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**Submission to the Senate inquiry on the impacts and management of feral horses in the Australian Alps
by SLE352 students at Deakin University**

This paper is being submitted as a group project by third year Bachelor of Science students at Deakin University. We are each currently completing the unit SLE352, Community Science Project, and have had input from Professor Don Driscoll of Deakin University on this submission. We have used our strong research skills and drawn on published literature as the basis of this submission. We bring to this submission a passion for the environment and subsequent passion for protection of native flora and fauna. This paper will discuss the implications of feral horses on biodiversity and ecology in the Australian Alps as well as the best practice approaches to reduce their numbers. The Australian Government powers and responsibilities regarding invasive species will also be discussed, with particular focus on the adequacy of current state and territory laws regarding management of feral horse populations.

Summary

- Current laws and protocols do not protect the natural environment in which feral horses currently reside.
- Rapid reduction of horse numbers is the only way to protect the unique native environment throughout the Australian Alps, National Parks and Reserves.
- The commonwealth is neglecting its responsibility under the EPBC Act to protect Australia's native flora and fauna.

Recommendations

- Aerial culling along with ground shooting are the most humane and effective population control methods and should be used to rapidly reduce horse population numbers in National Parks.
- Powers in the Environment Protection and Biodiversity Conservation (EPBC) Act should be used by the Federal Environment Minister to require states to rapidly remove feral horses from the Australian Alps.
- Updating of the current Australian environmental laws to strengthen the framework for threat abatement planning.

Impacts of feral horses

The number of feral horses in the Australian Alps has increased dramatically in the past 20 years (Driscoll, 2021). In the Kosciuszko National Park there are around 14,000 horses as of 2020 (Fletcher, 2021). This is well past the sustainable number of horses, although even a very small number (less than one hundred) has been shown to cause extensive damage to the alpine environment (Tolsma et al, 2018).

Horses are not indigenous to Australia and our native plants and animals have not evolved defences to live alongside the hard hoofed mammals. They consume native plants and alter the fragile environment. Their presence in bogs and other water collection areas cause extensive damage to water courses (Driscoll, 2019). This leads to detrimental effects on native animals, including the endangered Stocky Galaxias fish, due to alteration in watercourses (Driscoll, 2019). In addition to the effects on animals, feral horses trample or consume native plants. Overgrazing damages soil and decreases soil stability, disrupting water flow, which is particularly important to aquatic life including the Stocky Galaxias (Driscoll, 2019), Australia's most alpine adapted fish. Hard hooves quickly destroy peat soil which takes thousands of years to regenerate (Driscoll, 2019). Horses decrease stream depth and increase stream width, as well as stirring up silt, which is detrimental to native aquatic species (Lavery, 2022). All of these factors decrease native plant growth.

In addition to the destruction of waterways, many of which are small streams or rivers acting as headwaters for larger lakes, the destruction of habitats impact terrestrial mammals. In areas with high populations of feral horses, Broad Toothed Rats are entirely absent and in nearly a third of areas with moderate populations of feral horses Broad Toothed Rats are entirely absent (Schulz, 2019). This is largely due to the destruction of vegetation. Broad Toothed Rats frequently use vegetation beside streams to nest, and the degradation of stream banks by feral horses vastly decreases their habitat (Schulz, 2019).

To provide perspective surrounding the threat the feral horses within Kosciusko pose to native biodiversity, '23 native plant species, 11 native animal species and 4 ecological communities' (Kosciuszko's Threatened Species, N.D) which are under threat of extinction are found in Kosciuszko national park. Some animal and plant species that are threatened due to the presence of the wild horses include:

- 'Northern corroboree frog, critically endangered.
- Southern corroboree frog, critically endangered.
- Guthega skink, endangered.

- Anemone buttercups, vulnerable.
- Monaro golden daisy, vulnerable.
- Alpine she-oak skink, endangered.
- Alpine spiny crayfish, endangered.
- Mountain pygmy possum, endangered.
- Glycine latrobeana, critically endangered.
- Broad-toothed rat, vulnerable.' (*Invasive Species Council*)

Feral horse numbers, which are currently out of control, are only increasing, as is their impact on the Australian ecosystem. Without effective and urgent action the government will not meet its zero-extinction target nor its obligations to protect the heritage values of the Australian Alps.

