

# Kangaroo Island Koala Management Program

## How and Why

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### The introduction of koalas to Kangaroo Island

Koalas are not native to Kangaroo Island (KI). In the 1920s, 18 koalas from French Island in Victoria were introduced to KI as a response to a decline in koala numbers in the South East of South Australia, due to hunting for the fur trade. This relocation exercise was one of the earliest conservation attempts in Australia.

The introduced koalas were disease-free and thrived in their new habitat in Flinders Chase National Park. By 1948, koalas were frequently observed in the Park. Koalas were also relocated to other areas on the Island, including Cygnet River Valley in the late 1950s and early 1960s. Their numbers have since increased significantly, with the now very large population is placing immense pressure on the limited areas of suitable koala habitat on the Island.

### Koala population on Kangaroo Island

When the Koala Management Program began in 1997 it was estimated there were 5,000 koalas on the Island. However, this estimate was based on koala population surveys in limited areas in

the Cygnet River Valley and Flinders Chase National Park. In 2001, a comprehensive, Island-wide survey revealed that the koala population was actually around 27,000 and more widespread than previously thought. Management was therefore intensified, with a higher number of koalas being captured and sterilised. Some were translocated to the mainland while the remainder released back onto KI. The island-wide survey was repeated in 2006 and the population was found to have declined to approximately 16,000. Ongoing management involving capture and sterilisation is important to maintain a smaller population and ensure that numbers do not increase again.

### Why is it important to manage koalas on Kangaroo Island?

The large koala population has resulted in large areas of Eucalypt (gum) trees dying as a result of overbrowsing. Overbrowsing is the consumption of leaves to such an extent that all foliage is removed from the tree canopy and the tree eventually dies. Koala management is essential to protect the unique environments of Kangaroo Island. The Island has an extremely high conservation value, with large areas of intact native vegetation, a high number of species found only on Kangaroo Island and healthy populations of species rare or threatened on mainland Australia. The Island is also free of feral pests, such as foxes and rabbits, which are widespread on the mainland.

Koala overbrowsing also threatens the survival of the koalas themselves. To date, there is no evidence to suggest that koalas can self-regulate their numbers, as kangaroos do. Without effective management, Kangaroo



Island's koalas may eventually consume all the available food within an area, resulting in their own starvation.

### Impacts of koalas in natural areas

Koalas only feed on certain Eucalypt species and there are only small areas that contain these preferred food trees, thus putting enormous pressure on the habitat. This highly selective browsing represents a significant threat to Kangaroo Island's unique vegetation communities. In particular, koala preference for the regionally-rare Manna Gum has resulted in the loss of Manna Gum in some areas and poor tree health across a broader area.

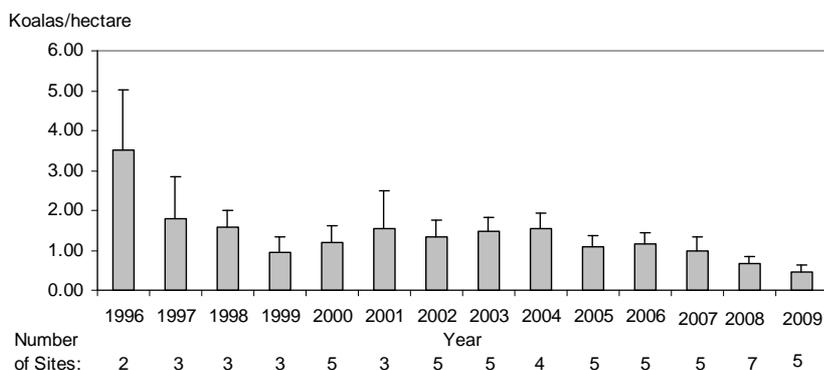
- Rough-barked Manna Gum (*Eucalyptus viminalis ssp. Cygnetensis*)
- SA Blue Gum (*E. leucoxylon*)
- River Red Gum (*E. camaldulensis*)
- Swamp Gum (*E. ovata*)
- Messmate Stringybark (*E. oblique*)
- Brown Stringybark (*E. baxteri*)
- Peppermint Box (*E. odorata*)

These trees also provide important habitat for other native animals and are an important part of the ecosystem.

