

BLIND or WORM SNAKES
(*Rhamphotyphlops*)

- All Blind Snakes are superficially similar. They rarely exceed 50cm in length and spend much of their life beneath the ground feeding on insect larvae. All are oviparous. The following key will allow identification to species. Blind Snakes that can not be identified with the key should be forwarded to the Department of Herpetology, Western Australian Museum. The habits of these burrowers causes them to be difficult to locate, increasing the responsibility for undescribed species to turn up. Remember, when counting the midbody scales in Blind Snakes, include the belly scales or ventrals as well as the dorsals.
- 20 scale rows at midbody 2
 - 22 scale rows at midbody 3
 - Less than 500 ventrals *bituberculatus*
 - More than 500 ventrals *wahli*
 - Snout rounded in profile, *australis*
 - Snout beaked; more than 340 ventrals *harmatus*

PYTHONS

Python includes Australia's largest snakes. All are nonvenomous and generally feed on warm blooded animals. Some python species have been observed assisting the incubation of their eggs. In fact, during incubation the female's body temperature may rise independent of the ambient temperature. Of the three species found on the Goldfields the Woma or Sand Python (*Aspidites ramsayi*) has not been sighted for nearly twenty years. When a roadkill was identified south of Menzies. Recent reports of this species would be most welcome. The Children's Python (*Liasis childreni*) is a small snake rarely exceeding 1.2 metres. It is found to the north of Kalgoorlie, usually where large areas of rock occur. The Carpet Python (*Morelia spilota*) is widespread from the coast north to about Kalgoorlie, and is the best known of the southern pythons. Attaining a maximum length of 4 metres it can be quite large, however, snakes in this region rarely exceed 2.1 metres. The following key will allow identification to species.

- Scales on lips pitted 2
- Scales on top of head large & plate like Woma or Sand Python
- Scales on top of head fragmented Children's Python
- Scales on top of head fragmented Carpet Python

FIRST AID

Earlier first-aid treatment for envenomation from snakebite was based on the belief that the venom entered the system directly through the blood vessels. Hence, the tourniquet was used to restrict the venous flow from the envenomated limb. The most recent treatment came about after it was discovered that the venom is carried in the lymphatic system. This revolutionised treatment, and that treatment not only delays the spread of venom, but to some degree, negates the effects of it. Children bitten by even small venomous snakes should have first-aid administered and taken to the nearest medical facility for observation.

- The majority of bites are pressure on the arms and legs, therefore:
- Apply a broad, firm pressure bandage over the site and as much of the limb as possible. This is bound as firm as would be required for a sprained ankle. Do not remove this until proper medical facilities are reached; the Doctor will decide when to do this. If the bite is on the trunk of the body apply local pressure over the site. Do not apply pressure to the head!
 - Immobilise the effected limb with a splint. If the bite is on the hand or forearm bind to the elbow with the pressure bandage, apply the splint as far as the elbow and support arm in a sling.
 - Keep the patient calm and in a relaxed position and convey to medical care quickly but safely.

Medical staff can determine the type of antivenom required from a swab taken from the bite site. The dosage of antivenom for children is the same or greater than for adults.

For further information, contact Brian Bush.

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SNAKES HARMFUL & HARMLESS
9 BIRCH PLACE
STONEVILLE W.A. 6554
PH (09) 295 3007

**Identification Key to the
SNAKES OF THE W.A. GOLDFIELDS
and Adjacent Areas.**

Brian Bush

Snakes are an integral part of the Australian bush. They are considered by many to be an unnecessary evil. However this is a misconception. Although some snakes are capable of causing death to man through the effects of their venom, this is becoming increasingly rare. Modern first-aid treatment, outlined later in this 'leaflet', and effective antivenoms must take the control of the much improved situation. Snakes as predators play an important role in the control of other animals, without which the effects on the natural balance could be catastrophic.

