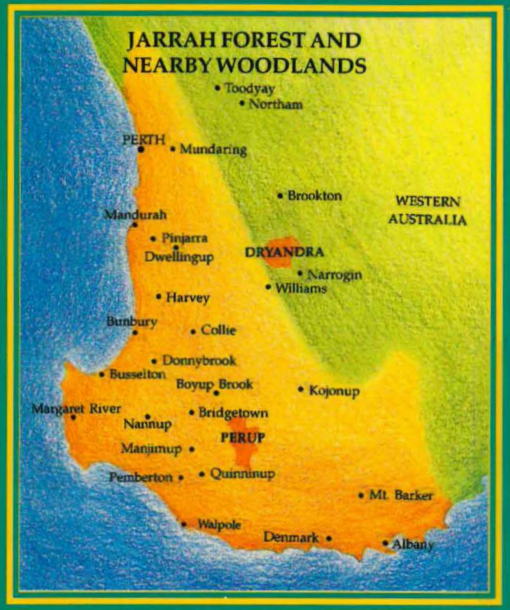

South West Eco Museum

WILDLIFE IDENTIKIT

South-west Jarrah Forests and Nearby Woodlands

Project Coordinator: Cliff Winfield
Compiled by: Mark Garkaklis
Editor: Liana Christensen
Illustration and design: Kellee Merritt

ISBN 0 7309 6435 3

Published by the Department of Conservation and Land Management for the Perup Wildlife Trust

A South West Eco Museum project

Cover photograph: Chuditch by Lochman Transparencies

LARGE

MEDIUM

SMALL

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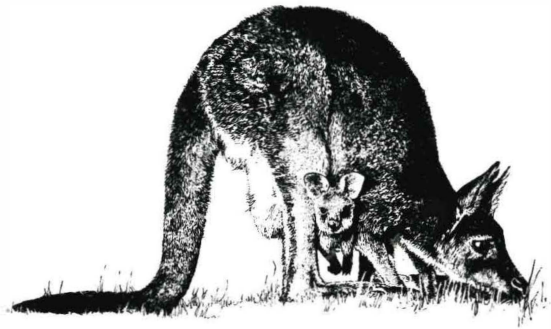
ABOUT THIS GUIDE

Australian mammals can be very difficult to see in natural bush settings. Most of them are nocturnal and secretive. Some native animals of Western Australia were considered to be almost extinct simply because they were never seen! Recent management of our native bushlands, however, has allowed even small numbers of mammals to survive and increase, so there is now more chance of seeing them. You may catch a fleeting glimpse as an animal darts across the road in range of your headlights; or you may see a possum if you turn a torch upon a rustle in the tree tops. To pursue the matter further, though, will take a bit of dedication and knowledge. This booklet supplies the information - you will have to come up with the rest.



NATURE CONSERVATION AND LAND MANAGEMENT

The Department of Conservation and Land Management (CALM) is the agency in Western Australia responsible for nature conservation, and for the management of State forests, national parks, conservation reserves, and marine parks. But because flora and fauna and the processes that affect them know no boundaries, nature conservation is a task for the entire community.

Human impact, particularly in the southwest forests, has increased greatly since European settlement, but nature conservation has progressed rapidly in recent decades. CALM and others are identifying threats to species and ecosystems and ways of alleviating them. In the south-west, areas of forest representing the highest conservation value have been set aside, and a forest management plan has been put in place to supply timber while protecting animal populations and plant communities.

But although much has been achieved, much remains to be done. Some of the major tasks for CALM are to enhance the existing reserve system, to involve the whole community in land management consistent with nature conservation, and to continue research into the ecologies of threatened species.

To make an informed contribution to this task requires a basic understanding of ecology. Ecology is about relationships - how different things affect populations of animals, plants and micro-organisms, and how populations affect each other. Use this book to develop your observation techniques. Once you have seen a rare species in the wild you will begin to comprehend the complex land management which allows them to survive.

FIRE IN THE AUSTRALIAN BUSH

Despite their evergreen appearance, eucalypts such as wandoo and jarrah replace all of their leaves on average every eighteen months. This means that around a tonne of dead leaves and twigs fall onto each hectare of forest floor each year. During the dry summer months the eucalypt forests of south-west Australia are like tinder; the slightest spark can set them ablaze. If there is enough dry leaf litter, with strong winds the flames quickly spread to the tree tops, where the oily green leaves literally explode. These wildfires are almost impossible to suppress during the heat of the day.

Australian ecosystems have evolved in the presence of fire. Eucalypts and other species have particular adaptations which enable them to regenerate after almost any fire. However, people, property, and forests with special wildlife habitats are particularly prone to damage, and need protection from repeated wildfires.

There is a wide range of opinion about what constitutes a natural fire frequency for the southern forests, but most people agree that 'burning off' is an acceptable method of reducing the risk and effects of wildfire.

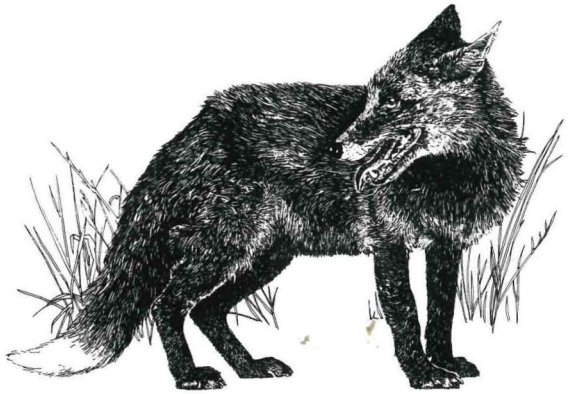
CALM uses a mosaic of planned fires (known as prescribed burns), to regenerate habitats in some areas and to reduce wildfire fuel in others. With the benefit of research and experience, these fires are designed to preserve the range of species and structural diversity over the whole ecosystem. For example, in the Perup forest there are surviving populations of several rare species. Once their requirements are known, burning-off patterns are used to create the most suitable habitat for each of them.

