

INQUIRY INTO DINGOES IN NATIONAL PARKS IN NEW SOUTH WALES

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To the Animal Welfare Committee,

My name is Dr. Dusty McLean, and I am an ecologist and contractor for the New South Wales (NSW) National Parks and Wildlife Service (NPWS). I am pleased to see an inquiry into dingoes in NSW national parks and have prepared a submission relating to the following terms of reference:

- c) The ecological role of dingoes in national parks, and
- e) The impact of current government policies and programs for the management of dingoes in national parks.

I have conducted research on dingo and macropod ecology in north-eastern NSW national parks in collaboration with Southern Cross University and the NSW NPWS over the past six years. During this time, I have undertaken several dietary studies of dingoes, each with differing primary objectives but all with a focus on the presence of threatened fauna in the diet to assess whether dingo predation might present a conservation risk to these species. The outcomes of these studies have consistently suggested that dingoes in the reserves studied do not pose an undue threat to threatened fauna but instead fulfil the essential ecological role of a top-order predator. Below, I outline several relevant case studies on dingoes within NSW national parks and other NPWS-managed reserves.

1. McLean, D., Goldingay, R., & Letnic, M. (2023). Diet of the Dingo in Subtropical Australian Forests: Are Small, Threatened Macropods at Risk? *Animals*, 13(14), 2257. <https://doi.org/10.3390/ani13142257>

This is a comprehensive academic research article detailing a study that involved dingo scat collection and analysis, together with camera-trapping surveys, in two north-eastern NSW National Parks (NP): Richmond Range NP and the Border Ranges NP. The camera-trapping data were used to assess whether prey items in the diet were selected according to their availability, while the scat collections were conducted on a seasonal basis to determine whether prey importance varied across seasons.

In both reserves, dingoes consumed a wide variety of prey, with medium-sized mammals comprising the bulk of the diet. Based on the camera-trapping data, the dietary frequency of these medium-sized mammals was generally proportional to their availability. Seasonal trends in the diet also appeared to reflect changes in prey availability. The most frequently consumed prey items in each reserve (pademelons in Richmond Range NP and possums in the Border Ranges NP) were considered common species.

In Richmond Range, dingoes consumed a high frequency of the threatened red-legged pademelon (*Thylogale stigmatica*). Two earlier dingo diet studies conducted in Richmond Range (Barker *et al.* 1994; Glen *et al.* 2006) also identified pademelons as important dietary items. Together with our study, these represent a history of sustained predation on pademelons spanning approximately 30 years. While this may initially raise concern, the

availability estimates generated in this study, combined with the high frequency of occurrence of pademelons in the diet, suggest that the species remains abundant and resilient to these levels of dingo predation.

A more recent study of mine (McLean & Goldingay, 2026), which documented the multi-year population dynamics of two threatened and one non-threatened macropod species in Richmond Range NP and the Border Ranges NP, found that the red-legged pademelon maintained a high level of occupancy in Richmond Range NP over a 12-year period, including two years that coincided with the dingo diet study. This provides further, and more robust, evidence that the species is resilient to the observed levels of dingo predation.

In the Border Ranges NP, the dingo rarely consumed red-legged pademelons despite their similarly high availability. This was attributed to alternative prey items, particularly possums, providing easier feeding opportunities for dingoes within the structurally complex rainforest ecosystem of the Border Ranges. This highlights two important and interconnected considerations: first, that dingo diets are influenced not only by prey availability but also by habitat structure and its influence on hunting strategy; and second, that preferred prey items can vary even across geographically proximate reserves. These findings suggest that dingoes respond opportunistically to local ecological conditions rather than consistently targeting particular prey species across landscapes, cautioning against assumptions regarding their feeding behaviour and impacts.

Additional outcomes of the study relevant to the inquiry include the absence of threatened long-nosed potoroos (*Potorous tridactylus*) and koalas (*Phascolarctos cinereus*) from the diets documented. Richmond Range NP contains one of the largest known populations of koalas in NSW (Goldingay *et al.* 2022), and koalas were observed being active on the ground on a somewhat regular basis during camera-trapping surveys in this reserve, indicating that they were exposed to the threat of dingo predation as they moved between trees. However, they were not recorded in the diet. Long-nosed potoroos are abundant in the Border Ranges NP and present in Richmond Range NP (McLean & Goldingay, 2026) and were recorded in both reserves during camera-trap surveys for this diet study, demonstrating their availability. Despite this, they too were not recorded in the diet. The endangered black-striped wallaby (*Notamacropus dorsalis*) was present in two scats collected in Richmond Range NP but not detected during the camera-trap surveys, so the threat posed by the dingo to this species could not be confidently assessed. Nonetheless, the low frequency of occurrence of black-striped wallabies in the diet suggests that they are not a major prey item. These findings have helped to end lethal control practices of dingoes in these reserves as they were not justified on conservation grounds.