This leaflet allows identification to species and includes brief notes on 30 of the 32 known types found in this area. Two species have been omitted from the key. These are (1) the yellow-bellied Sea Snake (*Pseudis obliquata*), which may at times be carried by rough seas to the coast adjacent to Esperance, and (2) the Lake Cronin Snake (*Dibsonia atriceps*), collected 190 kilometers from the Esperance region. The key to Blind Snake (*Marechis curtus*) but differs from it by the black colour of its head.

HOW TO USE THE KEY

As some snakes display considerable intraspecific variation in colour and pattern, these alone are unreliable guides for identification. Included in the key are a number of constant interspecific differences that the reader may be unfamiliar with. These are (1) the midbody scales, counted around the body excluding the broad ventral plates, except in worm snakes where the belly scales are included in the count; (2) the number of scales along the bottom side of the tail from the vent and including the terminal scale; and (3) whether these scales beneath the tail are in a single or double row. These three character states are important aids to determining species, and are quite simple to check using the included drawings as a guide.

Before moving on to the key, is the reptile to be identified a snake? If it is wormlike but has eyes that are well developed then it is a worm lizard belonging to the genus *Aprasia*. These small burrowing lizards superficially resemble worm snakes (*Rhamphotyphlops*); it has an external ear-opening, represented by a hole on each side of the head behind the eye; then it is one of several legless lizards (*Delma*, *Lialis* or *Pigopus*), common throughout this region. Some of these may attain 60 centimetres in length, however all lizards are nonvenomous.

To use the key, commence at the beginning and proceed step by step. Each step is numbered and broken into two parts. The snake being examined will agree with one part or the other. On the righthand side adjacent to that part which suits the snake is the name of the snake or a number. If it is the latter, move on to the step with the corresponding number skipping those in between until you eventually have the name of the snake on the righthand side.

- Body wormlike; tail without taper; eyes indistinct (each represented by a dark spot beneath head scales) Worm Snake (tail tapering, eyes distinct) 2
- Body very stout; tail noticeably differentiated from body and includes a grublike distal appendage (Body and tail not differentiated; tail with gradual taper (hardly differentiated from body) Death Adder 3
- Midbody scales in 23 or less rows Python (3 species) 4
- Midbody scales in 40 or more rows Python (3 species) 5
- Midbody scales in 15 rows 11
- Midbody scales in 17 or more rows 11
- Scales beneath tail divided (in 2 rows) 6
- Scales beneath tail undivided (in 1 row) 9
- Tail long; scales beneath tail number 35 or more 7
- Tail short; scales beneath tail 30 or less 7
- Head and neck black broken by a yellow to reddish bar; scales beneath tail less than 60 Moon Snake
- Head yellow-brown; scales beneath tail more than 60 Yellow-faced Whip Snake
- Body and tail banded Desert-Banded Snake
- Body and tail not banded (2 black bars on head only) Western Black-naped Snake
- Head shiny black; no transverse bar on neck Hooded Snake (3 species) 10
- Head greyish; narrow to wide bar across neck 10
- Neck bar yellowish Crowned Snake
- Neck bar yellowish Master's Snake 12
- Scales beneath tail all divided or all undivided 13
- Scales beneath tail undivided anteriorly and divided posteriorly 12
- Dorsal body colour black with bright yellow spots Spotted Muiga Snake
- Dorsal body colour pale to dark brown without bright yellow spots Common Muiga Snake
- Scales beneath tail undivided 14
- Scales beneath tail divided 16

