# CHAPTER 3

## THE IMPACT ON THE NORTHERN TERRITORY OF LARGE FERAL ANIMALS

### Introduction

3.1 Most submissions lodged with the Committee recognised that feral animals, including those in the Northern Territory, have a significant adverse impact on the environment, public health and rural industries. For example, the Royal Society for the Prevention of Cruelty to Animals, Australia, (RSPCA Australia) stated:

> Feral animal groups pose one of the largest single threats to the whole nation, to the landscape and to the conservation of the more vulnerable Australian native species of flora and fauna. [They] also threaten the continuing viability of large numbers of Australian industries ...[1]

3.2 Other submissions and evidence given at public hearings expressed similar views. Commenting specifically on the impact of feral horses in the Northern Territory, the Australian Equine Veterinary Association told the Committee that control of brumbies "is an issue of national importance and urgency".[2]

3.3 However, doubts were expressed about the adverse impact of feral animals. The Australian and New Zealand Federation of Animal Societies (ANZFAS), recognised that feral animal populations "may cause agricultural or environmental damage" but maintained that "alleged damage" needs to be independently assessed and proven.[3]

3.4 In this chapter of the report, the Committee discusses the nature and extent of the impact of large feral animals in the Northern Territory. In particular, the Committee addresses the environmental, public health and economic impact of feral horses and buffalo.

### Environmental Impact

3.5 It is difficult to generalise about the environmental impact of large feral animals in the Northern Territory. This is because of differing climatic and geographic conditions within the Territory and differences in population, distribution and habits of specific feral animals. For example, evidence presented to the Committee suggests that the environmental impact of water buffalo in the Top End has been "markedly adverse" and "very substantial"[4], whereas the impact of feral camels in Central Australia is more subtle.[5]

3.6 Nevertheless, Mr Bryce, an officer of the Northern Territory Department of Primary Industry and Fisheries, evaluated the environmental threat in the following terms:

> Buffalo and pigs are the most environmentally dangerous. Pigs probably will have to rate above buffaloes now and this is likely to be the case for the next 10 to 15 years. In central Australia, rabbits are the most dangerous, followed by horses. It would be fair to say that rabbits would be far and away the biggest problem ... Foxes are also significant.[6]

3.7 The Northern Territory Government maintains that the impact of feral animals on the environment is "widely accepted" and "in many instances patently obvious".[7] According to the Territory Government, feral animals reduce the productivity of land, degrade the natural environment and compete with native flora and fauna. Similar evidence was presented by government agencies and other interested groups. In particular, the Australian Conservation Foundation emphasised that feral animal control is necessary in order to preserve the biological diversity of Australia's natural environment.[8]

3.8 As indicated previously, the Committee also received evidence that disputed the nature and extent of the environmental damage caused by feral animals. The South Australian Federation of Animal Societies stated:

> Many of us believe that the impact of these animals on the environment is grossly exaggerated by those for whom the protection of the environment is a means to both earning a living and furthering their political agenda aiming at controlling everyone and everything. As for expert opinion on the environment, diametrically opposite views may usually be obtained by suitably picking the experts".[9]

3.9 In the following section of the report, the Committee considers the evidence it received on the environmental impact of horses, buffalo and other large feral animals in the Territory.

## Horses

3.10 In its submission, the Australian Equine Veterinary Association stated that the feral horse "poses an enormous and well documented environmental threat in Northern Australia".[10] In support of this view, the Association referred the Committee to studies on feral horses in central Australia undertaken by the Conservation Commission of the Northern Territory.

3.11 When in Alice Springs, the Committee received briefings and was accompanied on inspections by Mr David Berman, the author of several of these studies. Mr Berman described the environmental impact of feral animals in central Australia in the following terms:

> Horses, like cattle, help denude large areas, force macropods ... from the areas that they have been feeding in. The horses foul waterholes with their carcasses when they die during drought and they can cause accelerated gully erosion.[11]

3.12 Mr Berman stated that there are very few areas of pasture in central Australia that can avoid the influence of feral horses. He explained that after rains, horses and cattle are found on flatlands close to water, feeding on palatable grasses. When this vegetation is removed, horses and cattle will move out from the waterholes. Feral horses, however, tend to move out more quickly than cattle. They search for better quality grasses whereas cattle have broader diets and will browse on the leaves of trees. Horses are also able to traverse difficult and hilly terrain and have been known to walk up to 50 kilometres from water to feed. By the time cattle need to move from the flatlands, horses have removed palatable vegetation in surrounding areas.[12]

