

# D'harawal

## DREAMING STORIES

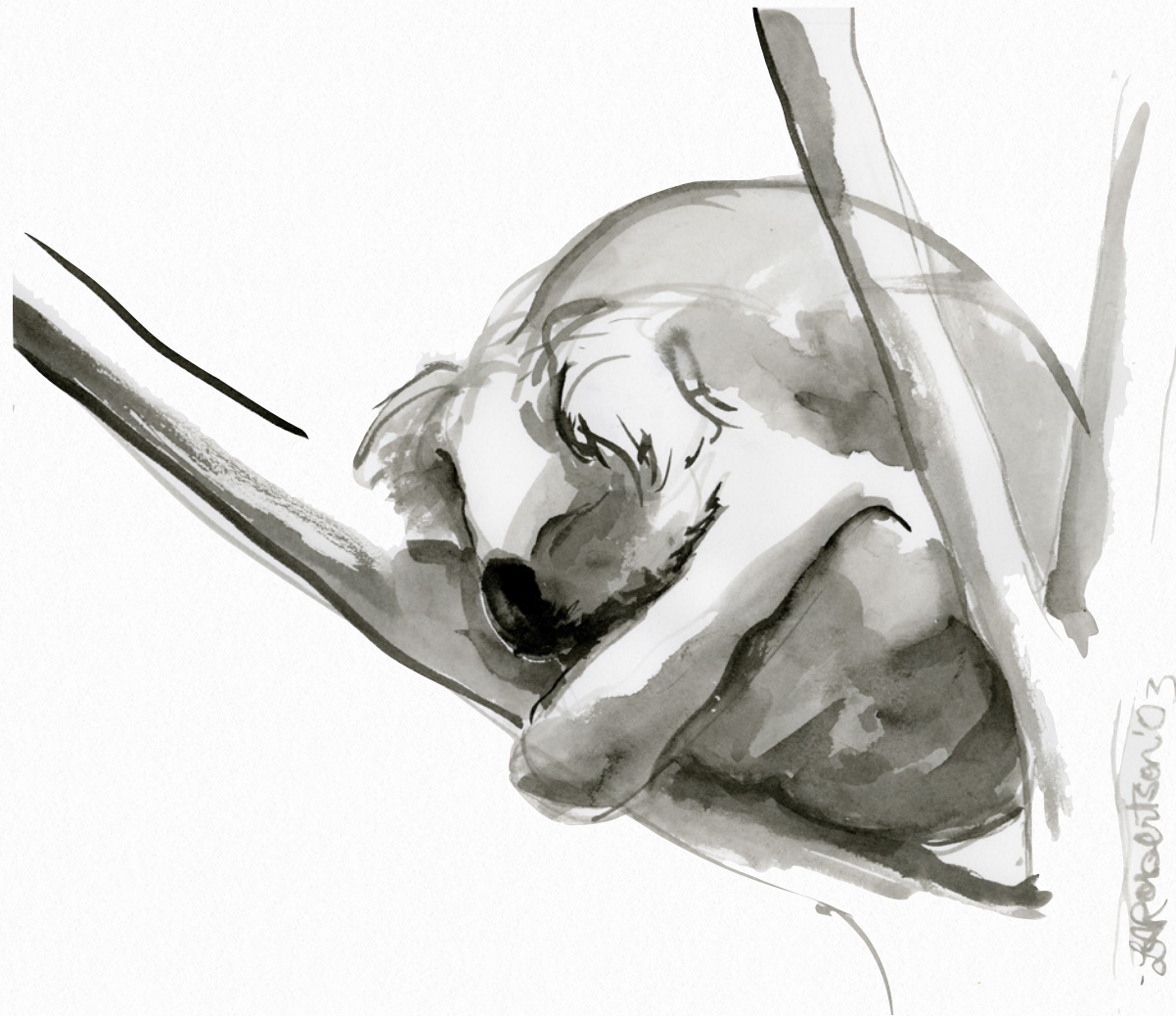
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*Illustrated by Lorraine Robertson*

### Kuwala'ora

### The Koala People



# Foreword

Throughout the past two hundred years, society has come to regard the Koori Dreaming stories as something akin to the fairy stories they were told as children.

