Brains versus brawn: Study finds there's more to the Noisy Miner than just being a backyard bully

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(PhysOrg.com) -- Some consider the Noisy Miner bird a badly-behaved backyard bully - an avian aggressor that moves into the neighbourhood and quickly takes over.

Others, like Macquarie University PhD student Danielle Sulikowski who has been researching the foraging behaviour and memory abilities of the Noisy Miner, have developed an admiration for these feisty, feathered bad boys of the backyard.

Sulikowski, who works in the University's Department of Brain,

Behaviour, and Evolution, said Noisy Miners may be getting a bad rap because they are not only adaptable, but smart.

“They are generalists rather than specialists, feeding on a bunch of different food sources, and in the animal kingdom being a generalist makes you flexible and clever. So when humans come along and interfere with the environment, we change the rules of survival. But Noisy Miners adapt and learn the new rules,” she said.

Sulikowski describes Noisy Miners as brave and aggressive birds. When teamed with smart, that means that other more specialised birds just can’t compete, she said.

They are native to Australia but are not related to another similarly-named and vocal neighbour, the introduced Indian Mynah bird. With mostly grey bodies and black crowns and cheeks, Noisy Miners live in groups and, are strongly territorial excluding other, mostly smaller birds.

Until people came along their aggressiveness wasn’t such a problem because they thrive in an edge habitat - at the edge of areas of bush. Now that humans have fragmented the bush in urban areas, Noisy Miners are moving in and taking over, attracted to the diverse array of large-flowered plants with abundant nectar found in many suburban backyards.

In studying the foraging behaviour and memory of the miner birds, Sulikowski found the birds changed their behaviour, and what they remembered, depending on the type of food they were looking for.

“With insects, their searching is based on movement patterns, whereas with nectar from flowers there’s no overall pattern to their movement, but they still know exactly which flowers they’ve been to and which ones they haven’t,” she said.

Sulikowski notes that the Noisy Miner's brain has evolved to deal with some diverse foraging problems which require them to process the same information in very different ways, depending on what food they're searching for. Understanding how their brains achieve this flexibility is important for understanding how intelligence, generally, evolves, she said.

"I think it's great that this innocuous little garden bird is teaching us about the evolution of the brain," she said.

Sulikowski, who recently presented her findings on the Noisy Miner at the General Meeting of the Royal Society of NSW, also received a scholarship from the group which will help her to continue research into the Noisy Miner.

Provided by Macquarie University