

Summary of conflicting cultural, historical, and scientific opinion relating to the role, risk and management of dingoes/wild dogs

The purpose of this attachment is the provision of background information that has significantly influenced and shaped our current approach to managing wild dog and dingo populations.

Historical conflicting views:

1. Cultural significance:
 - a. Aboriginal legends place the dingo within the geological landscape over 6,000 to 3348 years ago.^{1,2}
 - b. Dingoes are considered waterfinders, a hunting technology, navigational aid, living blanket and valuable item of trade and exchange. They also have a role in guardianship, ceremonial processes, economic and utilitarian functions specific to women and children.
 - c. According to Phelan 2007³ “certain dogs are given “skin” names. This automatically positions the dingo into society, granting them status such as parent, grandparent, aunt, child, etc. In some cases dogs are considered important enough to attend rituals, acting as fully fledged lawmen”



Image from [Dingo killing — Defend The Wild](#)

¹ Roughsey, Dick (Goobalathaldin). 1971. Moon and Rainbow. The autobiography of an Aboriginal. AH & AW Reed.

² Balme, J., O'Connor, S., & Fallon, S. (2018). New dates on dingo bones from Madura Cave provide oldest firm evidence for arrival of the species in Australia. *Scientific Reports*, 8, 9933

³ Phelan 2007. Conducting dog health programs in Indigenous Communities

2. Post settlement approach⁴ and intrinsic terminology

- a. Since European settlement, legislation for the management of wild dogs has included punitive Acts, including the [Wild Dog Destruction Act 1921](#), and Acts dealing with the conservation of wildlife. However, Dingoes have been included with other dogs in early colonial legislation designed to remove troublesome dogs and to reduce the threat of predation of livestock.
- b. During the 1800s, the combination of clearing for farming, exclusion fencing, poisoning and trapping resulted in the dingo becoming extinct over much of its previous range in southern Queensland, New South Wales, Victoria and South Australia.
- c. The Wild Dog Bounty System started in 1836.
- d. By 1889, all mainland States and Territories had enacted legislation to facilitate and administer the control of wild dogs - run by boards of local landholders, funded by government and by rates levied on landholders.
- e. In 1930, the Royal Commission into the Dingo and Stock Route Administration in Queensland concluded that bounties should not be paid as they were subject to fraud. However, it was only in 1975 that a resolution recommending that all bounties in Australia be stopped was passed by the Vertebrate Pests Committee. Wild Dog bounty systems are a current pest animal control strategy in Victoria⁵, South Australia⁶ and Queensland⁷. These schemes award landholders, who present the pelt of a dingo, a fee of up to \$120.
- f. During the Second World War it was believed that dingo populations were proliferating, posing a threat to the re-emerging wool and meat industry. Consequently, in 1946 the first aerial baiting occurred in Australia, initially targeting dingoes.⁸
- g. The scientific information on the biology and movements of dingoes and other wild dogs did not begin to accrue until the late 1960's.
- h. In 2009 Wild Dog Destruction Regulations were replaced by the (Wild Dog) Pest Control Order, which has since been repealed by the Biosecurity Act 2015.
- i. Byron Shire:
 - a) On 30/03/2010⁹, Local Land Services (former LHPA) held a Wild Dog Meeting at Mullumbimby RSL.
 - b) On 02/03/2011¹⁰, a wild dog control meeting was held in Byron Shire hinterland to coordinate approach between interested groups across the Shire. The meeting counted with around 40 participants including, LLS (Former North Coast Livestock Health and Pest Authority), National Parks, Council staff, Landcare Groups, Reserve Trust members, farmers, dog

⁴ Fleming et. Al. 2001. [Managing the Impact of Dingoes and Other Wild Dogs](#)

⁵ [Wild dog bounty - Isaac Regional Council](#) & [Victorian fox and wild dog bounty | Pest animals | Biosecurity | Agriculture Victoria](#)

⁶ [Wild dog bounty scheme - PIRSA](#)

⁷ <https://www.somerset.qld.gov.au/downloads/file/482/dingo-wild-dog-bounty-program-pdf>

⁸ Philip 2020. A historical review of Australian aerial vertebrate pest control, targeting dingoes and wild dogs 1946 - 2019.

