

Submission from the Threatened Species Scientific Committee
to the Inquiry into the Impacts and Management of Feral Horses in the Australian Alps
The Senate Environment and Communications References Committee

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The Threatened Species Scientific Committee is a statutory committee of scientists established by the *Environment Protection and Biodiversity Act 1999* (the EPBC Act) to provide independent scientific advice to the Australian Government Minister for the Environment and Water, particularly in relation to Recovery Plans, Threat Abatement Plans and Conservation Advices, and listing of threatened species, ecological communities and key threatening processes. The Committee currently comprises 12 scientists¹, who collectively have extensive knowledge and experience of flora and fauna conservation and ecology.

The Committee's submission to this Inquiry addresses the Term of Reference below:

TOR (b) Commonwealth powers and responsibilities, including:

- i. the protection of matters of national environmental significance under the Environment Protection and Biodiversity Conservation Act 1999, including listed threatened species and communities and the National Heritage listed Australian Alps national parks and reserves,
 - ii. obligations under international treaties, such as the Convention on Biological Diversity, and
 - iii. the commitment to prevent new extinctions under the threatened species action plan;
- Currently, at least 14 species of vertebrate animals that occur in the Australian alps have been assessed under the EPBC Act as being threatened with extinction. Feral horses are documented as a threat to 12 of these (see Appendix 1): three frogs, four fish, four reptiles and one mammal. Six horse-affected species are in the highest category of threat, Critically Endangered, indicating high risk of imminent extinction; five are Endangered and one is Vulnerable.
 - Threatened plants affected by feral horses include the Critically Endangered Kiandra greenhood (*Pterostylis oreophila*) and others listed in Appendix 1.
 - Much less is known about impacts of feral horses on alpine invertebrates. However, the degradation by horses of stream and bog habitats is likely to threaten unlisted invertebrates that rely on them.
 - The Alpine Sphagnum Bogs and Associated Fens ecological community, listed as Endangered under the EPBC Act, is threatened by feral horses.
 - The impacts of horses on listed threatened species consist of degradation of stream, bog, and grassland habitats by trampling and grazing.
 - In each case, impact of feral horses is one of several threatening processes that operate in combination to put species at risk. However, feral horses may be the crucial factor that causes final extinction. Several Critically Endangered species have disappeared from most of their original range due to other threats (such as disease in frogs, and predation by trout in fish) and now survive only in small areas of refugial habitat at high elevation. These remnant habitats are highly vulnerable to degradation by horses.
 - For example, the stocky galaxias *Galaxia tantangara* (a fish) currently has an extremely restricted distribution due to impacts of introduced trout. It survives only in a single small section of the headwaters of Tantangara Creek above a waterfall that acts as a barrier to trout. Feral horses are abundant in this area. Trampling by horses is widening the stream, removing vegetation, and degrading water quality by addition of sediment. Increased sedimentation is likely to smother the eggs

¹ <https://www.dceew.gov.au/environment/biodiversity/threatened/tssc>

of the stocky galaxias². The stocky galaxias is one of nine species of Australian vertebrates with an estimated probability of extinction within the next 20 years of 50% or greater³, and is one of the 110 priority species in the Australian Government's *Threatened Species Action Plan 2022-2032*.

- Feral horses have similar effects on other highly threatened species of fish in the alps. They also damage breeding habitat for several threatened frogs including another priority species in the Threatened Species Action Plan, the Critically Endangered southern corroboree frog *Pseudophryne corroboree*⁴.
- **Feral horses in the alps therefore pose an imminent threat to the Threatened Species Action Plan's objective to prevent new extinctions of plants and animals.**
- The Minister may make statutory Threat Abatement Plans (TAPs) under the EPBC Act to reduce the impact on species and ecological communities from listed Key Threatening Processes (KTPs). Such plans must: "*provide for the research, management and other actions necessary to reduce the key threatening process concerned to an acceptable level in order to maximise the chances of the long-term survival in nature of native species and ecological communities affected by the process.*"
- In the case of feral horses in the alps, the framing of the EPBC Act and the current list of key threatening processes, make the development of a TAP a long process. Horses are included in the listed "Novel biota and their impact on biodiversity" KTP. However, that KTP does not demonstrate the specific impacts of horses on listed threatened species and communities in the alps. Further, the Committee has received advice that the EPBC Act precludes more than one plan being made for a listed KTP, so making a Threat Abatement Plan for horses in the alps would preclude other Threat Abatement Plans being made to address other novel biota.
- Thus, a separate KTP for feral horses would have to be listed before a statutory Threat Abatement Plan could be made. Equivalent listing is already in place in New South Wales and Victoria.
- Based on commitments in the *Nature Positive Plan*, we expect that a reformed EPBC Act would provide an increased role for regional plans in the protection and recovery of biodiversity. In future, therefore, it may be possible to develop a regional plan for the alps that would address impacts of feral horses in context with other threats, with the goal of protecting and recovering threatened species and ecological communities across the region. Reforms to the EPBC Act may also enable a nimbler process than is currently available for addressing biodiversity threats.
- However, given the urgency of the problem and the lack under the current EPBC Act of a formal planning process able to respond in a timely manner, the Committee suggests that the Australian Government Minister for the Environment and Water should lead a cross-jurisdictional approach with the relevant state and territory environment ministers to develop coordinated management of horses across the alps, with the aim of preventing further impacts on threatened species and ecological communities.