Commonwealth responsibilities

The Environment Protection and Biodiversity Conservation Act (EPBC) was introduced by the Australian Government in 1999. The act was designed to ensure that the Commonwealth government would 'protect and manage national and international ecological communities, heritage places, flora and fauna' (Department of the Environment, 1970). The act applies to nine matters including 'Nationally threatened species and ecological communities' (Department of the Environment, 1970) . The Commonwealth Government of Australia has the responsibility and power to protect the country's biodiversity under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The government's responsibilities include conserving threatened, migratory, and marine species in Commonwealth waters, and managing a network of protected areas to protect and conserve biodiversity. The EPBC Act also gives the government the authority to regulate activities that may have a significant impact on matters of national environmental significance, such as development projects and land clearing. Furthermore, within the Environment Protection and Biodiversity Conservation Act the Federal Environment Minister has the authority to make regulations surrounding the removal of hard hoofed invasive species which state Governments must comply with.

This gives the Commonwealth the right to ensure the safety and protection of Australians' National Parks and the species inhabiting them.

The Commonwealth seemingly contradicted the purpose of the Act by not taking countermeasures under the EPBC Act against the NSW 'Kosciuszko Wild horse heritage bill 2018' (Government, N.S.W 2022). This bill inherently prioritises the protection of feral horses over the protection of native flora and fauna. The

Wild horse heritage bill was supported by the NSW Deputy Premier John Barilaro, who advocated for the protection of feral horses under the claim of the brumby's cultural significance.

John Barilaro defended the bill by stating that it was more 'cruel and barbaric' to enforce aerial culling than what is currently occurring in Kosciusko though it should be noted that aerial culling of feral deer in the area still continues (NSW Government, 2021). Although the bill still allows for a trapping and rehoming program, thus far state methods to control feral horse numbers have been unsuccessful, as evidenced by the continuous rise of population numbers throughout State and National Parks (Fletcher, 2021). The inaction resulting from this Act has allowed feral horse populations to grow to extraordinary numbers and degrade some of the most fragile and unique ecosystems in Australia. It is important to note that during the scrutinization of the bill, John Barilaro failed to disclose 'a political donation' (Tennant-Wood, R. 2018) from a business in the park, 'Horse Trekking Business' (Tennant-Wood, R. 2018), which benefits from the protection of feral horses (Tennant-Wood, R. 2018). The political donation of \$10,000 came from the owner, Peter Cochran, who furthermore claimed on Facebook to have instructed his own pro bono solicitor to draft the original bill (Tennant-Wood, R. 2018).

The commonwealth has a clear responsibility to protect Australia's plants and animals, many of which occur nowhere else in the world. Without rapid action the Government will not meet its obligations to protect the Australian Alps and the animals within them.

Current management strategies

In 2021 the NSW government adopted The Wild Horse Heritage Management Plan. The plan's goals included:

- Identification of heritage value of wild horse populations in parts of the park
- Retention of a wild horse population of 3000 in 32% of the park
- Reduction of the wild horse population from approximately 14,380 to 3000 horses by 30 June 2027, by means of "best practice animal welfare requirements" (Department of Planning and Environment, 2022)

This plan allows the horses to continue to reside in, and subsequently degrade, 32% of Kosciuszko National Park (New South Wales Government, 2022). This plan also disregards aerial culling as a control method, making achieving effective feral horse control far more difficult (Beeton, 2019). Lack of aerial culling will also increase the timespan in which this population control must occur, thus increasing the

number of horses having to be killed and the amount of money having to be spent by the NSW government (Driscoll, 2019).