However, for thousands upon thousands of years, the stories in this book were used as a teaching tool to impart to the youngest members of the clans the laws which governed the cultural behaviour of clan members. The successive attempts to destroy the Koori culture and assimilate The People into the Euro-centric population were unsuccessful, and the Dreaming Stories were able to continue in their disguise as charming legends where animals became the heroes and the heroines.

Historians and anthropologists have studied the Koori culture since they first arrived on this continent, and have come to the conclusion that the D'harawal culture is dead. Of, course, this has been done without reference to the descendants of that culture, and without even asking the proper questions. The D'harawal culture is not dead, it is a strong, living, vital culture of the Sydney and South Coast regions that just had to go underground for a while to be able to survive. Now that the right questions have been asked, we have the key to unlock a vast wealth of knowledge of this part of the country in which we live.

It is difficult to explain to a society based on commerce fuelled by the profit motive, that D'harawal culture is not based on the ownership of tangible things like land and dwellings and possessions, but it does have a very strong sense of ownership of information. That information, particularly in story form, was not traded, but could be given, and given freely, but its ownership was respected, those stories were not told or passed on by those to whom they had been given, but the knowledge in them was used by the receiver whilst ever they walked in the Land of the D'harawals, This Land.

It is hoped that our present society is now mature enough to be able to accept the Koori Dreaming stories as they were, as they are, and as they were always destined to be; tools to teach the Children of The People about living with Earth, the Mother, in peace and harmony.



Each story contains several layers of knowledge, the first of which are the secrets. Which can only be passed on or discussed with persons of the same level of knowledge or higher than the story teller. These secrets are never told within a legend, but are remembered separately from the legend itself. These are very important components of any legend, and it is the knowledge of the secrets which determines the level of the person's worthiness to ownership of that story.

The next layer of knowledge within the stories was the law, or laws, to be obeyed. The laws of the stories were told and often repeated after the telling of each story, after which the laws were discussed and their application in life demonstrated in a variety of ways.

The third layer of knowledge contained in each story was the lessons which could be learned from the story and the lessons were taught to all members of the group as well as visitors. These lessons introduced Peoples to the means to live in harmony with each other, and the land and its resources.

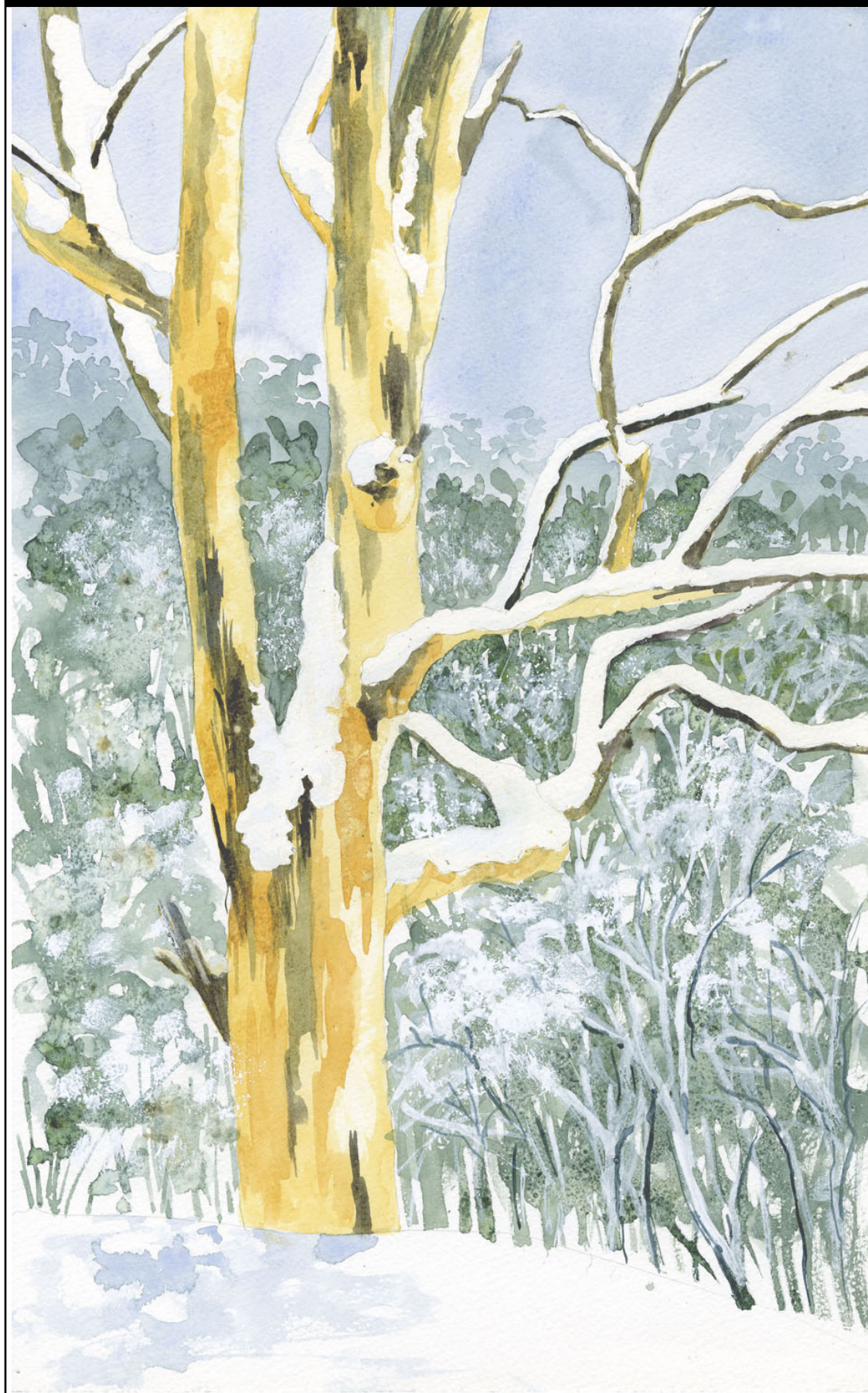
In this series of D'harawal Law Legends, there are many lessons to be learned. The D'harawals believed that children learned better and more quickly when they were encouraged to work through a problem, rather than be told the answer. By sharing the stories of our ancestors with you, it is hoped that not only will you recognise and learn the lessons and laws of the Peoples of This Land, but you will also come to understand and respect the culture of The People and our feelings and relationship with the land.

