

2015/02: Should the aerial culling of brumbies in National Parks be allowed?

What they said...

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Tom Bagnat, New South Wales National Parks and Wildlife Service director

'The horses have been there for 200 years. If they are causing this impact on flora and fauna, what has been made extinct or ... seriously impacted by the brumby?'

Clive Edwards, vice-president of the Snowy Mountains Bush Users Group

The issue at a glance

On December 19, 2014, the New South Wales Environment Minister, Rob Stokes, announced that aerial culling of brumbies would not be considered in an updated horse management plan for the Snowy Mountains. A draft of the plan will be released later this year. A ban on shooting wild horses from helicopters has been in place in New South Wales since 2000.

The continued ban on aerial culling has met with the approval of a number of brumby support groups; however, many environmentalists and National Parks rangers and administration are deeply opposed.

The chief executive of the National Parks Association, Kevin Evans, has said the brumbies should not be managed sustainably but removed completely to protect 'the fragility of these landscapes'.

The current ban on aerial culling in the alpine park regions of New South Wales and Victoria was introduced after more than 600 horses were culled at Guy Fawkes River National Park in October 2000. The technique continues to be used in Queensland, Western Australia and the Northern Territory.

Background

(The information below is abbreviated from a Wikipedia entry titled 'Brumby')

The full entry can be accessed at <http://en.wikipedia.org/wiki/Brumby>

A Brumby is a free-roaming feral horse in Australia. Although found in many areas around the country, the best-known Brumbies are found in the Australian Alps region in south-eastern Australia. Today, most of them are found in the Northern Territory, with the second largest population in Queensland. A group of Brumbies is known as a 'mob' or 'band'.

Brumbies are the descendants of escaped or lost horses, dating back in some cases to those belonging to the early European settlers, including the "Capers" from South Africa, Timor Ponies from Indonesia, British pony and draught horse breeds, and a significant number of Thoroughbreds and Arabians.

Today they live in many places, including some National Parks. Occasionally they are mustered and domesticated for use as campdrafters, working stock horses on farms or stations, but also as trail horses, show horses, Pony Club mounts and pleasure horses. They are the subject of some controversy - regarded as a pest and threat to native ecosystems by environmentalists and the government, but also valued by others as part of Australia's heritage, with supporters working to prevent inhumane treatment or extermination, and re-homing Brumbies who have been captured.

Origin of the term

The first recorded use of the term 'brumby' in print is in the Australasian magazine from Melbourne in 1880, which said that Brumbies were the bush name in Queensland for 'wild' horses. In 1885, the Once a Month magazine suggested that brumbies was a New South Wales term, and the poet Banjo Paterson stated in the introduction for his poem Brumby's Run published in the Bulletin in 1894 that Brumby was the word for free-roaming horses. Its derivation is obscure.

Early horse imports

Horses first arrived in Australia in 1788 with the First Fleet. They were imported for farm and utility work; recreational riding and racing were not major activities. By 1800, only about 200 horses are thought to have reached Australia. Horse racing became popular around 1810, resulting in an influx of Thoroughbred imports, mostly from England. Roughly 3,500 horses were living in Australia by 1820, and this number had grown to 160,000 by 1850, largely due to natural increase. The long journey by sea from England, Europe, and Asia meant that only the strongest horses survived the trip, making for a particularly healthy and strong Australian stock, which aided in their ability to flourish.

Origin of feral herds

Horses were likely confined primarily to the Sydney region until the early 19th century, when settlers first crossed the Blue Mountains and opened expansion inland. Horses were required for travel, and for cattle and sheep droving as the pastoral industry grew. The first report of an escaped horse is in 1804, and by the 1840s some horses had escaped from settled regions of Australia. It is likely that some escaped because fences were not properly installed, when fences

existed at all, but it is believed that most Australian horses became feral because they were released into the wild and left to fend for themselves. This may have been the result of pastoralists abandoning their settlements, and thus their horses, due to the arid conditions and unfamiliar land that combined to make farming in Australia especially difficult. After World War I, the demand for horses by defence forces declined with the growth in mechanization, which led to a growth in the number of unwanted animals that were often set free. Throughout the 20th century, the replacement of horses with machines in farming led to further falls in demand, and therefore may have also contributed to increases in feral populations.

