

# Practical guidelines for planning and implementing fauna translocations

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## Summary

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A successful translocation involves many complex factors, including a genetically appropriate source population that can sustain harvest, social and governmental support, assessment of disease transmission risk and a release site with appropriately secure habitat that can support population establishment and persistence. This information is typically discussed during statutory approval processes and can take considerable time. However, following approval, for translocations of most fauna, the initial critical step involves the inherently stressful process of capture, holding, transportation and release. This process is unpredictable and novel, and is especially challenging for wild animals when they are confined in close proximity to conspecifics and humans. In contrast, captive-reared animals have to cope with the unfamiliar challenges of finding food and shelter, along with coping with competition and predation. Little has been written in the scientific literature about the translocation process. This is unsurprising because this process has usually been the realm of skilled practitioners, often with animal husbandry backgrounds, rather than research scientists. Highly skilled intuition, observation and the translocation practitioner's equivalent of a 'green thumb' often guides the way. However, theory and experimentation, particularly on the effects of stress, is available and this work is invaluable for a successful translocation. Here, we provide a brief description of the translocation process, and discussion of what stress is and how it can be managed. We then provide practical guidelines for the successful translocation of invertebrates, lizards, turtles, passerine birds, marsupials and bats, using examples from Australia and New Zealand.

## Introduction

The translocation process is essentially a forced dispersal event with no evolutionary precedent (Parker *et al.* 2012). Translocation is unavoidably stressful to

most animals (Teixeira *et al.* 2007; Dickens *et al.* 2009, 2010), and stress likely contributes to the mortality and dispersal frequently observed following initial release (Armstrong and Seddon 2008; Parker *et al.* 2012).