The stories do not in themselves act as an instruction manual - rather they point the way and encourage The People to think, to learn and to live. It is hoped that by sharing our stories, you too may be able to think, to learn and to live in This Land.

With understanding and respect for each other we can learn to more easily share This Land and live together in peace and harmony.

*Frances Bodkin*





# Kuwala'ora

## The Koala people

It was a time of great cold, when the snow remained on the ground over the lives of many grandmothers. Even the oldest of the D'harawals could not remember a time when there was no snow covering the ground Food was scarce, and because this was also the time before the D'harawals had learned to carry fire, water was also very scarce.



The D'harawal clans called a meeting to which all came, despite the hardship. All, that is, except the Kuwala clan.

The knowledgeholders were concerned that the Kuwalas had not come to the meeting and sent a messenger to the clan requesting that they attend the meeting. The messenger, a young warrior who had a wife and two young children, entered the Kuwala Clan's lands and delivered the message.

He noticed the beautiful, warm cloaks that all the Kuwalas wore, and that they did not appear to be suffering from lack of food or from the cold. The Kuwalas were quite contemptuous of the other D'harawal clans and refused the invitation, sending the messenger back to the gathering of the clans, telling them that they had no interest in disturbing their comfort to come to a meeting to help solve another's problems. The Knowledgeholders were quite concerned at this lack of politeness of the Kuwalas, and sent the messenger back to his wife and children whilst they considered the problem.

The messenger got back to his camp to find his wife crying over the body of one of his children, and the other child very ill. With tears freezing on his cheeks he gently touched the dead body of his young child, then he farewelled his wife, and told her that he would return.





The Kuwala man just turned away, refusing even to speak to the young warrior. Enraged with concern for his child, he swung his club and hit the Kuwala man, then took his cloak and returned to his camp where he quickly wrapped his child in it.

Although the warrior's child recovered, the Kuwala man, unconscious in the snow, and without his warm cloak, froze to death.

He travelled back to the Kuwala encampment, and approached one of the men, requesting that he exchange his Coolamon for carrying water and food, for the Kuwala's warm cloak.

The Kuwala looked at the Coolamon and burst out laughing, saying that he had no use for it. The messenger explained that he needed the cloak for his child who was dying, and that he had already lost one child.







