

## Comments on the Draft National Recovery Plan for the Koala *Phascolarctos cinereus* (combined populations of Queensland, New South Wales and the Australian Capital Territory)

*“ This recovery plan provides principles for state-level and local governments to support the recovery of listed Koala populations and, although it aims as a priority to complement and augment state-level strategies and actions, it does not preclude locally driven activities. ...*

*With a wide distribution, Koalas are impacted by a broad range of interacting direct threats: land use threats such as urbanisation, grazing, agriculture, transport infrastructure, and energy extraction; vegetation change through forest harvesting; the modification of natural processes of fire, hydrology and soil erosion; disease; and droughts, heatwaves and bushfires exacerbated by climate change.”*

Koalas were abundant in the southeast corner bio-region of NSW and supported a koala fur industry for a least two decades after the majority of the primary habitat was cleared for agriculture in the 1800's. It seems likely the fur industry flourished because sufficient soil fertility remained for the primary feed species Forest red gum (*E. tereticornis*) to germinate and grow. When this remnant fertility was depleted, around the turn of the 20<sup>TH</sup> century, all of the koalas on agricultural land died.

This outcome is associated with changes to hydrology, increased subsoil soil dispersion and erosion that occurs when ecological functions are reduced or eliminated. NSW government agencies, including the NSW Threatened Species Scientific Committee (TSSC), do not believe sub-soils disperse. Hence the TSSC rejected a nomination to list extensive canopy dieback during periods of dry weather and drought (DADD) with Bellminer Associated Dieback (BMAD)(1). Rather the TSSC believes DADD is a result of all threatening processes including BMAD (2). This belief ignores hydrology because if DADD was a result of BMAD water would have to move upslope, against gravity.

Over the past 30 years the reduction in soil fertility in secondary habitat has resulted in the extinction of known koalas in Nullica SF, Yurrammie SF, Tantawanglo SF, Bodalla SF, Wallaga Lake NP, Bermagui SF (north of the Bermagui river) and most recently Kooraban NP. The principles behind the management leading to these extinctions are considered to be in the public interest.

The few remaining koalas are constrained to forests growing on the Murrah soil landscape between the Bega and Bermagui rivers. The state government's approach to protecting these koalas was to place the Murrah, Mumbulla, Tanja and part of Bermagui SF into what is called the Murrah flora reserve, managed by the NPWS. For its part the NPWS has continued the management it employed in Kooraban NP.- broad acre burning and associated clearing of koala habitat to facilitate the burning.

Like the NSW Forestry Corporation, the NPWS has precluded local community driven cross-tenure activities, funded by the Natural Heritage Trust and aimed at restoring ecological functions to increase soil fertility. The NPWS does not have a feral predator control program for the Murrah flora reserve.

The Bega Valley Shire Council relies on State Environmental Planning Policy 2020 for its understanding of koala feed trees. The SEPP indicates Forest red gum (*E. tereticornis*) is the only koala feed tree in the shire even though there is no evidence of koalas using this tree for over 100 years. Council has also relied on an inadequate flora and fauna report undertaken in 1997 (3) and a claim that a shotgun club it approved on the northern side of the Murrah river valley in 1999 is in the public interest. The flora and fauna report was not undertaken at the location where shooting was occurring at the time and surveys were constrained to an area of 100 x 200 metres. Despite this small area the report suggests koala call-back sites, undertaken in June, were one kilometre apart.

There is no apparent interaction between koalas north and south of the Murrah (4) and although surveys have been suggested, there is no evidence these have been undertaken.

The reduction in koala secondary habitat quality in the south east corner bio-region is likely to have begun in the 1950's/60's (5). This time period coincides with the initial proposals for a woodchip industry based at

Eden. This proposal was and remains based on the notion that clearing the forests would open up the canopy and trees would rapidly grow back, as they did in the past. Now at least 60 years on, the evidence demonstrates declining forests and it is apparent that, like agricultural land, koala feed trees either do not grow back or their growth rates are too low to support koalas.

Poor science, recalcitrant governments and claims the public benefit from ecologically unsustainable management are the reasons why koalas will become extinct in the wild. It is for these reasons the draft recovery plan for combined Koala populations will fail, because it is based on an assumption that state and local governments have an adequate understanding of ecological process, adaptive management systems and the principles that could prevent koala extinction.

Robert Bertram

24/9/2021

### References

(1) Nomination to list extensive canopy dieback during periods of dry weather and drought (DADD) with Bellminer Associated Dieback (BMAD). (2019)

<https://bertramr.files.wordpress.com/2019/08/daddktp.pdf>

(2) NSW Threatened Species Scientific Committee's response to nomination to list extensive canopy dieback during periods of dry weather and drought (DADD) with Bellminer Associated Dieback (BMAD) (2019)

<https://bertramr.files.wordpress.com/2019/09/ktp-dadd-nsw-tssc-response-september-2019.pdf>

(3) Flora and Fauna assessment, proposed clay shooting range at Murrah south of Bermagui, NSW. Southern Ecological Services (1997)

<https://bertramr.files.wordpress.com/2021/09/d-1753897-flora-and-fauna-assessment-da-1999.1438-checked.pdf>

(4) Management of a Small, Isolated, Coastal Population of Koalas in Southeast New South Wales, Koala Health Hub, University of Sydney (2017)

<https://bertramr.files.wordpress.com/2021/09/final-report-oe-h-mumbulla-survey-khh-draft-1.docx>

(5) Evidence of Massive Landscape Change Unearthed. CSIRO press release on outcomes of sediment studies in the Murrah River. (1999)

<http://bertramr.files.wordpress.com/2011/12/wallbrink-1999.pdf>