Snakes and Snake-like Reptiles of the WA Pilbara & Goldfields

A guide to their identification and medical significance for industry in remote regions of Western Australia

An important resource for every regional medical professional

By

Brian Bush and Brad Maryan



Desert Death Adder, Carosue Dam, WA Goldfields: This population near Kalgoorlie rediscovered by a SOG employee in 2002.

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Contact details – Brian Bush: bush@iinet.net.au (Manager, Snakes Harmful & Harmless)
Brad Maryan: Lerista.1@bigpond.com (WA Museum)

Dedicated to all mining and exploration workers:

the modern pioneers

NOTE: Venomous snakes can not crossbreed with pythons as is often erroneously believed – this myth may have originated from observations of foraging black-headed pythons overpowering venomous snakes before eating them.

Examples of Dangerous Mistaken Identity

In 1999, a thirty-five year old Broome man died after a bite from a Gwardar (also called Western Brown Snake). He was handling the snake when bitten, believing it was a nonvenomous Black-headed Python.

Several people, including snakebusters, have been bitten by venomous Rosen's Snake they had handled after mistaking it for a nonvenomous python.



Left: Harmless Pygmy Python (Antaresia perthensis) – Page 27 Right: Venomous Rosen's Snake (Suta fasciata) – Page 19

The triangular-shaped head in death adders has caused people in the Pilbara to pick them up believing they were harmless pythons, resulting in bites and serious envenomations.



Venomous Pilbara Death Adder (Acanthophis wellsi) from Karijini - Page 13

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Introduction

Many snakes in the remote parts of Australia where industry occurs may be regarded as environmental hazards to employees, both at work and off duty, especially during the latter in village areas where dress standards are relaxed. This booklet not only includes this potentially dangerous group, but also the harmless and mildly venomous species as well, along with the larger snake-like lizards.



Figure 1. Snakebite on heel

Combined, the Western Australian Pilbara and Goldfields encompass a vast area with many snakes and snake-like reptiles. In this resource-rich region there are numerous mining operations and associated industries. Currently twenty-seven venomous land snakes, six pythons and several worm-like blind snakes

are known to occur there. It is important to be able to identify the harmful species, as well as being able to administer effective snakebite first aid. Identification is of particular importance in isolated areas. If a mildly venomous snake or legless lizard is found to be responsible for a bite, then mobilisation of the substantial resources required for emergency evacuation of the patient need not be undertaken.

Lizards with legs are of lesser medical concern than the dangerously venomous snakes, however the larger forms, such as the monitor lizards (bungarras), can inflict wounds with their strong claws and jaws that are armed with numerous lacerating teeth.

The bigger varieties of nonvenomous pythons have large teeth too and may occasionally bite. The treatment of wounds caused by both groups should include cleaning with antiseptic

1

solution, along with a tetanus booster if required.



Figure 2. Yellow-spotted Monitor, a common lizard seen in mining areas

On the other hand. the venomous snakes include several species of medical significance cause that can serious harm. Because of their large size and predisposition for foraging the in vicinity of buildings. they are more readily

encountered accidentally, especially when they are active at night, which can result in a bite. Many of the smaller species may not inflict a life threatening envenomation, but because of localised swelling can cause a debilitating injury that may persist for several days.

All snake-like lizards are harmless, but have been included here because they are often found in villages and workplaces where sightings can cause considerable concern when one is mistaken for a snake. That concern can deteriorate to outright anxiety, along with an associated psychosomatic manifestation of physical symptoms if an individual believes he or she has received a bite.



Figure 3. Golden Sea Snake

Sea snakes have not been included here as they are easily identified with their laterally compressed bodies and flattened tails. All are front-fanged and closely related to the Australian front-fanged land snakes. They are best treated as

potentially dangerous and if a bite is suspected apply snakebite first aid and seek medical assistance at the nearest hospital. No bites from sea snakes have resulted in death to date in Australia.

