

Aussie snakes and lizards trace back to Asia 30 million years ago

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Eastern brown snake. Credit: John Tann, Flickr

Deadly snakes are among Australia's most iconic animals but a new study led by The Australian National University (ANU) has helped explain how they descended from creatures that have emigrated from Asia over the past 30 million years.

Lead researcher Dr Paul Oliver said about 85 per cent of more than

1,000 [snake](#) and lizard species in Australia descended from creatures that floated across waters from Asia to Australia.

The research helps explain how Australia has become home to about 11 per cent of the world's 6,300 [reptile species](#) - the highest proportion of any country around the world.

"Around 30 million years ago it appears that the world changed, and subsequently there was an influx of lizard and snakes into Australia," said Dr Oliver from the ANU Research School of Biology.

"We think this is linked to how Australia's rapid movement north, by continental movement standards, has changed [ocean currents](#) and global climates."

The researchers conducted the study using animal tree-of-life data combined with empirical evidence and simulations.

The origins for reptiles contrast with other famous Australian animal groups including marsupials and birds, which include many more species descended from ancestors that lived on Gondwana, a super continent that included Australia, Antarctica, South America, Africa and Madagascar.

Dr Oliver said that the study found that the immigration of reptiles into Australia was clustered in time.

"The influx of lizards and snakes into Australia corresponds with a time when fossil evidence suggests animal and plant communities underwent major changes across the world," he said.

"The movement of Australia may have been a key driver of these global changes."

The research is published in the *Nature Ecology and Evolution*.

More information: Paul M. Oliver et al. Phylogenetic evidence for mid-Cenozoic turnover of a diverse continental biota, *Nature Ecology & Evolution* (2017). [DOI: 10.1038/s41559-017-0355-8](https://doi.org/10.1038/s41559-017-0355-8)

Provided by Australian National University

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