2. Guerrilla Eco. (2024). Yabbara National Park: Dingo diet analysis. Report prepared for the New South Wales National Parks and Wildlife Service Kyogle Office.

In Yabbara National Park, feral pigs (*Sus scrofa*) were degrading habitats occupied by the endangered Richmond Range sphagnum frog (*Philoria richmondensis*) (Bolitho, 2023). This study was commissioned by NSW NPWS to assess whether feral pigs featured in the diets of dingoes in the reserve to determine whether dingoes might assist in their control. A secondary objective was to document the diet of dingoes in Yabbara NP more generally, and to compare the diet with those of nearby reserves. Feral pigs were found to be the most commonly consumed prey item, and their frequency of occurrence in the diet was higher than that reported in any previously published figures. While these data could not be used to determine whether dingoes were actively preying on feral pigs, they suggest that dingoes may play a role in their control and exert substantial top-down pressures on the feral pig population, which could alter their behaviour and landscape use, and prevent the severity of their impacts on the Richmond Range sphagnum frog from worsening.

Dietary comparisons indicated that the diets of dingoes in Yabbara NP were similar to those documented Richmond Range NP and the Border Ranges NP in that they were dominated by medium-sized mammals and characterised by a similar number of prey items, although the Yabbara diet differed in its most important prey items. As mentioned previously, feral pigs were the most commonly consumed prey item, followed by northern brown bandicoots (*Isoodon macrourus*) and red-legged pademelons. Camera-trapping surveys were not conducted, so no insights into prey availability were available, and no long-term population data were available for prey species in this reserve either. Based on the findings of McLean *et al.* (2023), it was assumed that the relatively high occurrence of red-legged pademelons in the diet reflected a relatively high abundance and availability, and concluded that the species likely experienced little population-level impacts due to dingo predation.

While no other threatened macropods were recorded in the diet, one scat contained remains of the threatened grey-headed flying fox (*Pteropus poliocephalus*), and two scats contained remains of the threatened greater glider (*Petauroides volans*). As these volant and arboreal species rarely venture on the ground, they are generally inaccessible to dingoes. It is possible that the remains detected in scats originated from scavenged carcasses rather than active predation. Regardless, it is unlikely that dingoes pose any meaningful conservation risk to these species.

The results of this study in Yabbara NP suggest that dingoes could potentially provide conservation benefits by curbing the impacts of a destructive invasive species on an endangered frog's habitat through top-down effects, and further underscore that dingo diets reflect local environmental conditions.

3. Guerrilla Eco. (2026). *Nightcap National Park: Dingo diet analysis*. Report prepared for the New South Wales National Parks and Wildlife Service Alstonville Office.

This study was commissioned by the NSW NPWS in response to reports of heightened dingo activity along the boundaries of Nightcap NP and Whian Whian State Conservation Area (SCA). Despite substantial survey effort from scat collection surveys conducted over 4 days, relatively few scats were located for analysis. This was presumed to reflect low overall dingo activity in the reserves (which was also suggested by previous camera trapping surveys (see McHugh *et al.* 2019; McLean & Goldingay, 2024)) and be linked to past and current lethal baiting practices along the reserve boundary.

Although the small sample sized constrained the ability to fully characterise the diet, the scats that were collected and analysed suggested that the diet was largely consistent with the diets in Richmond Range NP, the Border Ranges NP, and Yabbara NP. The diet was dominated by medium-sized mammals and, in particular, red-legged and red-necked pademelons (*Thylogale thetis*). Camera-trap studies conducted in the reserve show high occupancy of red-legged pademelons in 2016 and 2017 (McHugh *et al.* 2019) and in 2021 and 2022 (McLean & Goldingay, 2024), respectively. Again, despite being an important dietary item for dingoes in Nightcap NP and Whian Whian SCA, the red-legged pademelon seems resilient to dingo predation, and its dietary importance likely reflects its high abundance.

No other threatened species were recorded in the diet. Long-nosed potoroos exhibit relatively high occupancy in the reserve (McLean & Goldingay, 2024), so their continued absence from dingo diets (albeit from a small sample size here) provides further support that dingo predation is unlikely to be a conservation concern for this vulnerable species.

4. Guerrilla Eco. (2026). *Captains Creek Nature Reserve: Macropod occupancy in a burnt landscape and dingo diet analysis*. Report prepared for the New South Wales National Parks and Wildlife Service Kyogle Office.