Currently, Australia has at least 400,000 horses roaming the continent. It is also estimated that, during non-drought periods, the feral horse population increases at a rate of 20 percent per year. Drought conditions and brushfires are natural threats. Despite population numbers, feral horses are generally considered to be a moderate pest. Where they are allowed to damage vegetation and cause erosion, the impact on the environment can be detrimental, and for that reason can be considered a serious environmental threat. However, because they also have cultural and potential economic value, the management of Brumbies presents a complex issue.

Brumbies roaming in the Australian Alps of south-eastern Australia are thought to be descendants of horses which were owned by the pastoralist and pioneer, Benjamin Boyd.

In Victoria, feral horses occur in alpine and adjacent areas, mostly in the Eastern Alps Unit of the Alpine National Park and adjacent conservation reserves, State Forest and forested freehold lands, primarily east of the Benambra-Corryong Road. A small population occurs on the south-western fall of the Bogong High Plains. There are scattered records of individuals or small mobs from elsewhere in the alpine area and East Gippsland. The feral horse populations in the Cobberas-Tingaringy area are contiguous with populations in New South Wales.

Feral horse management in Victorian and New South Wales national parks

Since 2004, 1,524 horses (419 trapped and 1,105 roped) have been removed from the Alpine national park in Victoria. The Victorian government is preparing a draft wild horse management plan based on the advice of a roundtable group which included horse advocates, conservationists, animal welfare groups and national parks. It reached agreement on methods such as trapping and mustering horses for culling but could not reach unanimous agreement on aerial or ground shooting. When the draft is released, it will be open for public comment for 60 days.

The New South Wales National Parks and Wildlife Service (NPWS) has just opened its public consultation process that will inform its next wild horse management plan. Since 2002, NPWS has removed more than 2,600 horses from the Kosciuszko national park through passive trapping, where horses voluntarily enter a yard. Of those, about one third are re-homed. The rest are sent to the abattoir.

Internet information

On January 16, 2015, The Brisbane Times published an extensive analysis titled 'The brumbies' fight for survival' The analysis is an extensive discussion of the complexity of the brumby management problem. It includes comments from a wide range of stakeholders in this issue.

The full text of the analysis can be found at <http://www.brisbanetimes.com.au/good-weekend/the-brumbies-fight-for-survival-20150115-11eix8.html>

On January 3, 2015, The Sydney Morning Herald published a news report titled 'Aerial culling of brumbies in Snowy Mountains: controversial ban to remain'

The full text of this report can be found at <http://www.smh.com.au/world/australia/aerial-culling-of-brumbies-in-snowy-mountains-controversial-ban-to-remain-20150103-12h144.html>

On December 22, 2014, ABC News ran a report titled 'Concerns raised about ban on aerial culling of Snowy Mountains brumbies'

The full text of this report can be found at <http://www.abc.net.au/news/2014-12-22/brumby-culling/5982750>

On December 19, 2014, Rob Stokes, the New South Wales Rob Stokes Minister for the Environment, Minister for Heritage, Minister for the Central Coast and Assistant Minister for Planning issued a media release titled 'Government Plan for Wild Horse Management'.

The media release indicated that the current review of the Wild Horse Management Plan for Kosciuszko National Park would continue and a new draft would be placed on exhibition in mid-2015.

The media release also indicated aerial culling of wild horses was not under consideration.

The full text of the media release can be found at <http://www.environment.nsw.gov.au/resources/MinMedia/MinMedia14121901.pdf>

On November 20, 2014, Wild Magazine produced an analysis outlining the brumby culling debate titled 'Feral horses in the high country'

The full text of this analysis can be accessed at <https://www.wild.com.au/news/article/alpine-feral-horse-management>

In October, 2014, the Australian Brumby Alliance (ABA) published a review of the October 2000 Guy Fawkes River National Park aerial cull of 600 feral horses. The review includes reproductions or summaries of a number of documents produced at the time. This includes a full copy of media release from the Australian Veterinarian Association strongly criticism the cull.

