Submission to Inquiry: The Impact of Feral Deer, Pigs and Goats in Australia.

November 2018

Animal Liberation is the oldest animal rights organisation in Australia, formed in 1976 by Christine Townend. Our organisation's mission is to permanently improve the lives of animals through lobbying, consumer advocacy, action and education. We are a not-for-profit group (Charity No. CFN11637) based in Sydney.

Animal Liberation welcomes the opportunity to provide comment on the *Inquiry into the impact of feral deer, pigs and goats in Australia, and national priorities to prevent the problems worsening for the natural environment, community and farmers*. We have limited our discussion in this submission to address four Terms of Reference points: (a), (b), (d) and (e).

(a) The current and potential occurrence of feral deer, pigs and goats across Australia.

Deer, pigs and goats are a few of the many animals who have established wild populations in Australia as a result of repeated and deliberate introductions by European settlers.

Wild Deer

Six species of deer have become established in Australia: sambar (*Rusa unicolor*), red deer (*Cervus elaphys*), rusa deer (*Rusa timorensis*), fallow deer (*Dama dama*), chital (*Axis axis*) and hog deer (*Axis porcinus*). The establishment of wild deer populations is attributed to deliberate releases by Acclimatisation Societies (so they could hunt the animals), deliberate translocations and farm escapes/releases. It has been estimated that there are now 200,000 wild deer in around 218 herds (Moriarty 2004). Most wild deer live in south-eastern Australia, though it has been suggested that some species could survive in the tropical and subtropical parts of the country (Davis *et al.* 2016).

Wild Pigs

Pigs (*Sus scrofa*) were brought to Australia with early European settlers, who kept them in unrestricted and semi-feral conditions. Wild pigs now occupy a wide range of habitats in the north and east of Australia, and also occur in pockets in the south and west, as well as on some islands. Total population estimates vary from 13 million to 23 million[1].

A genetic study by Spencer & Hampton (2005) proves there are two processes involved in the maintenance of feral pig populations in WA: (1) gradual expansion of their range by natural dispersal, and (2) supplementation of existing populations by (presumably) hunters intentionally moving pigs to new areas. This study found evidence that illegal translocation of wild pigs has been ongoing and widespread - it isn't limited to the present generation or to a specific cohort of pigs. The authors suggest it is reasonable to assume a similar phenomenon is occurring elsewhere in Australia.

[1] Australian Government Department of Sustainability, Environment, Water, Population and Communities 2011: https://www.environment.gov.au/system/files/resources/a897fd1d-3d5c-408d-957e-3cf03f0b103b/files/pig.pdf

Wild Goats

Goats (*Capra hircus*) arrived in Australia with the First Fleet in 1788 and were subsequently introduced into the environment for a variety of reasons. There are an estimated 2.6 million wild goats in Australia (Parkes *et al.* 1996). They live across the continent, occurring in their highest densities in the arid and semi-arid rangelands (Pople *et al.* 1996).

(b) The likely and potential biosecurity risks and impacts of feral deer, pigs and goats on the environment, agriculture, community safety and other values.

Potential Impacts

Wild deer allegedly destroy native plants and agricultural crops through their natural browsing and grazing, antler rubbing, trampling, trail creation and wallowing behaviours. Though deer have been described as 'ecosystem engineers' in other parts of the world because of their ability to modify ecosystem function at the landscape scale, there is little clear evidence of their impact in Australia. Most literature on the subject is observational, and very few studies have experimentally partitioned the impacts of deer from those of sympatric native and non-native herbivores (Davis *et al.* 2016).

Similar to wild deer, wild goats allegedly destroy native vegetation, disturb the soil with their hooves, compete with both native animals and domestic livestock for food, water and shelter and may carry parasites that also affect sheep and cows.

The recognized potential impacts of wild pigs include habitat degradation through natural rooting and foraging behaviours, predation on and competition with native animals, reduced crop yield and lamb production due to predation, and disease transmission to humans (in particular Brucellosis and Leptospirosis). However, a review by Bengsen *et al.* (2014) explains that many of the potential impacts of wild pigs in Australian ecosystems have been inferred from anecdotal information, untested retroductive hypotheses of studies or systems outside of Australia. The authors suggest the paucity of experimental evidence for wild pig impacts is an indication of the difficulties in gaining reliable understanding of a species with such a high level of behavioural plasticity.