The noise of the slaughter awakened the other clans at the meeting, and grabbing their spears, the warriors ran to the melee. A terrible fight ensued, and although the Kuwalas were fewer in number, they were much stronger.

At sunrise, the Kuwalas withdrew and returned to their own lands, leaving their dead behind.

The other clans saw the beautiful, warm cloaks of the dead Kuwalas, but there was not enough for all, so the young men decided to hunt down the Kuwalas and steal their cloaks. They entered the Kuwala encampment where clan members were sleeping, and began to kill, not only the men, but also the women and children, and take their cloaks.

The next full moon, the surviving Kuwala men returned to the meeting place and this time slew many sleeping men, women and children.



The other members of the Kuwala clan found their brother's body, and saw the Coolamon laying nearby. The markings on the coolamon identified the young warrior's clan, and the Kuwalas formed a war party and made their way to the meeting place.

During the night of the full moon, they killed all of the young warrior's clan, including his wife and remaining child, and took their coolamons as trophies.



The Knowledgeholders, concerned that the war could result in the extermination of whole clans, pleaded for help from their Spirit Woman. The Spirit Woman looked down on This Land and saw the terrible carnage that had taken place, and she appeared to the Knowledgeholders, asking them what had happened.

To the best of their knowledge, they told her what had caused the fighting. Then she went to the Kuwala clan and asked them what had happened. The Kuwalas were very angry, saying that the others had started the war, not them, and therefore they were the ones who should be punished.

This made the Spirit Woman very angry. "It was your selfishness which started the war." She accused them. "Had you agreed to help the other clans, this war would not have begun."

But, as the members of the other clans began to heave a sigh of relief, she turned to them. "Not all the fault lies with the Kuwala clan." She told them. "Rather than seeking the reason for the attack, you sought only revenge. Your actions continued the war."



She then bestowed her punishment upon the participants in the war.

For the other clans, she commanded that they must always treat the Kuwalas as brothers and sisters, and care for them as family. To the Kuwalas she gave the command that they were never again allowed to eat on the ground, that they were only to eat the food provided by the Boo'angi and the Bai'ayli, and were to live only in the tree tops. To help them she turned their feet and hands into claws to enable them to climb the trees more easily.

She thought a while, then placed an additional punishment on all D'harawals.

They were never to carry water in their coolamons again. This meant that the Kuwala clan had to come down from the trees to drink, and the other clans had to follow the rivers and the creeks when travelling across This Land.

She then returned to her home, and shortly afterwards the snow began to melt and the first wattle began to bloom.

**That is why, when the Kuwalas walk upon the ground, they leave a thumb print, to remind the D'harawals that they are another of The Peoples, and must never be killed.**





# Some information about kuwala, the koala

The koala is a small bear-like, tree-dwelling, herbivorous marsupial which averages about 9kg (20lb) in weight. Its fur is thick and usually ash grey with a tinge of brown in places.

The koala gets its name from an ancient Aboriginal word meaning "no drink" because it receives over 90% of its hydration from the Eucalyptus leaves (also known as gum leaves) it eats, and only drinks when ill or times when there is not enough moisture in the leaves. ie during droughts etc.

The koala is the only mammal, other than the Greater Glider and Ringtail Possum, which can survive on a diet of eucalyptus leaves.

## Habitat & Diet

'Habitat' refers to the types of bushland that koalas like to live in. They are found in a range of habitats, from coastal islands and tall eucalypt forests to low woodlands inland.

Koalas today are found in Queensland , New South Wales , Victoria and South Australia . Their range extends from the Atherton Tableland west of Cairns in Qld to islands off the coast of Victoria and South Australia in the south, and west to central and western Qld, NSW and Victoria.

Koalas live in societies, just like humans, so they need to be able to come into contact with other koalas. It is because of this they need to have areas of suitable eucalypt forest which are large enough to support a healthy koala population and to allow for expansion by maturing young koalas. Koalas are highly territorial and in stable breeding groups, individual members of koala society maintain their own "home range" areas.

A 'home range' consists of a number of 'home range trees' and 'food trees' which comprise the long-term territory of the individual koala.

These trees provide the koala with food, shelter and places for social contact which will support it for the term of its natural life (assuming there is no habitat clearing).