This booklet will enable you to identify the terrestrial snakes in your workplace. It will also illustrate the differences between harmful and harmless varieties, as well as allow you to determine if the animal in question is a snake-like lizard.

Some snakes will be easily identified, while others not so. Most people should have little difficulty identifying a Black-headed Python, however this harmless snake has been mistaken for a venomous snake in the past because of its intimidating defensive display, especially in subdued light. A death in 1999 near Broome resulted from a bite to a 35 year-old male when he handled a Gwardar he mistook for a Black-headed Python.

The photographs should be sufficient to confirm identification of most regional snakes, however with the small species of 'no medical significance', **unless victim is hypersensitive** (Page 23), all that is needed is that an individual is identified as one of these that is not usually harmful.

If you require more information than is included in this booklet, we encourage you to contact the nearest regional DPaW office, or the Western Australian Museum. Contact details are included on Page 33.

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Body Pattern as an Indicator of Snake or Legless Lizard

(Australia only)

When a uniform and regular body pattern is present it can allow for a quick confirmation of snake or snake-like lizard.

No Australian snake has a body pattern consisting solely of multiple longitudinal stripes, only crossbands; and no Australian legless lizard has a body pattern consisting of multiple crossbands, if a body pattern is present it consists of longitudinal stripes, which may be continuous or broken into a series of dashes.

Figure 4.







SNAKE BANDS







LIZARD STRIPES

Belly Scales as an Indicator of Venomous or Nonvenomous

(Land snakes only)

If a legless reptile is captured or killed, it is simply a matter of examining the belly scales (ventrals) to determine if it is venomous or not.

To do this with a live individual requires considerable caution, it needs to be placed in a glass jar so that it can be viewed safely from below. Alternatively, if it is only small it may be restrained with tongs to allow examination. When holding a "snake" with this type of tool, ensure that the free length of the head end is shorter than the distance from your hand to where it is clamped.



BBQ tongs with sponge rubber attached to jaws make a simple safe handling aid for small snakes and snake-like lizards.

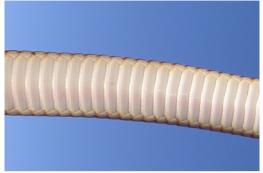
Figure 5.

Notes:

In the Kimberley Region there are several nonvenomous snakes with belly scales similar to venomous snakes as in Figure 6.

Australian sea snakes all have more than two rows of belly scales as in Figures 7 and 8.

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Venomous land snakes all have a single row of broad belly scales, almost as wide as body.

Figure 6. Venomous snake



Harmless pythons all have more than one row of belly scales with the large central ones being less than two-thirds width of body.

Figure 7. Python

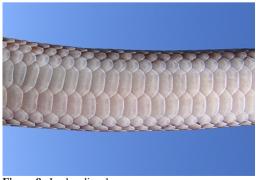


Figure 8. Legless lizard

Harmless legless lizards and blind snakes all have more than one row of belly scales.

Is it a snake?

When is a snake, not a snake? Included within Australia's incredibly rich herpetofauna is a family of lizards called pygopods (meaning rump-foot) that contains over 35 species of legless lizard. These snake-like reptiles display a wide variation in size and behaviour, including some that actually mimic snakes by raising the forebody and moving in a threatening fashion.

There are about a dozen different types of legless lizard in the Pilbara and Goldfields that at first glance may be mistaken for a small snake. All species have a broad, fleshy tongue compared to a very narrow one in snakes and all those illustrated here have ear openings represented by a hole behind each eye.

They spend most of their time hidden beneath cover becoming most active in the early evening and at night. Dense low, vegetation, particularly hummock grasses are favourite shelter sites. Apart from the lizard-eating Burton's Legless Lizard, most feed on insects, while the Common and Hooded Scaly Foot prefer spiders.

Legless lizards illustrated here all attain a length greater than 30 centimetres and have fragile tails that break readily when roughly treated.