² Threatened Species Scientific Committee (2021). *Conservation Advice Galaxias tantangara Stocky Galaxias*. Canberra: Department of Agriculture, Water and the Environment. Available from:

<http://www.environment.gov.au/biodiversity/threatened/species/pubs/87879-conservation-advice-03032021.pdf>

³ Garnett et al. (2022) Australia's most imperilled vertebrates. *Biological Conservation* 270, 109561

<https://doi.org/10.1016/j.biocon.2022.109561>

⁴ Foster CN & Scheele BC (2019) Feral-horse impacts on corroboree frog habitat in the Australian alps. *Wildlife Research* 46, 184-190 <https://doi.org/10.1071/WR18093>

Appendix: examples of EPBC-listed threatened species affected by impacts of feral horses in the Australian alps.

	Scientific name	Common name	Commonwealth conservation document (footnotes)
Critically Endangered			
<i>Frogs</i>	<i>Pseudophryne pengilleyi</i>	Northern Corroboree Frog	1
	<i>Pseudophryne corroboree</i>	Southern Corroboree Frog	2
<i>Fish</i>	<i>Galaxias tantangara</i>	Stocky galaxias	3
	<i>Galaxias mungadhan</i>	Dargo galaxias	4
	<i>Galaxias gunaikurnai</i>	Shaw galaxias	5
	<i>Galaxias supremus</i>	Kosciuszko galaxias	6
<i>Plants</i>	<i>Pterostylis oreophila</i>	Kiandra greenhood	7
	<i>Pimelea bracteata</i>		8
Endangered			
<i>Reptiles</i>	<i>Cyclodomorphus praealtus</i>	Alpine she-oak skink	9
	<i>Liopholis guthega</i>	Guthega skink	10
	<i>Liopholis montana</i>	Mountain skink	11
	<i>Pseudemoia cryodroma</i>	Alpine bog skink	12
Vulnerable			
<i>Frog</i>	<i>Litoria verreauxii alpina</i>	Alpine tree frog	13
<i>Mammal</i>	<i>Mastacomys fuscus mordicus</i>	Broad-toothed rat	14
<i>Plants</i>	<i>Xerochrysum palustre</i>	Swamp everlasting	15
	<i>Ranunculus anemoneus</i>	Anemone buttercup	16

¹ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/66670-listing-advice.pdf>

² <http://www.environment.gov.au/biodiversity/threatened/species/pubs/1915-listing-advice.pdf>

³ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87879-conservation-advice-03032021.pdf>

⁴ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87176-conservation-advice-25032023.pdf>

⁵ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87178-conservation-advice-25032023.pdf>

⁶ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87878-conservation-advice-25032023.pdf>

⁷ <https://www.environment.gov.au/biodiversity/threatened/species/pubs/22903-conservation-advice.pdf>

⁸ <https://www.environment.gov.au/biodiversity/threatened/species/pubs/8125-conservation-advice-07122021.pdf>

⁹ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/64721-conservation-advice.pdf>

¹⁰ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/83079-conservation-advice.pdf>

¹¹ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87162-conservation-advice-10082022.pdf>

¹² http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=84408

¹³ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/66669-conservation-advice.pdf>

¹⁴ <http://www.environment.gov.au/biodiversity/threatened/species/pubs/87617-conservation-advice-05052016.pdf>

¹⁵ <https://www.environment.gov.au/biodiversity/threatened/species/pubs/76215-conservation-advice-23112021.pdf>

¹⁶ <https://www.environment.gov.au/biodiversity/threatened/species/pubs/14889-conservation-advice-15072016.pdf>