A home range varies in size depending on the habitat quality of bushland. Habitat quality can be measured in terms of the density of key food trees. "Home range trees" define the boundaries of the individual koala's home range and can be likened to surveyors pegs marking the extent of a property. They are not always apparent to the human eye, but koalas can tell whether a tree 'belongs' to another koala or not. Within a socially stable group, the home ranges of individual koalas overlap with those of their neighbours. It is in the shared, overlapping trees that the majority of social interaction takes place. These are very important trees.

Koala populations only occur if suitable habitat is available and because Koala's are very fussy eaters and have strong preferences for different types of gumleaves, then the most important factor which make habitats suitable are the presence of tree species preferred by koalas (usually eucalypts, but also some non-eucalypts) growing in particular associations on suitable soils with adequate rainfall.

Research has shown that socially stable koala populations occur only when there are favourite tree species present. Even if a selection of tree species known to be used by koalas occurs within an area, the koala population will not use it unless one or two favourite species are available.

In Australia there are over 600 types of eucalypts, but koalas will only eat 40-50 varieties with only about 10 being preferred. Within a particular area, as few as one, and generally no more than two or three species of eucalypt will be regularly browsed while a variety of other species, including some non-eucalypts, appear to be browsed occasionally or used for just sitting or sleeping in.

Different species of eucalypts grow in different parts of Australia, so a koala in Victoria would have a very different diet from one in Queensland. Koalas like a change, too, and sometimes they will eat from other trees such as wattle or tea tree. Eucalyptus leaves are very fibrous and low in nutrition, and to most animals are extremely poisonous. To cope with such a diet, nature has equipped koalas with specialised adaptations. A very slow metabolic rate allows koalas to retain food within their digestive system for a relatively long period of time, maximising the amount of energy able to be extracted. At the same time, this slow metabolic rate minimises energy requirements and they will sleep for up to 18 hours per day in order to conserve energy.

Each koala eats approximately 200 to 500 grams of leaves per day. The teeth are adapted to deal with for this. The sharp front incisors nip the leaves from the branches and the molars(back teeth) are shaped to allow the koala to cut and shear the leaves rather than just crush them. A gap between the incisors and the molars, called a 'diastema', allows the tongue to move the mass of leaves around the mouth efficiently.

## Physiology

The Koala is well suited to life in the trees. The koala has an excellent sense of balance and its body is lean and muscular and its quite long, strong limbs support its weight when climbing. The arms and legs are nearly equal in length and the koala's climbing strength comes from the thigh muscle joining the shin much lower than in other animals.

Its paws are especially adapted for gripping and climbing with rough pads on the palms and soles helping it to grip tree trunks and branches. Both front and hind paws have long sharp claws and each paw has five digits. On the front paw, two fingers are opposed to the other three, rather like a human's thumb, so they are able to be moved in opposition to the fingers. This allows the koala to grip more securely. On the hind paw, there is no claw on the big toe, and the second and third toes are fused together to form a 'grooming claw'.

Koalas have a thick woolly fur which protects them from both high and low temperatures. It also acts like a 'raincoat' to repel moisture when it rains. The fur varies in colour from light grey to brown, with patches of white on the chest and neck, inside arms and legs and inside the ears. Mature males are recognisable by the brown 'scent gland' in the centre of their white chest.

The fur on the koala's bottom is densely packed to provide a 'cushion' for the hard branches it sits on, and has a 'speckled' appearance which makes koalas hard to spot from the ground.

An adult male koala can weigh between 8 and 14 kilograms and a female between 6 and 11 kilograms, with the heavier animals coming from the southern areas where they have adapted to the colder climate by an increase in body weight and thicker fur. If you see Koalas in Queensland, they look noticeably smaller than Koalas from Victoria.

Koalas are mostly nocturnal animals and they are most active during the night and at dawn and dusk. This is because in the cooler hours they are less likely to lose precious moisture and energy than they would during the hotter daylight hours. An average of eighteen to twenty hours each day are spent resting and sleeping, and the remainder for feeding, moving around, grooming and social interaction.

The Koala's nose is one of its most important features, and it has a very highly developed sense of smell. This is necessary to differentiate between types of gum leaves and to detect whether the leaves are poisonous or not.