Common legless lizards

(All are harmless)



Figure 9. Unbanded Delma Legless Lizard. Length to 36 cm – Southern Pilbara & Goldfields



Figure 10. Elegant Delma Legless Lizard. Length to 42 cm – Pilbara



Figure 11. Neck-barred Delma Legless Lizard. Length to 35 cm – Pilbara & northern Goldfields



Figure 12. Sharp-snouted Delma Legless Lizard. Length to 45 cm – Pilbara & Goldfields



Figure 13. Peace Delma Legless Lizard. Length to 40 cm – Pilbara



Figure 14. Excitable Delma Legless Lizard. Length to 35 cm – Pilbara & western Goldfields



Figure 15. Burton's Legless Lizard. Length to 65 cm – Pilbara & Goldfields



Figure 16. Common Scaly Foot. Length to 70 cm – southern Goldfields



Venomous Snakes of Extreme Medical Significance

There are six terrestrial snakes in the Goldfields and five in the Pilbara of extreme medical significance capable of inflicting a fatal bite. These appear here in descending order of potential lethality, although the Ringed Brown Snake and two mulga snake varieties have not been identified as the cause of death in any recent case histories. A little-known taipan, from further east, near Giles, has been included here on Page 18.

Most snakebites are dry, with insufficient venom injected for systemic poisoning to occur, thus *diagnosis based on bite site swab is unreliable*. An absence of symptoms, i.e., no coagulopathy, kidney damage, paralysis, nor venom in urine determined with VDK, contraindicates antivenom therapy.

Gwardar or Western Brown Snake

(Pseudonaja nuchalis)

In a review of *Pseudonaja*, Adam Skinner has recognised this snake as a separate taxon and suggests it be removed from *nuchalis* and named *mengdeni*. 2009: A multivariate morphometric analysis and systematic review of *Pseudonaja* (Serpentes: Elapidae: Hydrophiinae). *Zool. J. Linnean Soc.* 155: 171-197.

This slender snake grows to 160 cm and varies tremendously in colour and pattern. It is found throughout the area covered by this booklet, and is active day and night dependant on temperature. A bite causes little local pain and may go unnoticed by victim if bitten at night.

Involved in two recent work-related deaths: 1997 at Tarmoola Village, Leonora and 1999 at Broome rifle club.



Figure 18.

Gwardar bite on finger that resulted in an envenomation that required 5 ampoules of Brownsnake Antivenom and blood transfusion.

Many brown snakes, such as this Gwardar, have boldly-marked bellies; however it is not always as obvious as in the individual illustrated.



Figure 19.



Figure 20. Gwardar or Western Brown Snake. Part of a clutch of immature sibling snakes showing polymorphism and typical neonatal head markings in brown snakes.



Figure 21. Gwardar or Western Brown Snake. Banded form with indistinct bands from Paynes Find.



Figure 22. Gwardar or Western Brown Snake. Banded form with distinct bands from Laverton.



Figure 23. Gwardar or Western Brown Snake. Pale form with distinct neck chevron from Mount Magnet.



Figure 24. Gwardar or Western Brown Snake. Black-headed, orange form from Koorda.

Death Adders

(Acanthophis species)

These stout snakes grow to 90 cm in length and vary somewhat in colour, especially in the degree of black pigment present. Two species (A. pyrrhus and A. wellsi) commonly occur in the Pilbara and between them occupy most habitat types, and one (A. pyrrhus) less commonly in the Goldfields. particularly in sandy areas well vegetated with spinifex. They are particularly active at night, but may be encountered in the day during cool temperatures. A bite causes little local pain and may go unnoticed by victim if bitten by small individual at night.

All three deaths attributed to death adders since 1980 involved children (2 yrs old [1994], 9 yrs old [1998] & 16 yrs old [1988]).



Note elliptical pupil.



Figure 25. Desert Death Adder. Figure 26. Pilbara Death Adder from near Newman.



Figure 27. Desert Death Adder from Carosue Dam.

Caution: In the Pilbara death adders have been handled when mistaken for small pythons, resulting in serious envenomation to the handler.

