

Is Australia the birthplace of birds nests?

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Lyrebird nest. Credit: Justin Welbergen

The most common birds nests found today had their birthplace in Australia, and these nests may be key to many of our birds' success, according to new research from Macquarie University, released today.

The research, published in *Proceedings of the Royal Society B*, looked at

the [birds](#) nests of passerines – common song birds which include lyrebirds, fairy-wrens and magpies – and found the ubiquitous 'open' cup nest evolved in Australia multiple times more than 40 million years ago.

The birds resulting from these open cup nesting lineages gave rise to many of the worlds' birds today, and this study suggests that the open nests were perhaps a key to their success – measured both in terms of how many species they evolved into, and how far they have spread around the world.

"Among the passerine birds – which make up 60 per cent of the worlds birds – most species today build open cup-shaped nests, and only a minority build more elaborate roofed structures. The study shows that open cup nests evolved multiple times independently during early passerine evolution on the Australian continent, eventually becoming the most common nest type across the world today," said study co-author Professor Simon Griffith from the Department of Biological Sciences.

The fact that these common open cupped nests appear to have arisen several times in different lineages, but around the same time, suggests that this was driven by the emergence of new predators or parasites or with changing climates and habitats.

"Australia is host to the ancestors of today's common birds around the world, and the open cup nest that originated here is one of the innovations that perhaps has made them so successful," said Professor Griffith.

These nests evolved specifically in Australia as this period of time was when a lot of today's bird species were rapidly diverging from one another, and nests, as well as many other aspects of behaviour, plumage, song and life history variation were also changing quite rapidly.

"Until now we had assumed that more complex fully roofed nests had evolved from those without roofs. This study demonstrates that in fact it was the opposite, in that these simple nests evolved several times independently, and the bird families that made this switch to simple [nests](#) are some of the most species-rich bird families today, such as the Australian honeyeaters."

"This research really underlines the importance of Australia as the source of much of the worlds' avian diversity – Australia was the birthplace for which many key features of birds started out and still holds representatives of many of the ancient families," concluded Professor Griffith.

More information: J. Jordan Price et al. Open cup nests evolved from roofed nests in the early passerines, *Proceedings of the Royal Society B: Biological Sciences* (2017). [DOI: 10.1098/rspb.2016.2708](https://doi.org/10.1098/rspb.2016.2708)

Provided by Macquarie University

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