The ABA review can be accessed at http://australianbrumbyalliance.org.au/wp-content/uploads/2012/12/ABA-Guy-Fawkes-2000-review-20_Oct_2014-Final.pdf

On September 25, 2014, The Sydney Morning Herald ran a news report titled 'Cannibal brumbies claims incense Snowy Mountain horse riders' which condemned as sensational claims published in a recent article by two ANU academics published in The Conversation.

The full text of the news report can be found at <http://www.smh.com.au/national/cannibal-brumbies-claims-incense-snowy-mountain-horse-riders-20140925-10lye4.html>

On September 23, 2014, The Conversation published a comment by Don Driscoll, Research Fellow in Ecology at the Australian National University and Sam Banks, ARC Future Fellow, Fenner School of Environment and Society at the Australian National University. The comment is titled 'The grim story of the Snowy Mountains' cannibal horses'. It argues that wild horses in the alpine national parks have reached unsustainable numbers.

The full text of the comment can be found at <http://theconversation.com/the-grim-story-of-the-snowy-mountains-cannibal-horses-31691>

On August 20, 2014, The Guardian published a report titled 'A time to cull? The battle over Australia's brumbies' The report examines the conflicting issues surrounding brumby management plans for Australia's national parks.

The full text of the report can be found at <http://www.vcita.com/world/2014/aug/20-sp-a-time-to-cull-the-battle-over-australias-brumbies>

In 2014 The Hunter Valley Brumby Association produced a Position Statement on the Management of Wild Horses in the Kosciusko National Park.

The full text of this document can be accessed at http://hvba.com.au/uploads/Position_Statement_on_the_Management_of_Wild_Horses_in_the_Kosciusko_National_Park.pdf

On December 29, 2013, The Independent published an analysis titled 'To cull or not? "Brumby" wild horses divide Australians'

The full text of this analysis can be found at <http://www.independent.co.uk/news/world/australasia/to-cull-or-not-brumby-wild-horses-divide-australians-9029552.html>

On July 24, 2013, the Victorian National Parks Association made a submission in regard to Wild Horse Management in the Victorian Alps. The submission is critical of the current management practices, suggesting they are largely ineffective.

The full text of this submission can be found at <http://vnpa.org.au/admin/library/attachments/PDFs/Submissions/VNPA%20submission-%20Feral%20Horse%20Management%20%2713.pdf>

On May 30, 2013, ABC Radio National ran a report titled 'Calls for brumby culling in Australia's alpine habitats'

A transcript of the program can be found at <http://www.abc.net.au/radionational/programs/busstelegraph/4723832>

In May, 2013, Parks Victoria produced a background paper titled 'The Ecology of Wild Horses and their Environmental Impact in the Victorian Alps'

The full text of this document can be accessed at http://parkweb.vic.gov.au/_data/assets/pdf_file/0009/574146/Background-Paper-1-Wild-horse-ecology-and-environmental-impacts.pdf

On May 12, 2013, The Age published a background analysis by its environment editor Tom Arup titled 'Wild horses - a time to cull?'

The full text of this analysis can be accessed at <http://www.theage.com.au/victoria/wild-horses--a-time-to-cull-20130511-2jf27.html>

The homepage of Save the Brumbies includes detailed information on the operation of the New England Brumby Sanctuary.

This page can be accessed at <http://www.savethebrumbies.org/about-us/our-sanctuaries/>

In March 2004 the federal Department of Environment and Heritage, Australian Alps National Parks, Parks Victoria, Environment ACT and the New South Wales National Parks and Wildlife Service produced a report titled 'Feral Horse Management'

The full text of this report can be accessed at <http://www.australialps.environment.gov.au/publications/research-reports/pubs/feral-horses-workshop.pdf>

The Australian Horse Welfare and Rescue News Blog can be accessed at <http://www.australianhorserescue.com/news/resources/brumbies/>

Arguments in favour of the aerial culling of brumbies

1. Brumby numbers have reached unsustainable proportions

Aerial surveys of the wild horse population in the Australian Alps, including Kosciuszko National Park, between 2003 and 2009, indicate an increase in brumby numbers, from just under 2, 500 to over 7,500 horses.