Dugite or Spotted Brown Snake

(Pseudonaja affinis)

This large snake grows to 210 cm and varies tremendously in colour and pattern. It is restricted to the southern Goldfields, north to about Southern Cross and Widgiemooltha, and is active during the day, rarely at night. Its bite causes little local pain and in most cases venom is not injected when this snake bites.

There has been one death (1993 – Spearwood) attributed to this member of the brownsnake group since 1980.



Figure 28. Dugite or Spotted Brown Snake from Maida Vale.



Figure 29. Dugite or Spotted Brown Snake from Red Hill.

Mulga Snakes

(Pseudechis species)

The Common Mulga Snake (*P. australis*), which is also called King Brown, may grow to more than 200 cm (300 cm in Kimberley). It occurs throughout most of Australia, including the Pilbara and Goldfields, in all habitat types. The Spotted Mulga Snake (*P. butleri*), to 160 cm, *occurs* throughout the northern Goldfields, south to Mullewa, Ninghan and Menzies.

Both are particularly active at night, but may be encountered in the day during cool temperatures. A bite causes local pain and a general feeling of unwellness, but is unlikely to be life threatening, although an envenomation requires treatment with Blacksnake Antivenom to alleviate possibility of ongoing muscle destruction.

The most recent death attributed to a mulga snake was in 1969. In 2004 an adult male had a severe reaction requiring hospitalisation after a bite from a neonatal Common Mulga Snake.



Figure 30. Common Mulga Snake or King Brown from Weeli Wolli Creek.





Relative scale size showing the much larger king brown snake scales compared to the small olive python scales.





Figure 32. Spotted Mulga Snake (juvenile) from Yalgoo. Absent from the Pilbara.

Ringed Brown Snake

(Pseudonaja modesta)

This slender snake grows to 60 cm and varies considerably in colour: young snakes are salmon pink to orange with widely-space narrow black bands; adult snakes are monotonal olive green. It is found throughout the area covered by this booklet, and is active day and night dependant on temperature. A bite causes little local pain and may go unnoticed by victim if bitten at night.

There are no formal records of death attributed to the Ringed Brown Snake, although if it had been involved in a death, the objective identification made with a venom detection kit (VDK) would diagnose 'brown snake' only and not species.



Figure 33. Ringed Brown Snake from Petermarer Creek. In this adult, the narrow bands have faded completely on anterior body compared to following example.



Figure 34. Ringed Brown Snake. Distinctly marked juvenile from Port Hedland.

Western Desert Taipan

(Oxyuranus temporalis)

This description inserted March 2007

The first specimen of this slender snake was collected on 22nd September 2006 to the east of the Walter James Range, Western Australia. It was a female measuring 97 cm, although several more individuals have been examined since then and it's now known to 170 cm and probably will be found to attain about two metres in length. We know little about it's ecology apart from the collection data: most have been captured during hot sunny days crossing tracks through the flat interdunes with open low acacia and/or mallee and grevillea over diverse shrubbery dominated by spinifex.

Body colour light to dark brown. Young individuals with darker olive-grey variegations. Head paler than body. Belly yellowish-white with or without slight spotting towards head.

We expect this snake to be dangerously venomous, as are the other two taipans currently known: Coastal and Inland.



Figure 35a. Western Desert Taipan from near Ilkurlka, Great Victoria Desert



Figure 35b. Western Desert Taipan. Note the stubby nose and black eye.

Venomous Snakes of Lesser Medical Significance

The following snakes are unlikely to cause a life-threatening envenomation, but all are capable of inflicting a debilitating injury due to the extent of swelling a bite may cause. They appear in descending order of potential danger.

Bites from the first two species, Little Spotted Snake and Rosen's Snake, have been misdiagnosed as involving taipan in the past when determined with the venom detection kit (VDK). Because of this, a boy bitten on the foot by a Little Spotted Snake in South Hedland was air lifted by ambulance to Princess Margaret Hospital in Perth. Fortunately he never developed more than localised symptoms.



