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# *What’s missing and why does it matter?: Restoring ecosystems by bringing back the diggers*

## Euan Ritchie

Assoc. Professor, School of Life & Environmental Sciences, Deakin University

*Transcript edited by Dr Peter Mitchell and Ann McGregor, Biolinks Alliance*

Native digging mammals in Australia are now rare or extinct and their important ecological functions have been largely lost, but some restoration is possible with re-introductions, sufficient habitat cover, rabbit control and other approaches.

### Summary

*Digging mammals like bettongs, bandicoots and bilbies were very abundant prior to European arrival. Most are now rare or extinct, with their previous distributions largely unknown. These animals turned over huge amounts of soil and this had many ecological functions. They reduced soil compaction and increased water infiltration, buried and converted litter to organic matter in the soil, enhanced the dispersal and recruitment of plants and fungi across the landscape, consumed many invertebrates including some pest species, and reduced the flammable litter and hence moderated fire behaviour. Our landscapes have been transformed by the loss of these species. Introduced predators have had a big impact on these animals, enhanced by clearing, over-grazing, inappropriate fire regimes and rabbits. But re-introductions can succeed, even in heavily modified habitats, if there is sufficient cover and low numbers of predators. Novel approaches are also being used including Maremma dogs and breeding or training these mammals for anti-predator behaviour.*