THE FOX BAITING STORY

Many thousands of years ago, a genus of pea flowers in Western Australia called Gastrolobium evolved a method of protecting themselves from seed eating and browsing animals - they harbour in their leaves monofluoroacetate, a poisonous substance now commonly known as 1080™ (pronounced ten-eighty). This development had a major effect on the ecology of much of Western Australia. These plants had effectively declared war on animals that ate their leaves, and the animals that ate the animals that ate the leaves!

Over time, the native animals learned to live with the deadly toxin and evolved resistance. Introduced species, however, are extremely susceptible to 1080™; thousands of sheep, cattle and horses were lost by European settlers before the cause was discovered in the 1840s. Foxes, dogs, rabbits and cats are equally susceptible. Foxes die of secondary poisoning if they eat native animals, such as woylies or possums, which have fed on Gastrolobium.

CALM's fox-baiting program involves laying pieces of dried meat treated with 1080™ throughout forest areas at a rate of about five baits per square kilometre. Pet owners are alerted when this is carried out. The poison is rapidly broken down by microbes and moisture, so it does not persist or accumulate in the environment. As a direct result of fox baiting, forest animals are now recovering in many areas, such as Perup, from which they had all but disappeared.



CONTENTS page

HOW TO USE THE GUIDE

This guide provides you with some information on animal habitats in our inland reserves, particularly the Perup Nature Reserve and Dryandra woodlands. A section describing the dominant trees or shrubs that define several plant communities or animal habitats is included.

Only those animals that are most easily recognised by the casual observer or bush-walker are listed. As well as mammals, the most common frogs and reptiles are included. No distinction is made for tree-living (arboreal) animals, since they are most likely to be seen when on the ground foraging or moving along bush tracks or across roadways.

The first step in identifying a mammal is to estimate its size class.

Size Class	Head & Body Length	Colour Code
Large	Greater than 60 cm	GREEN
Medium	Between 20 to 60 cm	BLUE
Small	Less than 20 cm	RED

If you have already had a brief encounter with an animal and would like to know what it was, estimate its size class, then match it up with habitat type to narrow down the choice of possible species.

If you are deliberately trying to improve your chances of seeing some native animals, make a point of observing the kind of habitat you are in, look up the animals that live there and find out about their behaviour. Dispersal season provides prime time viewing. Look for evidence of their feeding activity. Some native animals dig for bulbs and fungi, so scratchings and diggings are a sure indication that they are close by. What goes in must come out, and all animals leave droppings (called scats) of some description. These offer another clue to the observant walker.

At night, animals are often seen in car headlights. If you are on an organised excursion, then your guide will probably be using a spotlight. In this situation look for the animal's "eye shine" to give away its position. A good technique is to move the spotlight continuously through a figure-of-eight pattern that takes in a broad sweep from tree-top to understorey. Don't make a habit of spotlighting in reserves without prior approval, however, because native fauna should not be disturbed unnecessarily.

If you are lucky enough to see an animal - by accident or design - observe it at respectful distance and then leave it to go about its own business, unmolested.

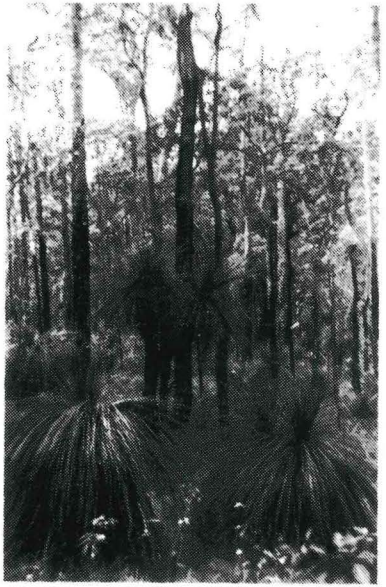
PLANT COMMUNITIES AND HABITATS

Each habitat type - within a complex mosaic of vegetation types - favours different animal species. This mosaic of trees, understorey, swamps, granite outcrops and areas regenerating after fire is essential for the long-term survival of a large diversity of mammals. The more closely and carefully we look at our native bush the more we will appreciate the complexity of the natural habitats that surround us, and the subtle ways the animals (although rarely seen) interact with them.

Jarrah (*Eucalyptus marginata*) is unique to the south-west of Western Australia. Today about 1.5 million hectares of jarrah forest remain, of an estimated 3 million hectares that existed prior to European settlement and clearing for agriculture, industry and housing.

Jarrah occurs in a band approximately 60 km wide from Gingin in the north to Albany in the south. Although it does occur in pure stands, it is generally found with other species, such as marri (*E. calophylla*), blackbutt (*E. patens*), wandoo (*E. wandoo*) in the east and karri (*E. diversicolor*) in the south.

Several plant communities go together to make up the jarrah forest type. The most obvious include:



- Tall open forest with jarrah and marri overstorey, and open understorey with blackboy (*Xanthorrhea preissii*) on moist, fertile sites (Pictured above).
- Jarrah and sheoak (*Allocasuarina fraseriana*) on sandy soils.
- Paperbark swamps with *Melaleuca preissiana* and *Banksia littoralis.*

- Jarrah with bull banksia (*Banksia grandis*) on gravelly uplands, and marri in the valleys (Pictured below).

- Jarrah/wandoo woodland in the drier east with prickly moses (*Acacia pulchella*), dryandra (*Dryandra nivea*) and zamia palm (*Macrozamia riedlei*) understorey.
- Wandoo woodland with little understorey (Pictured overleaf).

Other important habitats which are scattered through the jarrah forest belt include:

- Granite outcrops with *Allocasuarina huegeliana*, scrub sheoak (*A. humilis*), *Hakea* and *Dryandra* species.
- Open scrub with scrub sheoak and *Melaleuca viminea* or W.A. peppermint (*Agonis flexuosa*) and parrot bush (*Dryandra sessilis*).
- Flooded gum (*E. rudis*) woodlands along streams or wetland edges.

