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Kalari - The Natural History of an Urban White Kangaroo words and images by Simon Watharow and Steve McNeil

#### Abstract

The natural wonder of a white kangaroo is a joy to see. So how much chance do they have to survive in a 21st Century landscape? What are the chances threats and management issues we face? Can they reproduce without undue pressure on the mob? Well let's look at the White Kangaroo called Kalari and explore her life as seen through the lenses of a local photographer.

#### Introduction

White animals famously feature in literature, news and mainstream media outlets. They are fashionably sought after as unique and valuable commodities for breeding and represent novelty value for people that work with animals. Some animals are made famous through books like *The White Lions of Timbavati* by Chris McBride.

In Australia we have had many examples of white animals that catch our attention. We have the enigmatic white humpback whale called Migaloo now a 30-year-old father. He is regularly reported in media when he migrates up the eastern coast of Australia each year. White animals fascinate us, mostly because they are unusual but also because of how they manage to defy the principles of evolutionary dynamics and beat the odds.

While researching historical archives a few examples of white kangaroo articles came up in a wide range of now mostly defunct newspapers. First reports appeared in 1868 with anecdotal sightings through the early 1900's.

The prevailing evidence is that white kangaroos have existed for many years. Clearly there is a desire by various parks and zoos to have white kangaroos on display. These attractions always seem to have what we call the 'white tiger phenomena', as visitors are keen to see them. There are several breeding programs in existence to supply white kangaroo species and they are distributed worldwide.

#### So What IS A White Kangaroo

White; can be broken into two groups.

Albinism or albino is a congenital disorder demonstrated physically through a partial or total lack of pigment in the skin, hair and eyes. This is caused by a defect in the enzymes involved in the production of melanin, due to a genetic mutation.

Leucism is seen in animals when part of, or their entire, skin, feathers or scales fail to develop due to a fault in the pigment cells. It can occur in only a patch of body surface (if only a subset are defective). The overall individual therefore shows normal pigmentation of the eyes—dark versus red in albinos.

This unique genetic aspect sometimes crops up in a mob. Genetics plays a role with mobs isolated within small geographic areas with restricted access to a wider gene pool. This higher density potentially means the larger mobs will be more likely to ensure white joeys mature as the mob, due to larger numbers, can divert attempts by dogs or raptors.

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#### The Balagoron Mob

Through social media and a friends tip off, news was passed about a resident Eastern Grey Kangaroo mob in June 2014, particularly a group with a white joey at foot, within an urban environment. To highlight the natural life of this individual we set out to photograph it. This was

done in field durations in their area for two- to four-hour periods, hidden within shrub foliage or resting in long grass. Occasionally other than the usual 80m distance, approaches were allowed by the mob within 20m.

We called this mob 'Balagoron', as it literally means 'kangaroo feeding grounds'. The white kangaroo we named Kalari, which means 'daughter'.

Eastern Grey kangaroos are an open free-ranging and gregarious species. They typically forage mostly on grasses and will range in medium mob sizes in suitable foraging and rest areas. It is estimated that they range in some areas up to 2 to 5km. Mob density can vary, especially within urban or rural environments. A typical mob has dominant males, smaller males, females (who are often pregnant) with young in pouch and at foot, plus a small number of small adults or young kangaroos. Adult females can achieve 50 to 66kg in weight while males can often exceed 90 kg! The larger individual may stand up to 2m tall.

Given the density of housing around the Balagoron mob—the reserve they live on is over 150ha in size this mob seemed content to remain in an area of 25ha, at least during the day. They could move over to join another mob on its 36ha part of the reserve, and both mobs could enter the broader reserve to forage; however, they seemed reluctant to do so. There were roughly 70 members of this mob and they can be loosely grouped together or fragmented into several smaller roaming-sized mobs. Members included six large males, eight smaller males, roughly 10 at-foot joeys, 23 definite females and maybe 10 others of indiscernible sex. Kalari's mob, with a density of 33, consisted of six males, six younger males, 12 females with four at-foot joeys (including Kalari) and five small individuals of indiscernible sex.

The Kalari mob gathered together towards dusk and either congregated presumably where the grazing is freshest or rejoined with another mob. They all seemed to vary in the range and times they became mobile and joined with the entire Balagoron mob. Kalari, like most at-foot joeys, would typically stay close to her mother. She would forage, graze on various grasses and occasionally obtain milk from her mother. She remained very mobile, showing great agility and acceleration.

