

INFORMATION ABOUT KOALAS AT KENNETT RIVER, GREAT OCEAN ROAD, VICTORIA

The following information about the Kennett River koalas was given to me by Lindsay Murnane, Parks Victoria Field officer based at Lorne. Lindsay is in his 50's and has lived in Lorne all his life.

He said that koalas have always been at Kennett River. In his childhood the person who worked at the mill in Kennett River used to bring koalas back from there and release them into trees in his back yard. However, he wasn't sure whether koala numbers had declined in the decades before more were translocated there. Koalas were translocated there from Phillip Island about fifteen years ago, though maybe it was longer. Lindsay wasn't sure how many, not where they were released. He doesn't think there was any monitoring; if so there would be no information about survival rates, nor of the impact on the endemic population.

Lindsay said that there was no evidence of *Chlamydia* and that koala numbers appear to be increasing. There is a community-based group, "Friends of the Park" that undertakes an annual count, walking along the Grey river Rd for a kilometre and counting koalas. Two years ago the count was in the thirties, the following year it was in the sixties and just a few weeks ago the number was again in the sixties. On this day it was wet and windy and it would have been harder to observe koalas, so the number was probably low because of this. Lindsay observed that overbrowsing appears to be an increasing problem.

Apparently there was also an attempt to translocate koalas from Mt Eccles (where over-browsing is also a problem) but those koalas died.

Some observations

The dominant eucalypt on the coastal fringe is *E. viminalis* (manna gum), which is known to be a "primary" koala feed tree. Further inland the dominant eucalypt becomes *E. globulus* (blue gum), known as a "secondary" feed tree. This is the main species around the house at Kennet River.

The difference primary and secondary feed tree species is a fascinating subject. In summary, koalas usually can feed on all trees that are primary feed trees (though often this is also substrate determined –ie only more fertile sites provide habitat of this nature), but need to be much more selective about secondary feed tree species. What determines this selection process is not known, although a particularly family of compounds known as FPC's have been identified as being significant. The levels of FPS's vary species by species and tree by tree (and may also vary over time and season). The higher the amount of FPC's in the foliage the more the animal suffers nausea after browsing.

The koalas are clearly using these habitats differently. In the *E. viminalis* habitat almost every tree has been browsed almost to complete defoliation. Koala numbers appear to be higher in this area, although this impression may be just because koalas are much easier to see in this area. In the *E. globulus* habitat browsing is more patchy,

with some trees being quite severely browse, but rarely to the point of complete defoliation and most trees of this species appear to be hardly browsed, if at all.

Koala numbers in this latter area are still very high in my experience, far higher than any population I have observed in SENSW. The population extends at least several kilometres inland; I observed scats on the road quite frequently until we neared the Grey River picnic area. The habitat changes as you go inland; to a greater diversity of eucalypts and taller, wetter sclerophyll forest. But koalas are still using this type of forest, but perhaps at lower densities. Interestingly the koalas do not appear to be using the *E. viminalis* along the river areas to anything like the extent that they are using this species along the coast.

I didn't observe any evidence of *Chlamydia* in any of the koalas I saw. This is usually manifested as "wet bottom" or weeping eyes when the animal is severely effected by the disease.

Some reflections

A key question is whether this population is endemic, translocated or both. This could be done through DNA analysis. DNA has recently been extracted from koala scats at the University of Western Sydney. The scats need to be collected in dry weather when relatively fresh and the shiny external film (patina –from which to DNA is extracted) is still present. They need to be sprayed carefully with alcohol to preserve the patina. I have collected some samples (though it may have been too wet) and will send it off to the person undertaking this work. However, I think that to get the required information would need more samples and more detailed work would require funding from some source.

If the population (or a significant portion of the population) is endemic then it is very important. There is a high level of genetic diversity within koalas across their range and this population will probably be unique.

The answers to the following questions would be useful:

1. Is there any information about the conservation status of the endemic population before the translocation occurred? In particular, were they *Chlamydia*-free, perhaps because of geographical isolation?
2. How many koalas were translocated? Where were they released? Was any monitoring undertaken to assess survivorship?
3. Is there any evidence of over-browsing episodes in the past?
4. Is there any information about the dispersal of young?
5. Does the heavy browsing of in the heavily-browsed *E. globulus*?

Chris Allen
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