With recent good seasons and an estimated population growth of between eight to 20 per cent every year, New South Wales National Parks are projecting that a conservative estimate, would put the current horse numbers in the alps at over 10,000, with over 7000 in Kosciuszko National Park.

Though estimates vary as to how many horses are actually in the alpine national parks now, researchers claim that this uncertainty makes little difference to the relative outcomes for horses. Considering the Kosciuszko National Park and working on low estimates, it has been calculated that between 7,000 and 11,000 horses will die from starvation, poisoning or dehydration over a ten year period from if aerial culling is not included in management plans.

These calculations were made by Don Driscoll, Research Fellow in Ecology at the Australian National University and Sam Banks, ARC Future Fellow, Fenner School of Environment and Society at the Australian National University. Their conclusions were published in an opinion piece in The Conversation on September 23, 2014.

The two researchers have stated, 'If horse numbers are at the high end of recent estimates, the number that die in ways that we saw at Dead Horse Gap in Kosciuszko National Park could be as high as 20,000. In contrast, with aerial culling, only one quarter of this number would suffer and die on the mountain.'

The authors concluded, 'Whatever the initial population, deaths from starvation, poisoning and dehydration are likely to be 2-5 times higher if aerial culling isn't included in management...'

Rounding up and shipping out horses has had its chance as a management strategy, and it has failed completely. The result is that our iconic Kosciuszko National Park is under an accelerating path of degradation, while at the same time, thousands of horses face prolonged suffering and death in the wild.'

2. Brumbies are an introduced pest which damages the native environment

The principal concern that conservationists have with feral horses in the alpine national parks is that they are an introduced species which, because of their size and hard hooves, are having a damaging impact on the landscape and the plants and animals native to the region.

The region is an important water catchment area and acts in this capacity in part because of the sphagnum moss which is found there. Professor Emeritus Geoff Hope of the Australian National University has described the harm caused by the brumbies.

Professor Hope has stated, 'Horses can do incredible damage incredibly quickly because it [the moss] is soft stuff and they are great heavy-hoofed animals but the long-term effect is to block the drainage and hold the water in the catchment for a lot longer than it would otherwise be.'

The same point has been made by Tom Bagnat, a New South Wales National Parks and Wildlife Service director. Mr Bagnat has stated, 'The horses upset the hydrology of the bog and it dries out and dies. The sphagnum bogs are the vegetation that filters the water in the upper reaches and provides good-quality water downstream. You will see a reduction in water quality and an increase in sediment as a result along those particular streams.'

It is claimed that brumbies can chew eucalyptus trees looking for minerals, scrape under riverbanks looking for salt, and make tracks that can cause erosion.

Damage to the physical landscape is then said to threaten the survival of those native species that live within it. The Guy Fawkes River National Park, for example, is regarded as a 'biodiversity hotspot', with 28 threatened plant species and 24 threatened animal species. Area manager Janelle Brooks has stated, 'Horses have been wild in this landscape for 100 years but the native flora and fauna have been here for thousands of years, millions of years.'

Among the animals which it is claimed the feral horses are harming is the endangered broad-toothed rat. Its habitat is beneath grass and herbs which is being trampled by the horses.

Another species supposedly impacted upon is the endangered southern corroboree frog which is only found in Kosciuszko. Close to extinction, there are thought to be only 100 left in the wild since they were infected with amphibian chytrid fungus. The horses cut through their breeding habitat of sphagnum moss on river banks to get to water.

Tom Bagnat, a New South Wales National Parks and Wildlife Service director has stated, 'There are a number of endangered ecological communities up there. Once they are gone, they are gone for good. We don't get them back.'

A 2007 review produced by Deakin University reported that horses reduce the number of native plants, promote weed invasion, degrade sphagnum bogs, increase soil erosion, increase tree deaths and alter communities of reptiles, mammals, crabs, fish, and birds.