Figure 36. Little Spotted Snake from Munjina East Gorge.

A nocturnal snake to 62 cm that is common in the Pilbara and Goldfields. It is often mistaken for a Stimson's Python (bottom left), but has round pupil versus elliptical.



A pugnacious, nocturnal snake to 52 cm that is common in the Pilbara, but absent from the Goldfields.



Figure 37. Rosen's Snake from Newman and head (left) of pale form from Mount Magnet showing eye with round pupil compared to elliptical pupil in Stimson's Python.



Figure 38. Lake Cronin Snake from Forrestania.

A pugnacious snake to 60 cm that is restricted to the extreme south of the Goldfields north to Marvel Loch. Little is known about its behaviour but it is probably active day and night.



Figure 39. Coppertail or Green Whip Snake. Black headed form from Yandeyarra.

Figure 40. Coppertail or Green Whip Snake. Brown headed form from Spinifex Camp, Yandicoogina.

This fast, slender, diurnal snake to 100 cm is very common throughout the Pilbara and Goldfields. It is very active in early spring when it is commonly observed around village areas.

A small, slender, diurnal whip snake to 61 cm. It is restricted to the extreme south-western parts of Pilbara: Northwest Cape & adjacent parts.



Figure 41. Black-necked Whip Snake from near Carnaryon.



Figure 42. Red or Rufous Whip Snake from near Karratha.

This fast, slender, crepuscular snake to 70 cm is found throughout much of the Pilbara. It is much less common than its close relative, the Coppertail or Green Whip Snake.

A short, stout adderlike snake to 71 cm in length that is active both day and night. Although scarce inland, occurs in the Goldfields north to Boorabin and old unconfirmed record from 48 km east of Kalgoorlie. Absent from the Pilbara.



Figure 43. Bardicks from Lort River.

A nocturnal snake to 53 cm in length that occurs in the southern Goldfields north to Kalgoorlie. Absent from the Pilbara.



Figure 44. Gould's Snake from Darling Range.



Figure 45. Monk Snake from near Sandstone.

A pugnacious, nocturnal snake to 46 cm in length that is very common in the Goldfields and less common in the Pilbara.

A nocturnal snake to 65 cm in length that occurs in the southern Goldfields, north to Widgiemooltha.

Absent from the Pilhara



Figure 46. Black-backed Snake from near Karragullen.

Venomous Snakes of No Medical Significance

The following species are all technically venomous, although incapable of inflicting a medically significant bite, unless victim is hypersensitive and/or has an allergic reaction.



Figure 47. Northwestern Shovel-nosed Snake from near Newman.

A small, nocturnal snake to 39 cm that feeds on lizards and soft-shelled reptile eggs. Found widely throughout the Goldfields, but in the Pilbara it is restricted to sandy deserts in the eastern parts.

A small, nocturnal snake to 36 cm that feeds on soft-shelled reptile eggs. Occurs in the Pilbara and northern part of the Goldfields.



Figure 48. Narrow Banded Shovelnosed Snake from near Menzies.



Figure 49. Southern Shovel-nosed Snake from near Leinster.

A small, nocturnal snake to 35 cm that feeds on small soft-shelled reptile eggs. Occurs throughout the Goldfields, but is absent from the Pilbara

The name 'moon' may be related to this snake being very active on bright moonlit nights when other nocturnal snakes are inactive. They feed solely on small skink lizards.

The two forms of this snake illustrated are quite distinct and have previously been recognised as separate species.

The orange-naped morph attains 65 cm and occurs throughout the Goldfields and Pilbara. It has a reddish body and 15 midbody scale rows

The Yellow-naped morph attains 50 cm and occurs only in the northwestern Pilbara, south and west to Yandeyarra. It has a greyish body and 17 midbody scale rows.



Figure 50. Moon or Orange-naped Snake from near Newman.