The Koala's digestive system is especially adapted to detoxify the poisonous chemicals in the leaves. The toxins are thought to be produced by the gum trees as a protection against leaf-eating animals like insects. Trees which grow on less fertile soils seem to have more toxins than those growing on good soils. This could be one reason why koalas will eat only certain types of eucalypts, and why they will sometimes even avoid them when they are growing on certain soils.



## **Climbing trees**

When approaching a tree to climb, koalas spring from the ground and catch their front claws in the bark, then bound upwards. Claw marks are usually visible on the trunks of trees regularly used as home trees by koalas.

In the safety of their home trees, koalas assume a wide variety of sitting and sleeping postures, and they will move around the tree during the day and night to catch the sun or the breezes. On hot days it is common to see them with limbs dangling in an effort to keep cool, and during colder times, curled up in a ball to conserve body heat.

When descending a tree, koalas come down bottom first. They regularly descend to the ground to change trees, and it is there that they are most vulnerable to predators such as dogs, foxes and dingoes, and also to the risk of injury or death from cars. They walk with an awkward-looking gait and can also run. Koalas have sometimes been observed swimming, but this is not a regular occurrence.

## **Communication**

Koalas use a range of sounds to communicate with one another over relatively large distances.

There is a deep grunting bellow which the male uses to signify its social and physical position. Males save fighting energy by bellowing their dominance and they also bellow to allow other animals to accurately locate the position of the caller.

Females do not bellow as often as males, but their calls too are used to express aggression as well as being part of sexual behaviour, often giving the impression of fighting.

Mothers and babies make soft clicking, squeaking sounds and gentle humming or murmuring sounds to one another, as well as gentle grunts to signal displeasure or annoyance.

All koalas share one common call which is elicited by fear. It is a sickening cry like a baby screaming and is made by animals under stress. It is often accompanied by shaking.

Koalas also communicate by marking their trees with their scent.

## **Breeding**

The main characteristics of marsupials which differentiate them from other mammals is that they give birth to immature young which then develop further in a pouch. The word 'marsupial' comes from the Latin word marsupium, meaning 'pouch.' Most, but not all marsupials have a pouch in which to raise their young.

The breeding season for koalas runs roughly from September to March. This is a time of increased activity, and sound levels increase as males bellow more frequently. This is also when the young from the previous year are weaning from their mothers.

Females generally start breeding at about three or four years of age and usually produce only one offspring each year. However, not all females in a wild population will breed each year. Some produce offspring only every two or three years, depending on factors such as the age of the female and the quality of its habitat. In the average female's life span of about twelve years, this means that one female may produce only 5 or 6 offspring over her lifetime.

Once a female has conceived, it is only 34-36 days before the birth of the new baby, called a "joey". The tiny baby which is roughly 2 centimetres long and weighs less than 1 gram, looks rather like a pink jellybean as it is totally hairless, blind and has no ears.

The joey makes its way from the birth canal to the pouch completely unaided, relying on its already well-developed senses of smell and touch, strong forelimbs and claws and an amazing sense of direction. Once inside the safety of the pouch, it attaches itself to one of the two teats, which swells to fill its mouth. This prevents the joey from being dislodged from its source of food. The mother contracts her strong sphincter muscle at the pouch opening to prevent the baby from falling out.

The young koala drinks only mother's milk for the first six to seven months and remains in the pouch for that time, slowly growing and developing eyes, ears, fur etc. At about 22 weeks, its eyes open and it begins to peep out of the pouch. From about 22 to 30 weeks, it begins to feed upon a substance called "pap" which the mother produces in addition to milk. Pap is a specialised form of faeces, or droppings, which forms an important part of the young koala's diet, allowing it to make the transition from milk to eucalyptus leaves, rather like a human baby is fed "mushy" food when it starts to eat solids. Pap is soft and runny and thought to come from the caecum (a blind ended pouch at the junction of the small and large intestines). It allows the mother to pass on micro-organisms present in her own digestive system which are essential to the digestion of eucalyptus leaves. It is also a rich source of protein.

The joey leans out of the pouch opening on the centre of the mother's abdomen to feed on the pap, stretching it open towards the source of the pap. The baby feeds regularly on the pap and as it grows it emerges totally from the pouch and lies on its mother's belly to feed. Eventually it begins to feed upon fresh leaves as it rides on her back. The young koala continues to take milk from its mother until it is about a year old, but as it can no longer fit in the pouch, the mother's teat elongates to protrude from the pouch opening. Young koalas remain with their mothers until the appearance outside the pouch of the next season's joey. It is then time for the previous year's joey to wean and find its own home range. If a female does not reproduce each year, the joey stays with her longer and has a greater chance of survival when it does leave its mother.