Other Values

It is important to address the fact that there are Australians who value wild deer, pigs and goats as a resource (commercial harvesting) and as a source of entertainment (recreational hunting), and they have a vested interest in sustaining wild populations.

While Animal Liberation opposes the use of animals as resources and entertainment, we argue the Inquiry must consider how these uses complicate the task of developing a management strategy that effectively mitigates the potential impacts of these species. For example:

- In Victoria alone, there are approximately 51,000 licensed hunters and 70% of them are endorsed to hunt deer. In 2013, game hunters contributed approximately $439 million to the Victorian economy and $142.1 million of that was generated by deer hunters[2].

[2] VIC Game Management Authority, Media Release 4th September 2018: http://www.gma.vic.gov.au/__data/assets/pdf_file/0003/367104/Hunters-harvest-record-number-of-deer.pdf

- Wild pigs have been commercially harvested since 1980 with a majority of animals being exported to European countries as 'wild boar'. In 2015, it was estimated that the market or demand for wild boar in Europe could be up to 20,000 animals each month[3].
- Over 1.5 million goats are killed and processed for their meat each year in Australia, and more than 90% of these animals are sourced from the 'rangelands'[4]. It has been estimated that the commercial exploitation of feral goats is now an industry worth approximately $29 million a year and that many pastoralists now consider the capture and sale of goats to be an essential part of their business[5].

(d) The efficacy and welfare implications of currently available control and containment tools and methods.

Existing control methods for wild deer, pigs and goats have been both ineffective at preventing their gradual range expansion and overwhelmingly cruel in the suffering they cause the animals.

Efficacy

Government agencies facilitate recreational hunting because they claim it assists in managing the impacts or abundance of introduced animal populations. The issue is highly politicized as hunters are increasingly granted easy access to public lands and more public funding is allocated to the relevant government departments, hunter licensing schemes, insurance etc.

Recreational hunters and governments justify these activities by claiming each non-native animal killed assists in reducing the impact of that species on the environment, other animals and agricultural productivity. However, unless hunters kill more animals than can be replaced each year, they do not reduce the population size and therefore do not reduce the impacts of those species.

Importantly, many 'invasive' species have the ability to quickly produce large numbers of offspring, but most do not survive because there are not enough resources to sustain them. As with every other wild animal, disease and predation also reduce the numbers of young who survive. For example, a study by Saunders (1993) in Kosciuszko National Park showed just 15% of wild piglets survived their first year. A hunter who kills one pig may simply be enabling the survival of another pig due to reduced competition for food and suitable territory.

Welfare Implications

Firearms: Shooting is a commonly utilized lethal control measure for wild deer, pigs and goats. It may be conducted by operators on the ground or in the air. The goal is reportedly to achieve an instantaneous loss of consciousness and rapid death with a single bullet to the brain or heart. In reality, animals are live targets, which means they move unpredictably. Considering the sheer size of the Australian wilderness and the millions of points at which hunters may kill, there is no conceivable way that authorities can regulate hunting activity to ensure targeted animals are 'dispatched' quickly.

[3] Carmen Brown, 14/04/2015 'Wild boar exports suffer as accredited hunter numbers drop', ABC Rural. https://www.abc.net.au/news/rural/2015-04-14/wild-boar-market-hit-by-dropping-hunter-numbers/6383368
[4] Goat Industry Council of Australia: http://www.gica.com.au/projects-and-policies/research-and-development
[5] PestSmart: https://www.pestsmart.org.au/pest-animal-species/feral-goat/

Bowhunting: Bowhunting is a type of archery where bows (compound, longbow or recurved) and arrows with a 'broadhead' are used to hunt land game animals, including deer, goats and pigs. Tasmania is the only jurisdiction where bowhunting is illegal. On mainland Australia, it is legal to bowhunt declared game or pest animals on private property (provided appropriate permission has been granted) and on specified Crown Land and State forest areas.

Bowhunting is a notoriously cruel pursuit; clean and quick deaths resulting from a broadhead arrow penetrating the heart or major blood vessels are rare. Most animals will be initially wounded and then die hours, days or even weeks later from haemorrhaging or infections. In addition, bowhunters specifically target large individuals (such as Billy Goats) and as a rule, do not kill young animals.