Perhaps the most concerning aspect of this plan is the allocation of one third of the National Park to the feral horses. It is estimated that at least 33 threatened species reside within the allocated areas known as the horse-retention zones, with 28% of the alpine sphagnum bogs and associated fens distribution remaining inside the horse-retention zones (Watson et al, 2021). Even more worryingly, the only habitat the stocky galaxias resides in, is within the horse-retention zone (Watson et al, 2021). Although this area is currently fenced to protect the stocky galaxias, it is noted within the management plan that this is only a short-term solution (New South Wales Government, 2022).

A summary of the program outcomes is released every six months. As to date, one program outcome summary has been made available to the public (February to December 2022) with the next due in June of 2023. The most recent program outcomes summary is brief, stating 852 horses were removed during the aforementioned time period. To provide context, the Invasive Species Council estimates that the wild horse population grows at 18% per year. An evaluation of the plan was undertaken by the department of planning and environment. The goals of the evaluation were not orientated around the success in preserving the threatened flora and fauna, but rather focused on the welfare aspects of the brumby's removal process. The goals were:

1. Whether control operations are occurring in accordance with the Plan
2. Whether animal welfare considerations are being adequately managed and addressed
3. Any recommendations

The single paged recommendation segment of the evaluation was split into "imperative" recommendations and "further recommendations" (N.S.W Government 2023). The ecological impact of the feral horses was only mentioned in the further recommendation's category, in which it stated:

"There is continued monitoring if the removals are sufficient to impact the ecology of the area, and that alternative control methods be considered if sufficient numbers are not being removed" (N.S.W Government, 2023).

The Victorian government released the Feral Horse Action Plan 2021 in November 2021 outlining how feral horses would be managed in the Alpine National Park and adjoining state forests over the following ten years (Parks Victoria, 2021). The population control methods outlined in this action plan include

trapping and rehoming, ground shooting and, in exceptional circumstances; aerial shooting (Parks Victoria, 2021). Using these methods up to 500 horses could be removed within the first year of the action plan (Parks Victoria, 2021). This number is perplexing as it is estimated the feral horse population within the eastern Alps was approximately 4000 in 2021 (Parks Victoria, 2021), a statistic that is only likely to have grown. Culling only 500 per year when the population growth rate is predicted to be 18% (Invasive Species Council, 2019) will result in horse numbers continuing to grow.

Although these management plans award the state governments some ability to manage feral horse populations, without a drastic rapid decline in horse numbers the conditions of the Australian Alps will continue to deteriorate (Driscoll, 2019). At a time when the state of the alpine ecosystem relies heavily on the eradication of invasive hard hoofed species it is disappointing scientific advice has been disregarded by both state governments (Gibson, 2019). Both plans fail to rapidly reduce numbers, and make no, or inadequate, use of aerial shooting as a main control method. This has meant the number of feral horses has continued to grow along with the overall cost of protecting and recovering the Australian Alps from high feral horse numbers.

Change needs to be made to the current national environmental laws to allow the Commonwealth Government the ability to intervene where areas of national or international significance are not being managed effectively. Developing strong national environmental standards would allow for the protection of National Parks through ensuring effective invasive species control. This would ensure state governments must abide by these laws and thus not adopt bills such as the Kosciuszko Wild horse heritage Bill. The Australian Government should also adopt a clear process for listing and controlling invasive species as key threatening processes. This process needs to be scientifically led, involving the expert opinions of those in environmental and ecological fields.

It is evident that the current control methods are ineffective, and change is needed to protect Australia's native flora and fauna. The management plans adopted by the Victorian and New South Wales state Governments are still vastly inadequate, in large, due to their lack or limited application of the most effective population control method; aerial shooting. The Commonwealth has a responsibility to protect Australia's national parks as outlined in the EPBC Act and the ability to ensure states legislate to urgently remove feral horses from National Parks and Reserves. Aerial culling combined with ground shooting and trapping/rehoming programs would allow for a greater reduction in feral horse numbers thus, giving native threatened species and ecosystems an opportunity to recover within the National Park. Rapid reduction of feral horse numbers is the most humane and effective way to protect native species, river catchments, Indigenous heritage and unique Australian ecosystems.

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