

D'harawal

DREAMING STORIES

Frances Bodkin
Gawaian Bodkin-Andrews

Yandel'ora

The Land of Peace Between Peoples



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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

Yandel'ora

The Land of Peace Between Peoples

A very long time ago, all the Peoples and all the animals spoke the same language.

And whenever the three sisters in the sky danced in a straight line, everyone would come together to meet and have a great Bunya, a festival to celebrate their friendship.

At these great festivals, disputes would be settled, marriages would be arranged, and most importantly of all, laws would be made for all to obey.

In those days, each nation would take turn to host these great Bunyas, and on this occasion, it was Wiritjiribin, the Lyrebird, who had issued the invitations.

Peoples came from everywhere, Duluma, the Crocodile, made his way down from the salty rivers of the north, and the bad tempered Djunguwaragal, the Devil Dog, trudged through the forests from the south.

The ever playful Garal'ga, the black Cockatoos made a wonderful game out of their long journey over the mountains, Bittoorong'burrin, the great red kangaroos bounded their way in from the west, while Kulun'aga, the finches, and Bullabulla the butterflies played hide and seek during their journeys.

All the clans of all the Peoples of This Land came together and chose their camping areas.

Some were marked with carved trees, some with piles of rocks, some were marked by special plants brought in from their own homelands. But all made their home here for the time of the great Bunya.

Wiritjiribin, the lyrebird, who was the host, chose the highest spot to enable him to watch over his guests and to ensure their comfort.

However, one of the guests was Gilinga, the Toad. He was a very handsome creature who had the most beautiful voice of all creatures in This Land. But Gilinga was a very conceited person.

He was only proud of his good looks, and therefore liked to camp beside still waters so that he could admire his reflection on the surface of the water, but he was even prouder of his voice.

He liked to sit beside the water and sing so that every creature who came to drink could hear his voice and be envious of him.

But this time, the Peoples were so excited about meeting each other, that they did not stop their conversations with each other to listen to Gilinga sing. Nor did they stop to tell him how handsome he was.

He became very upset, and looked into the water, just to reassure himself that he was still as handsome as ever. And as he stared at the reflection of himself, he devised a plan to get even with those who did not stop to admire his good looks or his fine voice.

Gilinga hid himself amongst the reeds beside the pond and waited until the first of The Peoples came down to drink. Gilinga watched, concealed amongst the reeds as Kookaburra and his friend Wombat, chatted happily beside the pond as they occasionally stooped to drink the water. "Isn't it a pity that Kookaburra is so greedy that he would rather feed himself, than look after his children?" Gilinga said, using the voice of Wallaroo.

Kookaburra and Wombat stopped their chatting and listened to the cruel words. "Yes, and just look at that fat, lazy Wombat." Said Gilinga in the voice of Muru'duwin, the Silver Eye.

Kookaburra and Wombat departed the pond, silent, and deeply hurt by the remarks they thought were made by Peoples whom they considered to be their friends.

Then, down to the pond came Burra, the Kangaroo, and Didijiri, the Willy Wagtail. "That Didijiri thinks he is so handsome with his black and white cloak, but he just looks silly."

Kangaroo drew in his breath, he knew that Didijiri was very proud of his cloak which he always kept so clean, but he was not at all conceited.

Burra, the Kangaroo was about to comfort his friend when Gilinga spoke again, this time with the voice of Gaya'dari the Platypus. "Burra is so dumb. He couldn't find his way home even in daylight unless he had help."

Now, Burra, the Kangaroo was very proud of his travelling ability, and of his ability to find his home, no matter how far he had travelled, and to hear his friend Gaya'dari say something like that hurt him deeply.

Didijiri the Willy Wagtail, and Burra, the Kangaroo, returned to their camp, their hearts heavy with sadness.

And down to the waterhole came Wangali the Bandicoot, with Naga the honey bee; Wagal the blackfish with Mara'yan, the spider; Yuran'yi the duck, with Bilima the turtle; Magudun the blue tongue lizard, the Kai'ray the bush turkey, and many others, and each overhearing one of their friends saying terrible things about them.

Naturally, when they returned to the camping place, they began to argue with their former friends, until Wiritjiribin, the Lyrebird realised that something was very, very wrong.

He went to where Kookaburra and Wallaroo were arguing and asked them what had happened. Kookaburra said that he had gone to the waterhole with Wombat and overheard Wallaroo and Muru'duwin the Silver eye talking about him.

Lyrebird then went to where Kangaroo and Gaya'dari were wrestling on the ground, and asked them what happened. Burra and Gaya'dari stopped fighting each other long enough to explain to Lyrebird that they had gone down to the waterhole and overheard the other saying hurtful things about them.

One by one, Lyrebird went to all the Peoples and asked them what had happened.

And the answer that he received each time was that they had gone down to the waterhole to have a drink, and that was where they had heard the hurtful things said.

Lyrebird gathered all the Peoples around him, and asked them to come down to the waterhole with him, but to hide and be very quiet. There, Lyrebird bent over the water as if he was having a drink, and he heard the voice of his best friend, Dil'bung, the Golden Finch. "I cannot imagine why the Lyrebird should be so proud of that stupid tail of his. It is dull and has no colour." Now, everybody knows that Lyrebird's tail is the way it is because of the first fire.

All the Peoples drew breath, because the Golden Finch was standing amongst them, and had not said a word.

Managa, the Eagle, whose sight was better than anyone's swooped down into the reeds and brought out the struggling Gilinga and dropped him at the feet of Wiritjiribin.

All the Peoples began to beat Gilinga, until he was black and blue, but Lyrebird stopped them, and explained to them that they were doing exactly what Gilinga had wanted them to do.

They were learning to hate each other.

Meanwhile, all this fuss and bother had awakened the Spirit Woman, who was resting nearby, and saw all her Peoples fighting each other. However, by the time she had reached the waterhole, Wiritjiribin, the Lyrebird had made the peace. But she was very angry at having been awakened unnecessarily.

She punished Gilinga for his deception by taking away his handsome looks, and making him the ugliest creature in This Land. And because he had used his beautiful voice to make trouble, she took it away, too, so that all he could do was croak.

The Peoples were happy at this punishment for Gilinga, and cheered.

Now, the Spirit Woman was in a VERY BAD temper. She turned to all the People, and told them of her disgust with them. “Of all of you, only Lyrebird sought the Truths. And because you disregarded your obligation to seek the Three Truths, I am going to take from you your ability to speak to each other. In future, you will no longer understand what the others have to say.”

Then she turned to Wiritjiribin. “Because you sought the Truths, and made the peace, I give to you the ability to speak all languages. Lyrebird will be known as the Peacemaker, and This Land, in which he lives, will be the Land of Peace Between Peoples.”

That is why all The Peoples come to This Land to make their laws and to settle disputes.

And that is why only the Lyrebird can speak all languages.

The Law of the Story of the Land of Peace Between Peoples:

One must always seek the Three Truths in everything one does.

Information about the animals in the story:

Bilima **bill-lee-mah**

Eastern Snake-necked Turtle

Chelodina longicollis

The Eastern Snake-necked Turtle lives in freshwater environments and feeds on aquatic invertebrates, tadpoles and small fishes.

It is also known as the Long-necked Tortoise because this turtle has a long neck, which is usually about half the length of its carapace (shell). It is 26cm long and has webbed feet used for swimming and digging. The colour of the carapace varies through shades of brown. The Eastern Snake-necked Turtle lives in freshwater habitats including wetlands and most of the turtle's time is spent in the water, but it can make overland movements in search of new waterholes and nesting areas. It feeds on aquatic invertebrates, tadpoles and small fishes. Another common name is 'stinker' - the Eastern Snake-necked Turtle can eject pungent liquid gland secretions from its 'armpits' and groin when handled or disturbed.

In summer, female Eastern Snake-necked Turtles dig holes in sand or in soft sediments along stream banks and lay about ten eggs which can occasionally provide a meal for Water-rats and lizards. Hatchlings are eaten by fish and birds, and adults may be killed by cars while moving overland.

<http://australianmuseum.net.au/Eastern-Snake-necked-Turtle/#sthash.Qm1QVYsC.dpuf>

Bittoorong'burrn **bit-too-rong-buh-rahn**

Red Kangaroo

Macropus rufus

The Red Kangaroo is an iconic Australian animal of the arid zone and is the largest living marsupial in the world. It is a large kangaroo with a body length of up to 1.4m and tail up to 1m. Males tend to be orange red in colouring while females are often blue grey. Both males and females are a lighter whitish colour underneath. Red Kangaroos can be distinguished from other species of kangaroos by the black and white patches on their cheeks and the broad white stripe that extends from the corner of the mouth to ear. Male Red Kangaroos are double the body weight of females and can weigh up to 92kg while the females can weigh up to 39kg.

