Anchoring techniques for translocated Duvaucel's geckos (*Hoplodactylus duvaucelii*), and the use of cell-foam retreats by lizards and invertebrates

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"You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make."

Jane Goodall

Abstract

Conservation management often requires translocations to isolated habitats, and determining the success of such events is reliant on the use of effective post-translocation monitoring (PTM) techniques. Many reptile populations are already difficult to monitor, and post-release dispersal often increases this difficulty. Effective monitoring techniques for nocturnal, semi-arboreal, cryptic lizards are consequently still lacking. Furthermore, very little research has been conducted on the use of anchoring techniques for improving the PTM of lizards by reducing post-release dispersal behaviour. In early 2013, two populations of Duvaucel's geckos (*Hoplodactylus duvaucelii)* were translocated to two offshore islands. This provided an excellent opportunity to investigate several aspects relating to the improvement of PTM techniques for this species. I investigated whether two anchoring techniques, i.e. temporary food provision and release into cell-foam retreats (CFRs), can reduce post-release dispersal and encourage CFR usage. Further, I assessed the usefulness of CFRs for the PTM of *H. duvaucelii*. Additionally, I investigated the usage of CFRs for a range of other lizard species and invertebrates. My research provided evidence that both anchoring techniques can improve the use of CFRs by *H. duvaucelii* in the short term. However, anchoring effects were not maintained beyond two months after release. While anchoring treatments may have delayed post-release dispersal behaviour, they did not affect post-release dispersal distances. The study results suggest that CFRs can be a useful PTM tool for *H. duvaucelii*, particularly shortly after translocation, and also aid in the detection of young. In addition, I demonstrated that CFRs can detect a variety of other lizard and invertebrate species. In conclusion, this research provides valuable information for the improvement of monitoring techniques for cryptic, semi-arboreal lizards, also providing evidence that CFRs can be useful tool for monitoring a range of lizards and invertebrates.

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Table of Contents

List of Figures

List of Tables

List of Appendices