

Planting trees arrests koala decline, study finds

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The researchers used GPS collars to track the koalas' movements over three months.

(PhysOrg.com) -- University of Sydney researchers have gained a rare insight into the habits of koalas, discovering simple tree planting may be the solution to expanding their habitat and allowing their populations to grow.

The study, conducted in the town of Gunnedah and using GPS collars fitted to [koalas](#), also found the vulnerable mammals were most at risk from living in small patches of bush near roads and train tracks.

Lead scientist Dr. Mathew Crowther says the ongoing research highlights the challenges of [habitat loss](#) and fragmentation faced by koalas in NSW, and identifies high-risk areas that must be managed to reduce koala mortality.

"It is encouraging to see that koalas can use a variety of trees, including newly planted eucalypts, and are not restricted to old growth forests," said Dr. Crowther from the School of Biological Sciences.

"Unfortunately, this also means koalas will use trees planted next to roads, train tracks and fence lines. We saw very high rates of koala mortality in these areas. We also saw signs the small patches of trees available to koalas could not support them during tough times, such as [droughts](#), when resources are scarce."

Koala numbers across Australia are dwindling due to a combination of deforestation, [habitat fragmentation](#) and disease. In 2006, prompted by concerns koalas were in serious decline in NSW, the state government commissioned a survey of NSW koala populations.

The survey, by Dr. Crowther and colleagues from the Department of Environment, [Climate Change](#) and Water (now the Office of Environment and Heritage) was sent to a random sample of NSW residents. It revealed falling koala populations across the state, with lower numbers on the south coast and higher numbers in the north coast. It also identified rare pockets - such as the town of Gunnedah - where populations are both high and increasing rapidly.

"We were interested in studying the koalas in Gunnedah because we

wanted to work out why the population was increasing in this particular place," said Dr. Crowther. "We knew a massive tree planting effort had taken place in the 1990s, so we wanted to know if that campaign had led to an increase in koalas and whether we could use this information to guide areas of koala decline."

To investigate the movements of the Gunnedah population and what trees they use, the researchers trapped koalas and attached global positioning system (GPS) collars, which provided data on each individual's location over an average period of three months.

Results showed that koalas were actively using the newly planted trees in Gunnedah, which are likely to be the reason for the growth in koala numbers. They prefer to use a variety of trees throughout the night, including some old growth trees, and are limited to a small range of movement, generally less than two kilometres, mostly within small patches of trees.

Dr. Crowther says the koalas' limited habitat is worrying for their survival, but there is hope reforestation can benefit them. "We saw lots of koalas die during high summer because they couldn't find enough food and water within these small patches," he said.

"The koalas would benefit from having access to multiple patches of trees so they have a few more options and don't have to compete with each other during hard times, especially with the extreme weather events predicted under climate change.

"The fact that the koalas in Gunnedah are using trees planted in the 1990s means that simply planting the right trees could expand their habitat and mitigate some of the current problems we are seeing with koalas living in such fragmented patches of forest."

Provided by University of Sydney

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