They are found throughout the semi-arid and arid regions of mainland Australia and prefers sparsely wooded or open plains, grassland, shrubland, desert, woodland and open forest, and are most common in open savanna woodland.

Red Kangaroos are herbivores, primarily grazing on grasses but also eat forbs and leaves of shrubs. The Red Kangaroo has the ability to survive when water is scarce. The herbage and foliage that the Kangaroo eats provides them with their water needs as well as their nutritional requirements. In times of drought, Red Kangaroo populations can suffer as their food supplies diminish.

The abundance of food is a determining factor in the Red Kangaroo life cycle - reproduction is very sensitive to environmental conditions. The Red Kangaroo breeds all year round, however spring and summer tend to be times when most young are born. The females have the unique ability to delay birth of their baby until their previous Joey has left the pouch. This is called embryonic diapause. Females have one baby at a time, which at birth is the size of a jellybean. The infant immediately climbs into its mother's pouch and the gestation period is around 33 days. Until they reach about eight months of age, threatened young kangaroos, called joeys, will quickly dive for the safety of mom's pouch. As they grow, joeys' heads and feet can often be seen hanging out of the pouch. The young Joey will permanently leave the pouch at around 235 days old, but will continue to suckle until it reaches 12 months of age.

<http://australianmuseum.net.au/Red-Kangaroo/#sthash.4XVqpKel.dpuf>

Bullabulla **boo-lah-boo-lah**

butterflies

Some examples of butterflies of the D'harawal area:

Common Imperial Blue Butterfly

Jalmenus evagoras

Butterflies in the family *Lycaenidae* are known as 'the blues' and some species are famous for their relationships with ants.

The Imperial Blue Butterfly has a tail on the base of each hind wing. While resting, the tails blow in the wind and look like antennae. This may fool predators into attacking the more dispensable tails, rather than the head, of the butterfly. Average size: 4 cm.

The Common Imperial Blue Butterfly lives in urban areas, forests and woodlands, heath.

Ants swarm and surround the caterpillars of the Common Imperial Blue Butterfly, eating the honeydew they produce and, in return for their sweet treat, the ants guard the caterpillars and keep predators away. The black caterpillars are usually found feeding on acacias. The best way to find the caterpillars is to follow the trail of ants along the branches of one of these plants.

Australian Painted Lady (Blue Spotted Painted Lady)

Vanessa kershawi

The Australian Painted Lady Butterfly has pale brown underwings and a delicate pattern of orange and brown on the upper wings, with tiny blue eyespots on the hind wings. The larvae are brown and spiky with a pale yellow stripe along each side. Average size: 6 cm, lives in urban areas.

'Painted ladies', as a group, have a reputation for their mass migrations. Australian Painted Ladies in New South Wales migrate in great numbers in spring, moving on a front that extends for about 580 km inland from the coast. This migration can continue for up to eight weeks, with the main movement being in a south to south-westerly direction.

The caterpillars of the Australian Painted Lady feed on native everlastings and other daisies, as well as the introduced Capeweed (*Arctotheca calendula*), Scotch Thistle (*Onopordum acanthium*) and Lavender (*Lavendula officinalis*).

Blue Triangle Butterfly

Graphium sarpedon choredon

The Blue Triangle Butterfly is an active butterfly moving quickly from flower to flower.

Commonly seen in Sydney gardens, the Blue Triangle Butterfly's triangular-shaped wings are vibrant turquoise-blue with black around the margins. Average size: 6.6-7.5 cm.

The Blue Triangle Butterfly is found in Eastern Australia, from Torres Strait and Cape York in Queensland to about 160 km south of Sydney. It is found in urban areas, forests and woodlands. Although preferring moist rainforest habitats, this species has survived well in Sydney's suburbs.

The caterpillars of the Blue Triangle Butterfly have adapted to feed on a variety of plants including the introduced Camphor Laurel (*Cinnamomum camphora*). The green Blue Triangle Butterfly larvae rest on the upperside of the leaves and can be difficult to see. If the plant is disturbed, you are more likely to smell them before you see them. Many caterpillars in this family (*Papilionidae*) have an 'osmeterium', which looks like a fleshy horn that pops up from a slit behind their head and emits a strong smell. In this species the osmeterium is yellow, but in other species it may be red.

Common Brown Butterfly

Satyrinae Heteronympha merope

The Common Brown Butterfly is active in spring and summer when there is sunshine and plenty of flowers to feed on. Average size: 5.6 cm - 6.5 cm.

The Common Brown Butterfly is found in south-eastern Queensland, New South Wales, Victoria, Western Australia, and Tasmania. It lives in urban areas, forests and woodlands.

Mating in the Common Brown Butterfly occurs during October or November and the males die shortly after. Females live for three months or more, waiting for the heat of summer to pass and the grass to grow before laying their eggs in early March. They lay their eggs directly onto several introduced and native grass species to ensure an immediate food supply when the larvae emerge.

<http://australianmuseum.net.au/>

Bunya Bah-nyah

1. festival

2. Bunya pine tree

Araucaria bidwillii

Araucaria bidwillii is a tall tree growing 30-45 metres in height, with a straight, rough-barked trunk, and a very distinctive symmetrical, dome-shaped crown. It is an emergent species in subtropical rainforest. The glossy green leaves are lance-shaped, sharply pointed and about 50 mm long.

The male cones are narrow, cylindrical structures to about 20 cm long on the ends of short branchlets. They usually appear in autumn. The large, female fruiting cones are very large (football sized) and generally mature in summer through to early autumn but they are not formed every year (generally once every three years). Both the male and female cones are shed from the tree and can be a hazard to anyone underneath. Because of their size and weight, the female cones are particularly dangerous but the male cones are also capable of causing injury, particularly when they fall from the top of a large tree.

Each female cone contains from 50 to 100 large "nuts". These are edible and were a rich source of food for the Aborigines. During the "Bunya season" the Aborigines would temporarily set aside their tribal differences and gather in the mountains for great Bunya Nut Feasts.

The bunya pine is widely cultivated in many areas and, despite its sub-tropical/tropical origins, is hardy in colder districts of Australia.

<http://anpsa.org.au/a-bid.html>

Burra buh-rrah

Eastern Grey Kangaroo (male)

Macropus giganteus

The Eastern Grey Kangaroo is an iconic marsupial mammal. They live in mobs of 10 or more in a home range of up to 5km in eastern Australia.

Macropus giganteus, is a marsupial mammal that belongs to a small group called macropods. They have hind legs that are larger than their forelimbs. Their hind feet are also large and powerful. Their long muscular tail is used for balance when hopping and as a fifth limb when movements are slow. The fur is a light grey woolly colour except the face which is darker. A dark tip of fur is also found on the tail.

Males: body length to 1.3m, tail to 1m; females: body length to 1m, tail to 0.84m

Grey Kangaroos have wide and almost continuous distribution between the inland plains and the coast where the annual rainfall is more than 250mm. The Eastern Grey Kangaroo is found over most of the eastern states including Tasmania. They are also found at all altitudes in woodlands up to subalpine areas and in habitats ranging from semi-arid mallee scrub through to woodlands, some farmland areas with remnant vegetation and forest. They tend to favour denser scrubs and forests.

The Eastern Grey Kangaroo is predominantly a grazing animal with specific food preferences. They are herbivorous, favouring grasses but will eat a range of plants, including in some cases, fungi. With the grasses they prefer to eat young green shoots high in protein. Dry grass is difficult for them to digest. Being nocturnal, large 'mobs' will gather at dusk to feed where food is most abundant.

They usually rest in the shade or shelter of trees or scrubs moving out to graze from late afternoon to early morning when they will congregate in the open. This is avoiding the hottest part of the day. They communicate via a series of clucking sounds. Aggressive males and alarmed individuals of both sexes give vent to a guttural cough.

The tendons in the legs of kangaroos act like sprung ropes and help propel the animal at fast speed with minimum effort. The highest recorded speed was set by a female Eastern Grey Kangaroo at 64km/hr.