3.13 In his evidence to the Committee, Mr Berman summarised the conclusions of his studies on feral horses in central Australia. He stated:

> During these studies we felt that there was a need to control feral horse numbers for environmental reasons because of the damage they are doing, to protect them from eating themselves out of house and home and dying of starvation during drought. I have seen many waterholes where there are 70 or 80 carcasses [of horses] that have perished during drought because they have run out of food or the waterhole has dried up. To avoid that situation, the horse numbers have to be kept lower.[13]

Buffalo

3.14 The Australian National Parks and Wildlife Service advised the Committee that large feral animals, particularly water buffalo, present an unacceptable environmental threat in Kakadu National Park. The potential of this impact was described as "devastating".[14] The Service stated that environmental impacts of buffalo include:

- vegetation damage through grazing and trampling;
- soil compaction;
- saltwater intrusion into low-lying freshwater swamps through breaching of natural levee banks by swim channels;
- wallowing and erosion;
- siltation and pollution of water bodies;
- noxious weed dispersal; and
- impact on other animals through modification of habitat.[15]

3.15 In its submission, ANPWS cited several scientific studies undertaken at Kakadu supporting its evidence to the Committee.[16]

3.16 During inspections in Kakadu, members of the Committee observed areas of the Park that have sustained significant and obvious damage from buffalo. Mr Andrew Skeat, an officer of ANPWS at Kakadu, presented historical material demonstrating adverse changes to the hydrology of the ecosystem in the Park. The Committee was also shown areas that have regenerated following the removal of buffalo.

3.17 In its submission to the Committee, the Northern Territory Government expressed similar concerns about the environmental impact of water buffalo on areas under its jurisdiction in the Top End. Officers of the Government expressed the view that if buffalo numbers are not reduced to manageable levels, "widespread environmental and ecological changes" would result throughout the Top End of the Northern Territory.[17]

Other Large Feral Animals

3.18 Evidence presented to the Committee also recognised that other large feral animals have an effect on the environment.

3.19 For example, the environmental impact of feral donkeys on the Victoria River Downs, an area in the north-west of the Territory, has been profound and well documented.[18] Little is known about the impact of camels on the environment of the arid areas in central Australia. This also seems to be the case with feral pigs, even though they are recognised by many as posing the most significant threat in the foreseeable future.[19]

Impact on Native Fauna and Flora

3.20 The Central Australian Conservation Council expressed concern about the influence of feral animals, including horses, on endangered native species in central Australia.

3.21 The Council maintains that proportionally, arid Australia has experienced the greatest species decline of any region in the world. According to the Council, forty-two per cent of all arid zone mammals are threatened and 14 species are extinct. This decline has resulted from the damage and fragmentation of the habitat of native species. Massive populations of feral animals, including horses, are largely responsible for the destruction of critical habitat.[20]

3.22 The Council provided the Committee with the following list of threatened or extinct mammals of the Australian arid and semi-arid zone.

**Table 3.1: Threatened or extinct mammals of the Australian arid and semi-arid zone**

| | |
|---|---|
| Inland Western Quoll | Red-tailed Phascogale |
| Long Tailed Dunnart | Julia Creek Dunnart |
| Numbat | Golden Bandicoot |
| Western Barred Bandicoot | Desert Bandicoot* |
| Lesser Bilby* | Pig-footed Bandicoot* |
| Desert Rat-kangaroo* | Burrowing Bettong |
| Mala [Rufous Hare-wallaby] | Eastern Hare-wallaby* |
| Banded Hare-wallaby | Central Hare-wallaby* |
| Central Rock-rat* | Crescent Nailtail Wallaby* |
| Alice Springs Mouse* | Gould's Mouse |
| Lesser Stick-nest Rat* | Greater Stick-nest Rat |
| Long-tailed Hopping Mouse* | Short-tailed Hopping Mouse* |
| Pebble-mound Mouse | Dusky Hopping-mouse |
| Sandhill Dunnart | Kowari |
| Northern Hairy-nosed Wombat | Bilby |
| Central Brushtail Possum | Brush-tailed Bettong |
| Bridled Nailtail Wallaby | Black-footed Rock-wallaby |
| Yellow-footed Rock-wallaby | Ghost Bat |
| Shark Bay Mouse | White-footed Rabbit-rat* |
| Big-eared Hopping Mouse* | |

* Indicates species that are extinct.

