

Inquiry into Koala Populations and Habitat in NSW

Relevant terms of reference; a) status of koala populations including trends, threats...adequacy of protections and areas for further research and d) identification of key areas of koala habitat on private and public land that should be protected... and the likely impacts of climate change on koalas and koala distribution.

I have been working with koalas for 9 years, first in Victoria then since 2013 leading research in the Greater Blue Mountains World Heritage Area (GBMWH). Our data to date has demonstrated that koalas in the GBMWH are important for species conservation.

In collaboration with the University of Sydney, James Cook University and San Diego Zoo global we undertook a study assessing the genetic diversity of koalas across the species range (Kjeldsen et al 2018). We found NSW holds the greatest level of genetic diversity of all states, and the Blue Mountains region in particular has the highest genetic diversity of any population sampled.

It was previously assumed the largely sandstone-based protected area network in the GBMWH would only support low densities of koalas, and not enough to be significant. However, we are finding large numbers of koalas in medium densities and our data suggests the populations are growing, as are other populations around the Sydney basin (Campbelltown, Southern Highlands). This appears to be the case at our first two study sites which comprise south east Wollemi National Park into the Hawkesbury LGA, and Kanangra-Boyd National Park to the Megalong Valley.

Koalas in the GBMWH occupy highly diverse habitats and microclimates. The area has been identified as a climate refuge for several species over recent geological history (Hamill and Tasker 2010) and climate refugia for koalas are likely to become more important as habitats to the west become hotter and dryer, and while human development pressures continue on the coastal plains to the east. The importance of these areas for the persistence of koalas has been underestimated.

Contrary to modelling estimates that suggest koalas are unlikely to be found above 800m or on poor soils, koalas in Kanangra-Boyd National Park are living at over 1100m altitude on low and low to moderate quality soils. Importantly, this population appears to be young and expanding and is free of chlamydia. Recent koala records indicate more koala colonies occur in several other parts of the protected area network including the Lower Blue Mountains, Newnes Plateau and potentially the Kedumba Valley. In particular, indications are that the Lower Blue Mountains koala population is also expanding.

Recommendations:

1. Support research for: i) further identification of koala populations, their distribution, habitat requirements and status in the GBMWH and similar regions ii) characterizing climate refugia for koalas iii) assessing genetic diversity, disease status and connectivity. This is essential for estimating population viability and informing effective management.
2. Fire management is critical in order to maintain koala populations inside protected areas. Climate change is likely to drive more frequent and intense bushfires (Clarke et al 2012). Koalas and habitats are currently being lost in Wollemi and Kanangra-Boyd National Parks to fire. This may also be the case in other areas which have not yet been surveyed. We recommend koalas should be considered in prescribed burning and potentially in asset protection, and this should be undertaken via consultation involving key stakeholders including the National Parks and Wildlife Service and Rural Fire Service to plan for the long-term conservation of koalas in NSW.

Yours Sincerely

Dr Kellie Leigh, Executive Director, Science for Wildlife.

References:

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