Breeding is continuous throughout the year and reaches a peak in summer. The newborn 'joey' which weighs less than one gram is born thirty six days after mating. It climbs unaided into the pouch and shortly afterwards attaches to one of the four teats. The young kangaroo is raised in the pouch until it can survive outside. At about 9 months the joey will begin to leave the pouch but continues to suckle from time to time. A joey becomes independent at about 18 months of age.

The Eastern Grey Kangaroo is protected by law. For thousands of years, though, indigenous peoples have hunted the kangaroo for food and skins. When Europeans arrived in the eighteenth century, they too hunted the kangaroo. There are now rules in place in all Australian states and Territories to protect kangaroos. The Eastern Grey Kangaroo is among 4 abundant species that can be commercially harvested for export and this can only be done by licensed hunters. None of these 4 species is threatened or

endangered. Kangaroo meat is now being looked at as an alternative source of meat to beef. The soft feet of kangaroos are more preferable to the hard hoofs of cattle in erosion prone areas.

<http://australianmuseum.net.au/Eastern-Grey-Kangaroo/#sthash.Tnm4mC8L.dpuf>

Didijiri did-dee-gee-ree

Willie Wagtail

Rhipidura leucophrys

The Willie Wagtail is the largest, and most well-known, of the Australian fantails. The plumage is black above with a white belly. The Willie Wagtail can be distinguished from other similar-sized black and white birds by its black throat and white eyebrows and whisker marks. The name wagtail stems from the constant sideways wagging of the tail. Young birds resemble the adults, but have paler, slightly rusty edges to the feathers of the wings.

The Willie Wagtail is found throughout mainland Australia but is absent from Tasmania. They are found in most open habitats, especially open forests and woodlands, tending to be absent from wet sclerophyll forests and rainforests. They are often associated with water-courses and wetlands and are common around human habitation.

Although usually seen singly or in pairs, it may form winter flocks, often mixed with other species.

Willie Wagtails are active feeders. Birds can be seen darting around lawns as they hunt for insects on the ground. As they do so, the tail is wagged from side to side. Insects are also captured in the air, in active chases.

The Willie Wagtail's nest is a neatly woven cup of grasses, covered with spider's web on the outside and lined internally with soft grasses, hair or fur. The soft lining of the nest, if not readily available, is often taken directly from an animal. The nest of the Willie Wagtail may be re-used in successive years, or an old nest is often destroyed and the materials used in the construction of a new nest. Nests are normally placed on a horizontal branch of a tree, or other similar structure. The cream-coloured eggs, speckled with grey and brown are incubated by both sexes. The young birds stay with the parents until the eggs from the next clutch start to hatch. At this point they are driven away. If conditions are favourable, the couple may raise up to four successive clutches in a single season.

Although it is active in defending its territory, the Willie Wagtail is very tolerant and tame around humans, often feeding and nesting in close proximity of houses and human activity.

<http://www.birdsinbackyards.net/finder/all-specie>

Dil'bung deel-bung

Golden Finch (European Goldfinch)

Carduelis carduelis

Introduced to Australia in the nineteenth century, the European Goldfinch is one of only two 'true finches' in Australia (the other is the Greenfinch). It has a red face, with a black crown and shoulders. The sides of the head are white. The upperparts and flanks are brown, the abdomen and rump are white. The black wings have conspicuous yellow bars and a white trailing edge in flight. The tail is black, tipped with white. Females are similar to males but have a less red face. Juveniles have a brown head and streaked body plumage.

The European Goldfinch is found in settled areas, farmlands and weedy areas such as roadsides, railway lands and industrial wasteland. They are often seen in gardens and parks. Particularly associated with patches of Scotch Thistle.

Locally nomadic within range.

The European Goldfinch has a finer bill than its relative, the Greenfinch, and eats smaller seeds, especially those of the introduced Scotch Thistle. They also eat insects in summer. It can sometimes be a pest in orchards.

The European Goldfinch builds a cup-shaped nest in low bushes.

A group of Goldfinches is called a 'charm'.

Calls: A liquid 'tu-leep' or 'tsi-i-it'; also twittering song.

<http://www.birdsinbackyards.net/species/Carduelis-carduelis>

Djunguwaragal Jahn-goo-wah-rrah-gull

Thylacine

Thylacinus cynocephalus

The Thylacine (*Thylacinus cynocephalus*: dog-headed pouched-dog) is a large carnivorous marsupial now believed to be extinct. It was the only member of the family Thylacinidae to survive into modern times. It is also known as the Tasmanian Tiger or Tasmanian Wolf.

The Thylacine was sandy yellowish-brown to grey in colour and had 15 to 20 distinct dark stripes across the back from shoulders to tail. Although the large head was dog- or wolf-like, the tail was stiff and the legs were relatively short. Body hair was dense, short and soft, to 15mm in length. It had short

ears (about 80 mm long) that were erect, rounded and covered with short fur. Jaws were large and powerful and there were 46 teeth. Adult male Thylacine were larger on average than females.

The female Thylacine had a back-opening pouch. The litter size was up to four and the young were dependent on the mother until at least half-grown. Interestingly, males also had a back-opening, partial pouch.

The Thylacine was mainly nocturnal or semi-nocturnal but was also out during the day. The animal moved at a slow pace, generally stiff in its movements. The Thylacine hunted singly or in pairs and mainly at night. They preferred kangaroos and other marsupials, small rodents and birds and were reported to have preyed on sheep and poultry after European colonisation, although the extent of this was almost certainly exaggerated.

Although the precise reasons for extinction of the Thylacine from mainland Australia are not known it appears to have declined as a result of competition with the Dingo and perhaps hunting pressure from humans. The Thylacine became extinct on the Australian mainland not less than 2000 years ago. Its decline and extinction in Tasmania was probably hastened by the introduction of dogs, but appears mainly due to direct human persecution as an alleged pest.

Aboriginal rock-paintings of Thylacine-like animals are recognised from northern Australia including the Kimberley region of Western Australia and the Northern Territory. There is evidence to suggest that Aboriginal people in Tasmania used the Thylacine as a food item.

Fossil thylacines have been reported from Victoria, South Australia, Western Australia and Queensland. Work at the Riversleigh World Heritage fossil site in north-west Queensland has unearthed a spectacular array of thylacines dating from about 30 million years ago to almost 12 million years ago. The fossil record of thylacines is a powerful reminder of how important it is to learn from the past the messages for the future. In Riversleigh times there were several species but by 8 million years ago only one species remained, the Powerful Thylacine, *Thylacinus potens*. The modern Thylacine made its appearance about 4 million years ago. A mummified carcass of a Thylacine has been found in a cave on the Nullabor Plain. It lived about 4 to 5,000 years ago, just before the Dingo was introduced into Australia.

<http://australianmuseum.net.au/The-Thylacine/#sthash.L5wCBJEp.dpuf>

Duluma doo-loo-mah

Estuarine Crocodile

Crocodylus porosus

The largest of all living reptiles and an iconic Australian animal, the Estuarine Crocodile does not suffer foolish humans that enter its watery domain.

Typical crocodilian appearance – long well-toothed snout, eyes and nostrils set atop the head, thick skin with embedded bony plates (osteoderms), long muscular tail, streamlined body and short limbs with clawed webbed feet. The Estuarine Crocodile has a broad snout that is less than twice as long as the width of the head. Adults typically have a heavy build and range in colour from golden tan to grey to black, with irregular darker mottling. Juveniles are brightly patterned with dark spots/bands on the body and tail; these tend to fade with age. Belly is cream-coloured.

Average total length for adults is 3-5m, with males typically growing much larger than females.

In Australia the Estuarine Crocodile may be found in areas inhabited by the Freshwater Crocodile *Crocodylus johnstoni*, which is similar in appearance but may be distinguished by its more slender snout (length of snout is more than twice the width of the head) and generally lighter build. Crocodiles can be found in a wide range of habitats, including rivers, estuaries, creeks, swamps, lagoons and billabongs. They can tolerate salinities ranging from freshwater to sea water. They are found from Broome in north-western Western Australia to the Gladstone area in southeastern Queensland and islands off the Northern Territory and Queensland coasts.

During the cooler months in the Northern Territory (June-July) large crocodiles are often seen basking on the open mud banks, however in the warmer months (October-December) they seem to noticeably avoid the sun, and use the shade of mangroves when out of the water.