*Source*: Central Australian Conservation Council, *Threatened Mammals in Arid Australia*, p.3

3.23 Ms Nanette Smibert, Co-ordinator of the Council, described the effect of 80,000 feral horses in central Australia. She observed:

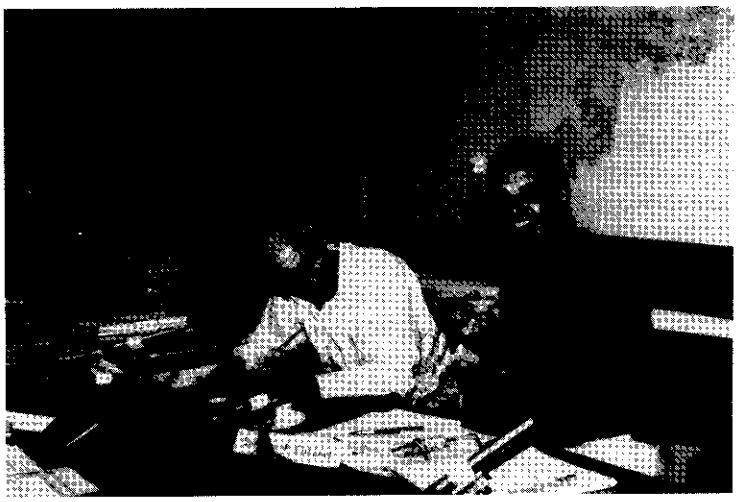
> They eat, they trample, use up the water, pollute the water; they cause very serious land and water degradation ... Land degradation means loss of habitat for native species.[21]

3.24 The Council concluded that "feral animals must be culled" but indicated that better controls, adequate resources and co-ordination across whole regions are needed.[22]

3.25 Representatives of the Council who appeared before the Committee maintained that "control measures for feral animals will be supported nationally and internationally if the full situation is understood".[23] An appreciation of broader issues, and in particular the plight of native species, would resolve any conflict between concerns for animal welfare and conservation.

3.26 The Council also stressed the need for "better [public] education and better targeting of education" on all of the issues involved in the culling of large feral animals.[24]

3.27 Dr Ken Johnson, Principal Wildlife Research Officer, Conservation Commission of the Northern Territory, also presented evidence on extinct and endangered native mammals, such as the rufous hare wallaby and the bilby.



*At the Committee's public hearing in Alice Springs, officers of the Conservation Commission of the Northern Territory tabled a bilby.*

*"There does not seem to be one single cause for bilbies becoming extinct. There are layers of different impacts and feral animals have been a very significant part of that". Evidence*, Conservation Commission of the Northern Territory, p. 121.

3.28 He expressed the view that the impact of feral animals on native mammals in central Australia over the last 50 years has been a "a disaster"[25] and that "feral animals have [played] a very significant part".[26] Although foxes and rabbits have been particularly implicated in this process, Dr Johnson advised the Committee that, "anything that eats grass ... puts extra stress upon [native species]".[27]

Land Management

3.29 The evidence presented to the Committee on the environmental impact of large feral animals raises the associated issues of land management and stocking rates.

3.30 Officers of the Northern Territory Government recognised that "many of the environmental impacts ... are purely the result of too many animals on a particular area of land, whether they be managed or unmanaged animals".[28] Therefore, there is a direct relationship between stocking levels, feral animal populations, and the capacity of the land to maintain them.[29] Mr Davis explained:

> At the moment, there are properties that are running large numbers of ferals and trying to ignore the fact that there are those numbers of ferals. They are saying, 'This property can run 40,000 head of cattle', and they are running 40,000 head of cattle when in fact the total stocking [with feral cattle or cattle equivalents] is probably 120,000.[30]

3.31 Dr Owen Williams, Regional Veterinary Officer with the Territory's Department of Primary Industries and Fisheries, maintained that pastoralists are now more aware of the land degradation and the need for sustainable usage of land. He advised the Committee that pastoralists "are now counting their stocking rates [including feral animal numbers] ... so that pasture quality is maintained". According to Dr Williams, a concerted program of education over the last 15 years has brought about a "major change in the philosophy of pastoralists" on stocking rates.[31]

**Health Impact**

3.32 Feral animals, particularly horses and buffalo in the Northern Territory, are recognised as potential entry points and reservoirs for major exotic diseases.