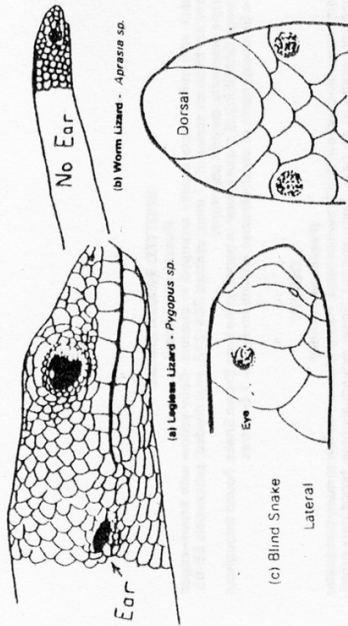
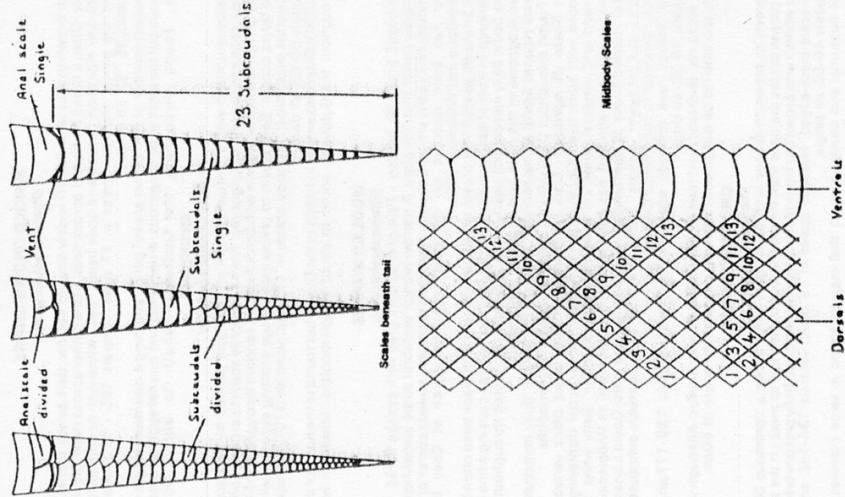


Figure 1
(a) Position of ear aperture in legless lizards (ear absent in snakes). (b) Head of worm lizard (ear present, but eyes are well developed). (c) Head of blind or worm snake showing poorly developed eyes and typical arrangement head scales.
Figure 2
The different snake scales used in this pamphlet for identification and how to count them. Note the several methods of counting the midbody.



14. Belly, pearly white, dorsum marked with dark brown or with ill-defined markings. Variegated Snake
15. Belly cream; yellow or orange anteriorly; dark grey posteriorly. Tiger Snake
16. Eye small (eye diameter no greater than distance between eye and mouth). Bardick
17. Eye large (diameter greater than eye to mouth distance). King Snake
18. Body whitish with numerous red spots between narrow black bands; interspaces wider than bands. Narrow-banded Snake
19. Body pale brown between dark brown bands; interspaces and bands equal in width. Half-girdled Snake
20. Midbody scales in 17 rows. Dugite
21. Midbody scales in 19 rows. Dugite
22. Body and tail usually with 4 to 10 widely spaced narrow dark bands that extend onto belly. Ringed Brown Snake
23. Body and tail usually without bands, if banded, interspaces equal in width to bands. Gwardar

DEATH ADDER
(*Acanthophsis*)

Two forms are found in this area. On the coast and adjacent islands the Coastal or Southern Death Adder (*A. antarcticus*) occurs. It is generally pale brown to grey with ragged-edged bands. Lips boldly marked with white. Belly whitish with brown flecks. Midbody scales in 21 or 23 rows; anal single; ventrals 110-125; subcaudals 36-50; single anteriorly, paired posteriorly. Preys on lizards, mammals and birds which it will actively hunt or lure with its modified tail. DANGEROUS; viviparous and nocturnal.
To the north, south to about Kalgourie, the Desert Death Adder (*A. pyrrhus*) may be found on red soil where spinifex occurs. This snake is predominantly reddish with cream or yellow indistinct narrow bands. Belly white. Midbody scales in 17-21 rows; anal single; ventrals 126-152; subcaudals 46-65; single anteriorly, paired posteriorly. Preys exclusively on lizards which it lures with its modified tail from the shelter of spinifex. DANGEROUS; viviparous and nocturnal. Maximum length in both species 70cm.