They are mostly nocturnal but will also hunt during the day should an opportunity arise. They will eat just about any animal that they can catch and overpower. Small crocodiles feed frequently on small prey, such as insects and crustaceans, whereas larger individuals feed less often and on bigger prey, including water birds, sea turtles, and mammals up to the size of water buffalo. Juvenile crocodiles tend to 'sit and wait' in shallow water for suitable prey to come within striking distance, while larger crocodiles actively hunt and are attracted to any movement that may represent a potential meal. When prey is detected the crocodile makes a stealthy approach under water, keeping any exposure to a minimum. Once in range the crocodile lunges rapidly and slams its jaws shut on the victim – the force of this alone may be enough to kill it. Small prey is simply crushed and swallowed, however larger prey may be dragged to deeper water before being dismembered and eaten. If the meal is too big to be swallowed whole, the crocodile will grab hold with its jaws and shake violently or roll to tear off a manageable piece. Because the tongue and skull bones of a crocodile are not very movable, food is tossed around in the mouth to manipulate it into a position for swallowing. After eating its fill (a crocodile's stomach is relatively small), the crocodile may store the remains in mangroves or underwater to feed on again at a later time. They are also scavengers and will come on to land to feed on carrion or unattended catch.

Crocodiles communicate with each other using sound, visual and chemical signals. Hatchlings 'chirp' to gain the attention of their mother and to keep members of the creche together. Adults and juveniles may emit a low rumbling growl in response to a predator, and males will also growl to advertise their presence during the breeding season.

The buildup to the wet season in northern Australia stimulates courtship and mating behavior. As the reproductive season approaches, males advertise themselves in conspicuous displays - chasing, head-slapping and growling, and full-blown combat - intended to drive off rival males and stimulate receptive females. Nesting takes place throughout the wet season (from late October to May-June). The female selects a secluded area close to water and constructs the nest by first making a clearing and then scraping piles of vegetation and earth together to form an elliptical mound up to 2.5m long and 80cm high. Then she digs an egg chamber and lays up to 71 hard-shelled eggs which are covered over and incubated both by heat generated from the rotting vegetation and by solar radiation. The sex of the developing embryos is determined by the incubation temperature - cooler temperatures tend to produce females and warmer temperatures produce males.

The young hatch after 2-3 months and begin to 'chirp' to attract the attending female. After helping to dig out the hatchlings the female assists in carrying them in her mouth down to the water where she continues to protect them for some time. Eggs are subject to predation by goannas and feral pigs and young hatchlings may fall victim to birds of prey, large fish, freshwater turtles, and other crocodiles, and very few will make it to adulthood. Once they do they have little to fear besides larger crocodiles and humans.

Danger to humans and first aid

The Estuarine Crocodile is a top predator in its environment, and a large specimen is likely to consider humans as potential prey. Taking certain precautions in crocodile-inhabited areas greatly reduces the risk of encounter:

Obey all crocodile warning signs – they are there for a reason

Do not assume that a shallow pool, drainage canal or even a ditch is safe, especially if the water is muddy

Do not allow pet dogs to roam near the water. Supervise children at all times and explain the dangers.

Do not walk around at night without a torch if fishing or camping near water

When camping, choose a site well away from the water, preferably on high ground. If camping on a beach, be aware that Estuarine Crocodiles sometimes come ashore at night

When fishing stand at least 3m back from the water's edge, and cut the line if it becomes entangled rather than wade in

Never leave animal carcasses, fish guts, etc. near where people swim, fish or moor boats

If boating do not allow arms or legs to dangle over the sides

A person seized in the water by a Estuarine Crocodile has little chance of escaping without serious injury, if at all. Resulting wounds are usually horrific and likely to become infected.

<http://australianmuseum.net.au/Estuarine-Crocodile/#sthash.0Osjf9wj.dpuf>

Garal'ga **gah-rral-gah**

Yellow-tailed Black-Cockatoo

Calyptorhynchus funereus

The Yellow-Tailed Black-Cockatoo is one of six species of Black-Cockatoo in Australia. In recent years it has been in rapid decline because of native habitat clearance, with a loss of food supply and nest sites.

The Yellow-tailed Black-Cockatoo is a large cockatoo, 55 cm to 65 cm. It is easily identified by its mostly black plumage, with most body feathers edged with yellow, not visible at a distance. It has a yellow cheek patch and yellow panels on the tail. The female has a larger yellow cheek patch, pale grey eye-ringing (pink in males), white upper bill (grey-black in males) and black marks in the yellow tail panels. Young birds resemble the adult female, but young males have a smaller cheek patch.

The Yellow-tailed Black-Cockatoo inhabits a variety of habitat types, but favours eucalypt woodland and pine plantations. Small to large flocks can be seen in these areas, either perched or flying on slowly flapping wings. And they feed in small to large flocks, their favoured foods are wood-boring larvae and seeds of native and introduced trees and ground plants.

The contact call is a drawn-out, distinctive "kee-ow". They may screech if alarmed.

Yellow-tailed Black-Cockatoos have a long breeding season. Both sexes construct the nest, which is a large tree hollow, lined with wood chips. The female alone incubates the eggs, while the male supplies her with food. Usually only one chick survives, and this will stay in the care of its parents for about six months.

<http://australianmuseum.net.au/Yellow-tailed-Black-Cockatoo#sthash.8hokHyOp.dpuf>

Gaya'dari **gah-yah-dah-ree**

Platypus

Ornithorhynchus anatinus

The Platypus is a unique Australian species. Along with echidnas, Platypuses are grouped in a separate order of mammals known as monotremes, which are distinguished from all other mammals because they lay eggs. When first discovered, the unusual look of a Platypus caused considerable confusion and doubt amongst European naturalists and scientists, many of whom believed that the animal was a fake.

The Platypus is well adapted for semi-aquatic lifestyle. Its streamline body and a broad, flat tail are covered with dense waterproof fur, which provides excellent thermal insulation. It propels itself through the water by using its front, short, webbed limbs, and the partially-webbed hind feet act as rudders. Behind its distinctive bill are the grooves that house the ear openings and the eyes which close when the

animal dives. The Platypus uses its tail for storage of fat reserves and the strong claws on its feet for burrowing and moving on land. In addition, males possess a horny spur on their ankles, which is connected to a venom gland in the upper leg, making the Platypus one of the few venomous mammals.

Typically, males are 400-630 mm long (tip of the bill to tip of the tail), and females are 370-550 mm long. The weight is 800-3000 g for males and 600-1700 g for females. Males are larger than females.

The Platypus lives on rivers, streams and bodies of freshwater from tropical rainforest lowlands and plateaus of far northern Queensland to cold, high altitudes of Tasmania and the Australian Alps. When not foraging, the Platypus spends most of the time in its burrow in the bank of the river, creek or a pond. At times, the individuals use rocky crevices and stream debris as shelters, or they burrow under the roots of vegetation near the stream. Hence, the ideal habitat for the species includes a river or a stream with earth banks and native vegetation that provides shading of the stream and cover near the bank.

Platypuses are active all year round, but mostly during twilight and in the night. The Platypus feeds mainly during the night on a wide variety of aquatic invertebrates. It closes its eyes, ears and nostrils when foraging underwater and its primary sense organ is the bill, equipped with receptors sensitive to pressure, and with electro-receptors and the bill serves to find and sift small prey from the river bottom and storing them in its cheek-pouches. It then chews the food using its horny, grinding plates, while it floats and rests on the water surface. Diet of the Platypus consists mainly of insect larvae, shrimps, swimming beetles, water bugs and tadpoles, and worms, freshwater pea mussels and snails, cicadas and moths and freshwater crayfish (Yabbies).

The Platypus is largely a solitary animal, but several individuals can share the same body of water. The vocalisation has not been recorded in the wild, but captive animals produce a low-pitched growling sounds when disturbed or handled.

Young Platypuses do not seem to reproduce in their first year of life, instead, both sexes become reproductive in their second year. After mating, a female will lay 2 following a 21-days gestation period. She then incubates the eggs for possibly 10 days, after which the lactation period lasts for 3-4 months before the young emerge from the burrow. Platypuses are long-lived animals both in captivity and in the wild, living up to approximately 20 years.

The female builds a nest in a long complex burrow, collects wet nesting material to prevent her eggs and hatchlings from drying out and holds the eggs pressed by her tail to her belly, while curled up. When the young hatch, the female starts secreting milk and the young Platypuses suckle from the two milk patches covered by fur on the female's abdomen. The female spends most of this time with her young in the burrow, and as the young grow, she increasingly leaves them to forage. Towards the end of the summer the young emerge from the burrow.

