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Shelter as important as food for sweltering koalas

Land management practices must change to protect vulnerable koala populations, according to [new research](#) published in the international biodiversity and ecology journal, *Ecography*.



Credit: [runmonty/flickr](#)

In the first study of its kind, a research team – led by The University of Sydney’s Mathew Crowther – found koalas are choosing trees different to those in which they feed in an attempt to survive higher daytime temperatures and extreme events such as droughts and heatwaves.

‘Koalas need a combination of both the right kind of shelter trees and food trees to survive,’ Dr Crowther said.

‘Ensuring a habitat has a good supply of feed trees and protecting koalas from predators is not enough to ensure their survival.

‘Our research confirmed koalas shelter during the day in different types of trees to the eucalypts they feed on at night.

‘Shelter trees can be significantly cooler than feed trees. We found the hotter it is during the day the more koalas will tend to seek out bigger trees with denser foliage to try to escape those temperatures.

‘The koalas studied also showed a preference for trees in lower lying areas such as gullies which are often cooler than trees on open plains or hilltops.

‘Our research was the first in which shelter trees were considered equally with feed trees when examining the viability of a koala habitat.

‘The lack of understanding of the importance of shelter trees for koalas is particularly concerning given the increasing frequency of extreme weather events.

‘Exposure to prolonged high temperatures can result in heat stress, dehydration and eventually death.

‘One quarter of the koalas we studied perished in a heatwave in 2009 and Australia has just experienced the hottest year since

climate records began,' he said.

Forty koalas were tracked using GPS, global positioning system, over three years on Liverpool Plains farmland around Gunnedah in north-western New South Wales.

Landholders in the region supported the efforts of the research team, especially though the community-driven Liverpool Plains Land Management Inc.

'Our research calls for a rethink of koala management and conservation,' Dr Crowther said.

'The implication is that long-standing land management practices of retaining and planting feed trees for koalas needs to be expanded to include shelter trees within the home range of each koala.

'Unlike their very narrow choice of feed trees, koalas chose a relatively wide variety of trees for shelter, including species such as *belah* and *kurrajong*.

'An urgent emphasis needs to be placed on retaining taller, mature trees such as remnant paddock trees, and the planting of both food and shelter trees, especially in more protected gullies to try to offset the impact of high temperatures,' he said.

Dr Crowther said his team's research also highlights the need for further investigation into the koala's diet and how other tree-dwelling species are affected by sustained changes to climate.

Source: The University of Sydney

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