such as competition (both within and between species) and hierarchies. To do this, I will be catching and marking individual birds for behavioural observations, and using micro-chip leg bands and microchip readers at feeders to record visitation. I anticipate being able to definitively say whether sugar-water feeding has negative effects on urban native birds, and whether additional hygiene procedures may be able to mitigate any negative effects.



Adult tui is taking an advantage over a sugar-water feeder.

Photo: Daria Erastova