Females generally live longer than males as the males are more often injured during fights, they tend to travel longer distances with the resulting increase in risks such as cars and dogs, and they more often occupy poorer habitat. Putting a life span on the average koala can be misleading because some survive only for a period of weeks or months, while others survive to old age. Koalas living in an undisturbed habitat would have a greater life expectancy than those living in suburbia. Some estimates for the average life-span of an adult wild male koala are ten years, but the average survival rate for a dispersing sub-adult male living near a highway or a housing estate is closer to two or three years.

There are always some transient animals who hang around the edges of stable groups. They are usually young males and will often drift between breeding aggregations waiting for an opportunity to become a permanent resident.

## Threats

Since European settlement, approximately 80% of Australia's eucalypt forests have been decimated. Of the remaining 20% almost none is protected and most occurs on privately-owned land.

Settlers favoured the rich fertile lands along the eastern seaboard to have their farms and urban developments. Unfortunately, this is where the majority of koalas are already living because they also like to live in trees which are growing in fertile soils.

The main causes of loss of habitat include:

### LAND CLEARING

Clearing of the land for expansion of human settlement eg:- agriculture, housing, mining, forestry, factories and roads.



The results of this would include:- Loss of habitat, increased disturbance by humans, injury or death from traffic, injury or death from dogs and cats, effects of garden pesticides getting into waterways, increased competition for food and territory because of overcrowding, increased stress on animals, making them more susceptible to disease. It has also been documented that over 4000 koalas are killed each year by dogs and cars. It is easy to see that the biggest threat to the Koala population is the human.

#### BUSHFIRES

Koala populations in fragmented areas of bushland are at great risk of localised extinction from a single fire which may wipe out an entire habitat. Bushfires are extremely common in the Summer months.

#### DIEBACK

Changes in the balance of the ecosystem can lead to dieback of trees. The cutting back of the original vast forests has created patches of forest separated from each other by treeless land. Small, isolated patches of forest are prone to dieback. Dieback is a general term for the gradual dying of trees due to factors such as land degradation, leaching of soil nutrients, changes in the composition of vegetation communities, rising water levels underground, salination of the soil, erosion caused by wind and water, exposure to weather and excessive defoliation (or loss of leaves).

The underlying cause of all these factors appears to be the clearing and disturbance of forests. Seventy five percent of the main koala food tree species are declining in numbers as a result of this.

#### OTHER THREATS

Today the natural predators of the koala do not make a significant impact on wild populations. They include goannas dingoes, powerful owls, wedge-tailed eagles, and pythons, all of which are most likely to prey upon juvenile koalas.

Feral animals are another threat koalas have had to face since European settlement. Foxes have been blamed for preying upon young koalas when their mother descends to the ground to change trees, and large feral cats may also be a problem for young koalas.

Long droughts also have an effect on the Koala population

#### DISEASE

Disease is part of the natural history of the koala. There are 4 common koala diseases caused by the chlamydia organism: conjunctivitis which can cause blindness, pneumonia, urinary tract infections and reproductive tract infections, which can cause female infertility. The symptoms of chlamydia manifest as sore eyes, chest infections, and "wet bottom" or "dirty tail". Different strains of chlamydia bacteria are thought to cause these diseases. In 1995, scientists isolated two strains called chlamydia pecorum and chlamydia pneumoniae.

Scientists now believe that the chlamydia organism has been occurring amongst koala populations for many years, and has acted as a natural population control in times of stress. The organism is harmless in populations with unlimited resources, but manifests in times of stress, such as happens when habitat is reduced. The weaker animals succumb to the disease, become sick, infertile or die, leaving the genetically stronger animals to continue breeding. In disease-free populations which have been moved to areas where they were not native or where there is not enough habitat to support them (such as on some islands off Victoria and Kangaroo Island in South Australia), problems with overpopulation have arisen because of this unnatural situation. However, this is not the case in most mainland populations, and indeed many of the mainland colonies are in decline. Koalas also suffer from a range of cancers like leukemia and skin cancers.