

Verdict of the Ultimate Poo Critics: Food Selection and Preference in Native New Zealand Dung Beetles

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Worldwide, dung beetles (Coleoptera: Scarabaeidae: Scarabaeinae) are one of the most extensively researched groups of insects. Unique and diverse feeding habits have been documented in dung beetle taxa across an array of ecosystems and this is recurrently linked to a number of important ecological processes. Conversely, New Zealand's endemic dung beetle fauna is poorly understood, even though these beetles habitually fill entomologists' pitfall traps. The feeding ecology of New Zealand dung beetles is intriguing given the near absence of land mammals in New Zealand's evolutionary history and the importance of mammal dung for most dung beetles elsewhere. It has been hypothesised that New Zealand species use a range of non-mammalian dung resources, and default to saprophagy, although this remains unproven. My research is focused on the feeding ecology of three North Island dung beetle species and seeks to determine their food preference, feeding rate and trophic position. To date I have found that endemic dung beetles vary substantially in food preference across different taxa. One species displays a generalist response to different dung types while the other two species are either highly specific or do not remove dung at all. Further research will expand on our current understanding of feeding behaviour and will investigate factors involved in food selection processes.

