

Citizens 'can help save our wildlife'

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Farmers and city people can play a key role in saving Australia's native animals and plants by small changes to the way they manage their paddocks and backyards.

Researchers at the National Environmental Research Program's (NERP) Environmental Decisions Hub say that although many native species don't live in paddocks or in backyards, Australians can still help [native wildlife](#) by adding features like plants, trees or logs to their property that benefit species living in nearby [bushland](#).

"Very little native vegetation is now left in our agricultural and [urban landscapes](#). That means that the main way we can help native species is by what we do in the areas surrounding our bushland remnants," says Associate Professor Don Driscoll of NERP Environmental Decisions Hub and The Australian National University (ANU).

Assoc. Prof. Driscoll explains that animals need to move to forage for food, find mates and colonise new areas. They also shift in response to [climate change](#); for example animals that prefer cool conditions may have to move from warm low-lying areas to cooler areas at higher elevation to retain their ideal environment.

"If animals are restricted from travelling across landscapes by open farmland or built-up urban areas, they risk becoming isolated in small patches of bush," he says. "If all the individuals of a species in a small patch die, they won't be replaced because individuals in other bush reserves can't get there."

"So the key to conserving native wildlife will from now on hinge on what people do in the spaces between the remnants of native vegetation, in both farmland and cities."

In their study, the researchers explored how animals and plants survive in fragmented landscapes and identified three things that farmers and city dwellers can do to help them.

"Research has shown that animals are more likely to move between landscapes when farmland or built-up urban areas resemble their homes," Assoc. Prof. Driscoll says.

"So instead of clearing land, we can build corridors of [native vegetation](#) or make other more subtle changes across our cities and farming landscapes to support native animals as they move, encouraging them to spread out and avoid inbreeding."

Secondly, both farmers and [city dwellers](#) can plant fruit and other trees and shrubs to provide food for native animals that pass by, or could remove certain plants to take away resources from abundant predators or exotic species.

An example of providing resources across farmland is the case of the hairy footed gerbil, a mouse-like creature from southern Africa.

"These gerbils survive in small patches of native grasslands surrounded by scrubby areas and livestock grazing," Assoc. Prof. Driscoll says.

"When it rains, grass spreads across the entire landscape, enabling them to move freely while eating the grass seeds. They can then move between separate grasslands and re-establish populations in areas where they have previously disappeared.

"It's a good example of how we can start to think about conserving

Australian native animals over whole landscapes; with temporary changes in [paddocks](#) and backyards."

The third way that paddock and back-yard activities can affect native species in bushland is by altering disturbance levels, like fire and trampling by livestock, and it can change the amount of light or the humidity, and this can encourage invasion by exotic species. "We need to think very carefully about what we plant on our farms and in our gardens and parks," he says.

For example an introduced pasture plant, gamba grass, has taken over huge areas of Australia's tropical savannahs, and is destroying [native species](#) through the high-intensity fires it causes.

"We need to control invasive plants like this, we need to stop spreading them, and we need to be careful not to introduce new invasive grasses that can transform entire landscapes. The fires they carry could change the normal patterns of fire in bushland, rendering them unfit for some native animals and plants," Assoc. Prof. Driscoll says.

"There is a great opportunity for all Australians to play a part in protecting our native wildlife, and there are many ways we can do this without undermining how farmers and city people use their land," he says.

"A simple redesigning of urban areas and farmland so patches of vegetation are linked together, even if those linkages are temporary, could make a big difference."

The study "Conceptual domain of the matrix in fragmented landscapes" by Don A. Driscoll, Sam C. Banks, Philip S. Barton, David B. Lindenmayer and Annabel L. Smith was published in the latest issue of *Trends in Ecology and Evolution*.

The full paper and videos about the study are available on <http://dondriscoll.wordpress.com/>

More information: bit.ly/12JMRKD

Provided by NERP Environmental Decisions Hub

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