3. Other control measures are inadequate or too expensive

It has been claimed that other means of controlling wild horse numbers are either ineffective or too expensive.

The average number of wild horses removed from the Victorian Alpine National Park over the past five years (2007 to 2012) has been 160 per annum, which represents less than 25% of the annual population increase seen between 2003 and 2009. Critics note that this is a seriously inadequate extraction rate which sees wild horse numbers continue to grow. Population modelling suggests that to stabilise the Victorian Alps wild horse population at its current estimated size (8200 - 10 900 horses) around 350 -600 horses would need to be removed annually. While to return the population size

to 2001 levels (around 5000 horses) around 1500 - 1900 horses would need to be removed annually for five years. Critics claim that current feral horse management techniques are not able to achieve this level of population decline. Peter Lawrence, a recently retired Victorian park ranger has stated, 'The only way it's being managed is through trapping, which is a highly intensive effort required by staff, takes a lot of time and a lot of patience, and you can sometimes get only two to three animals after two weeks of work.'

In July, 2013, the Victorian National Parks Association made a submission in regard to Wild Horse Management in the Victorian Alps. The Association stated that 'roping (brumby running)... is ineffective, can distress and hurt the horses, and is not endorsed by the RSPCA'. Mustering was stated to be 'not viable in remote areas because trucking horses out on rough tracks from such areas causes considerable suffering.' A similar judgement was made about trapping. Fertility control was said to have 'a temporary effect only, and it's very difficult and costly.'

4. Skilled aerial culling is humane

Proponents of aerial culling note that it has been inexpertly employed in the past; however, they claim that if done well aerial culling is the most humane management strategy.

The RSPCA considers that where it is necessary to reduce the numbers of a wild species, 'The humaneness of a given control method is influenced by its application and the skill of the operator. Control methods must be applied in the best possible way by trained and competent operators.'

The New South Wales RSPCA Chief Inspector, David O'Shannessy, has indicated that if conditions are met, the RSPCA would support aerial culling in Kosciuszko National Park.

Mr O'Shannessy has stated, 'The RSCPA accepts that the circumstances may exist where among a suite of other control methods, it is possible that aerial culling may be an appropriate method to be employed, so long as the animals are humanely euthanised.'

Victoria's Invasive Species Council chief executive Andrew Cox has stated, 'An aerial culling program is now the only humane solution, provided there is rigorous welfare supervision and the RSPCA is closely involved.'

It has been noted that areas that are difficult to access require aerial culling to control feral horse numbers. Phil Ingamell's of the Victorian National Parks Association's has claimed that controlling horses would take a range of actions, depending on where they were located, but that a cull was inevitable in remote locations.

Don Driscoll, Research Fellow in Ecology at the Australian National University and Sam Banks, ARC Future Fellow, Fenner School of Environment and Society at the Australian National University have noted that only thirty percent of those horses trapped and removed from the high country are successfully re-homed. The rest are sent to abattoirs. Driscoll and Banks have claimed, 'From an animal ethics point of view, aerial culling spares thousands of horses from unsavoury deaths on the mountain due to starvation, thirst or poisoning, and spares hundreds to thousands of horses from the stress of capture, trucking and subsequent death in an abattoir.'

5. The traditional significance of the brumbies has been exaggerated and does not require that they be preserved in the high country

Some of those who believe that the brumbies should be either culled or completely removed from national parks argue that Australia's cultural traditions can continue to be acknowledged without these horses remaining in the parks in large numbers.

Roger Good is a retired alpine ecologist and soil conservationist who worked on restoring degraded areas following the removal of alpine cattle grazing. He argues that the physical presence of introduced species is not necessary for their place in Australia's heritage to continue to be recognised. He further claims that the cultural significance of some of these animals has been exaggerated.

Mr Good has stated, 'Large grazing] is not culturally very significant. They thought it was. You can still have the cultural acceptance of it, that it did happen, that it's been part of the history of the European settlement of the mountains but you don't have to have stock up there to show the public this is what used to go on.' Mr Good believes the situation regarding the brumbies is similar.

