

Impact of the Rabbit in Australia

"The rabbit is one of the greatest pests of the pastoral industry in Australia, and has fundamentally altered ecosystems" (Wilson et al,10).



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Economic Impact



It would be difficult to exaggerate the economic and ecological impact of the rabbit prior to myxomatosis. In good seasons there may have been one billion rabbits. As 16 rabbits eat as much as one sheep (Short,1985), this is equivalent to approximately 60 million sheep and the consequent loss of production. The economic impact of present day rabbit populations is not well quantified but is estimated to be in the order of 90

million dollars in lost production and about 20 million spent on control (Sloane et al.1988).

Conservation

A. Fauna

The rabbit impacts upon native wildlife in many ways:

- 1. By directly competing for food and habitat the rabbit has displaced many small to medium size marsupials such as the greater bilby, *Macrotis lagotis* (now an endangered species), and the burrowing bettong *Bettongia lesueur*, (now extinct on the mainland). The disappearance of these marsupials is reputed to have occurred only after areas were invaded by rabbits. (Willson et al 10,1992)



[Map of extinction intensity in Australia](#)

- 2. Due to selective grazing the rabbit has changed ecosystem composition radically. When an ecosystem is changed, the dependant fauna are displaced by a depletion in their required food source and breeding grounds. This has marginalised various species into smaller populations and effected their reproductive capability.
- 3. In its spread across Australia, the rabbit took advantage of pre-existing burrows and evicted various burrowing mammals such as the rufous hare-wallaby *Lagorchestes hisutus*, the bilby *Macrotis lagotis* and the burrowing bettong *Bettongia lesueur*, from their burrows. This factor contributed to the regional extinction of the bilby and of the burrowing bettong.



- 4. A colony of rabbits will support a high number of predators such as feral cat and foxes. These predators put stress on small populations of native mammals. After a crash in the numbers of rabbits during a drought, the predator numbers initially drop much less dramatically than the rabbit and remain high putting intense pressure on the small populations of native mammals. (Myer & Parker, in Williams et al, 79). Unlike the rabbit, which can quickly recover from a population crash, native mammals are not such prolific breeders and their numbers increase slowly. They rarely repopulate areas where they have become locally extinct due to isolation.
- 5. Wildlife were often killed by poisons and traps set for rabbits. Rat-kangaroos, tiger-cats and magpies were some of the species inadvertently effected. Goannas, wombats and bandicoots were often directly poisoned as they were perceived as a menace to the farmer (Rolls,173-5).
- 6. Late last century the populations of species plummeted as shooters hired to cull rabbits, also culled wildlife for the pelt trade.



- 7. In South East Australia and South Australia bounties and bonuses were paid for wombats scalps up until 1966, as the wombat was destructive to rabbit proof fences (Rolls, 162-3).



[Endangered species of the arid zone](#)

B. Fauna - Impact on vegetation

1. Due to selective grazing, the rabbit has changed ecosystem composition radically "Biomass and cover are reduced as perennial grasses and shrubs are replaced with annual species and then an

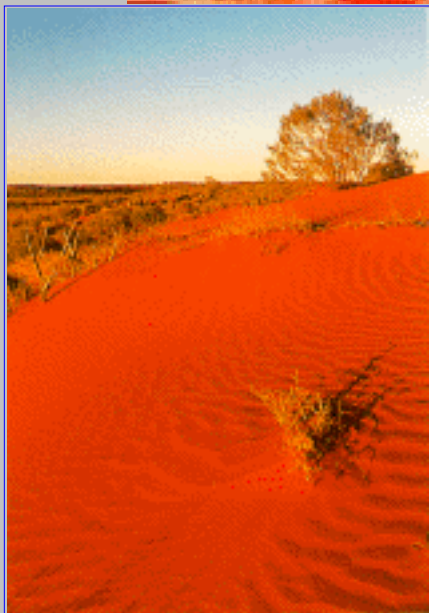
increasing number of unpalatable and woody weeds" (Williams).



Rabbits strip bark from some woody vegetation. The plant will die from complete ringbarking

[click to see another ringbarked tree](#)

2. During drought, rabbits will kill trees and shrubs by ring barking and digging to eat the roots in search of moisture. Hence, rabbits not only control species germination, but the species composition of mature plants thus effecting [biodiversity](#).



C. Soil Erosion

Due to high population numbers, the impact of rabbits prior to the introduction of myxomatosis was immense. In the [semi-arid and arid zones](#) the rabbit continues to degrade the soil by destroying the stability of the soil by the removal of vegetation cover. By denuding the landscape, as rabbits will in droughts, it is leaving the soil highly susceptible to various forms of erosion and loss of fertility. Phillip Island (above and below) has severe erosion problems due to the presence of rabbits.



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