⁹ DM951032

¹⁰ DM1067223

- trappers and others. The outcomes of that meeting allowed Council's current wild dogs, foxes, and feral cats' control.
- c) In 2012 Byron started the Wild Dog Trapping Program¹¹
 - DNA analysis results on E2012/18736
 - d) Pilot Wild Dog Education & Control Program 2012-2013 (NOROC)¹²:
 - <http://www.pestales.org.au/>
 - <http://www.feralfocus.org.au/>
 - e) On 28 of February 2013¹³ Council adopted its first Feral Animal (wild dog, fox and cat) Management Plan 2013-2015

Conflicting science

1. Taxonomy

The dispute in dingoes' taxonomy centres around the classification of these canids as either a distinct species or a subspecies of the domestic dog (*Canis lupus familiaris*). While dingoes share common ancestry with domestic dogs, they exhibit unique physical and behavioural characteristics that have evolved over thousands of years in the Australian ecosystem. The disagreement arises from differing perspectives on the degree of domestication and the genetic relationship between dingoes and domestic dogs. Some argue for their recognition as a separate species, emphasizing their ecological role, behaviour and long history in Australia, while others advocate for their classification as a domestic dog subspecies due to possible historical interbreeding with introduced domestic dogs. This taxonomic debate remains unresolved and holds implications for conservation efforts, legal protections, and the management of dingoes in various contexts.

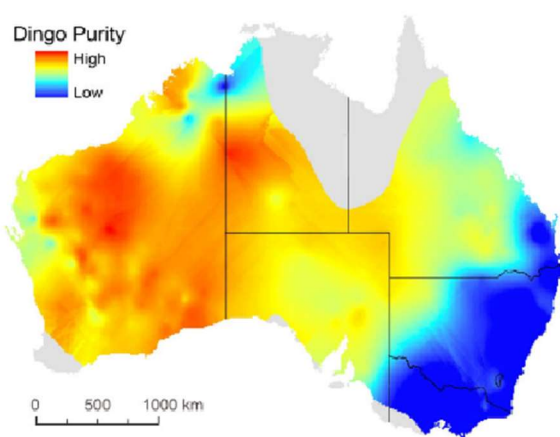
2. Hybridization

Some researchers argue that hybridization with domestic dogs threatens the genetic purity and ecological role of dingoes, potentially leading to a loss of their unique characteristics. On the other hand, other researchers contend that hybridization occurs in very small percentage of individuals, that dingoes avoid breeding with feral dogs and that survivorship of hybrid pups is very low.

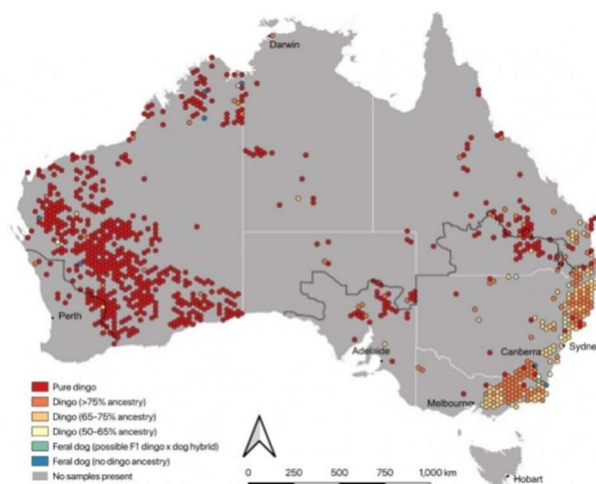
¹¹ media release on DM1150112

¹² DM 1181134, E2023/19337 final report E2013/50290, joint management DM 1189079 and action Plan DM 1217241

¹³ E2013/24014



Stephens et al. 2015



The median ancestry of wild canine DNA samples across Australia. Image: Cairns et al 2021.

Figure 1 Dingo hybridization results using different methodologies for DNA analysis¹⁴

3. Ecology and local landscape relevant data

- a) Some researchers view Dingoes as apex predators that play a crucial role in maintaining ecological balance by controlling herbivore populations, others argue that their presence leads to negative consequences for livestock and native fauna. Additionally, human activities, such as habitat fragmentation, increased resources and impacts of non-targeted lethal control, all impact on dingo behaviour and consequently on their ecological role in different landscapes. Most studies on the ecological role of dingoes are in more open, rangeland landscapes. However, even amongst studies carried out in ecosystems similar to Byron Shire show conflicting results regarding the ecological role and impacts of dingoes.
- b) Since the settlement Australian landscape changed rapidly and resources are available in areas where previously it was scarce. This can cause changes animal breeding cycle and/or behaviour.