3.33 The Northern Territory Government advised the Committee that feral cattle, buffalo and pigs in coastal regions provide potential entry points for exotic diseases such as foot-and-mouth disease, screw-worm fly and swine fever. These populations, as well as feral horses and donkeys, are also potential vectors for diseases that do not occur normally in Australia.[32]

3.34 The Committee questioned officers of the Northern Territory Government on how an outbreak of an exotic disease might occur. Mr Allen Bryce, Acting Director, Veterinary Technical Services, Department of Primary Industry and Fisheries, responded:

> There are a number of possibilities ... We have got a large coastal population of feral horses, pigs and cattle. There is passing sea traffic. There is the possibility of refugee boats, or even fishing boats, carrying a goat or the possibility of any passing shipping dumping garbage overboard, either of which could be a carrier of, say, foot-and-mouth disease. The chances are not great but the effects of an outbreak could be catastrophic.[33]

3.35 The Committee also received evidence from other contributors that an outbreak of exotic diseases would be devastating to Australia's economy and, in particular, its export trade.[34] Mr Bryce elaborated on this matter in his evidence to the Committee. He stated:

> If [for example] we had a foot-and-mouth disease outbreak today, and we eradicated it today, it would affect our exports of livestock products, and would probably extend to other products ... It would affect those export markets for months, possibly years afterwards, as we would have to establish to the satisfaction of our trading partners that our efforts to eradicate the disease had been completely successful.[35]

3.36 The Territory Government recognised that it is difficult to quantify the likelihood of a particular exotic disease establishing itself in feral animals. According to the Government, the potential for an outbreak of exotic disease in feral animals exists and poses problems for effective control.[36] Mr Graeme Davis, an officer of the Conservation Commission of the Northern Territory explained:

> An exotic disease which occurs first in feral livestock populations may be difficult to detect because of the isolation of the populations, the fact that they are, by definition, unmanaged and uncontrolled ... Once those diseases are detected, it may be very difficult to eradicate or control them.[37]

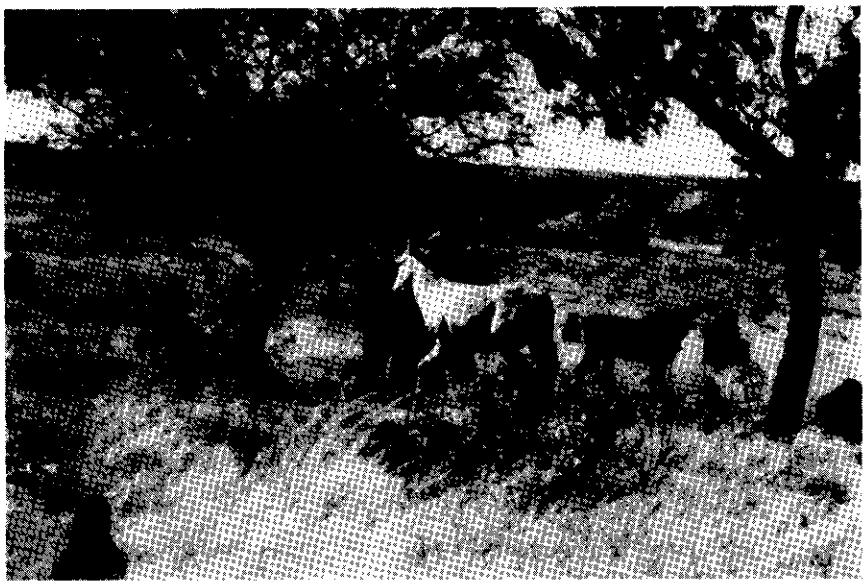
### Economic Impact

3.37 The Northern Territory Government recognised that feral animals can have a positive economic impact. Feral animals, particularly cattle, buffalo and horses, have been mustered and trapped for domestication, abattoir processing or pet meat. For example, over 80 per cent of buffalo removed from the Northern Territory between 1983 and 1986 were removed by commercial operators. Officers of the Northern Territory Government told the Committee that "the Government has a policy of commercially utilising any wild animals it can".[38]

3.38 The Territory Government also recognised that feral animals have a significant negative impact on the pastoral industry in terms of stocking levels and productivity. For example, evidence to the Committee maintained that 100 feral horses remove forage which could support 45 to 128 cattle. The Government indicated that it has been estimated that the pastoral industry could be losing about $90 million per annum as a result of feral animal activity in the Northern Territory. This estimate does not include the hidden costs of long-term environmental degradation.[39]

3.39 The Government submission concluded that, although there are some positive economic benefits associated with feral animals, costs far outweigh benefits.[40]

3.40 In relation to feral animals, RSPCA Australia recognised that feral animals "threaten the continuing viability of large numbers of Australian industries that depend upon continuing growth and freedom from competition in the rural environment".[41]



*Feral Donkey with Cattle*

### Research on Impact of Feral Animals

3.41 It was recognised by most contributors to the inquiry that more research on the impact of feral animals is necessary.

