Ecology and conservation of the **Christmas Island giant gecko**

Project information





Four out of the 5 native lizards on Christmas Island have been wiped out by invasive predators and competitors. We're conducting research to understand more about the last remaining endemic lizard species - the threatened Christmas Island giant gecko.

Losing lizard species

The Christmas Island giant gecko (Cyrtodactylus sadleiri) is the last remaining endemic lizard found in the wild on Christmas Island, out of the 5 species the island once held. The threats presumed responsible for the collapse of other lizard populations are still present on Christmas Island (e.g. predation by invasive centipedes, wolf snakes and cats) and may also lead to the extinction of the Christmas Island giant gecko.

Conserving the giant gecko

Though the Christmas Island giant gecko was common until the 1970s, little is known about this endangered species. The need to obtain more information on this species is vital for its survival.

To effectively manage and conserve the Christmas Island giant gecko, this project will obtain up-todate information on various aspects of the species' ecology, including its population abundance, density, spatial distribution, ecology, habitat preferences, predator interactions and genetic diversity.

Collectively, this information will provide a comprehensive understanding of the species, which will aid in the development of effective conservation strategies to safeguard its survival.

Key research goals

To address the threats to the survival of the Christmas Island giant gecko, this project is:

- assessing current population size and distribution of the giant gecko on Christmas Island
- investigating the ecology and habitat preferences of the giant gecko
- investigating the interactions between predators and giant geckos
- developing and recommending an appropriate monitoring program based on comprehensive baseline data.



Christmas Island giant gecko. Photo: JP Emery.

What is the NESP Resilient Landscapes Hub?

The Australian Government's National Environmental Science Program (NESP) funds environment and climate research. NESP currently supports 4 multidisciplinary research hubs, each hosted by an Australian research institution. The program:

- · provides evidence for the design, delivery and onground outcomes for environmental programs
- · helps decision-makers, including from Indigenous communities, build resilience
- · supports positive environmental, social and economic outcomes.

This project is funded by the NESP Resilient Landscapes Hub, which is hosted by the University of Western Australia. The Resilient Landscapes Hub's research supports the management of Australia's terrestrial and freshwater ecosystems and makes them more resilient to extreme events and pervasive pressures.



fingered gecko. Photo: danicalockett CC BY-NC 4.0.

Further information

This project is being led by Dr JP Emery from the University of Southern Queensland, Dr Eric Nordberg from the University of New England and Dr Nicholas Macgregor from Parks Australia.

This document and further information are available from the project website at nesplandscapes.edu.au/projects/nesp-rlh/ christmas-island-giant-gecko.

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NESP Resilient Landscapes Hub



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