- Several leguminous species form dense thickets following fires, especially heartleaf poison (*Gastrolobium bilobum*), prickly poison (*G. spinosum*) and prickly moses.
- Closed Melaleuca scrub with *M. viminea, M. lateritia* and *M. incana* (Pictured below).

Two areas of the south-west - Perup Nature Reserve and Dryandra woodlands - are particularly useful for people looking to have close encounters with some of our native fauna.

PERUP NATURE RESERVE

This 52 000 ha reserve is centred 45 km east of Manjimup and about 50 km south of Boyup Brook. As in any large district it contains several distinctive types of forest, but the most common is the jarrah-marri dominated habitat.

Animals to look for in the jarrah and marri forests of the Perup Nature Reserve are the Brushtail Wallaby, the Grey Kangaroo, the Bandicoot, the Brushtail Possum, and the Ringtail Possum. Dense thickets of heartleaf poison provide excellent cover for Woylies and possibly the Tammar Wallaby.

If termite mounds are obvious then it may be possible to see Numbats on their morning or late afternoon foraging excursions. Small areas of wandoo forest also occur at the Perup Nature Reserve and Numbats are more likely to be seen there due to the high termite activity and because these areas often have a more open understorey.

Another important habitat type in the Perup Nature Reserve is the *Melaleuca* thickets that occur low on hill slopes, usually where it is wetter. These thickets provide excellent cover for the Tammars. If you are in these swampy areas at night don't forget to listen for the different frog calls.

DRYANDRA WOODLAND

The Dryandra woodland, about 35 km north-west of Narrogin, is an area dominated by wandoo and powder bark wandoo (*E. accedens*). There are many termite mounds throughout this area which provide a plentiful food supply for the Echidna and the Numbat. Both of them can be seen in the morning and afternoon. Nocturnal animals that can be seen include the Woylie, the Brushtail Possum the Grey Kangaroo and the Brush Wallaby. Tammar Wallabies can sometimes be seen foraging, especially where there are pasture or grasses found near the edges of the forest.

The Dryandra woodland tends to be quite open. There are thickets of sandplain poison and other pea type plants, however, which provide excellent cover for animals like the Woylie. There are also a few small dams within Dryandra, where several types of frog can be heard. Areas close to these permanent water sites and along the creeks that feed them support small stands of York gum (*E. loxaphleba*) which can be identified by its rough bark near the base of the trunk and smoother, greyer, barked branches.

MAMMALS

WESTERN GREY KANGAROO
(*Macropus fuliginosus*)

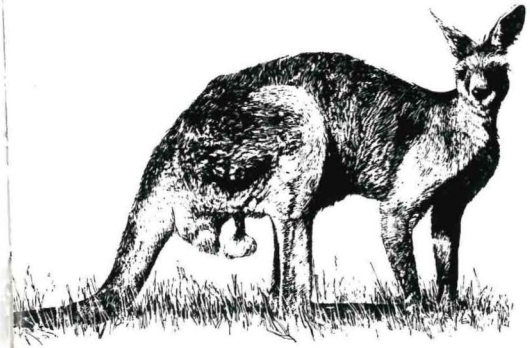
IDENTIFICATION

A maximum head-to-tail length in excess of two metres makes this species the largest of our local native fauna. When they are seen in family groups there will be a great range of sizes, with the smallest and youngest animals often measuring less than a metre from head to tail (about the same size as the largest Tammar Wallabies). These smaller kangaroos will almost certainly be in a family group with larger, more mature animals, whereas the Tammar Wallaby or Brush Wallaby may be alone or with animals their own size or smaller.

GENERAL HABITAT & BEHAVIOUR

The Western Grey Kangaroo is undoubtedly the most commonly seen native animal in the south-west of Western Australia. They can be found in almost any natural bush setting, although they are more common in jarrah and marri woodlands and less common in swamps

and wandoo forests. During the day they will shelter in the shade of understorey vegetation, and often begin to forage in the late afternoon.



BREEDING: continuous

BRUSH WALLABY/ BLACK-GLOVED WALLABY
(*Macropus irma*)

IDENTIFICATION

The Brush Wallaby has a head and body length of about 90-130 cm. Its size may lead the observer to confuse this animal with a small Grey Kangaroo. This Wallaby, however, has a long tail that is distinctive - with black hair along the lower two-thirds of its length. Other features to look for are the black hind-feet and paws, the black and white ear margins, and a distinctive white stripe across the face. If there is only a single animal, then there is a good chance that it is a Brush Wallaby.

GENERAL HABITAT & BEHAVIOUR

The Brush Wallaby is a grazing animal, most often seen singularly, though sometimes in pairs. It is most likely to be seen in open jarrah woodland with suitable grazing sites, such as areas of low-cropped grasses. It often shelters in thickets, and can startle the unprepared bushwalker by beating a fast retreat when disturbed. The Brush Wallaby can sometimes be seen on

its morning or late-afternoon foraging excursions, but because of its size and nervous disposition it often stays hidden until it takes flight.

BREEDING: unclear - birth about April - May

TAMMAR WALLABY
(Macropus eugenii)

IDENTIFICATION

This animal is a medium-large wallaby, with a combined head and body length of about 60 to 65 cm. Its tail length is approximately 40 cm. When combined with an alert upright posture, this gives the Tammar Wallaby a much larger appearance. Often when it is seen by the light of car headlights, or a spotlight, it appears to have an area of darker colouring stretching the length of its forehead. Look for a distinctive white stripe on each cheek.

GENERAL HABITAT & BEHAVIOUR

For day-time cover the Tammar Wallaby relies on dense understorey vegetation, for example, thickets of *Melaleuca* scrub or young heartleaf poison. The latter is particularly dense when it has regenerated after fire. After sunset, Tammar Wallabies will come out from under cover and graze in more open country. They may even be seen in (or close by) pastures that border reserves with large enough populations. These grazing sites may be more than one kilometre from suitable shelter.