Poisoning: Wild pigs are killed with poison-laced grain, cereals, meat and pellets. The poisons used include 1080 (sodium fluoroacetate), yellow phosphorus (CSSP) and warfarin. 1080 causes severe central nervous system disturbance, convulsions and ultimately respiratory failure. Pigs, and many other animals who have ingested 1080, show symptoms of extreme distress that last from several hours to several days, making it a most painful and slow death (Thiriet 2007). CSSP causes severe irritations in the gastrointestinal tract and takes 2 to 4 days to kill. Warfarin is an anticoagulant that causes internal haemorrhaging and takes between 1 and 2 weeks to kill[6].

Use of Dogs: 'Pig dogging' or 'pigging' refers to the hunting of wild pigs with purpose bred and specially trained dogs. At the command of human hunters, pig dogs will track, flush, bail and then 'hold' wild pigs. The Australian Pig Doggers and Hunters Association Inc (APDHA) recommends using up to five dogs per pig (two for bailing, two for holding and one young dog in training). They are taught to latch onto the pigs' ears, so the hunter may approach more safely and immobilize the pig. This is done by lifting one or both hindlegs, or by flipping pigs onto their back. Once restrained, the hunter will stab the pig with a hunting knife in either the throat or side of the chest.

Targeted pigs suffer a prolonged period of distress as they are chased, harassed and mauled by a pack of dogs. Once the hunters arrive, the dogs are often encouraged to continue biting as the pigs' final struggle is filmed. Although the APDHA national code of practice states pigs are to be dispatched with "a single knife stick to the heart", you would be hard-pressed to find a single example of this occurring in any footage published online or in pig dogging DVDs. The vast majority of footage reveals pigs are stabbed repeatedly and bleed for many minutes before losing consciousness.

Pig dogs are trained from a young age to be tough and highly aggressive towards other animals. Many are housed in deplorable kennel conditions and may be starved before hunts to ensure they keenly locate and capture the pigs. Hunters also frequently lose track of their pig dogs in the bush, and they then become a major threat to dingo populations (hybridisation through interbreeding), livestock and native animals.

Pig hunting also presents risks for the dogs. When boars are under attack, they will typically stand their ground and attempt to drive their tusks into the attacker. This means pig dogs regularly suffer injuries, including fatal wounds, while they are in locations far from professional veterinary attention. The first aid kits sold by hunting supplies shops include a staple gun and a type of glad wrap. The dogs are also at

[6] PestSmart states the time that it takes for pigs to die from CSSP and warfarin poisoning: https://www.pestsmart.org.au/poison-baiting-for-feral-pig-control/

significant risk of hyperthermia, exhaustion and dehydration because of the huge physical exertion required during hunts that may last an entire night.

Finally, pig hunters present a disease risk for the broader human population. The greatest risk factor for brucellosis is feral pig hunting, with all confirmed cases in northern Queensland between 1996 and 2009 resulting from the activity (Eales *et al.* 2010). Transmission occurs during slaughter by direct contact with feral pig blood or body fluids, or by aerosol spread. This is especially concerning because most hunters in Queensland are recreational and do not have hunting licenses or use protective equipment while hunting. In addition, pig hunters hold regular events that attract substantial crowds and involve 'weigh in' competitions. This means potentially infected carcases are transported long distances to the event, handled by numerous people from different towns and are held in close proximity to areas where people are eating, drinking, going to the bathroom etc.

Please see Attachment 1 for photos.

(e) Priority research questions.

Translocation

It is widely recognized that hunters are motivated to maintain feral animal populations, so they can continue hunting them. It is important that the Australian Government prioritizes addressing this issue by first determining the extent to which deer, pigs and goats are translocated, and second by strengthening laws and penalties to deter people from this activity. The Australian Government should also consider tightening regulations for recreational hunting, and restricting hunter access to public lands.

Non-lethal Control Methods

Animal Liberation considers native and non-native wild animals as having an equal right to live their own lives, and we are therefore opposed to all lethal forms of 'pest control'. We encourage the Australian Government to explore trap-neuter-release (TNR) and contraceptive options to mitigate any negative impacts of these species on the environment. A recent study of wild cat abundance in Australia by Tan *et al.* (2017) concluded that TNR associated with high desexing rates in cat colonies, and adoption of friendly kittens and adults, substantially reduces colony size and improves the welfare of the animals. They add that the strategy is cost-effective for municipalities and should be legalized in Australia.