YELLOW-FACED WHIP SNAKE
(*Demansia psammophis*)

Bluish-grey with brown to orange head and tail. A distinctive black bar across nose and a black comma-shaped marking from each eye. Both the nose and tail are brightly bordered with yellow, belly yellowish-white except where the head and tail colour continues on to less onto adjacent parts of underside. Midbody scales in 15 rows; ventrals 180-205; anal paired; subcaudals 70-85; all divided.
A slender, quick moving diurnal snake that feeds almost exclusively on small lizards captured on the run. Locally common in Kambalda and near Menzies, although probably sparsely distributed throughout that area north of Norseman. An egglayer that is venomous but too small to be considered dangerous. Maximum length 70cm.

VARIEGATED SNAKE
(*Denisonia fuscata*)

Yellow, to pale brown with numerous irregular dark brown or black bands. Belly white. Eyes large with distinctive round pupils. Midbody scales in 17 or 19 rows; anal single; ventrals 144-182; subcaudals 20-38; single.
A nocturnal, viviparous snake that feeds on lizards. Venomous although too small to be considered dangerous. Maximum length to 60cm. Common throughout the Goldfields north of Widgiemoorla.

The *Denisonia* genus of snakes is generally regarded as comprising snakes that are quick to bite, however this snake is the exception, being very placid even when first collected.

MOON SNAKE
(*Furax ornata*)

Reddish-brown, each scale white to cream centred. In juveniles the scales are whitish and only narrowly edged with reddish-brown causing young snakes to be paler than adults. The head is black broken on the nape by a broad transverse yellow or orange bar. Belly white. Midbody scales in 15 rows; ventrals 163-220; anal divided; subcaudals 38-60; all divided.
A nocturnal, egg-laying snake that feeds on small lizards. Although venomous, much too small to be considered dangerous. Maximum adult length 65cm. Sparsely distributed throughout the Goldfields north of Kalgourie, locally common near Lemster.

KING BROWN OR MULGA SNAKE
(*Pseudechis australis*)

Dark brown, each scale cream anteriorly. Belly cream to yellowish-brown with or without dark-edged ventrals. Midbody scales in 17 rows; ventrals 185-215; anal paired; subcaudals 50-72; single anteriorly, divided posteriorly (rarely all divided or single).
The commonest large DANGEROUS snake on the Goldfields south to the vicinity of Norseman. Nocturnal and diurnal. Some populations are believed to be viviparous, however a specimen from Leonora laid 9 eggs in November. Preys on snakes, lizards and mammals. Often encountered in wells and mineshafts. Although specimens have measured 2.4 metres in the Kimberleys. Goldfields snakes rarely exceed 1.8 metres.

SPOTTED MULGA SNAKE

(*Pseudechis butleri*)

Black with yellow spots usually arranged in clusters. Belly yellow with brown-edged ventrals. Midbody scales in 17 rows; ventrals 204-216; anal divided; subcaudals 55-65; single anteriorly, divided posteriorly.
A large DANGEROUS snake similar in habits to the King Brown Snake. Found throughout the Goldfields north of about Menzies. Maximum length 1.6 metres.

DUGITE

(*Pseudonaja affinis*)

Pale brown, olive, yellow, dark brown or black. Pale snakes with a few to many dark scales randomly scattered on head, body and tail. Some individuals have broad dark cross-bands, while others may have a black or grey head contrasting with a pale coloured body. Belly in pale individuals yellowish with numerous brownish-orange spots except on throat where more or less black pigment often present. Belly in dark individuals pale to dark brown heavily blotched with grey. Midbody scales in 19 rows; ventrals 210-225; anal divided (very rarely single); subcaudals 55-65; all divided.
A large DANGEROUS species very common on the coast. It has been recorded as far north as Widgiemoorla where very dark individuals predominate. A diurnal and nocturnal egglayer that feeds on lizards and mammals. Maximum length 2.1 metres.

