

# Females get along fine without males - in the world of tropical ants

A type of tropical ant has dispensed with males altogether, according to scientists, and only the female of the species exists.

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Experts have discovered a South American species that is exclusively female and reproduces asexually by cloning the queen.

Reproduction without sex is fairly common in the ant world, but the *Mycocrepus smithii* is the first known to be a male-free species. The phenomenon takes the stress out of finding a mate and may help keep the peace in colonies, the scientists believe.

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Researchers were first drawn to *Mycocrepus smithii* by its skill at cultivating various different fungal crops for food but closer inspection raised questions about the ants' sex life.

Six separate tests on the ants failed to uncover any males, researchers led by Anna Himler at the University of Texas at Austin wrote in the British journal *Proceedings of the Royal Society*.

The findings run counter to scientific theories that say asexuality is an evolutionary disadvantage because it eliminates mutations and generates genetic diversity more slowly than sexual reproduction.

The researchers carried out half a dozen tests, including field surveys of colonies from Panama to Argentina, examining the reproductive system of queen ants, and testing the genes of clones and their mothers.

They also tested whether bacteria could be the cause of the ants' asexuality and whether treating females with antibiotics or changing the fungus they fed on would stimulate the production of males.

One possible advantage of asexual reproduction is that it avoids the need to find a mate and the efforts associated with mating, according to the researchers.