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Attachment 1: Photographs of Pig Dogging

Image source: ABC: Hunters risking their lives to stamp out feral pigs.

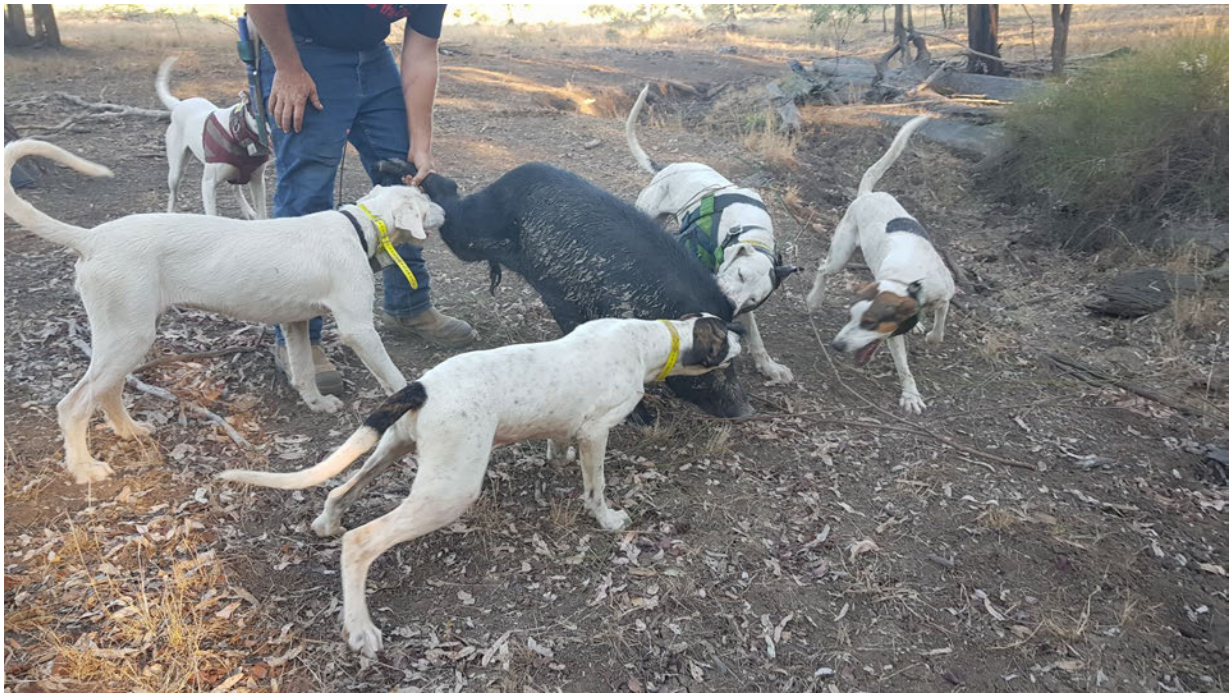

Image source: Facebook.

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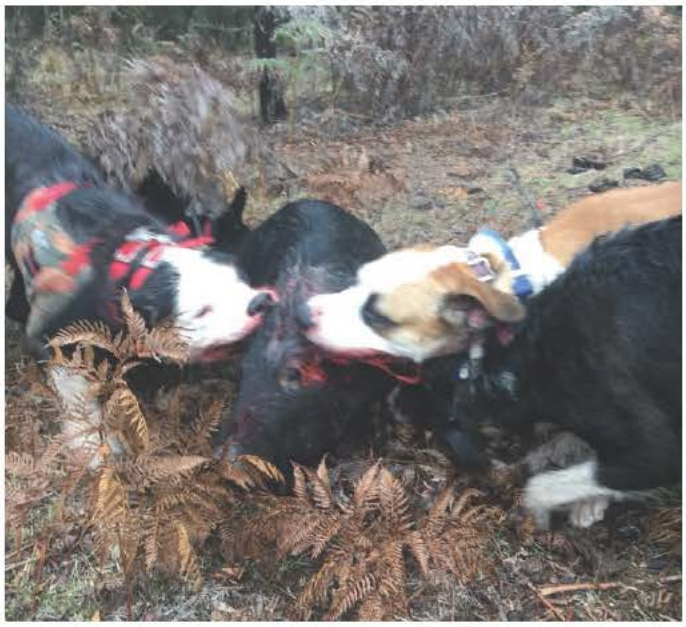

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