Some critics have suggested that the supposed cultural icon status of the brumbies is simplistic, noting that Banjo Paterson did not merely romanticise the brumbies; he also wrote about the wild horses being 'a great nuisance to stock owners'. There are accounts from the mid-1800s of stockmen rounding up brumbies and shooting them.

It has also been noted that popular conceptions about the current state of brumbies in alpine regions are often inaccurate. A Feral Horse Management Workshop Report released in March, 2004, noted, 'The public image of brumbies in the Snowy Mountains is similar to those depicted in movies like the Silver Brumby; however, the reality is often very different.'

The report then presents a slide showing a half-starved horse at the end of winter with bad conformation which it claims is 'typical of many of the Snowy Mountain horses.'

Arguments against the aerial culling of brumbies

1. Previous aerial culling has been unacceptably brutal

Critics of aerial culling condemn the practice for its cruelty. Criticism came to a head in October 2000 after a cull organised by the New South Wales National Parks and Wildlife Service (NPWS) in Guy Fawkes River National Park. The cull was conducted over three days.

The horses were driven up against an escarpment by a helicopter hovering above the trees, and then marksmen opened fire with semi-automatic rifles. More than 600 horses were killed. Some horses were shot and left to die. One mare was

shot while giving birth. Foals whose mothers had been killed were left to starve.

Greg Everingham, a local pastoralist who found the carcasses, took his photographs of them to the media. In a report published in *The Guardian* on November 6, 2000, Mr Everingham said, 'The manner in which these horses were killed was absolutely barbaric. It was damned murder - that's what it was.'

Mr Everingham further stated, 'I've never seen anything as awful as the sight of those horses. Some of them would have taken hours, even days, to finally die.' It was reported that the RSPCA euthanised a pony with two high-calibre bullet wounds to its shoulder nearly two weeks after the culling took place.

The RSPCA laid aggravated cruelty charges against the NPWS. On October 30, 2000, the Australian Veterinarian Association (AVA) issued a media release which included the statement that it was 'appalled by the brutal slaughter of 600 horses'. It also stated that it was outraged 'at the apparent lack of concern by NPWS for the welfare of the many horses which suffered terribly in this incident.'

The AVA has stated that aerial culling should only be considered in 'open arid and semi-arid country, where helicopters can easily pursue any injured animals to ensure they can be put down without undue suffering.' The AVA has specifically stated, 'The very rugged forest terrain in Guy Fawkes River National Park is not suitable for this because of the obvious difficulty in conducting the operation in the most humane manner possible.'

The AVA joined the 'Increasing public criticism from reports that many of the horses had sustained large numbers of bullet wounds to the body, legs and even the rump when marksmen are meant to kill humanely with clean shots to the head.'

The October 2000 aerial cull has come to represent the what such a practice can degenerate into, even when performed by supposedly capable operators.

2. Brumbies are an established part of the alpine ecology and do not pose a significant environmental threat

Supporters of the brumbies remaining in the national parks claim that, after the length of time the horses have been there, they are now part of the parks' ecology. Megan Hyde, manager of northern New South Wales's New England Brumby Sanctuary, has claimed, 'They have every right to be there, as much as any animal. They have been there much longer than the national parks.'

Supporters of the brumbies remaining in the national parks, without culling, claim that their impact on the natural environment has been exaggerated.

Clive Edwards, vice-president of the Snowy Mountains Bush Users Group, has stated, 'The horses have been there [Kosciuszko] for 200 years. If they are causing this impact on flora and fauna, what has been made extinct or ... seriously impacted by the brumby? They can't name a single thing; they won't be able to. The impact is negligible.'

Brumby advocates also dispute claims that brumby numbers are reaching unsustainable levels. They claim that survey numbers are unreliable as mustering by helicopter in rugged terrain concentrates horses through valleys, which leads to double counting. It also assumes annual growth of about 20%, which does not account for bad seasons, such as the deaths caused by 2014's late snow.

Kathryn Massey of the Hunter Valley Brumby Association has claimed that 'Living in the wild means natural attrition controls the populations through the impact of blizzards, bushfires, long winters and so on.'

