

T
here are more than 2,800 species of snakes throughout the world, and just over 100 species occur in Western Australia.

They are quite common here; motorists will often see them basking on the warm bitumen roads, and people enjoying their gardens or out bush walking see them too. Mostly, snakes are inoffensive. Only about eight species occurring on land in Western Australia are considered potentially dangerous to people. Even these species are not a threat if people use common sense and show respect to these amazing animals.

They have successfully adapted to habitats ranging from swamps and lake margins, sand dunes, mallee scrubs, rocky upland areas, spinifex grasslands, open woodlands, and sandy deserts to tropical vine thickets. They range in length from the delicate blind snakes, some of which are less than 20 centimetres long, to the olive pythons that can reach four metres. Some species are generalist feeders eating insects, spiders, other reptiles, amphibians and small birds and mammals, while others, like the blind snakes, are very specialised feeders eating only termites or ants and their larvae.

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Stimson's python occurs in the Darling Scarp suburbs of Perth.

3Below: The Pilbara olive python is Western Australia's only threatened snake.

While some of our snakes have very wide distributions across the State, others have been recorded from a single location and are known from just a few specimens. Currently the only snake on the State's Threatened Fauna list is the Pilbara olive python (Morelia olivacea barroni). The carpet python (Morelia spilota imbricata) is specially protected in WA because of its declining numbers and its attractiveness to illegal collectors. A further two species, the south-west woma python (Aspidites ramsayi) and the rough-scaled python (Morelia carinata) of the Kimberley, are on CALM's Priority Fauna list. This is because not enough is known of their status and distribution to decide whether they are really threatened or not. So, with less than one per cent of the snake species considered threatened, you have to wonder how they have been able to cope so well with the changes to the landscape, while so many other animal groups have declined.

Part of the reason is that snakes are exothermic or cold-blooded animals. This means that they cannot maintain a constant body temperature through internal processes. Instead, they must rely on external heat sources to raise their body temperature to a level that allows them to be active and hunt for their prey. This is why people often see snakes on roads or on rocky outcrops. It is also why they are often run over on roads at night. They are attracted to the dark bitumen surface, which radiates
heat well into the night and allows them to remain active for longer periods.

## ENERGY EFFICIENT

While this approach to life might seem to be not overly efficient, it does have its advantages. In the cold winter months, when hours of daylight are fewer, average daily temperatures are low and prey is in short supply, the best strategy for the snakes is simply to sleep. While they sleep, their body temperature falls almost to that of the surrounding air and their metabolism slows. This means that snakes can survive the winter months using very little of their stored fat reserves. As winter turns to spring and temperatures rise, the snakes begin to emerge from their burrows or shelters and set off in search of food.

Another important reason for the survival of snakes in urban and urban fringe areas is that these environments still support good quantities of their prey. Frogs are still common in most wetland habitats, and ground-dwelling birds or those that nest close to the ground are also easy to find. Several of the small mammals have become locally extinct or been reduced in areas of WA that have been developed, but they have been replaced by the house mouse (Mus musculus) and the black rat (Rattus rattus). Both of these introduced rodents breed prolifically in urban and urban-fringe environments and are now abundant. Terrestrial


Right: The gwardar comes in a variety of colours.

Below right: The tiger snake favours swamp and lake margin habitats.
invertebrates such as ants, termites, and spiders are also still common in these environments, along with other small reptiles such as geckoes and skinks.

Snakes like Stimson's (Morelia stimsoni) and carpet pythons and the venomous gwardar (Pseudonaja nuchalis), dugite (Pseudonaja affinis) and tiger snake (Notechis scutatus) are all still found in parts of metropolitan Perth. The ready supply of mice and rats in and around remnant bushland areas contributes greatly to their survival. In areas outside Perth, mulga snakes (Pseudechis australis) are common, particularly in cereal farming areas.

## CLOSE ENCOUNTERS

The close association between introduced house mice, black rats and people can lead to unexpected and, for some, frightening encounters between people and snakes. Some people are not very comfortable having snakes of any sort around their houses and sheds. Consider also that suddenly disturbing a snake can be a frightening experience for the snake too. So respecting snakes and keeping your distance can reduce the risks to you, your family, your pets, and the snakes.

However, understanding what it is that may make your property attractive to snakes and their prey can help you modify the surroundings to reduce the chance of encountering dangerous snakes there.

## REDUCING THE RISKS

Keep grass short, particularly in areas close to the house, and there will be less cover for both snakes and their prey. Removing rubbish, old machinery and timber also reduces the available habitat for rodents and snakes. If it is not possible to remove these items, they should be stacked clear of the ground and as far from dwellings as possible. Compost heaps should be turned regularly and the contents spread on gardens as soon as the mix has matured. This will reduce breeding sites

for rodents and will mean fewer problems with flies in summer. Fruit trees and grapevines are also attractive to rodents, so any unused fruit should be picked or collected from the ground and composted or disposed of. This will also stop fruit fly damaging the remaining fruit.

