

Researchers discover hundreds of new ant species in Northern Australia's tropics

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Thousands of new species of ants from the monsoonal tropics have been discovered by researchers at Charles Darwin University (CDU), making ant populations in Northern Australia some of the most diverse in the world. Credit: Charles Darwin University

Charles Darwin University (CDU) researchers have discovered thousands of new ant species in the monsoonal tropics, showing ant populations in Northern Australia are some of the world's most diverse.

CDU ecologist Professor Alan Andersen and his collaborators have

assembled the world's largest collection of Australian ants, containing more than 8,000 species.

"The extent of unrecognized diversity of species is incredible in our monsoonal tropics. We are not talking about three or four [new species](#), but thousands of them; we have recently shown that something that has been considered to be a single variable species is in fact hundreds of actual species," Professor Andersen said.

"This is just scratching the surface of ant diversity in Northern Australia. The diversity is totally unappreciated."

Professor Andersen, from the Research Institute for the Environment and Livelihoods, said the ants were collected during hundreds of [field trips](#) over the past 40 years and it is the world's largest ant collection outside one or two major museums.

Professor Andersen and his team use a combination of morphology, genetics, and [geographic distribution](#) to separate different species.

"In one trap during a collecting trip, we recorded 27 different species of ants," he said.

"An area the size of an average suburban house block is often home to more than 100 different species of ants."

Professor Andersen said in all there could be 5,000 species of ants in the monsoonal tropics. This would make monsoonal Australia the world's richest region for ants.

"That 5,000 may in fact be a very conservative number," he said.

"As new research is coming out, that number is only increasing."

Professor Andersen said the results has dispelled some assumptions about global patterns of biodiversity.

"Peak ant diversity is generally considered to occur in [tropical rainforests](#), particularly in the Amazon Basin and in South-East Asia. Our research has totally flipped that idea on its head," he said.

"It is not just the monsoonal region but arid Australia more generally that has extraordinary ant diversity."

More information: Alan N. Andersen et al, Unrecognized Ant Megadiversity in Monsoonal Australia: Diversity and Its Distribution in the Hyperdiverse *Monomorium nigrius* Forel Group, *Diversity* (2022). [DOI: 10.3390/d14010046](https://doi.org/10.3390/d14010046)

Provided by Charles Darwin University

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