Ms Massey has stated, 'In such circumstances, older horses and younger ones will die. The 2003 Kosciuszko National Park bushfires, for instance, wiped out 50 per cent of the population of brumbies by reducing available food and habitat. Without intervention, the population just stabilises.'

3. Brumbies are an important Australian cultural icon

Supporters of the brumbies remaining in Australia's national parks see these animals as of great cultural significance.

There are those who see brumbies as a tangible link to Australia's colonial past. They point to the significance of the *Silver Brumby* novel series by Elyne Mitchell as well as Banjo Paterson's *The Man From Snowy River*, a poem dramatically presenting the race to capture a valuable colt that had 'joined the wild bush horses'.

The continuing significance of the Patterson poem is claimed to be shown in the successful film which was made around its story line. That Australians still see the Snowy River area and the wild horses found there as culturally significant is claimed to be demonstrated by the nature of the opening ceremony for the Sydney 2000 Olympics.

An analysis of the brumby management dilemma published in *The Guardian* in August 2014 notes, 'When Australia chose to portray itself to the world in the opening ceremony of the 2000 Sydney Olympics, it chose 120 stockmen and women dressed in bush clothing and mounted on stock horses, riding to the soundtrack of *The Man From Snowy River* movie.'

It has also been claimed that the historical significance of these horses has been scientifically proven. The horses in Guy Fawkes River have been genetically tested to prove that they are descendants of the cavalry horses used in the Australian Light Horse Brigade in World War I. In 2002, a heritage working party found that they had significant historical, military and cultural value; they are now a registered breed.

Erica Jessup, who is part of the Guy Fawkes Heritage Horse Association, has stated 'Most Australians are a bit brumby. They epitomise our culture.'

Some of those who still live in Australia's high country claim a special connection with the feral horses. Peter Cochran, who runs a horse trekking business now out of his alpine property at Yaouk and is the president of the Snowy mountains bush user group and the chairman of the Tourism Snowy mountains board, has stated, 'The brumby is symbolic of freedom but is also symbolic of the spiritual relationship between man, land and their horses and there has been a longstanding connection between the human being and the horse...

That relationship extends to the brumby and the brumby has now become symbolic of the battle which the people of the high country have had to maintain their freedom over the years.'

4. Brumbies are a tourist attraction

Supporters of brumbies remaining in the high country have noted the extent to which they are already a tourist attraction and the capacity there is for brumby tourism to be expanded.

The member for Wagga Wagga, Daryl Maguire, has stated in response to the New South Wales Government's decision not to continue with aerial culling, 'This region's economy hinges on tourism. The natural environment of Kosciuszko National Park is a major drawcard to the area and wild brumbies are also an attraction.

I am pleased the NSW Government is committed to finding an acceptable way to protect this unique landscape while maintaining a sustainable wild horse population.'

Supporters of brumbies remaining in national parks and adjoining areas have argued that their tourist potential could be used to fund brumby management programs. The Hunter Valley Brumby Association has stated, 'The tourist potential of the Brumbies should be explored and utilised.

For example, Brumby spotting tours could be run, and some of the proceeds of these tours could contribute to funding the management program. Alternatively yearly licences could be purchased by businesses and individuals to conduct Brumby related tourist activities within the park. They would keep the profits from these activities, but the cost of the licence would go towards funding the management program.'

One of the current brumby sanctuaries, The New England Brumby Sanctuary, situated on the outskirts of Armidale New South Wales has managed to successfully incorporate tourism into its activities.

Bellingen is a country town near the sanctuary with monthly markets and a range of tourist activities. A Bellingen holiday with a visit to the Mountain Thyme Brumby Sanctuary (a smaller offshoot of The New England Brumby Sanctuary) is proving popular. The sanctuary welcomes visitors by appointment and accepts donations to assist in its work.

Similarly, visitors to the Victorian high country and Barmah Forest are attracted by the opportunity of seeing wild horses and some tourism operators, particularly some horse-riding tour operators, promote their tours by advertising the chance to see one.

5. There are other, humane methods of controlling brumby numbers

Those who object to aerial culling, yet consider there may be reasons to reduce brumby numbers or remove them altogether, argue that there are other management strategies that can be employed.