For example, some bird species, such as the regionally-rare White-naped Honeyeater, are dependent on Rough-barked Manna Gum. This species is at risk of further decline if tree deaths continue. Along creeks and rivers, the loss of trees can also result in erosion of stream banks and sedimentation of waterways. The loss of shade and the changes to ground litter (bark and leaves) can also affect smaller understorey plants and ground-dwelling animals, particularly invertebrates.

### Restoring koala habitat

Habitat restoration involves planting tree seedlings of species from the local area and from the same genetic stock. Seeds are collected from within the local area and propagated on the island. Each year in late autumn and winter, the seedlings are planted to restore overbrowsed habitats. In the last five years, thousands of trees have been planted in riverine areas to replace those lost through koala overbrowsing. The Program also places tree collars on some remnant trees to prevent koalas climbing them and therefore protecting them from overbrowsing.



Koala population density in sites of medium-quality Koala habitat in the Cygnet River Management Unit 1996 – 2009. [Note: desired density is 0.75 koalas/ha]



## Frequently asked questions

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### Could this damage be caused by Cinnamon Fungus *Phytophthora*, rather than koalas?

No. There is a significant amount of evidence to indicate koalas are responsible for damage to a number of Eucalypt species.

Tree deaths were recorded as early as 1965 in at least two isolated areas in Flinders Chase National Park. This was prior to the known introduction of *Phytophthora* onto Kangaroo Island in the late 1970s to early 1980s. In both cases, tree deaths were attributed to high densities of koalas feeding on the trees.

The Koala Management Program has also shown that trees recover when koalas are removed, despite the presence of *Phytophthora*. For example, in one area where *Phytophthora* was present and Manna Gums were dying, koala density was reduced (by translocation) from 12 Koalas/hectare in 1996 to 0.3 Koalas/hectare in 1998. Despite the presence of *Phytophthora* in the area, 32% of the Manna Gum trees improved from poor to good condition within 12 months.

### Does this situation only occur on Kangaroo Island?

No, koalas have reached large numbers and been shown to cause tree deaths in many areas of Victoria where they have been introduced.

### Why not move Koalas from Kangaroo Island to regions in Australia where Koala populations are falling, or to other areas?

DENR only relocates koalas to the south-east of the state, where they once occurred as a natural part of the local ecosystem. Koalas are sterilised before relocation to avoid creating overpopulation problems in their new habitat. However, the number of koalas that can be relocated from Kangaroo Island to this area is limited by the available habitat. Koala densities and habitat condition are monitored in the relocation areas to ensure that the number of koalas released will not damage the local ecosystems.

Releasing Kangaroo Island's koalas into the wild in other states of Australia is not appropriate for a number of reasons, including:

- Koalas in different parts of Australia prefer different types of Eucalypts and many habitat areas are therefore unsuitable.
- Koala numbers in many areas where there is suitable habitat are already high. In fact other regions of southern Australia, such as Gippsland and Mt Eccles in Victoria, are facing similar problems to Kangaroo Island.
- Koalas cannot be relocated to NSW or Qld where koala numbers are declining. The decline in those states is mainly due to habitat loss and disease, so placing more koalas there would just add to the pressure on food resources and available habitat. Koalas in SA are also physically distinct from those in NSW or QLD, being larger with longer hair and better suited to the colder climates than koalas in northern Australia. Thus relocating a larger animal unsuited to the warmer temperatures has animal welfare issues, as well as putting their smaller counterparts at a competitive disadvantage.



## Can more trees be planted?

Kangaroo Island has suffered less land clearance than most other regions in Australia, with approximately 47% of its natural vegetation still intact. Tree planting to restore formerly cleared habitat is an ongoing and valuable activity. However, planting more trees will not solve the problem, as it will just facilitate further expansion of the koala population, and therefore increase the browse pressure. Furthermore, it takes many years for the trees to reach a size that can support koalas. Many of the trees that are dying because of koalas are more than 100 years old.

## What about fencing and metal 'collars' around trees to prevent koalas climbing up them?

Fencing is not feasible on a large scale for a number of reasons, including:

- Fences may exclude native species such as: echidnas, kangaroos, wallabies and possums, as well as stock that rely on the trees and surrounding habitat for survival.
- It is difficult to build fences in riverine environments (where most of the suitable trees grow) when water levels continually change and there is flood damage.
- Fencing koalas out of areas just makes the problem worse elsewhere.

Metal collars around tree trunks are useful for protecting isolated trees but are not feasible in most areas due to overlapping tree canopies which allow koalas to move between trees.

## Additional information

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