<http://australianmuseum.net.au/Platypus/#sthash.teUvqF5n.dpuf>

Gilinga gee-lee-ngah

Toad

Anura

The toad is an amphibian. Amphibians crawled from the water over 370 million years ago and were the first vertebrates to colonise the land. Most toads and frogs are still dependent on water to complete their life cycle as they have a larval stage that lives in water. The word 'amphibian' actually means 'two lives' - one in water and one on land. Australia has around 200 species of native amphibians, about 37 of these are found in Sydney.

One of the factors that allowed the transition from water to land was the development of specialised skin. The skin of a frog is more than just a covering. It is used for a number of important biological functions including: absorbing oxygen and releasing carbon dioxide, regulating their salt content and absorbing water, changing colour to camouflage themselves, secreting mucus to avoid drying out (as well as making them slippery, which is a form of defence), oozing poisons to deter predators (only some frogs do this).

Frogs and toads play a key role in many food webs, both as predators and as prey. They are carnivores and mostly eat insects. For many larger animals including snakes and birds, they form an essential part of their diet.

Some examples of the toads seen around the D'harawal area:

Brown Toadlet

The Brown Toadlet is the most widespread of its group (genus *Pseudophryne*), occurring throughout southern Australia.

Also known as Bibron's Toadlet it is 3 cm long and found in south-eastern Australia living in forests, heathlands and grasslands where it can be heard calling throughout the year.

The male Brown Toadlets call with a grating 'ark' or squelching sound from burrows made in damp soil or from under rocks or within grass clumps.

Brown Toadlet eggs are usually laid in the burrow or in damp leaf mould and are larger and fewer in number than eggs from most frogs that breed in water. When they are fully developed, eggs hatch with the first heavy rainfall. This washes the eggs out of the burrow and into a creek or pond where the tadpoles continue their development.

Red-crowned Toadlet

Despite its name, this is not a toad but a colourful little frog, easy to identify by the bright orange-red triangle or 'T' shape on its head and a stripe on its lower back of the same colour. On its belly is a striking, marbled, black and white pattern. It is 3cm long. The Red-crowned Toadlet is restricted to the Hawkesbury sandstone areas surrounding Sydney forests and woodlands, and heath.

The calls of Red-crowned Toadlets can be heard all year round. They call several times in quick succession, as these frogs commonly live in small colonies and answer each other.

The Red-crowned Toadlet breeds in damp leaf litter.

Hatching occurs when the tadpoles of the Red-crowned Toadlet are well developed and the site has had heavy rainfall. Until then, the male frog usually stays close to the developing eggs, but this is probably to defend the breeding site rather than the eggs.

Tyler's Toadlet

T 3.4cm long this frog is a little larger than most of its close toadlet relatives.

Tyler's Toadlet is a mottled dark colour with orange or yellow spots. The best way to identify this toadlet is by its belly, which is a characteristic blue-black colour with white spots.

Tyler's Toadlet is found in eastern Victoria and New South Wales, in dry forests and shrubland but is usually found close to areas flooded by summer rainfall during their breeding season from September to January.

Male Tyler's Toadlets call with a single, short, squelching sound.

<http://australianmuseum.net.au>

Kai'ray kai-ray

Australian Brush-turkey

Alectura lathamii

The Australian Brush-turkey has a mainly black body plumage, bare red head, yellow throat wattle (pale blue in northern birds) and laterally flattened tail. It is the largest of Australia's three megapodes, a distinct family of the group of fowl-like birds which includes quails, turkeys, peafowl and junglefowl.

The Australian Brush-turkey's range extends along eastern Australia, from Cape York Peninsula, Queensland, south to the northern suburbs of Sydney and the Illawarra region of New South Wales.

It inhabits rainforests and wet sclerophyll forests, but can also be found in drier scrubs. In the northern part of its range, the Australian Brush-turkey is most common at higher altitudes, but individuals

move to the lowland areas in winter months. In the south, it is common in both mountain and lowland regions.

Brush-turkeys feed on insects, seeds and fallen fruits, which are exposed by raking the leaf litter or breaking open rotten logs with their large feet. The majority of food is obtained from the ground, with birds occasionally observed feeding on ripening fruits among tree branches.

It incubates its eggs in a large mound. The male usually builds a single large mound of organic matter, approximately 4 m in diameter and 1 m high. Eggs are laid by several females in a single mound. The eggs are incubated by the heat given off by the rotting vegetation and he maintains a constant temperature of 33 - 38°C by digging holes in the mound and inserting his bill to check the heat, then adding and removing vegetable matter as required. Before the eggs hatch, many fall prey to burrowing predators such as goannas. After hatching, the chicks burrow out of the mound, at which point they are left to fend for themselves - these hatchlings are fully feathered and are able to walk and fend for themselves immediately and are able to fly just a few hours after hatching.

The Australian Brush-turkey can sometimes damage gardens when raking up the ground looking for food. The NSW Department of Environment and Climate Change is researching brush-turkey behaviour in urban areas and provides hints for living with them.

<http://www.birdsinbackyards.net/species/Alectura-lathamii>

Kookaburra **goo-goo-gah-rah**

Laughing Kookaburra

Dacelo novaeguineae

The Kookaburra is instantly recognisable in both plumage and voice. It is generally off-white below, faintly barred with dark brown, and brown on the back and wings. The tail is more rufous, broadly barred with black. There is a conspicuous dark brown eye-stripe through the face. It is one of the larger members of the kingfisher family at 40 cm to 45 cm.

They are found throughout eastern Australia in most areas where there are suitable trees.

Laughing Kookaburras feed mostly on insects, worms and crustaceans, although small snakes, mammals, frogs and birds may also be eaten. Prey is seized by pouncing from a suitable perch. Small prey is eaten whole, but larger prey is killed by bashing it against the ground or tree branch.

The chuckling voice that gives this species its name is a common and familiar sound throughout the bird's range. The loud 'koo-koo-koo-koo-koo-kaa-kaa-kaa' is often sung in a chorus with other individuals. The Laughing Kookaburra also has a shorter 'kooaa', which is normally given when accompanied by other members of its family group. The cackle of the Laughing Kookaburra is actually a territorial call to warn other birds to stay away.

Laughing Kookaburras are believed to pair for life. The Breeding Season extends from August to January. The nest is a bare chamber in a naturally occurring tree hollow or in a burrow excavated in an arboreal (tree-dwelling) termite mound. Both sexes share the incubation duties and both care for the young. Other Laughing Kookaburras, usually offspring of the previous one to two years, act as 'helpers' during the breeding season. Every bird in the group shares all parenting duties.

Laughing Kookaburras often become quite tame around humans and will readily accept scraps of meat. This 'pre-processed' food is still beaten against a perch before swallowing.

<http://australianmuseum.net.au/Laughing-Kookaburra#sthash.13Jwmhsl.dpuf>

Kulun'aga goo-lahn-ah-gah

finches

For example, Zebra Finch

Taeniopygia guttata

Zebra Finches are mainly grey, with characteristic black 'tear drop' eye stripes and 'zebra like' black and white barring on the rump and upper tail. The throat and upper breast are pale grey, with fine black barring, and there is a broad black band on upper chest. The sides of the belly are chestnut with many white spots. The remainder of the belly and the undertail are white. They have red eyes and bill and the legs and feet are orange yellow. The male is distinguished from the female by its chestnut cheek patches. Young are similar in plumage to the female, except that the clear black and white markings of the head are absent and the eyes are grey-brown and the bill is black.

Zebra Finches are the most common and widespread of Australia's grassfinches, found across the Australian mainland, with the exception of Cape York Peninsula and some coastal areas.

Zebra Finches are most commonly found in the drier areas of Australia, living year round in social flocks of up to 100 or more birds. They can be found in a variety of habitats, mainly dry wooded grasslands, bordering watercourses.

Zebra Finches feed in large flocks on fallen or ripening grass seeds. Insects may be taken at any time of the year, but are particularly favoured when feeding young. Feeding takes place on the ground, and, unlike some other grassfinches, birds never pull seed heads down with their feet.

Zebra Finches pair for life. The female alone selects the nest site, but both birds care for the eggs and young. The male gathers almost all the nesting material, with which the female constructs the loose dome-shaped nest. Birds have also been reported to nest in hollows in the ground, although this behaviour is uncommon.

The introduction of artificial dams and water tanks has actually increased the Zebra Finch's natural range, as the birds need to drink on a regular basis.

<http://www.birdsinbackyards.net/finder/all-species>

Magudun mah-goo-darn

Eastern Blue-tongue Lizard

Tiliqua scincoides scincoides

Blue-tongued lizards are the largest members of the skink family. Skink lizards have overlapping scales that are usually smooth and contain small plates of bone.