Figure 51. Yellow-naped Snake from 12-mile, near Port Hedland



Figure 52. Black-naped Snake from Jurien.

This very slender, nocturnal, lizard-eating snake attains 45 cm. During the day it lives in litter or soil where it hunts sandswimming lizards. It is found throughout the Goldfields but is absent from the Pilbara This very small, to 21 cm, nocturnal, lizard-eating snake spends most of its life burrowing in loose sand and litter. It occurs in sandy areas of the Pilbara but is absent from the Goldfields, although it does occur in the central deserts of WA to the east.



Figure 53. Desert Banded Snake from near Shay Gap.



Figure 54. Jan's Banded Snake from near Coolgardie.

This small, to 30 cm, nocturnal, lizard-eating snake spends most of its life burrowing in loose sand and litter. It occurs throughout the Goldfields north into the southern Pilbara.

This strikingly marked bandy bandy attains 50 cm and is a burrower that feeds solely on blind snakes. It only occurs in the more stony parts of the Pilbara.



Figure 55. Pilbara Bandy Bandy from Karratha.



Figure 56. White-bellied Mangrove Snake.

A rear-fanged snake to 80 cm that occurs in mangrove mud flats south to about Port Hedland. In 1995, during cyclone Bobby, a large aggregation of Whitebellied Mangrove Snakes was observed near Karratha.

Pythons

The following species all lack venom glands and fangs as such, but may cause a false positive for venom in the VDK if a bite site swab is used.

The treatment of a wound caused by a python bite should include cleaning with antiseptic solution and a tetanus booster if required.

Pythons are primarily nocturnal, although considerable diurnal behaviour occurs during the cooler months of the year.



Figure 57. Pygmy Python from near Newman.

This is the world's smallest python, attaining only 60 cm in length. It occurs throughout the Pilbara and northwestern parts of the Goldfields. Adults may lack body pattern and have been mistaken for death adders (also see caution note on Page 13).

This member of the Children's Python Group attains 105 cm in length. It occurs throughout the Pilbara and Goldfields. The one illustrated was removed from an office at Granny Smith Mine (Laverton) after it had climbed onto a bench and defecated on the snake catching gear placed there!



Figure 58. Stimson's Python from Granny Smith Administration Block.



Figure 59. Black-headed Python from Bea Bea Creek.

This reptile-eating python attains 300 cm in length and occurs throughout the northwest, south to the 26th Parallel. Its saliva causes a false positive for tiger snake with the VDK.

This reptile-eating python attains 230 cm in length and is found throughout the more sandy areas of the Pilbara & Goldfields.



Figure 60. Woma or Sand Python from near Laverton.



Figure 61. Pilbara Olive Python from unknown locality.

This is one of Australia's largest pythons attaining 650 cm in length. It occurs in the Pilbara, south to Mount Augustus. This snake is often killed by mistake for a king brown, however it is easily recognised as a python on its numerous, small, glossy scales.



Pilbara Olive Python



King Brown Snake

Relative scale size showing small olive python scales compared to the much larger king brown snake scales.



Figure 62. Southwestern Carpet Python from Two Rocks.

This python attains 250 cm in length and occurs throughout the southwest, north into the southern Goldfields

Blind Snakes

These small worm-like snakes are easily recognised and all are completely harmless. They spend most of their life underground feeding on various ant eggs and larvae. This is Australia's largest family of nonvenomous snakes, although only a sample of regional representatives is included here. The all-female, naturalised exotic Flowerpot Snake (*Ramphotyphlops braminus*) is a parthenogenetic member that has been recorded from the local port areas.



Figure 63. Southern Blind Snake – (Kalgoorlie) **-** Goldfields – 42 cm.



Figure 64. Pilbara Hook-snouted Blind Snake – (Pardoo) **-** Pilbara – 44 cm.



Figure 65. Black-tipped Blind Snake – (Indee Stn) Pilbara – 53 cm.



Figure 66. Waite's Blind Snake – (Mount Keith) - eastern Pilbara & Goldfields – 64 cm.