Programs have been put in place to remove the brumbies through trapping or mustering and roping. Areas where trapping is employed are characterised as having suitable road/trail networks to provide transport of trap yards and the safe removal of animals.

In the Alpine National Park, Parks Victoria is working in partnership with the Australian Brumby Management Association (ABMA) to reduce feral horse populations in target areas by roping and mustering. Members of the ABMA contract to Parks Victoria to complete the work. The terms of the contract includes conditions relating to animal welfare, the prohibition of dogs, notification of capture trips and the reporting of trip outcomes.

Once the animals have been removed from the national parks there are a number of brumby rescue groups which seek to re-home them.

In autumn 2002 Parks Victoria erected feral horse and domestic cattle exclusion fences around two sensitive sub-alpine bogs on Davies Plain. Fenced sites were selected on the basis of records of threatened bog-dependent fauna. Evidence from faeces and tracks outside the fences, but not inside, indicates that when in good repair the fences effectively exclude both feral horses and domestic cattle.

Another management strategy of particular interest is the use of contraception. The New England Brumby Sanctuary began trialling a contraceptive vaccine in 2014. The Sanctuary founder, Jan Carter, has stated, 'We want to contain breeding (at the sanctuary) and it's our hope, in a few years time, to convince the government to start using fertility control in parks which will be a lot cheaper in the long-term than trapping them and pulling them out.' Dams remain infertile for four years and the contraceptive can be delivered by dart.

Further implications

Attitudes toward the appropriateness of the aerial culling of feral horses in Australia's national parks differ dramatically. A degree of consensus appeared to have been reached in October 2000 following an aerial culling in the Guy Fawkes River National Park which was widely condemned for its apparent brutality. Animal welfare groups were incensed and the Australian Veterinarian Association was highly critical, claiming that conditions in the high country made aerial culling an inappropriate practice. The RSPCA was initially seeking to bring 12 charges of 'aggravated cruelty' against those responsible for the cull; however, these were later cut back to one charge of 'unintentional cruelty'. Interestingly a later scientific review of the cull claimed it had been conducted humanely.

The widely differing judgements made regarding this cull, and aerial culling generally, appear to derive from the value that the different stakeholders attach to the feral horses and to be relative, based on assumptions made about the trauma involved in other forms of removal.

Those managing both Victorian and New South Wales national parks appear to see the wild horses as a pest animal, an introduced species that is damaging the environment and placing already threatened native species at greater risk. However the end is achieved, for those with this perspective the only acceptable result is that the horses be permanently removed from the parks. This outlook colours what are then seen as acceptable means of achieving this solution.

Efficiency and the immediate minimisation of environmental damage become determiners and aerial culling is generally seen as the most suitable option.

Those who value the wild horses tend either to want them to remain within the parks or to be removed in the most humane manner possible. For those with these aims the relative inefficiency of all the practices currently used to control horse numbers are not a major concern. What is significant is that the horses are distressed as little as possible and (for many) that they are able to stay in their current environment.

For the politicians who ultimately determine environmental policy popular attitudes are likely to shape what is decided. Currently the brumby is regarded favourably by Australians as a whole and the upsetting nature of any aerial cull, no matter how efficiently conducted, is likely to create an uproar both within key electorates and among animal welfare groups overseas. In this context policy makers are likely to opt for the sort of gradualist approach that has been in place for the last ten years. Australia is unlikely to see a return to aerial culling whatever the environmental concerns created by these horses.

Newspaper items used in the compilation of this issue outline

AGE, January 4, 2015, page 10, background (photos - ref to culling, killing of brumbies) by Singhal and Elliott, 'The ban from Snowy River'.

http://newsstore.fairfax.com.au/apps/viewDocument.ac;jsessionid=7880AB43F818DCA48A18917E8C68E25E?sy=afr&pb=all_ffx&dt=selectRange&dr=1month&so=relevance&sf=text&sf=headline&rc=10&rm=200&sp=brs&cls=2502&clsPage=1&docID=SAG150104OC2D8C1O0EF