BREEDING: birth early and mid-summer
DISPERSAL: September-October

BRUSHTAIL POSSUM
(Trichosurus vulpecula)

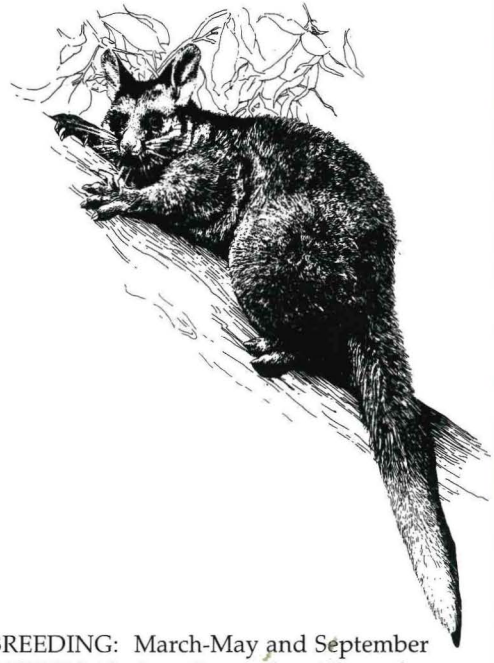
IDENTIFICATION

The Brushtail measures about 45 cm from head to tail. It is mainly grey, with a pale-grey to yellowish belly, and is distinguished by its long oval ears. Another feature to look for is the bushy, prehensile tail (adapted for grasping). The tip of the tail can be black or white, while the underside is hairless which shows up the Brushtail's pink skin.

GENERAL HABITAT & BEHAVIOUR

The Brushtail Possum is an arboreal animal, so it is possible to find it in any area with a sufficiently large stand of timber, such as jarrah-marri forests or wandoo forests. Although this possum finds some of its food in the canopy of trees and shelters in hollow trunks or branches, it is mostly seen by us as it crosses tracks or roads on its nightly foraging excursions. A tell-tale sign of Brushtail Possums is the presence of distinctive parallel claw trails on marri trunks, leading to a hollow.

Brushtail Possums can often be seen in areas close to human habitation, for example, at the Dryandra Village and Perup Forest Ecology Centre.



BREEDING: March-May and September
DISPERSAL: late September-November and March

RINGTAIL POSSUM
(*Pseudocheirus peregrinus*)

IDENTIFICATION

The Ringtail Possum is smaller than the Brushtail Possum, measuring about 30 to 35 cm along its head and body. Its prehensile tail is also about 30 to 35 cm in length and is distinctively marked with white hair at its tip. Another feature to look for is white patches behind its short ears. It is grey and pale underneath, although its legs can vary to a rust or reddish hue.

GENERAL HABITAT & BEHAVIOUR

Ringtail Possums are arboreal animals and can move between trees through the canopy if the vegetation is sufficiently dense. They feed mainly on leaves, and make extensive use of tree hollows in jarrah and marri forest or wandoo woodlands. These sites are ideal for seeing Ringtail Possums, particularly when they are within areas managed for predator control. In the Perup Nature Reserve they have a slight preference for gullies where the wandoo grows. When the bull banksia is in flower as many as six individuals have been seen

together feeding on the blossom. Ringtails can also be found in coastal areas, such as the tuart and peppermint forests near Busselton.

BREEDING: April-November
DISPERSAL: October-May

QUOKKA
(Setonix brachyurus)

IDENTIFICATION

The Quokka is a small, dark wallaby which can measure up to 54 cm along its head and body. The body and head of the Quokka are quite broad, giving it a stocky appearance - a look accentuated by a relatively short tail. Its ears are short and rounded, and the top of its head is tinged with a rufous (red) fur.

GENERAL HABITAT & BEHAVIOUR

Perhaps the most familiar of Western Australia's native mammals, with the exception of the local kangaroos, the Quokka is commonly associated with Rottnest Island. It is less well-known that the Quokka also makes its home in the south-west of the State. After suffering a decline in the early part of this century, it has now returned to reasonable numbers. It favours swamps and swampy thickets, where it browses on a range of foliage, shoots and swamp plants.

BREEDING: autumn on Rottnest Island, continuous on the mainland.
DISPERSAL: spring on Rottnest, continuous on the mainland.

WOYLIE/ BRUSH-TAILED BETTONG (*Bettongia penicillata*)

IDENTIFICATION

The Woylie is a ground-dwelling marsupial with a head and body length of about 33 cm. It has a yellowish-grey or sandy back, and a black-crested tail, which measures about 30 cm. Other features to note are pointed ears and flattened nose. In flight, the Woylie has a distinctive "head-down-tail-up" posture, as it beats a fast retreat.

GENERAL HABITAT & BEHAVIOUR

This is a nocturnal animal that shelters during the day in a domed nest made of shredded bark or grass. The Woylie was widely distributed throughout the drier forests of the south-west once, but its numbers dropped severely after European settlement. Today, its numbers appear to be stable where fox control is practised. The Woylie digs and forages for fungi associated with the local vegetation and supplements this diet with seeds, tubers and bulbs. Lots of digging could be an indication of Woylies or Bandicoots. Woylies are often associated with open woodlands of jarrah, marri and

wandoo, but because of their foraging behaviour they are most likely to be seen in and around thickets of poison bushes or similar understorey vegetation. Woylies also build nests under clumped vegetation, most often associated with *Bossiaea ornata*, which usually occurs in the jarrah and marri forests, especially on ridges.

BREEDING: continuous

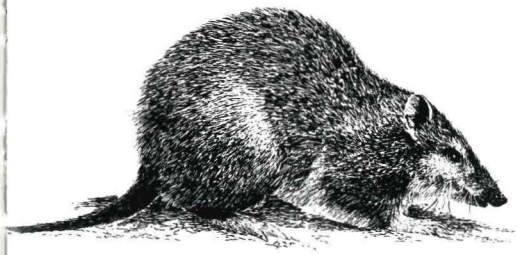
SOUTHERN BROWN BANDICOOT
(*Isoodon obesulus*)

IDENTIFICATION

The combined head and body length of the Bandicoot is approximately 30 cm, with a tail length of about 10 cm. Its short tail is one feature that allows an observer to distinguish the Bandicoot from the Woylie.