Snake management in plant and village areas

Many animals, including potentially dangerous snakes, move into work places, villages and recreational areas. In recreational areas the placement of signs warning of snake sightings in the immediate area is sensible. When snakes are sighted in places away from public areas then it is preferable that they be left alone, or at most escorted back into the bush. It is only when the snake is in a high-risk area, especially within a building, service/valve pit or regularly sighted on a pathway, that there is a need to bag it for relocation.

Certificate courses on snake management/handling are available to allow employees to source the required Department of Parks and Wildlife (DPaW) license (Regulation 17) by contacting Brian Bush (Snakes Harmful & Harmless) – bush@iinet.net.au



Figure 67.

Mine worker at Darlot using safe catching gear and technique to bag an unwanted visitor in the village for relocation back to the bush

Extreme caution is needed when using this tool. On two occasions recently, bystanders have been bitten by grasped snakes:
Paraburdoo (king brown) & Tom Price (gwardar).



Figure 68. Grab sticks are also available.

Which snakes are deadliest?

Following is a laboratory ranking of venom toxicities compiled using mice. It is not a true reflection of Australian snakes involved in human fatalities. See graph below.

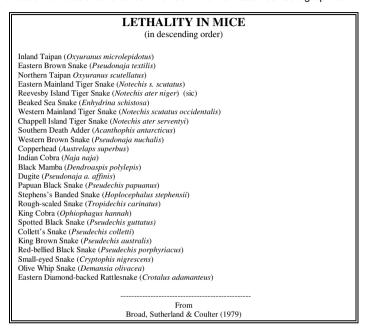


Figure 69. The most widely misrepresented data concerning venomous snakes in Australia. It is usually stated that this ranking is an undisputable reflection of dangerousness.

AUSTRALIAN SNAKES INVOLVED IN FATALITIES

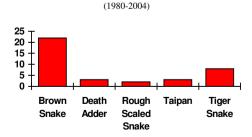


Figure 70. Graph showing frequency of fatalities relative to the five species-groups of snake believed involved for the 24-year period 1980-2004.

Contact Details for Regional DPaW Offices

HEAD OFFICE

Australia II Drive CRAWLEY 6009 Tel: (08) 9442 0300

Fax: (08) 9386 1578

PILBARA

Regional Office

Lot 3 Anderson Road Karratha Industrial Estate PO Box 835 KARRATHA 6714 Tel: (08) 9143 1488

Fax: (08) 9144 1118

District Office

20 Nimitz Street PO Box 201 EXMOUTH 6707 Tel: (08) 9947 8000 Fax: (08) 9947 8050

MIDWEST

Regional Office

1st Floor, Foreshore Centre 201 Foreshore Drive PO Box 72 GERALDTON 6530 Tel: (08) 9964 0901

