Koalas are losing out to traffic


QPWS

More koalas living near urban areas are being killed on roads as traffic increases with development. Innovative measures are needed to divert koalas from roadsides.

While Australia's most popular national symbol, the koala, is still a relatively 'common', vulnerable populations living in expanding urban areas are under an increasing threat: traffic. Roaming koalas are suffering alarmingly high road mortality.

On Phillip Island in Victoria, for example, road deaths have become a major cause of the decline in a once healthy population, accounting for about 60% of koala mortality.

In south-east Queensland, the 'Koala Coast' population is, according to Dr David Dique and his colleagues at the Queensland Parks and Wildlife Service (QPWS), nationally significant because it is the largest natural koala population living in close proximity to a capital city. However, while rapid urbanisation and increasing habitat destruction for residential development make the koala's future in this area very uncertain, the impact of high levels of road mortality on the population has been concerning but unmeasurable.

To better understand and test ways to reduce koala road deaths, the Parks and Wildlife Service, the Queensland Department of Main Roads, and Redland Shire Council, initiated a koala speed zone trial to assess the effect of differential speed signs on the number of animals hit by vehicles on the Koala Coast from 1995 to 1999. The theory suggested that a reduction in traffic speed would give motorists more time to avoid a collision with a koala, and if a collision did occur, the chance of the koala sustaining fatal injuries may be decreased.

Ten arterial and sub-arterial roads on the Koala Coast were selected for the trial. Four sites acted as controls, while differential speed signs were erected every 500 m at the other six sites. These signs required drivers to reduce their speed from 80 km/h to 60 km/h between 7pm and 5am, during the koala breeding season from August to December. The trial period was selected on the basis of historical records collected by QPWS that suggested most koala fatalities occurred during these months.

The Department of Main Roads monitored vehicle speed at four trial sites and three control sites before and during the trial, while data on koala injuries and deaths in the region before and during the trial were contributed by the local Moggill Koala Hospital.

The study found that from 1995–1999, 1407 koalas were hit, 83% of which died. 61% were, tragically, young, healthy males (2–4 years old). Males disperse more to look for mates, particularly when a population is reducing, and it's thought that this accounts for the disproportionate number killed trying to cross roads. Ultimately, deaths of breeding-age males are likely to have an impact on the population's viability.

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While vehicle speed did decrease on a few trial roads for some test years, no overall significant reduction in vehicle speed occurred during the trial. Thus, according to the QPWS team, there was no evidence to indicate that the low speed zones trialled caused a reduction in the number of koalas hit by vehicles. Any koalas hit by cars travelling at slower speeds were no more likely to survive. This suggests that speeds may need to be much less than 60 km/h to have an impact.

In 1997 the number of koalas hit peaked at 315, and then decreased to 252 in 1999, a worrying decline, as it may reflect a sustained reduction in the population. This begs the question of what management measures can be taken to reduce fatalities?

There are, however, complicating factors. The combination of a large koala population and high traffic volume, for example, probably increases the probability of a koala being hit. Habitat destruction has also seen an increased movement of koalas from the site – typically young males – heightening the risk of road death.

Broadly, the QPWS team suggest an appropriate management strategy would include provisions for safe koala movement across roads, exclusion from roads in some instances, increased community awareness, and planning guidelines to reduce habitat loss associated with future urban development. While further research is required to determine if these management measures would be effective, the team is now engaged with the Department of Main Roads to implement new road designs and monitor their success in reducing koala mortality.

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More Information:

David S Dique *et al* (2003) Koala mortality on roads in south-east Queensland: the koala speed-zone trial. *Wildlife Research* 30: 419–426.

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