

Fortune favours the bold: Can behaviour explain why some animal species become invasive?

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Credit: Macquarie University

A new study has found that adaptability is the key to invasive species succeeding in non-native environments.

The study published in *Animal Behaviour* compared the behaviour of two closely related [lizards](#) to understand why only one species has become established in several locations throughout the world.

The Italian Wall Lizard and Green Iberian Wall Lizard may look like

close relatives, but key differences in their behaviour explained why the Italian Wall Lizard is the successful invasive species of the two.

Researchers from Macquarie University found that the invasive lizard was more exploratory, bold, and comfortable in new environments – all factors that are likely to contribute to the lizard's success as an invasive species. The invasive Italian Wall Lizard was also more flexible in its behaviour, pointing to adaptability as an essential behavioural trait for successfully invading different environments.

Dr. Isabel Damas-Moreira, the lead author of the study said invasive species have enormous ecological and [economic costs](#) and the world's growing population will create more opportunities for these species to spread.

"Invasive species like the Italian Wall Lizard use human transportation to hitch-hike and invade new locations," said Dr. Damas-Moreira.

As the human population increases, transport networks also increase in frequency and number. This also increases the number of species translocated to new habitats, so biological invasions show no signs of slowing down.

In order to mitigate the impacts of [invasive species](#) on native fauna, scientists need to understand more about their behaviour and what makes them invasive.

"The findings from this research are important because the behavioural traits of a species are crucial for determining its invasive success, but behaviour of invaders has often been neglected in research within this field."

The next step for the researchers will be to understand how the lizards'

behavioural traits affect the outcome when these two [species](#) compete over food and shelter.

More information: Isabel Damas-Moreira et al. Can behaviour explain invasion success? A comparison between sympatric invasive and native lizards, *Animal Behaviour* (2019). [DOI: 10.1016/j.anbehav.2019.03.008](#)

Provided by Macquarie University

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