Fax: (08) 9964 0977

Local Office

211 Robinson Street PO Box 500 CARNARVON 6701 Tel: (08) 9941 3754 Fax: (08) 9941 1801

GOLDFIELDS

Regional Office

32 Brookman Street PO Box 10173 KALGOORLIE 6430 Tel: (08) 9080 5555 Fax: (08) 9021 7831

WA Museum

Locked Bag 49 WELSHPOOL DC 6986 Tel: (08) 9212 3700

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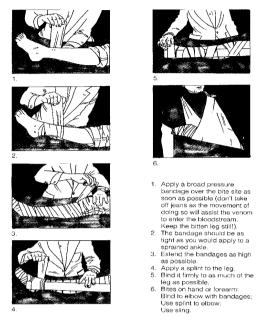
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- 20. Gwardar or Western Brown Snake (*Pseudonaja nuchalis*). Part of a clutch of immature snakes
- 21. Gwardar or Western Brown (*Pseudonaja nuchalis*) with indistinct bands
- 22. Gwardar or Western Brown (Pseudonaja nuchalis) with distinct bands
- Gwardar or Western Brown (Pseudonaja nuchalis) with distinct neck chevron
- Gwardar or Western Brown (Pseudonaja nuchalis) black-headed, orange morph
- 25. Desert Death Adder (*Acanthophis pyrrhus*) showing elliptical pupil
- 26. Pilbara Death Adder (*Acanthophis wellsi*)
- 27. Desert Death Adder (*Acanthophis pyrrhus*)
- 28. Dugite or Spotted Brown Snake (*Pseudonaja affinis*)
- 29. Dugite or Spotted Brown Snake (*Pseudonaja affinis*)
- 30. Common Mulga Snake or King Brown (Pseudechis australis)
- 31. Spotted Mulga Snake (Pseudechis butleri) adult
- 32. Spotted Mulga Snake (*Pseudechis butleri*) juvenile
- 33. Ringed Brown Snake (Pseudonaja modesta) adult
- 34. Ringed Brown Snake (Pseudonaja modesta) immature
- 35. (a & b) Central Ranges Taipan (Oxyuranus temporalis)
- 36. Little Spotted Snake (Suta punctata)
- 37. Rosen's Snake (*Suta fasciata*) & head showing eye with round pupil and Stimson's Python with elliptical pupil
- 38. Lake Cronin Snake (*Paroplocephalus atriceps*)

- 39. Coppertail or Green Whip Snake (*Demansia psammophis*) with black head
- 40. Coppertail or Green Whip Snake (*Demansia psammophis*) with brown head
- 41. Black-necked Whip Snake (*Demansia calodera*)
- 42. Red or Rufous Whip Snake (Demansia rufescens)
- 43. Bardick (Echiopsis curta)
- 44. Gould's Snake (*Parasuta gouldii*)
- 45. Monk Snake (Parasuta monachus)
- 46. Black-backed Snake (Parasuta nigriceps)
- 47. Northwestern Shovel-nosed Snake (*Brachyurophis approximans*)
- 48. Narrow Banded Shovel-nosed Snake (*Brachyurophis fasciolata*)
- 49. Southern Shovel-nosed Snake (*Brachyurophis semifasciata*)
- 50. Moon or Orange-naped Snake (Furina ornata)
- 51. Yellow-naped Snake (Furina ornata)
- 52. Black-naped Snake (Neelaps bimaculatus)
- 53. Desert Banded Snake (Simoselaps anomalus)
- 54. Jan's Banded Snake (Simoselaps bertholdi)
- 55. Pilbara Bandy Bandy (Vermicella snelli)
- 56. White-bellied Mangrove Snake (Fordonia leucobalia)
- 57. Pygmy Python (*Antaresia perthensis*)
- 58. Stimson's Python (*Antaresia stimsoni*)
- 59. Black-headed Python (Aspidites melanocephalus)
- 60. Woma or Sand Python (Aspidites ramsayi)
- 61. Pilbara Olive Python (*Liasis olivaceus barroni*)
- 62. Southwestern Carpet Python (Morelia spilota imbricata)
- 63. Southern Blind Snake (Anilios australis)
- 64. Pilbara Hook-snouted Blind Snake (Anilios pilbarensis)
- 65. Black-tipped Blind Snake (*Anilios grypus*)
- 66. Waite's Blind Snake (Anilios waitii)
- 67. Mine worker safely catching snake
- 68. Grab sticks or tongs are used by some to catch snakes
- 69. Lethality in mice ranking
- 70. Australian snakes involved in recent deaths

First aid for snakebite



Based on material by Dr S. K. Sutherland, Commonwealth Serum Laboratories, Parkville, Victoria (1985)

The following additional aid should be provided by nurse or paramedic prior evacuation to major hospital:

- Apply extra bandaging if first aid deemed unsatisfactory.
 Under no circumstances should existing pressure bandage be removed.
- 2. Provide oxygen.
- 3. Administer antihistamine.
- 4. Insert IV drip line *if qualified* and commence hydration to reduce kidney damage.