GENERAL HABITAT & BEHAVIOUR

Like many others, this marsupial was common in the south-west prior to European settlement, but its numbers have declined with the introduction of the fox, the spread of urban environments and the halt in Aboriginal burning regimes. As is the case with many Australian animals, the Bandicoot relies on varying habitats which include species of ground covers and scrub vegetation interspersed with areas regenerating after fire. Bandicoots seem to take advantage of the increased diversity of insects and vegetation that result from fire. Diggings seen in swampy areas are usually a good indication that Bandicoots are close by. This animal is still common in managed reserves like the Perup Nature Reserve.



BREEDING: winter to January
DISPERSAL: approximately September to late February

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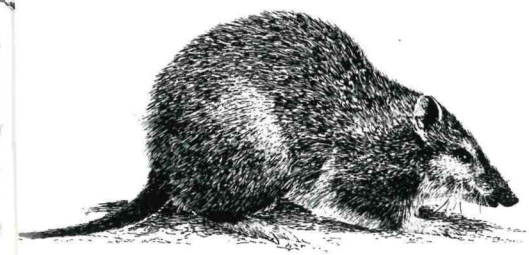


BREEDING: winter to January
DISPERSAL: approximately September to late February

CHUDITCH/WESTERN QUOLL
(*Dasyurus geoffroii*)

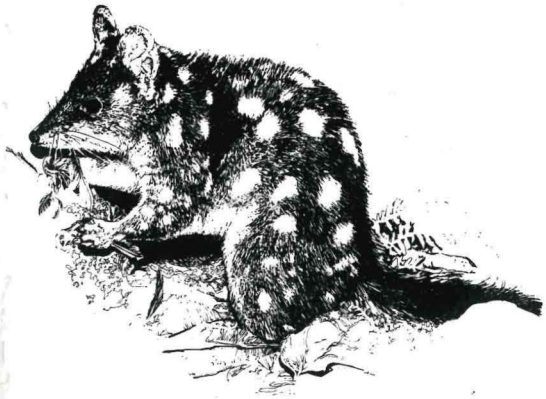
IDENTIFICATION

The Chuditch has a head and body length of about 34 cm. It is the largest native carnivore in the south-west, and is easily recognised by a series of large white spots which contrast sharply with the brown body. The tail is slightly bushy and 25 cm long.

GENERAL HABITAT & BEHAVIOUR

The Chuditch can be found in a wide variety of habitats, such as jarrah-marri forest or wandoo forest, provided that the area has enough suitable hollow logs or den sites. It often has a very large territory, possibly because of its carnivorous diet of insects, carrion and small mammals or birds - all of which can be in low supply. Large territories would be difficult to cover for a medium-sized animal, and it has been suggested that the Chuditch may take advantage of forest tracks where areas of dense vegetation could restrict its movement. The Chuditch has been the focus of a successful ecological, captive

breeding and translocation study for the past decade. Attention was directed at this species when it was realised that as few as 6 000 individuals may have survived since European settlement. Chuditch can be very hard to see because every night they forage for food all over their very large territories.



BREEDING: mid-May to early July
DISPERSAL: mid-to-late summer

ECHIDNA
(*Tachyglossus aculeatus*)

IDENTIFICATION

The Echidna has a head and body length of about 40 cm. Its habit of foraging in the early morning and evening makes the Echidna one of the easiest Australian mammals to see. In southern areas, like the Perup Nature Reserve and Dryandra woodland, it forages around termite nests which it pulls apart with strong forepaws. The destroyed termite mounds distinguish the work of the Echidna from that other termite eater, the Numbat, which has a more delicate approach. Echidnas lay one egg, probably directly into their pouch.

GENERAL HABITAT & BEHAVIOUR

As with all animals, the best way to find them is by knowing their diet and shelter requirements. The Echidna is a solitary animal and tends to find shelter in hollow logs and under thick bushes. Because it relies largely on termites for its diet, it is most likely to be found in those areas with plenty of fallen timber and the very obvious termite mounds. This makes the wandoo woodlands ideal.

As Echidnas sometimes roam about, even in the middle of the day, walkers may stumble across them along bush tracks. If startled, the Echidna will take evasive action by burrowing itself into the surface layers of soil. Do not attempt to handle the animal.

BREEDING: July to August
DISPERSAL: summer

BRUSH-TAILED PHASCOGALE
(Phascogale tapoatafa)

IDENTIFICATION

The Phascogale is a small, arboreal, almost squirrel-like marsupial that feeds mainly on insects and other small invertebrates such as spiders and centipedes. It has a head and body length of about 20 cm and a tail length of 19 cm. The most distinctive feature of the Phascogale is its very bushy black tail. This contrasts with the uniform grey of its head and back.

GENERAL HABITAT & BEHAVIOUR

The Phascogale is a nocturnal carnivore that appears to rely on tree hollows as nest sites. Sightings are often reported from forested areas with adequate rainfall, such as jarrah and marri forests near Collie. Its night-time foraging excursions can be very extensive, although it has been recorded returning to its nest site several times during a single evening. Male Phascogales breed after their first year. Competition among individuals is fierce, however, and all males die soon after mating as a result of diseases brought on by excessive stress.

This is a common phenomenon among the small carnivorous marsupials - the Dasyurids.

The Red-tailed Phascogale, a similar looking but much smaller animal, inhabits wandoo and sheoak remants in the wheatbelt and is sometimes seen at Dryandra.