On the odd occasion, Kalari was joined by a small male kangaroo that was probably last year's joey maybe a brother. They would frolic together, although no real antics were observed beyond that of being close together. One of the dominant males often approached and remained close to Kalari's mother for short periods. I think that I could safely assume that this was Kalari's father.

Kalari followed the lead of the adults when feeling threatened or spooked. Their alert nature, which meant that they always seemed to have at least one kangaroo watching in each direction, helped a lot with maintaining awareness of predators. The area has several resident Wedge-Tailed Eagles constantly seen overhead and on the horizon around the reserve. A naturalist once reported a white kangaroo female with a joey being brought down by two Wedge-Tailed Eagles. This, plus some of the anecdotal historical evidence, proves how vulnerable a white kangaroo can be. Kalari often remained within the centre of the mob. Whether this is due to their awareness of her vulnerability or another reason is largely speculative. It is a tactic that most kangaroos probably employ with the younger members. The mob sometimes will have used another section of the reserve that means a road crossing. While not heavy with traffic it is still a risky proposition. The mob has crossed twice in the 2014/2015 period.

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#### **First Joey**

In the warmer months of 2015/2016 season both authors were occupied heavily with commitments and only the barest of checks were made. But a set of images revealed Kalari looking bulkier than normal. This of course set our tongues wagging on what the joey might be, white or grey? On a monthly check, Kalari was spotted with a joey that was by this time out of pouch. The little one was a joey and a pale grey and not a white colour that was always a possibility. The first shots of the little grey head protruding from Kalari's pouch are a real memorable moment. Clearly everything about Kalari is normal other than her colouration. She was instinctive, observant and demonstrating her motherhood characteristics as do any other females within the Balgaron mob. She was always in attendance with her natural mother, other females and the odd male, likely her partner. The occasional visits saw the joey progress from pouch to the exploring phase of an at foot joey. Two years earlier this is what we saw in Kalari. As of July 2016, Kalari and her first joey are readily mobile and while at foot, the joey is a curious and confident little fellow. However, the mob has fractured into two smaller groups and currently Kalari and around 18 others are in the section where they had to cross the road. A nervous wait might entail till she rejoins the other members and stays away from the road crossing!

#### Kalari's chances

It would be difficult to really understand the likelihood of the eventual predation or survival of a white kangaroo against other members of the mob. Clearly its prestigious uniqueness, while lost on other kangaroos, could make night predation by dogs or foxes a strong possibility due to the high visibility of white in the dark. It's easy visibility from the air by a Wedge-Tailed Eagle would endanger it further. However, this mob's size and alertness does assist Kalari's continued preservation. Currently she is now over two years old with no signs of attempted predation or injuries.

Strangely, perhaps, people may represent the greatest threat to her. Concerns about the attention given to her inadvertently through this article may even provide a flashpoint. The human desire to be aware of, or keep unusual things, does present Kalari with potential hazards from people. Reviewing historical records reveals many incidents of fatal attacks, attempts to capture a white kangaroo for zoos or to obtain a white

skin, and predation by the domestic dog. These threats seem to continue on a much smaller level perhaps except, hunting. The authors know of one white kangaroo skin in a residence within indicating Melbourne, a hunted white roo. The pressure may be mounting over the next generation to perform a cull within the reserve. This may be fraught with difficulties within public community awareness and likely aggressive opposition. One of us has also collected evidence of a road killed white kangaroo.



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Further evidence that the road perhaps is Kalari's greatest danger. Yes, it is a difficult thing, to achieve a safe from harm, exclusion for Kalari. We can enjoy the spectacle within her family unit and monitor as best we can.

Park rangers offer protection through their commitment to keeping these reserves predator free, and also in keeping the human element under supervision with security cameras and trail cams, which are now a feature of the park.

One would hope that the uniqueness of white kangaroos and the fascination they inspire will present an opportunity to create a natural history window into mob life. The interest of the public and rangers has led to an increase in observations within the reserve. The celebrity status of locally known white kangaroos, at Lake Grabine or Bogan Valley for instance, has demonstrated that, for raising the awareness of mobs, twenty-first-century media may in fact be a good tool. The more we have an interest in, and dedicate our attention to, raising such awareness, the more likely we are to achieve long-term goals for urban kangaroos.



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