

# Ecosystem responses to mammalian pest control in New Zealand

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New Zealand's native flora and fauna have immense biological, cultural and economic value, but are under major threat from invasive vertebrate pests. Predation by possums, rodents and mustelids, in particular, has caused many of NZ's iconic native species to decline at an alarming rate. Approximately 1/3 of NZ's land mass is now under some form of vertebrate pest control, either through aerial delivery of toxic baits, or ground-based baiting and trapping operations. Quantifying the benefits of pest management activities for native biota is important for justifying the intensive efforts and resources invested by conservation agencies and other groups concerned with protecting and restoring ecosystems. To this end, we perform extensive meta-analyses of published studies reporting native biota responses to pest control, along with data from unpublished outcome monitoring studies conducted across NZ. Our meta-analyses provide significant insights into the extent to which ecosystems respond to pest control, and allow a comparison of effect sizes across NZ's different major control regimes.