BREEDING: winter
DISPERSAL: December-January

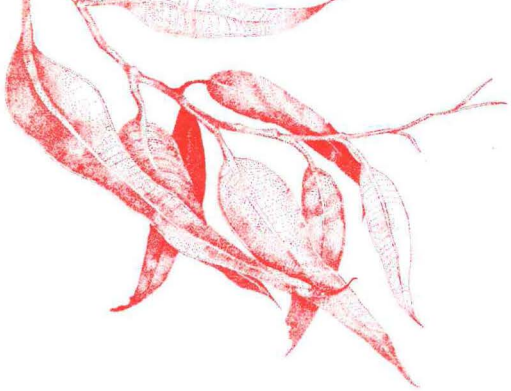
BUSH RAT
(*Rattus fuscipes*)

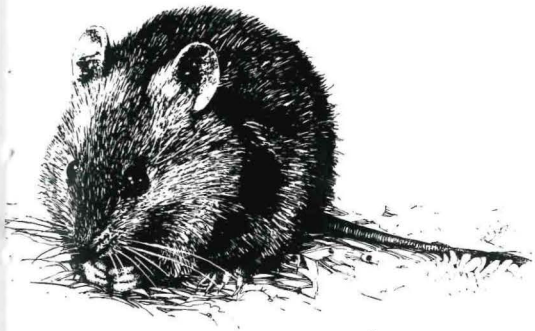
IDENTIFICATION

The Bush Rat is a small animal, with a head and body length of about 15 cm. Its tail is the same length as its head and body, and it has a grey to grey-brown back with a cream belly.

GENERAL HABITAT & BEHAVIOUR

Like most Australian animals, the Bush Rat is mainly active at night, and therefore very difficult to see. The Bush Rat appears to prefer areas with a dense cover of understorey vegetation. In suitable habitats, such as thickets occurring in gullies, they can reach very high numbers, especially as thickets regenerate after fire. Bush Rats can be found in almost any eucalypt forest with an appropriate understorey. There are only a few areas of suitably dense undergrowth in the Perup Nature Reserve. Most of these are in the wetter southern half of the reserve where black pea type flowers (*Brachysema*) grow, and form large mounds of dense cover for the Bush Rat to forage under.





BREEDING: continuous, although reduced in winter

WATER-RAT
(*Hydromys chrysogaster*)

IDENTIFICATION

The Australian Water-rat is a spectacular animal and, although its size is somewhat variable (ranging from just over 20 cm to in excess of 30 cm in its head and body length), it is the largest of the Australian rodents. The dense, dark fur of its back grades to a lighter colour, sometimes a brown-orange, on its lower flanks. Perhaps the most distinctive feature that distinguishes it to those lucky enough to see one is its effortless gliding movement over fallen logs and rocks as it forages close to the water's edge. Its motion becomes more clumsy, however, if it is alarmed or retreating.

GENERAL HABITAT & BEHAVIOUR

The Water-rat most often inhabits areas close to permanent water, so (although their numbers can be low) good habitats to look for them in are the blackbutt, flooded gum and thickets associated with rivers and swamps. They also occur in coastal districts such as in the habitats

associated with peppermint groves and tuart trees near Busselton. This animal can be seen during daylight hours as it often forages in the early morning and late afternoon and may even forage during the middle of the day when conditions are overcast. The larger pools of the Perup and Tone Rivers are the best places to encounter this animal.

BREEDING: mainly spring and summer

NUMBAT
(*Myrmecobius fasciatus*)

IDENTIFICATION

The Numbat is a small-to-medium sized animal with a head and body length of 25 cm and a tail length of 18 cm. Its tail often appears to be very bushy because the animal keeps its tail hairs erect. The Numbat is red-brown, with seven or eight easily visible white stripes that run across its back. It has a narrow head with a pointed snout and a horizontal stripe of dark hair running across its eye from the point of its snout.

GENERAL HABITAT & BEHAVIOUR

Although suitable environments were quite common at the time of European settlement, Numbats are now restricted to a few localities. Numbats are solely dependent on termites as a food source. They also require suitable shelter sites in the form of fallen hollow logs. Wandoo woodlands provide both. Unlike Echidnas, Numbats delicately excavate along underground termite galleries and forage around fallen logs or leaf litter. Look for their shallow diggings. The best time to

see Numbats is in the mid-morning and the late afternoon. They are most often seen crossing the roads and tracks as you travel through places like Perup Nature Reserve or Dryandra woodlands, but keep your eyes open as they move very quickly.

BREEDING: mainly spring and summer

MARDO / YELLOW-FOOTED ANTECHINUS
(*Antechinus flavipes*)

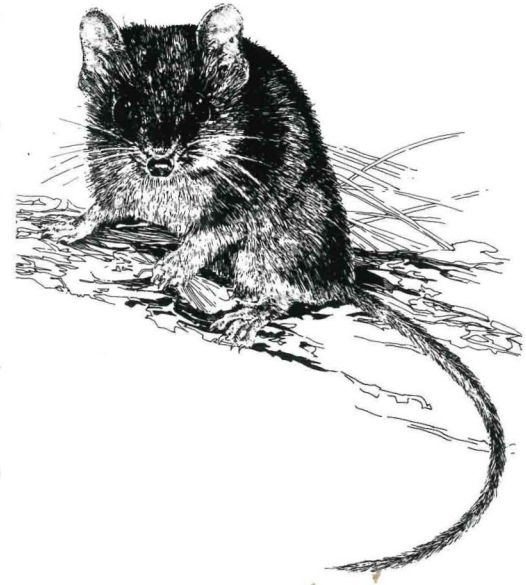
IDENTIFICATION

This is a small mouse-like animal with a head and body length of just over 10 cm and a tail of between 7 and 12 cm. Mardos found in Western Australia are not distinctively coloured: the slate-grey fur of the head and back contrasts only marginally with the browner flanks and the pale hair of the belly. When it is viewed closely, other - more distinguishing - features are noticeable, such as the black-tipped tail and a lighter ring of hair that circles the eye.

GENERAL HABITAT & BEHAVIOUR

The Mardo occurs in many of the forested areas of the south-west, including jarrah and marri forests, areas of blackbutt and flooded gum and dense vegetation surrounding the habitats near rivers and swamps. They are extremely difficult to observe as they will quickly dart for cover if they are disturbed on their nocturnal foraging excursions. They are a carnivorous marsupial, feeding mainly on

insects and (like the Brush-tailed Phascogale) they experience a sharp drop in their population after mating has occurred, due to the die-off of breeding males. They are mostly found in areas that have been unburnt for some years.