RINGED BROWN SNAKE

(*Pseudonaja modesta*)

Reddish brown to grey with 4 to 10 widely-spaced narrow, dark bands that extend onto the belly. Often a broad dark band across head and another across nape. Old individuals may lack any indication of head and body bands. Belly white with or without dark spots between the bands. Midbody scales in 17 rows; ventrals 155 - 175; anal divided; subcaudals 35 - 52; all divided.
The smallest member of the "brown snake" genus attaining a maximum length of 60 cm. Venomous but too small to be dangerous. A nocturnal and diurnal egglayer that feeds on lizards. Found throughout the Goldfields south to about Norseman.

GWARDAR

(*Pseudonaja nuchalis*)

Pale, yellowish-brown with a V-shaped mark on the nape caused by dark scales, is the dominant colour form north of Kalgourie. From Kalgourie south to around Kambalda the majority of individuals are reddish with black head. At random throughout the Goldfields banded forms occur. Belly cream to yellow with orange spotting except where black on head extends onto throat. Midbody scales in 17 rows; ventrals 210-230; anal divided; subcaudals 50-65; all divided.
A DANGEROUS species similar in habits to the Dugite but found to the north of that snake, i.e. throughout the Goldfields south to about Widgiemoorla. Maximum length 1.5 metres.

HOODED SNAKES

(*Rhinoplocephalus*)

Square-nosed Snake (*R. bicolor*) - Pale grey to dark grey with orange flanks. Often the head maybe darker than the body. A narrow orange vertebral stripe sometimes present. Belly immaculate pearly white. Generally restricted to the south-west corner of the State however has been recorded on the coast near Esperance at Cape LeGrande, Coomalbidup and Wittenoom Hills.

Gould's Snake (*R. gouldii*) Pale brown to reddish - brown with black head often broken by pale markings in front of each eye. Dorsal scales are dark-edged causing a fine reticulum over the body. Belly immaculate pearly white. Sparsely distributed throughout that area between Kalgourie in the north and Scaddan in the south.

Goldfields Hooded Snake (*R. monachus*) - Red with black head. Belly immaculate pearly white. Found throughout the Goldfields south to about Widgiemoorla.

Copper Snake (*R. nigriceps*) - Dark, reddish-brown with broad black vertebral stripe. Occasional individuals with black head and black dorsal stripe. Generally restricted to the coast although has been recorded as far north as Widgiemoorla.

Nulioroo Hooded Snake (*R. spectabilis*) - Very closely allied to the Gould's Snake which it resembles, but for fewer ventrals, 135-156 v. 153-177. Sparsely distributed on the Nulioroo Plain west to the Coolgardie Highway.

Hooded Snakes have midbody scales in 15 rows; ventrals 135-177; anal single; subcaudals 18-38; all single.
All are nocturnal, viviparous and feed on lizards and smaller snakes. Although venomous they are too small to be dangerous, attaining a maximum length of 60cm.

CROWNED SNAKE
(*Notechis coronatus*)

Olive-green to brownish-orange with bluish-grey head above a continuous black band which passes across the nape then forward through each eye to meet on the snout. The lips are whitish with brown markings that extend onto the chin. Belly pinkish-orange, each ventral scale black-edged. Midbody scales in 15 rows; ventrals 134-148; anal single; subcaudals 40-50; all single.
A small nocturnal and diurnal species that may be found in large colonies in poorly drained areas where it feeds on frogs, or well drained sites where it feeds on lizards. Viviparous. Restricted to the coast in this region. Maximum size 60cm., and generally regarded as not dangerous.

BARDICK

(*Notechis scurtus*)

Olive, reddish-brown or black. Lips with pale flecks. Belly salmon-pink, brown or grey. Midbody scales in 19 (rarely 17 or 21) rows; ventrals 128-140; anal single; subcaudals 28-40; all single.