The Eastern Blue-tongue is silvery-grey with broad dark brown or blackish bands across the back and tail and has a black stripe between the eye and the ear which may extend along the side of the neck. The Blotched Blue-tongue is dark chocolate brown to black with large pink, cream or yellow blotches on the back, and a tail banded in the same colours.

The Eastern Blue-tongue can grow to almost 600 mm in total length, of which about 360 mm is head and body.

The Eastern Blue-tongue occurs throughout much of New South Wales, west to about Cobar. In the Sydney region, the Eastern Blue-tongue occurs on the coastal plain and in the lower Blue Mountains. They live in open country with lots of ground cover such as tussocky grasses or leaf litter. They shelter at night among leaf litter or under large objects on the ground such as rocks and logs. Early in the morning blue-tongues emerge to bask in sunny areas before foraging for food during the warmer parts of the day. Like all lizards, blue-tongues do not produce their own body heat, and rely on the warmth of their surroundings to raise their body temperature. Blue-tongues maintain a body temperature of about 30°C - 35°C when active. During cold weather they remain inactive, buried deep in their shelter sites, but on sunny days they may emerge to bask.

Blue-tongues eat a wide variety of both plants and animals. They are not very agile and the animals they eat are mostly slow-moving. Their teeth are large and they have strong jaw muscles so they can crush snail shells and beetles.

When threatened, blue-tongues turn towards the threat, open their mouth wide and stick out their broad blue tongue that contrasts vividly with the pink mouth. This display, together with the large size of the head, may frighten off predators. If the threat does not go away, blue-tongues may hiss and flatten out the body, making themselves look bigger. A frightened blue-tongue may bite if it is picked up.

If handled roughly by their tail, Eastern Blue-tongues, particularly young ones, may drop the tail. The tail stump rapidly heals and a shorter regenerated tail grows back after a while.

Female blue-tongues give birth three to five months after mating, between December and April. She is able to breed every year if she has sufficient food. The embryos develop in the female's oviduct with the help of a placenta, which is as well-developed as that of many mammals. The young are ready to look after themselves straight after birth, and disperse within a few days. Up to 19 (but usually about 10) young are born, each measuring 130-140 mm in total length and weighing 10-20 g.

They mature at about three years of age when they have a total length of about 400 mm. Blue-tongues are long-lived and live alone for most of the year, but between September and November males pursue females and mating occurs. At this time, males may fight aggressively among themselves.

Reptile ticks are commonly found on blue-tongues; they attach under the scales and in the ear canal. In the bush the major predators of blue-tongues are large predatory birds (such as Brown Falcons and Laughing Kookaburras) and large snakes (including the Eastern Brown Snake, Red-bellied Black Snake and Mulga Snake). Feral cats and dogs also eat blue-tongues. Young blue-tongues are easy prey for suburban dogs and cats, as well as predatory birds like kookaburras. A few adult blue-tongues are also killed by large dogs, although the thick bony scales of the adults protect them from many animal bites.

Unfortunately, blue-tongues will eat snails and slugs poisoned by snail baits and can be poisoned themselves. And look out for blue-tongues when mowing long grass - they will try to escape the lawn mower by hiding in the grass rather than running away! Blue-tongues like to bask on warm surfaces, and black tar roads which warm up quickly in the sun "lure" many to their deaths.

Adult blue-tongues adapt well to suburbs where there are large backyards with plenty of shelter. Plenty of food such as snails, slugs and caterpillars is usually available in gardens, and a blue-tongue in the garden will help to keep down the number of snails and plant-eating insects.

A bite from an adult blue-tongue can cause pain, break the skin and leave a bruise but there is no venom and hence no long-term ill effect. However the bite site should be cleaned with a mild disinfectant, as with any animal bite.

<http://australianmuseum.net.au/eastern-blue-tongue-lizard#sthash.CWDKnHKC.dpuf>

Mananga **mah-nan-gah**

Wedge-tailed Eagle

Aquila audax

The Wedge-tailed Eagle has long wings (wingspan 2.3 m), a characteristic long, wedge-shaped tail, and legs that are feathered all the way to the base of the toes. The bill is pale pink to cream, the eye brown to dark brown, and the feet off-white. Young Wedge-tailed Eagles are mid brown in colour with reddish-brown heads and wings. They become progressively blacker for at least the first ten years of their lives;

adults are mostly dark blackish-brown. The only difference in plumage between the sexes is that a female adult is generally slightly paler than her mate. Females (4.2 kg - 5.3 kg) are also larger and heavier than males (3.2 kg up to 4.0 kg). Wedge-tailed Eagles are Australia's largest raptors (birds of prey). The Tasmanian subspecies (*Aquila audax fleayi*) is listed federally as endangered.

The Wedge-tailed Eagle is found throughout mainland Australia, Tasmania and southern New Guinea, from sea level to alpine regions in the mountains, but prefers wooded and forested land and open country, generally avoiding rainforest and coastal heaths and can be seen perched on trees or poles or soaring overhead to altitudes of up to 2000 m. Wedge-tailed Eagles build their nest in a prominent location with a good view of the surrounding countryside. It may be built in either a live or dead tree, but usually the tallest one in the territory. In some parts of Australia, where tall trees are absent, small trees, shrubs, cliff faces or even the ground may be used.

Wedge-tailed Eagles eat both live prey and carrion. Their diet reflects the available prey, but the most important live items are rabbits and hares. Rabbits usually comprise about 30-70% of the diet. Other food items include lizards, birds (weighing over 100 g) and mammals (usually weighing over 500 g). Wedge-tailed Eagles will kill lambs, but these make up only a small percentage of their total prey. Carrion is a major food source; roadkills and other carcasses are readily eaten. Many of the reports of predation on lambs result from birds scavenging already dead animals - up to 20 birds may attend a carcass, although only two or three feed at any one time.

Wedge-tailed Eagles may hunt singly, in pairs or in larger groups. Working together, a group of eagles can attack and kill animals as large as adult kangaroos. This explains the scientific name of the Wedge-tailed Eagle which means 'bold eagle'. Under ideal conditions, an eagle can lift about 50% of its body weight. Often, eagles may cache food items on a branch near the nest area.

Wedge-tailed Eagles are monogamous and apparently mate for life but if one bird of a pair is killed, the survivor will find a new mate. Established breeding pairs are territorial and live in the one area throughout the year, defending around their nest sites from other Wedge-tailed Eagles. (They are also known on occasion to attack intruding model airplanes, hang gliders, gliders, fixed-wing aircraft and helicopters.) Surrounding the territories are large home ranges in which the birds hunt for food but do not defend. There is usually overlap between the home ranges of two or more breeding pairs and of non-breeding birds.

The nest is a large structure of dead sticks, usually reused for years, often reaching considerable size. Nests 1.8 m across, 3 m deep and weighing about 400 kg are known. Nests have a shallow cup on the top, lined with fresh twigs and leaves. Sticks are added by a bird while it stands in the nest.

The timing of breeding may vary from location to location and from year to year according to the local availability of food. Both parents share in the duties of nest building, incubation and feeding of the young.

A clutch consists of white eggs measuring 73 mm x 59 mm with varying amounts of reddish brown spots and blotches. These are laid at intervals of two to four days. Incubation starts with the laying of the first egg. Because of the intervals between laying, the eggs do not hatch simultaneously. A breeding pair usually rears only one young per clutch, although in a good year, two chicks may fledge in some nests. Because of the differences in size, the oldest and largest chick has the best chance of surviving. If food is scarce, it will kill and eat its smaller nest mates.

Chicks hatch covered with a white down. For the first five weeks or so, the adults must deliver food to their mouths. After this time they are able to recognise bits of food on the floor of the nest and can feed themselves. The young acquire their first feathers during the second week after hatching. If threatened by predators, the chicks lie flat in the nest, but will defend themselves if required. The adults, in contrast, make little defence of the young. The juveniles remain with the adults for about 11 weeks after leaving the nest. Young and non-breeding birds disperse, moving to wherever conditions are suitable. Juveniles are known to have moved over 850 km in a seven to eight month period.

Mara'yan **mah-rah-yarn**

Venemous spider

Venemous spiders are rather drably coloured, ranging from charcoal grey to pinkish brown found Australia-wide. Spiders are vagrant hunters that are especially common in forest and woodland habitats, living in leaf litter and under bark. Some are highly specialised arthropod-feeders, carnivorous, insectivorous predators.

