

Interactions among introduced ant species in the Auckland region

Thomas Goodman *¹

¹ School of Biological Sciences, The University of Auckland, Private Bag 92019, Auckland, New Zealand

For any given species, distribution in space and time may be determined by a number of factors, both biotic and abiotic. At the local scale, an interplay of both biotic and abiotic conditions are likely to play a role in the ability of a species to persist in an area. Our understanding of these questions can be greatly improved through the use of model taxa. One such model taxon is ants, due to their high abundance and diversity, and the importance of local scale environmental conditions in regulating their daily activities such as foraging. This work aims to investigate patterns in the distribution and abundance of introduced ant species in the Auckland region, and to model the relationship between the environment and these distribution patterns. This has implications for our ability to better predict and manage invasions of exotic ant species into New Zealand. An increasing number of ant species are being dispersed worldwide by human transport and travel, several of these have severe impacts in their introduced range. Their ability to colonise new areas has been shown to depend on both climatic suitability and the biotic resistance of the existing ant fauna, both native and introduced. The ant fauna of New Zealand is relatively impoverished, with 11 native and approximately 30 introduced species, and more species continuing to arrive. This low number of native species, and the increased likelihood of further introductions, makes this question of particular interest to New Zealand.