BREEDING: late winter to spring
DISPERSAL: May-June

DUNNART
(*Sminthopsis griseoventer*)

IDENTIFICATION

The Dunnart is a small carnivorous marsupial with a head and body length of 9 cm and a tail length ranging from 6-9 cm. It is mouse-like, with a slate-coloured body and a cream-coloured belly. Many of the features distinguishing Dunnarts are quite small, however, and would not be apparent during a fleeting encounter in the wild.

GENERAL HABITAT & BEHAVIOUR

Like all small nocturnal marsupials, the Dunnart is very difficult to see in our local bush. It often occurs at higher densities in areas that have been regenerating for three to four years after fire. It occurs in the open woodlands of jarrah and marri forest and inland heaths where it shelters in fallen logs or nests made in dense vegetation. Its distribution appears to be restricted to areas with an annual rainfall of greater than 300 mm.

BREEDING: August-March
DISPERSAL: September-April

WESTERN PYGMY POSSUM
(Cercartetus concinnus)

IDENTIFICATION

The Western Pygmy Possum was aptly named - it is only 80 mm long. These tiny creatures have reddish-brown to brownish-grey fur above and white below. A distinctive feature of the Pygmy Possum is its prehensile tail, which is used to grip twigs and leaves as it forages.

GENERAL HABITAT & BEHAVIOUR

The Western Pygmy Possum is nocturnal and somewhat secretive, so it is not readily seen. It is relatively common throughout the south-west. It lives in jarrah and marri forests, wandoo woodlands and heath and shrublands with blackboys. Western Pygmy Possums live on nectar and insects, and will often be found in large numbers in areas with high concentrations of nectar-producing plants.

BREEDING: possibly twice a year, with an average of five young.

AMPHIBIANS

BANJO FROG/POBBLEBONK FROG

(*Limnodynastes dorsalis*)

IDENTIFICATION

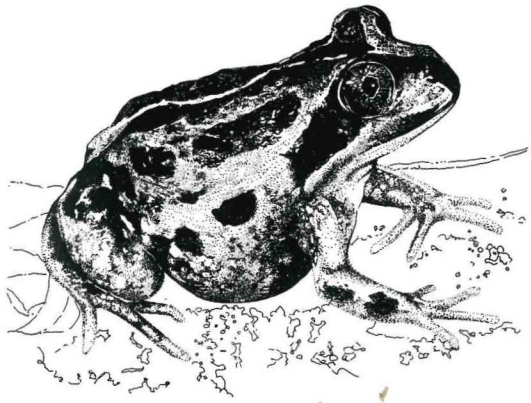
This frog has a drab grey back with some irregular darker patches and a distinctive white or cream stripe running along its backbone. Adults grow to about 70 mm in length.

HABITAT

A common species heard around many wetlands throughout the south-west of Western Australia, the Banjo Frog may even be heard near swampy area and wetlands in urban areas.

CALL

The call of this frog has been likened to the plucking of a banjo string. However, the combined call of many frogs tends to be a little tuneless. A single frog makes a repetitive bonk!...bonk!...bonk!

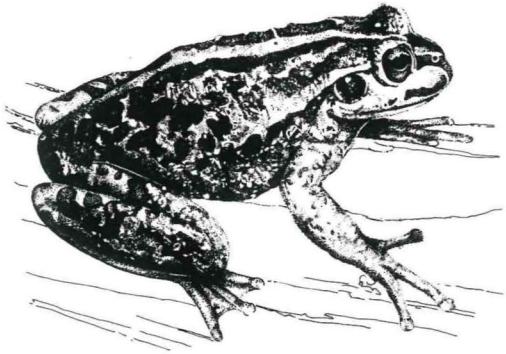


GREEN AND GOLDEN BELL FROG/MOTORBIKE FROG
(*Litoria moorei*)

IDENTIFICATION
Green and Gold Bell Frogs are olive to light-green above, with irregular bronze blotches forming a pattern on their backs. Adult frogs grow to a maximum size of 100 mm long.

HABITAT
Like all frogs, this species requires some moisture and often shelters during the day under fallen timber and logs that offer a degree of protection. They may also be found in and around vegetation that grows near permanent water.

CALL
The call of this frog is a deep drone followed by several higher pitched and repetitive cracks. The call has been likened to a motorbike accelerating and changing gears.

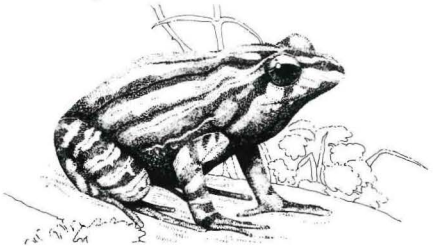


Crinea georgiana
(No common name)

IDENTIFICATION
Adults range in size from 20 to 40 mm. When seen closely, the most obvious feature of these frogs are their red hind legs and groins. Otherwise, they are a uniform brown, with some darker mottling on their back.

HABITAT
This species is often found near small soaks surrounded by wooded areas, like the karri forests near Quininup and Pemberton.

CALL
This frog will most likely be heard during its main breeding season, which occurs in mid-winter and early spring. Its call is a loud repetitive quack....quack....quack.



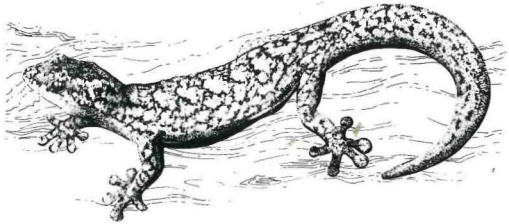
REPTILES

Five families of lizards are found in the south-west forests: Geckoes, Legless Lizards, Goannas, Dragon Lizards and Skinks. All are harmless.

MARBLED GECKO
(*Phyllodactylus marmoratus*)

IDENTIFICATION
Geckoes are distinguished by their large eyes with vertical pupils. They have very soft, fleshy, grey-brown skin, with whitish "w" or "v" markings.

HABITAT
Of all the lizards you might find in granite outcrops in the south-west forests, the Marbled Gecko is arguably the most common.