This study was commissioned by the NSW NPWS to investigate the effects of recent wild and prescribed fires on the occupancy of threatened macropods, namely the rufous bettong (*Aepyprymnus rufescens*) and brush-tailed rock wallaby (*Petrogale penicillata*), and to expand understanding of dingo diets across the north-east NSW region. Whilst the study is ongoing, the hitherto collected data offer relevant insights. The camera-trapping survey conducted for this study has revealed the presence of 7 threatened species (5 of which were macropods). Two of these, the red-legged pademelon and the long-nosed potoroo, were found to be present at 33% and 25% of sites, respectively, despite site selection favouring drier habitats not typically associated with these species (meaning, occupancy of these species would likely be higher if the study design preferentially targeted their preferred habitats). The non-threatened red-necked pademelon was found to occupy 55% of sites. Although only approximately 50% (n = 36) of the scats collected have been analysed, the results thus far indicate a high frequency of occurrence in the diet of pademelon species (75%, with red-legged pademelons occurring in 42%). There is currently no evidence of consumption of the long-nosed potoroo, nor any other threatened species (with the exception of a single scat containing remains of an eastern chestnut

mouse (*Pseudomys gracilicaudatus*), which was not detected during the camera-trap survey). Considering the findings of McLean *et al.* (2023) and the relatively high proportion of sites occupied by pademelons (55%), it is reasonable to assume that they are abundant and preyed upon in proportion to their availability.

Summary

The scat analysis studies outlined above provide insight into the feeding habits of dingoes across four national parks, one nature reserve, and one state conservation area in north-eastern NSW. These studies have shown that, in this region, dingoes are generalist carnivores that prey primarily on common prey species and that the most important dietary items vary somewhat amongst reserves, presumably reflecting local variation in species assemblages. Collectively, these studies suggest that ecological interactions involving dingoes are highly context-dependent and that management decisions should therefore be informed by site-specific evidence rather than broad assumptions regarding dingo impacts. One threatened species, the red-legged pademelon, consistently appears as an important dietary item (with the exception of the Border Ranges diet), yet camera-trapping surveys conducted across the north-eastern NSW landscape have shown the species to be abundant, suggesting that its populations can sustain relatively high levels of dingo predation. The dingo (and wild dog) was previously considered a threat to the persistence of the long-nosed potoroo, but these studies have helped to shift that view and remove this perceived threat from the species' conservation strategies.

The dingo fulfils an important ecological role as a top order predator and presents little concern for the conservation of threatened species in national parks in north-eastern NSW. In some cases, it may provide indirect conservation benefits for certain threatened species, such as the Richmond Range sphagnum frog, through predation and fear-mediated effects on invasive species. Given the evidence presented here, I consider the status quo, which is the persecution of dingoes in NSW national parks, to be insufficiently supported on ecological grounds. A more appropriate approach may be to implement control measures only where adverse impacts have been clearly demonstrated and incorporate dingoes into the conservation strategies of species where appropriate.

Regards,

Dusty McLean

References

- Barker J, Lunney D, Bubela T. (1994). Mammal surveys in the forests of the Carrai Plateau and Richmond Range in north-east New South Wales. *Australian Mammalogy*, **17**: 19-29.
- Bolitho L. (2023). *Islands in the sky: the conservation ecology of an endangered mountain-top frog (Philoria kundagungan)* [PhD thesis, Southern Cross University].
- Glen A, Fay A, Dickman C. (2006). Diets of sympatric red foxes *Vulpes vulpes* and wild dogs *Canis lupus* in the Northern Rivers Region, New South Wales. *Australian Mammalogy*, **28**: 101-104.
- Goldingay, R. L., McHugh, D., & Parkyn, J. L. (2022). Multiyear monitoring of threatened iconic arboreal mammals in a mid-elevation conservation reserve in eastern Australia. *Ecology and Evolution*, *12*(5), e8935.
- Guerrilla Eco. (2024). *Yabbra National Park: Dingo diet analysis*. Report prepared for the New South Wales National Parks and Wildlife Service Kyogle Office.
- Guerrilla Eco. (2026). *Nightcap National Park: Dingo diet analysis*. Report prepared for the New South Wales National Parks and Wildlife Service Alstonville Office.
- Guerrilla Eco. (2026). *Captains Creek Nature Reserve: Macropod occupancy in a burnt landscape and dingo diet analysis*. Report prepared for the New South Wales National Parks and Wildlife Service Kyogle Office.
- McHugh, D., Goldingay, R. L., Link, J., & Letnic, M. (2019). Habitat and introduced predators influence the occupancy of small threatened macropods in subtropical Australia. *Ecology and evolution*, *9*(11), 6300-6317.
- McLean D, Goldingay R, Letnic M. (2023). Diet of the Dingo in Subtropical Australian Forests: Are Small, Threatened Macropods at Risk? *Animals*, **13**: 2257.
- McLean, D., & Goldingay, R. (2024). Response of medium-sized mammals in subtropical forests following Australian 'Black Summer' wildfires. *Forest ecology and management*, *562*, 121952.
- McLean, D., & Goldingay, R. (2026). Multi-Year Monitoring of Small, Threatened Macropods in Two Subtropical Australian Forests Reveals Varied Stability Between Northern Long-Nosed Potoroo (*Potorous tridactylus tridactylus*) Populations. *Ecological Management & Restoration*, *27*(2), e70046.