3.42 Dr Peter O'Brien, Principal Research Scientist, Bureau of Rural Resources, told the Committee that there is relatively little comprehensive, quantitative data on the impact of feral animals. He suggested that "there is a need for much more extensive long-term studies of impact".[42]

3.43 The Northern Territory Government expressed a similar view. It noted that, although the impact of feral animals is "widely accepted, relatively few detailed or rigorous studies have been conducted".[43]

3.44 Animal welfare groups including RSPCA Australia and ANZFAS also supported further research on the impact of feral animals on the environment. ANZFAS also recommended that studies ascertain the extent of alleged agricultural damage and resulting economic impact.[44]

### Conclusions

3.45 On the basis of evidence presented during the inquiry, the Committee is left in no doubt that feral animals pose a major problem. In particular, horses, buffalo and other large feral animals have a significant adverse impact on the environment of Northern Territory. This manifests itself in degradation of the landscape and destruction of vulnerable Australian species of flora and fauna. Feral animals also have the potential to exacerbate problems arising from the introduction of exotic diseases.

3.46 Although in many instances the impact of feral animals is patently obvious and widely recognised, the Committee considers that quantitative research should be undertaken on the agricultural and environmental damage caused by individual species of feral animals. Specifically, the Committee considers that research should investigate the densities of feral populations, impacts and concomitant economic effects. In the Committee's view, such research would provide a better understanding of the damage caused by feral animals and might result in more practical and humane strategies of control.

3.47 *The Committee recommends that the Commonwealth Government, through its various research and funding agencies, extend research into the agricultural, environmental and economic impact of feral animals.*

## ENDNOTES

1. *Evidence*, RSPCA Australia, p. 242.
2. *Evidence*, Australian Equine Veterinary Association, p. 217.
3. *Evidence*, Australian and New Zealand Federation of Animal Societies, p. 350.
4. G. Letts, *Feral Animals in the Northern Territory*, Government Printer, Darwin, 1979, p. 16.
5. *Evidence*, Northern Territory Government, p. 34.
6. *ibid.*, p. 25.
7. *ibid.*, p. 53.
8. *Submission*, Australian Conservation Foundation, p. 2.
9. *Submission*, South Australian Federation of Animal Societies, p. 2.
10. *Evidence*, Australian Equine Veterinary Association, p. 217.
11. *Evidence*, Conservation Commission of the Northern Territory, p. 124.
12. *ibid.*
13. *ibid.*, p. 125.
14. *Evidence*, Australian National Parks and Wildlife Service, p. 516.
15. *ibid.*, pp. 516-520.
16. *ibid.*
17. *Evidence*, Northern Territory Government, p. 29.
18. *ibid.*, p. 34.
19. *ibid.*
20. *Evidence*, Central Australian Conservation Council, p. 81.
21. *ibid.*, p. 103.
22. *ibid.*, p. 105.
23. *ibid.*, p. 89.
24. *ibid.*, p. 91.
25. *Evidence*, Conservation Commission of the Northern Territory, p. 119.
26. *ibid.*, p. 121.
27. *ibid.*
28. *Evidence*, Northern Territory Government, pp. 4-5.

29. *ibid.*, p. 30.

30. *ibid.*

31. *ibid.*, p. 135.

32. *ibid.*, p. 61.

33. *ibid.*, p. 33.

34. *ibid.*, p. 12.
Evidence, Australian Equine Veterinary Association, p.217.

35. *Evidence*, Northern Territory Government, p. 33.

36. *ibid.*, p. 61.

37. *ibid.*, p. 13.

38. *ibid.*, p. 9.

39. *ibid.*, p. 51.

40. *ibid.*

41. *Evidence*, RSPCA Australia, p. 242.

42. *Evidence*, Department of Primary Industries and Energy, p. 502.

43. *Evidence*, Northern Territory Government, p. 53.

44. *Evidence*, Australian and New Zealand Federation of Animal Societies, p. 350.