Progress Report STP 2018-082 (FY 2020-2021)

Reintroduced digging mammals and ecosystem restoration

Animal Science

Project Core Team

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Project status as of May 10, 2022, 12:42 p.m.

Approved and active

Document endorsements and approvals as of May 10, 2022, 12:42 p.m.

Project Team	granted
Program Leader	granted
Directorate	required

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C Lohr

Progress Report

This project aims to explore the roles of digging mammals in ecosystem restoration by 1) undertaking a review of faunal translocations in Australia, 2) investigating how boodie warrens alter soils and vegetation communities, and whether foraging diggings facilitate native or introduced plant species. 3) whether the presence of digging mammals alters soils and vegetation communities at landscape scales and 4) whether digging mammals disperse seeds in their scats. Field work for this project is being conducted in and around the predator-free enclosure on the Matuwa Indigenous Protected Area, and several other locations managed by other organisations.

This research is complete and three journal articles have been published. The first paper, published in *Mammal Review*, reported that at least 208 translocations of 24 digging mammal species have been conducted in Australia, and 74% of those planned for post-2018 included a goal relating to the restoration of ecological processes. Research in a second paper published in *Ecology and Evolution* confirmed that digging by boodies (*Bettongia lesueur*) alters other environmental characteristics, including soil characteristics and vegetation structure. A third paper published in *Wildlife Research* reported that seeds consumed by Australian digging mammals could remain viable and germinate, indicating that digging mammals play a more important role in seed dispersal than previously considered.