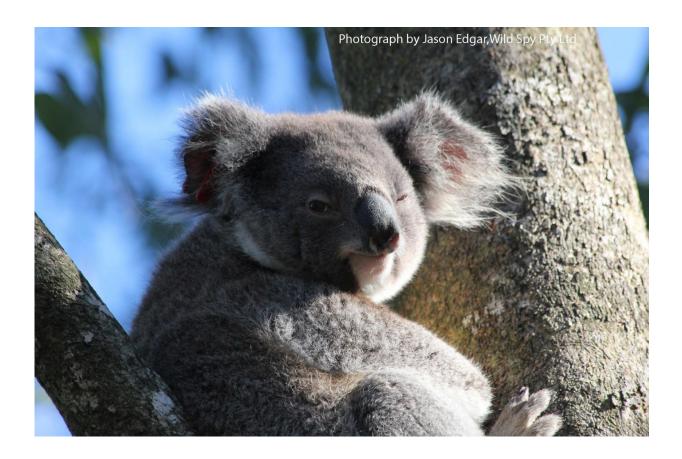


Can you teach koalas new tricks?

August 4 2016



A koala in a tree during the study. Credit: Wild Spy

In a paper titled Using complementary remote detection methods for retrofitted eco-passages: a case study for monitoring individual koalas in south-east Queensland published by the CSIRO on Tuesday (July 26), the Environmental Futures Research Institute team verified 130 crossings by koalas involving a retrofitted structure or a road surface



over a 30-month period.

Professor Darryl Jones said nobody knew whether the structures would actually keep koalas safe from being hit by cars or if they would work.

"We expected the animals to take a while to get used to them," he said.

"To our great surprise they were using them three weeks into it. Can you teach koalas new tricks? You can, that's the point. I was the first sceptical person to say they're not that smart."

The team used a range of technologies that allowed them to not just generically monitor whether koalas passed through the crossing but pinpointed individual koalas and the exact time they entered and left the tunnel.

Using camera traps, audio radio transmitters and RFID tags that are similar to microchips in pets, they gathered more information than any researcher ever has or would be necessary to monitor koala movements and habits.

"This is all about trying to make absolutely sure that koalas are using some of the structures we've put out for them to get safely under roads," Professor Jones said.

"Knowing how they do that is really difficult. You can get photos but you don't know if it's the same animal each time.

"The essence of this you can get really import information using a range of technologies at the same time. That's a world first. Nobody has done that so comprehensively before.

"We really wanted to know what individual koalas were doing, whether



they crossed at the same time each day. We wanted more information than most people ever need and we did that using this range of technologies."

Professor Jones said most people living in suburban Brisbane or parts of the Gold Coast did not realise koalas lived all around them and that these structures were keeping them safe in their backyards and off the roads.

The research was supported by funding from the Queensland Department of Transport and Main Roads, which was responsible for the structures.

"The tunnels were an experiment," Professor Jones said.

"Nobody knew whether they would work or not. We really wanted to know what the local koala was doing so we got ridiculous amount of details of these animals.

"We needed to be clear on whether they were successful because the structures were so innovative and risky that we tried really hard to prove it. That's why it was worth it.

"Although we don't want the <u>koalas</u> to be disturbed, all over the place on the Gold Coast and in Brisbane there are special koala specific tunnels and ledges that's allowing them to cross. Those animals are not going to be hit anymore so that's good news.

The crossings studied in Brisbane were within the jurisdictions of Brisbane City, Redland City and Moreton Bay Regional Council.

Traffic volumes for this region are predicted to increase by 19 per cent, or 2.8 million trips per day between 2006 and 2031.



The paper states: "The continuous clearing of koala habitat for development has placed a great deal of pressure on local koala populations and the risk of vehicle strike is recognised as a key threatening process for ongoing koala persistence in this region.

"The focus must shift from studies that simply assess how many species pass through an eco-passage (i.e. presence), to those that assess the utilisation level by individuals.

"Such information will represent a powerful step forward in providing road authorities with recommendations in relation to the design and placement of crossing structures, and ensuring that the costs equal the ecological benefit."

More information: C. E. Dexter et al, Using complementary remote detection methods for retrofitted eco-passages: a case study for monitoring individual koalas in south-east Queensland, *Wildlife Research* (2016). DOI: 10.1071/WR15153

Provided by Griffith University

Citation: Can you teach koalas new tricks? (2016, August 4) retrieved 25 April 2024 from <u>https://phys.org/news/2016-08-koalas.html</u>

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