BOBTAIL
(*Trachydosaurus rugosus*)

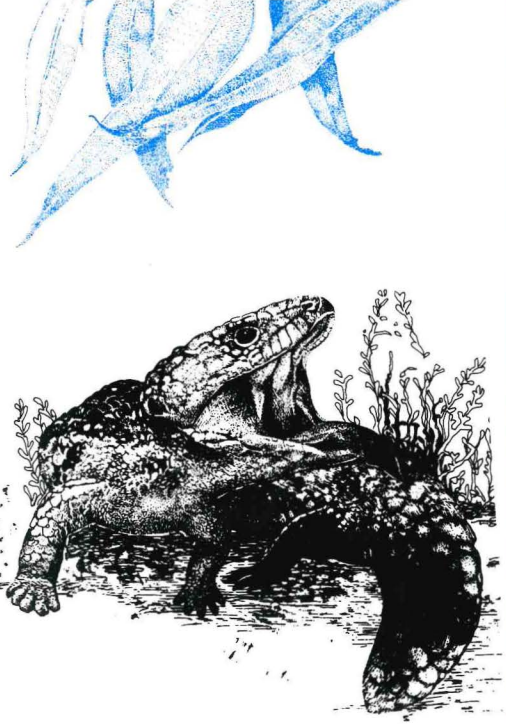
IDENTIFICATION

The most identifiable feature of this lizard is its short and rounded tail. It is generally brown and has numerous cream blotches on its back. Typically, it grows to about 30 cm from head to tail. It is a very slow-moving animal, and when approached it curls its body and opens its mouth wide in an aggressive manner.

Bobtails feed mainly on invertebrates, especially snails. They also commonly eat carrion and fruit.

HABITAT

This is possibly the most abundant lizard in the south-west, and it is frequently seen crossing roadways that run adjacent to almost any natural bush or forested areas.



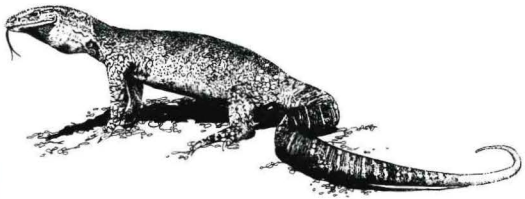
BUNGARRA (RACEHORSE GOANNA, MONITOR) (*Varanus rosenbergi and V. gouldii*)

IDENTIFICATION

These goannas are the largest lizards, and may be up to 160 cm long, but more commonly about 50-100 cm. They have forked tongues, are long and flat with a powerful tail, and covered in loose-fitting skin. *Varanus gouldii* is more likely to be seen in the northern areas, and has a distinctive yellow tip on its tail. *Varanus rosenbergi* has black bands across its back and a dark tip to the tail.

HABITAT

These lizards are diurnal (active in the daytime), and are often seen strolling through open jarrah forest. They are attracted to the warm surface of sealed roads, where many fall victim to vehicles.



DUGITE (*Pseudonaja affinis*) and TIGER SNAKE (*Notechis acher*)

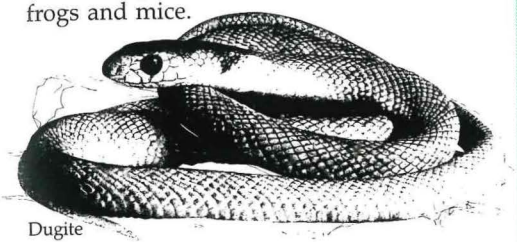
These two snakes are common throughout the forests. Both are very dangerous to humans and should not be handled.

IDENTIFICATION

There is a large variety in the sizes and colours of these two snakes. Tiger Snakes, however, averaging one metre long, are black with a yellow belly; and Dugites, often longer, are frequently a pale-to-dark brown with a more slender body.

GENERAL HABITAT & BEHAVIOUR

Tiger Snakes prefer a diet of frogs, so they are generally found in and around damp places. Dugites, on the other hand, like to dine on mice. Farm houses with hay sheds and lush gardens are often abundant in frogs and mice.



Dugite

Tiger snake

THE SOUTH WEST ECO MUSEUM

The South West Eco Museum Project is an initiative of the South West Development Commission to link a series of centres throughout the region which depict the diversity of the natural environment. Existing centres are being developed to interpret the karri, jarrah and tuart forests, the caves, wetlands (natural and constructed), the marine environment and a river catchment area.

Community involvement or support for an ecomuseum is essential. The Perup Forest Ecology Centre became a part of the South West Eco Museum after a joint application for funding by the local community, the Boyup Brook Shire Council and the Department of Conservation and Land Management. Funding was provided for the development of a comprehensive interpretation system, including guided walk trails and the publication of this booklet.

Eco Museum modules being established:

Perup Forest Ecology Centre, Boyup Brook
Dolphin Discovery Centre, Bunbury
Wellington Forest, Dardanup
Tuart Forest Visitor Centre, Busselton
Karri Forest Discovery Centre, Pemberton
Capel Eco Discovery Centre
Lake Cave Interpretive Centre, Margaret River
Quininup Eco Module

THE FRIENDS OF PERUP

A community-based organisation, the Friends of Perup, was formed in 1994 to raise community awareness of the values of Perup, and engender a deeper understanding of complex land and wildlife management issues.

The Friends of Perup produce a quarterly newsletter, and conduct regular nature study activities and workshops. The cost of family membership is modest. For more information write to:

The Secretary, Friends of Perup, PO Box 150, Boyup Brook 6244.

THE PERUP WILDLIFE TRUST

The Perup Trust Wildlife Fund holds funds donated by the public or raised from sponsors or merchandising for the purpose of community education and interpretation in the proposed Perup Nature Reserve. The Trust Fund is administered by a committee from CALM, the South West Eco Museum, Boyup Brook Shire Council and the Friends of Perup.

Copies of the Wildlife Identikit are available from the Trust. Generous discounts apply for purchases of twenty or more copies.

Fax: Perup Wildlife Trust (097) 771363

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