4. Management practices

Evidence of the effectiveness of lethal wildlife control at reducing impacts on human interests is limited and sometimes conflicting^{15,16}. While lethal control of predators can result in decreases in attacks on livestock, it can also have

¹⁴ Stephens D, Wilton AN, Fleming PJS, Berry O (2015) Death by sex in an Australian icon: a continent-wide survey reveals extensive hybridisation between dingoes and domestic dogs. *Molecular Ecology* 24:5643-5656.

Cairns, K. M. (2021). The myth of wild dogs in Australia: are there any out there? *Australian Mammalogy*. <https://doi.org/10.1071/AM20055>

¹⁵ Rodriguez, S. L., & Sampson, C. (2019). Expanding beyond carnivores to improve livestock protection and conservation. *PLoS Biology*, 17, e3000386.

¹⁶ van Eeden, L. M., Eklund, A., Miller, J. R. B., López-Bao, J. V., Chapron, G., Cejtin, M. R., ... Treves, A. (2018). Carnivore conservation needs evidence-based livestock protection. *PLoS Biology*, 16, e2005577

no impact or even result in increased attacks^{17,18}, so livestock producers bear financial and psychological costs of ongoing attacks on their livestock. Some researchers (Cairns, Letnic) suggest that non-targeted lethal control (e.g. aerial baiting) disrupts strictly hierarchical dingo family structures, resulting in an increased likelihood of problematic dingo behaviour and negative interactions with humans/livestock.

	Description	References
Taxonomy	Dispute over whether dingoes and dogs are taxonomically different	Crowther et al., 2014; Jackson et al., 2017; Jackson et al., 2019; Smith et al., 2019; Zhang et al., 2020; Jackson et al., 2021; Cairns, 2021; Shipman, 2021; van Eeden et al., 2021; Field et al., 2022; Krofel et al., 2022;
Hybridization	Dispute over whether hybridization between dingoes and dogs is a conservation issue	Claridge and Hunt (2008); Jones, 2009; Claridge et al., 2014; Stephens et al., 2015; Allen et al., 2017; van Eeden, Dickman, et al., 2018; Cairns et al., 2019; Crowther et al., 2021; Cairns et al., 2021
Cultural value	Uncertainties on the extent to which dingoes are valued by the broader Australian society	Smith & Litchfield, 2009; Hytten, 2011; Fleming et al., 2012; Archer-Lean et al., 2015; Probyn-Rapsey, 2015; van Eeden et al., 2021
Ecological impacts	Contested evidence on how dingoes affect local wildlife populations, including native and nonnative species, and livestock production	Wallach et al., 2009; Letnic & Dworjanyn, 2011; Allen & Fleming, 2012; Johnson & Ritchie, 2012; Letnic et al., 2011, 2012; Moseby et al., 2012; Ritchie et al., 2012; Allen, Fleming, et al., 2013; Fleming et al., 2013; Hayward & Marlow, 2014; Nimmo et al., 2015; Marrant et al., 2017; Fancourt et al., 2019; Allen et al., 2021; Castle et al., 2021; Emmott, 2021; Kreplins et al., 2021
Management practices	Dispute over how to manage dingo populations and their impacts	Glen et al., 2007; Allen, 2013; Allen, Allen, et al., 2013; Smith & Appleby, 2015; Doherty & Ritchie, 2017; Johnson & Wallach, 2016; Allen, 2017; Newsome et al., 2017; van Eeden, Crowther, et al., 2018; Campbell et al., 2019; Allen & Hampton, 2020; Ballard et al., 2020; Behrendorff, 2021; Fleming et al., 2021; Smith et al., 2021; Claridge et al., 2021; Kennedy et al., 2021; Philip, 2021

¹⁷ Allen, L. R. (2013). Wild dog control impacts on calf wastage in extensive beef cattle enterprises. *Animal Production Science*, 54, 214–220

¹⁸ Wielgus, R. B., & Peebles, K. A. (2014). Effects of wolf mortality on livestock depredations. *PLoS One*, 9, e113505