Aviaries and poultry yards are very attractive to introduced rodents, as they provide both spilt food and shelter. It is of paramount importance in any rodent control that you deny the rodents food. Aviaries must be cleaned regularly, with any spilt grain and other food scraps removed and either buried, composted or placed in rubbish bins. Grain and other food must be stored securely and any spills cleaned immediately. Unused nest boxes and breeding hollows should be cleaned and stored off the ground so they do not provide refuge for rodents. Although they might initially be attracted by rodents, snakes can take eggs and chicks from nest boxes.

You may also need to resort to poisons to control rodents. Suitable rodenticides can be purchased at most large retail centres or rural trade suppliers. Care must be taken in using rodenticides, as with any poisons. Poisons can have harmful effects on animals that eat the rodents, including pets, and may also kill harmless reptiles like bobtail lizards and pythons. If you find dead rodents, dispose of them with your household rubbish. It is also important to remember that controlling rodents can be an ongoing issue, and a coordinated effort with your neighbours will yield the best results.

## THE GREAT OUTDOORS

For those people who spend a lot of their time outdoors, particularly in bushland areas, or in the vicinity of wetlands, there are a few simple things that can be done to reduce the risk of being bitten by snakes. Wearing
protective clothing (stout footwear, long pants, long-sleeved shirts and, where necessary, gloves) will reduce the risks. Taking the time to look around the area you are planning to walk in before starting may also save you a few surprises. It also pays to see if there are any signs of major rodent infestations in the area. Where there is abundant food for snakes there could be snakes.

Most people are bitten by snakes while trying to catch or kill them. The fact that the snake is small does not mean it will not bite or that it is not dangerous. Baby dugites and tiger snakes have the same venom as adults. If you see a snake, respect it, and let it go about its business without interference. Remember, most snakes are as likely to be as frightened of you as you are of them. Back away or move around the snake, keeping a good distance away from it. If there is one area of obvious bushland or wetland habitat or shelter near the snake, don't walk between the snake and its most obvious route back to this shelter. Keep children and pets well away from the snake until it has moved off.

If you encounter a snake in your yard, keep children and pets away from it. The snake should move away without any need for other action from you. If you encounter a snake inside your home, or in another position from which it cannot easily escape, direct action may be required. The simplest and safest action is to leave a suitable door or other escape route available to the snake, so that it may move away of its own accord. You should then watch to see that the snake escapes. If this strategy is not possible, you will need expert advice or assistance.


## CALLING FOR HELP

Fortunately, there are people in the community who are familiar with snakes and have the skills and experience to give you expert advice. If required, they can catch and relocate snakes to more suitable habitats. In the Perth metropolitan area there are a number of volunteer snake relocators licensed by CALM to remove and relocate snakes. There are also licensed snake relocators in some country centres, mostly north of Perth. Contact details for these skilled volunteers can be obtained from your nearest CALM office, Shire Office or Police Station. There are also licensed pest control operators listed in the Yellow Pages who will charge a fee to remove snakes. It is important that you use licensed expert relocators, as these people should be covered by accident insurance and will know how to capture and remove the snake quickly and humanely without putting the snake, themselves, or your family at risk of injury.

If you have a snake inside your home and a snake removal service is
not available to you, the best strategy is to allow the snake to leave of its own accord and make sure it does so, as outlined above. While it is legal to kill any dangerous venomous snake that poses an immediate threat to people or livestock, remember that your chances of being bitten are much greater if you are trying to capture or kill it. It is better to suffer some short-term inconvenience than unnecessarily risk your life and that of the snake by attempting to remove it yourself. Specific advice on your circumstances may also be obtained over the telephone from CALM or any of the licensed snake relocators.

Remember, snakes have survived for millennia and continue to survive despite widespread ecological change. The best way to be 'snake smart' is to respect them and give them their space. We can manage our properties to minimise the risks to our family and pets from unwelcome rodents and the snakes that feed on them, and we can assist snakes to survive for future millennia in our bushland areas, if we follow the simple strategies outlined above.


Above: The dugite is a common species in Perth, and is quite variable in colour pattern.

Left: The mulga snake is more common in the Wheatbelt and pastoral areas.

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In 'Photographing a Temperate Wonderland' (page 10), photographers Sue Morrison and Ann Storrie share their experiences .


Many farmers and landowners are turning to plantation pine for a variety of good reasons. Five of them tell us why. See 'A Crop of Forests' on page 38.

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In 'Those Spotted Things' (page 22), we see how fox-baiting and captive breeding continues to swell populations of this popular native mammal.


Snakes. You either love them or hate them, but how do we live with them? See story on page 45.


As habitat changes, so do species populations. But just when does a species become threatened? See 'Healing the Land' on page 49.

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Marketing: Estelle de San Miguel $\pm$ (08) 93340296 Fax: (08) 93340498 Subscription enquiries: ¥ (08) 93340481 or (08) 93340437 Colour Separation by Colourbox Digital
Printed in Western Australia by Lamb Print
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Visit LANDSCOPE online on our award-winning internet site NatureBase at http://www.calm.wa.gov.au

Published by Dr 5 Shea, Executive Director
Department of Conservation and Land Management Dick Perry Avenue, Como, Western Australia