A small thickset, nocturnal (rarely diurnal), viviparous snake that feeds on lizards while subadult, and mammals (rarely frogs) when mature. Common on the coast, but extends inland almost to Norseman. Maximum length 70cm. Large individuals should be considered DANGEROUS. The venom of this snake reacts to Death Adder antivenom.

MASTER'S SNAKE

(*Notechis masterii*)

Greenish-brown to blackish-brown. Head darker than body with a yellow to orange band across neck. Belly rich red, each ventral dark grey laterally. Midbody scales in 15 rows; ventrals 129-145; anal single; subcaudals 32-44, all single.

A very small snake rarely exceeding 30cm. in length. Feeds on lizards, and is viviparous, nocturnal and diurnal. Although venomous, much too small to be considered dangerous. Restricted to the coast east of the Coolgardie Highway, north to about Grass Patch.

TIGER SNAKE

(*Notechis scurtus*)

Generally black, although greyish specimens occur, with or without cream, yellow or orange narrow bands. Belly cream, yellow or orange anteriorly with bold black markings, changing to bluish-grey posteriorly. Midbody scales in 17 or 19 rows; ventrals 140-165; anal single; subcaudals 38-50; all single.
A DANGEROUS snake restricted to the coast. Most common in poorly drained areas or close to permanent freshwater such as dams. Viviparous, nocturnal and diurnal. Feeds on frogs, birds and mammals. Although mainly terrestrial, it is the only venomous snake in this region that displays arboreal behaviour, particularly when hunting for nesting birds. Maximum length 1.2 metres.

DESERT BANDED SNAKE

(*Vermicella bartholoi*)

Orange with numerous evenly spaced black bands that completely ring the body. The bands and pale interspaces roughly equal in width. Head pale brown flecked with dark brown, a dark brown patch on top of the head behind a line passing from eye to eye. Belly yellow between black bands. Midbody scales in 15 rows; ventrals 112-130; anal divided; subcaudals 15-25; all divided.

A very attractive small snake most often found amongst leaf-litter beneath low shrubbery. Feeds on lizards, especially *Lerista* species that share the same habitat. A diurnal and nocturnal forager. Viviparous. Found throughout the Goldfields south to about Salmon Gums. Venomous but harmless.

WESTERN BLACK-NAPE SNAKE

(*Vermicella bimaculata*)

Yellow with a broad vertebral region of orange-edged scales. Head with a wide black band between, and extending back from the eyes. Also a wide black band across nape. Belly yellow. Midbody scales in 15 rows; ventrals 175-230; anal divided; subcaudals 20-30; all divided.

A small, very slender, snake rarely collected in this region, even though it is sparsely distributed throughout the Goldfields north of Widgiemoorla. A burrower that may be encountered on the surface at night. Viviparous. Venomous but harmless, attaining only 45cm.

NARROW-BANDED BURROWING SNAKE

(*Vermicella fasciolata*)

White, each scale with a reddish spot between numerous narrow, dark brown bands that are often discontinuous along vertebral region. Head and neck black above, broken by pale snout and pale band on nape. Midbody scales in 17 rows; ventrals 140-172; anal divided; subcaudals 20-30; all divided.

A small burrower that may be encountered on the surface in the evening. Viviparous. Prey unknown. Venomous but harmless. Found throughout the Goldfields north of Widgiemoorla.

HALF-GIRDLED SNAKE

(*Vermicella semifasciata*)

Pale brown with evenly spaced, ragged-edged, dark brown bands. The bands and interspaces roughly equal in width. Head with dark brown patch extending back from line passing across the head from eye to eye. Belly white. Midbody scales in 17 rows; ventrals 147-188; anal divided; subcaudals 14-26; all divided.

A small burrower that occasionally comes to the surface at night. Feeds exclusively on reptile eggs, and is viviparous itself, venomous but harmless. Found throughout the Goldfields north of Norseman.