Examples of Mararan from the D'harawal area include:

Sydney Funnel-web Spider,

Atrax robustus

Probably the most notorious of all spiders, Sydney Funnel-webs have a fearsome reputation. They are shiny, dark brown to black spiders with finger-like spinnerets (silk-spinning organs) at the end of their abdomen. Males have a large mating spur projecting from the middle of their second pair of legs. If threatened, they will show aggressive behaviour, rearing and displaying their impressive fangs.

They range between 1.5 cm - 3.5 cm long.

Atrax robustus occurs in New South Wales, from Newcastle to Nowra and west to Lithgow. They especially favour the forested upland areas surrounding the lower, more open country of the central Cumberland Basin. This includes the Hornsby Plateau to the north, the foothills of the Blue Mountains to the west, and the Woronora Plateau to the south. Funnel-web occurrence is low in much of central-western Sydney, and also the sandy coastal parts of the eastern suburbs and the Botany Bay area. They do better in areas of sandy clay, shale or basaltic soils that can retain moisture more effectively.

Trapdoor spiders

Misgolas rapax

Brown Trapdoor Spiders are dull brown spiders with a cover of paler gold hairs on carapace ('dusty appearance') and there are often pale bars across the abdomen. Males have thick 'boxing glove' palps. Brown Trapdoor spider eyes are arranged in two compact rows. They have short, blunt spinnerets. Males usually have a small double spur halfway along their first leg. They are between 1.5 cm and 3 cm long, females are larger than males. These spiders tend to be quite timid, although the male may rear up if threatened.

Most trapdoor spiders are misleadingly named, as not all species make a door for their burrows. For those species that do, these highly camouflaged entrances are almost undetectable, unless the door is open. Brown Trapdoor burrows are open (without a trapdoor) and are often they found scattered over lawns. They can be distinguished from Funnel-web burrows by the absence of silk triplines around the entrance.

A carnivorous arthropod-feeder, common prey items include crickets, moths, beetles and grasshoppers, taken near the entrance to the burrow. Predators of Trapdoor Spiders can include birds, bandicoots, centipedes, scorpions, parasitic wasps and flies.

<http://australianmuseum.net.au/Trapdoor-spiders-group#sthash.CaEyFACl.dpuf>

Muru'duwin moo-roo-doo-ween

Silvereye

Zosterops lateralis

The Silvereye is a small bird with a conspicuous ring of white feathers around the eye, and belongs to a group of birds known as white-eyes. The Silvereye shows interesting plumage variations across its range - the grey back and olive-green head and wings are found in birds through the east, while western birds have a uniformly olive-green back.

Silvereyes are more common in the south-east of Australia, but their range extends from Cape York Peninsula, Queensland, through the south and south-west to about Shark Bay, Western Australia. They are also found in Tasmania. They may occur in almost any wooded habitat, especially commercial orchards and urban parks and gardens. Silvereyes move north each autumn, and move back south in late winter to breed.

Silvereyes feed on insect prey and large amounts of fruit and nectar, making them occasional pests of commercial orchards. Birds are seen alone, in pairs or small flocks during the breeding season, but form large flocks in the winter months.

Silvereye pairs actively defend a small territory. The nest is a small, neatly woven cup of grasses, hair, and other fine vegetation, bound with spider web. It is placed in a horizontal tree fork up to 5m above the ground. The nest is constructed by both sexes, who both also incubate the bluish-green eggs. If conditions are suitable two to three clutches will be raised in a season.

<http://www.birdsinbackyards.net/finder/all-species>

Naga nah-gah

native honey bee

Some bees seen in the D'harawal area:

Common Blue-banded Bee

Amegilla cingulata

The Common Blue-banded Bee stands out because of the blue bands across its black abdomen and because of its darting, hovering flight pattern. It is 1.2 cm long, is found throughout most of Australia in urban areas, forests and woodlands, and heath.

It was thought that these bees only visited blue and purple flowers. This is not true, but they do seem to like lavender and are attracted to blue objects, including clothing.

The Common Blue-banded Bee builds a solitary nest, but often close to one another. It prefers soft sandstone to burrow in, and areas of this type of rock can become riddled with bee tunnels. It also likes mud-brick houses and often burrows into the mortar in old buildings. Cells at the end of the tunnel contain an egg with a pollen/nectar mixture for the emerging larva.

Stingless Bee

Trigona

The Stingless Bee is the only truly social native bee found in the Sydney area. They are also known as Sweat Bees; Sugarbag Bees

Trigona are small (4-5 mm), dark bees which form colonies in tree hollows and other cavities. They are one of the few species of native bees that form large social nests.

The Stingless Bee is found in coastal areas from Queensland to southern New South Wales in urban and rural areas, forests and woodlands, and heath.

They feed on pollen and nectar.

The Stingless Bee's nest is usually made in the trunks of large trees and can contain several thousand bees. Constructed from a waxy substance secreted by workers and resin collected from trees, the nest has a spiral-shaped honeycomb centre. They store pollen and nectar in pot-like structures near the outer edge of the nest. The queen lays a single egg into brood cells stocked with honey and pollen, and a worker bee quickly seals the cell. Hive members collect nectar and pollen from a number of different flowers. They can lead each other to good food sources using a chemical scent trail.

Trigona produce a thin honey, which can be used as bush tucker. The cultivation of *Trigona* in artificial nests is being developed for more commercial uses.

Trigona species are stingless and so are harmless to humans.

<http://australianmuseum.net.au/Stingless-Bee#sthash.Gq9hwErY.dpuf>

Wagal **wah-gull**

Rock Blackfish

Girella elevata (Macleay 1881)

Adult Rock Blackfish are uniformly blue-black. The species grows to about 60 cm in length and a weight of 7kg. The Rock Blackfish has also been called the Black Drummer, Eastern Rock Blackfish and 'Pig', for the sounds it makes when landed by anglers.

In Australia, it occurs from southern Queensland to north-eastern Tasmania, plus Lord Howe Island. Juvenile Rock Blackfish are found in rockpools, estuaries and shallow rocky reef areas. Adults prefer exposed rocky reef areas from the surf zone to depths of around 25 m. Divers often see this species in caves or under ledges.

This fish is a popular angling species. It is valued for its fighting ability and eating qualities.

<http://australianmuseum.net.au/Rock-Blackfish-Girella-elevata-Macleay-1881/#sthash.1T126llb.dpuf>

Wallaroo **wahl-rah-roo**

Eastern Wallaroo

Macropus robustus robustus ('robust long-foot')

Eastern Wallaroos are distributed up the east coast of Australia and are locally abundant in many parts of the Great Dividing Range and foothills

Eastern Wallaroos have a large dark shiny 'button nose' like koalas and wombats. They have large rounded ears. Their coat is coarser and shaggier than the fine down of Red Kangaroos. Females are relatively short and small and rarely exceed 25 kg. Their coat colour varies from light grey through to black. Males are short but very stocky with pronounced forearm musculature when mature. They reach around 50 kg are darker coloured than females and often predominantly black on the upperparts. The underparts are lighter and the tail tip is not black. The Eastern Wallaroo can be distinguished from the Eastern Grey Kangaroo by its less gracile form and blacker coat. Eastern Wallaroos hop on their short legs in an upright posture, which seems less elegant than Eastern Grey Kangaroos on flat ground, but comes to the fore as they effortlessly bound up rocky slopes.

The Eastern Wallaroo is a hill-dweller and so occupies the slopes and ridges, using rocky overhangs and shallow caves as shelter in summer and intense cold in temperate habitat in winter. In some places they inhabit low lying areas of dense scrub. Females tend to be more easily alarmed by people than males who sometimes tolerate quite close approach.

The diet of the Eastern Wallaroo consists of tussock grasses.

Males reach sexual maturity from about 18 months of age and females show similar variation in age at sexual maturity and generally first mate towards the end of their second year and give birth about 34 days later. Gestation is on average 33 days and is similar to the Euro but the latter species may have longer oestrous cycles (45 d vs. 34 d) without an intervening birth. Young first exit the pouch around 195 days and vacate at about 260 days. Post-partum oestrus follows permanent pouch vacation within 1-2 days.

Individuals are often seen alone and a female may encounter a number of males during her oestrus and there is some segregation of large males from other smaller males and females in habitat use, especially during sheltering. Eastern Wallaroo males occupy steep and rocky slopes.

<http://www.rootourism.com/fsheet30.ht>

Wangali **wahn-gah-lee**

Southern Brown Bandicoot

Isodon obesulus

The Southern Brown Bandicoot has brown fur with distinct golden streaks that cover most of its body. The fur underneath is often dull white or cream colour. The bandicoot is a small and quick marsupial that varies in size and weight. The adult males can grow up to 45 centimeters and adult females 41 centimeters. The average weight for males is around 850 grams and females are around 700 grams. Males are almost always bigger and heavier than the females.

The Southern Brown Bandicoot is found in northern Queensland, New South Wales, Victoria, southern Western Australia and Tasmania. In New South Wales, one population is found on the south coast and the other just north of Sydney.

Southern Brown Bandicoots are largely crepuscular (active mainly after dusk and/or before dawn). They prefer scrubby habitats with plenty of low ground cover and shelter, particularly areas recovering from the effects of bushfire. By day, it sleeps in a nest made from grasses and other plant material, and at night emerges to feed on a variety of insects, earthworms and plants.

They feed on a variety of ground-dwelling invertebrates and the fruit-bodies of hypogeous (underground-fruited) fungi. Their searches for food often create distinctive conical holes in the soil.

They are solitary. Males and females establish home ranges, which vary considerably in size depending on the habitat and the individual.

The Southern Brown Bandicoot is listed as an endangered species in New South Wales and is known from only two areas - one population is found on the south coast and the other just north of Sydney.

<http://australianmuseum.net.au/Southern-Brown-Bandicoot#sthash.BHZ9SVyd.dpuf>

Wiritjiribin

whee-ree-chee-ree-been

Superb Lyrebird

Menura novaehollandiae

The Superb Lyrebird looks like a large brown pheasant with rufous wings and black bill, legs and feet. The adult male has an ornate tail which he fans out during a mating display. The tails of females and young males are long, but lack the spectacular plumage. Females are smaller than males.

One other lyrebird found in Australia is Albert's Lyrebird, *M. alberti*, which is restricted to an area around the Border Ranges, on the Queensland-New South Wales border. This bird is redder in colour and the male's tail is less elaborate.

The Superb Lyrebird is found in the south-eastern Australian mainland and southern Tasmania.

It is a ground-dwelling species in moist forests, feeding on insects, spiders, worms and, occasionally, seeds. It finds food by scratching with its feet through the leaf-litter. Birds tend to forage alone, but females and young males may be seen feeding together.

They roost in trees at night and rarely move away from a home-range of about 10 km in diameter. The male secures a territory, attracting potential mates by singing and dancing on one of several mounds within it, while throwing the tail forward over the body and shaking it in display. He will mate with several females but the female alone builds the nest, incubates the eggs and cares for the young.

The Superb Lyrebird's song consists of expert mimicry - both natural and mechanical sounds imitated and joined together in a rousing medley. Sounds can include anything heard in the bird's immediate surroundings, such as chainsaws, car engines, dog barks and local native birds as well as other calls: a loud alarm shriek and a series of whistles and cackling notes that are used as territorial calls.

<http://www.birdsinbackyards.net>

Wombat **wohm-bat**

Common Wombat

Vombatus ursinus

Wombats are amongst the world's largest burrowing animals. It is a short, stocky, barrel-shaped animal with powerful limbs, short broad feet and flattened claws. It has a broad head with small eyes, a short strong neck, powerful shoulders and a very small tail (~25 mm) hidden by fur. Colour of the wombat's coarse coat varies from glossy black, dark grey, silver-grey, chocolate brown, grey-brown, sandy and cream. The Common Wombat's distinguishing features are: large and naked nose; coarse thick coat; short, slightly rounded ears.

Wombats are primarily grazers and their continuously growing incisors work as efficient cutters of grass and forbs. They have only two incisor teeth in the upper jaw. The incisor and molar teeth of this animal are also unique because they have open roots and continue to grow throughout the animal's life.

The size of the Common Wombat varies with their distribution. Tasmanian and island species are generally smaller. Females tend to be slightly larger than males of the same age. Average head and body length is 985 mm (840-1150 mm). Weight is 26 kg (22-39 kg).

The main habitat for the Common Wombat is the temperate forest-covered areas of southeastern Australia but they tend to avoid rainforests and is often found in the mountainous areas. Wombats prefer to dig their main shelters on slopes above creeks and gullies, and feed in grassy clearings.

Common Wombat is one of the few marsupials that are active above the snowline in winter, however they appear to be less active than during warmer months. In summer, the animal is mainly nocturnal,

emerging from its burrow when the air cools down, to avoid high temperatures. In general, wombats spend most of their lives (about two thirds) in their burrows only usually leaving the burrow after sunset and to graze for several hours. During this time, it may return to its burrow to rest, or seek refuge, and it will return to sleep generally before sunrise. However, in cool or overcast days the animals are known to forage longer and during the day.

The main food for wombats is fibrous native grasses, sedges and rushes, and the choice of food depends on what is available at the time. At times when it is eating grass, a wombat will also eat dry leaves and stalks, and occasionally tear a strip of bark from a tree trunk and chew small quantities of it. They also feed on mosses and, possibly fungi.

Wombats are generally classed as solitary animals and communication between two individuals is often threatening or aggressive. A warning call is usually a low guttural growl, but when a wombat is alarmed or angered, rasping hiss can also be heard. Young make repeated, softer 'huh huh' calls when they lose sight of their mother, and she usually responds in the same manner.

Breeding may occur at any time of the year, however, in the highlands of New South Wales, most wombats give birth during December-March. Usually, one very small, underdeveloped wombat is born following a short gestation period (probably 30 days). It makes its way to the pouch, where it grows and develops for 6-10 months. The young then leaves the pouch and remains with its mother for further 8-10 months before becoming independent. Common Wombats become sexually mature after two years and live up to 11 years in the wild.

The Common Wombat does not have many natural predators, except the introduced ones: wild dogs and foxes. When threatened it will escape to the nearest burrow, where it can defend itself by crushing a predator's head with its rump against the roof or wall of the burrow. In the open, an adult wombat can usually hold its own against a single dog, but it is overcome by a pair or a pack of dogs. Young, immature wombats, or old/weakened adults are, therefore, more likely to be the potential prey for the predators.

The Wombat suffers from mange mite, and in severe cases mange can affect the wombat's vision and ability to eat, making the animal weaker until it eventually dies.

Common Wombats are mainly nocturnal animals and as such are not often encountered by people in the wild. However, they are strong animals and can move fast at speeds over 40 km/h over short distance.

<http://australianmuseum.net.au/Common-Wombat/#sthash.Z2G65X2O.dpuf>

Yuran'yi you-rang-gee

Pacific Black Duck

Anas superciliosa

The Pacific Black Duck is mostly mid-brown in colour, with each feather edged buff. The head pattern is characteristic, with a dark brown line through the eye, bordered with cream above and below and a dark brown crown. The upper wing colour is the same as the back, with a bright glossy green patch in the secondary flight feathers. The white underwing is conspicuous in flight. Young Pacific Black Ducks are similar to the adults in plumage.

The Pacific Black Duck is found in all but the most arid regions of Australia. It frequents all types of water, from isolated forest pools to tidal mudflats. They are usually seen in pairs or small flocks and readily mix with other ducks.

The Pacific Black Duck is mainly vegetarian, feeding on seeds of aquatic plants. This diet is supplemented with small crustaceans, molluscs and aquatic insects. Food is obtained by 'dabbling', where the bird plunges its head and neck underwater and upends, raising its rear end vertically out of the water. Occasionally, food is sought on land in damp grassy areas.

Mating in Pacific Black Ducks coincides with availability of sufficient food and water, and often with the onset of heavy rains or when waterways are at their peaks. Courtship is accompanied by ritualised displays including preening, bobbing and wing-flapping. This behaviour is often initiated by the female, and, other than copulation, the male helps little in the breeding process. Often, two broods will be raised in a year. The number of offspring produced may seem quite high, but only 20% of these will survive past two years of age.

<http://www.birdsinbackyards.net/species/Anas-superciliosa>

Banarong

Rose Bay, a suburb of Sydney on Sydney harbour

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Barrago

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Boora Birra

The D'harawal name for the Sow and Pigs reef. As you travel on the ferry to Manly, you will see a marker buoy on the right hand side of the ferry in the shallow waters of the reef.

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Butoowee

ceremony to teach children the laws and protect them from evil spirits

cause them to break laws

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Miwa Gawaian

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Parra Doowee

the Eel Dreaming Spirit - which looks after the Parramatta River.

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