

# Arid Zone Monitoring Species Profile

## Large snakes

This profile includes two species of **very dangerous** poisonous snakes, and three species of python. They all leave large, similar tracks that are hard to tell apart. None of the large snakes in this profile are listed as threatened under the EPBC Act, although some species (such as mulga snake) may be declining from places where they can hunt toxic cane toads. There are some studies which shows the woma is decreasing in parts of its range.

### Language names

Arreperlp, Arripere, Ilparralhia, Ilperrelheye, Kwerreny, Liru, Lumpurra, Ngurrupulkka, Pwekerrenye, Warna, Wiril

## Mulga snake (king brown snake)

*Pseudechis australis*

### Dangerous

#### Animal Description

The mulga snake is the largest of Australia's poisonous snakes, reaching lengths over 2 m. Colour is variable, the scales are pale brown to olive to rich reddish brown with a pale base and darker hind edges, that make the snake look like it is wearing a fishnet stocking. Its belly is cream to white.

#### Habitat

Mulga snakes live in lots of different habitats, including arid and semi-arid country. In drier country mulga snakes prefer water courses and moister areas. It may be active during the day, or at night during hot times of year, hunting small mammals, reptiles, birds and frogs.



Image: Sarah Legge

Mulga snake.



Image: Chris Jolly

Mulga snake.



# Western brown snake

*Pseudonaja mengdeni*

## Dangerous

### Language names

Lirrapurta (and see list above for other names that may be used for the western brown snake)

### Animal description

The western brown snake is usually about 1.2 m long but can grow up to 2 m. It has a slender body and narrow head. Colours range from light brown to almost black, with a cream, yellow, orange or grey



Western brown snake.

belly, sometimes with darker blotches. There are two forms—orange with black head, or pale head with grey nape.

### Habitat

Like mulga snakes, western brown snakes are found in lots of different habitats in arid and semi-arid country. Western brown snakes are usually active during the day, but will hunt at night during hot times. They hunt small mammals, reptiles and birds.



Western brown snake.

# Woma python

*Aspidites ramsayi*

### Language names

Ahenenye, Aheye-inenhe, Ertnweye, Kuniya, Ngawininyi, Piilyurru, Utneye

### Animal Description

The woma is a large python that usually reaches lengths of about 1.5 m, but can pass 2 m. It can be pale brown, yellow-brown, red-brown to olive, with darker uneven bands along its body.



Woma python.

### Habitat

Womas are found in desert country and surrounding areas. Womas are active at night and shelter in abandoned burrows of other animals, such as goannas or mammals, and in big soil cracks during the day. They also hunt small animals in these same burrows and cracks, especially small reptiles.



Woma python.



# Black-headed python

*Aspidites melanocephalus*

## Language names

Kalurrjawa, Lirramunga, Purruyura

## Animal description

The black-headed python is light to dark brown, with dark bands across its body, and has a shiny black neck and head. It is usually about 1.5-2 m long, but can reach over 3 m.

## Habitat

The black-headed python lives in the northern part of Australia and its distribution edges into the northern deserts. During the day, they shelter in burrows. They are active at night, hunting reptiles including other snakes.



Image: David Nelson

*Black-headed python.*

# Centralian carpet python

*Morelia bredli*

## Language names

Antetherrke, Inturkulya, Yintajirrk

## Animal description

Centralian carpet pythons can grow to 2 m or longer. They are brown or reddish brown and may have different pale patterns along the body, and a yellow or cream belly.

## Habitat

Centralian carpet pythons live in dry desert country of the southern NT. They like to climb in trees or in rocky country.



Image: Chris Watson

*Centralian carpet python.*



## Tracks

All these large snakes make a wavy pattern in the sand as they move across it. It can be hard to tell the difference between species from their tracks.



Image: Sarah Legge

*Woma tracks. All snakes make this wavy pattern, squishing the sand up behind their body as they push themselves forward.*



Image: Arid Recovery

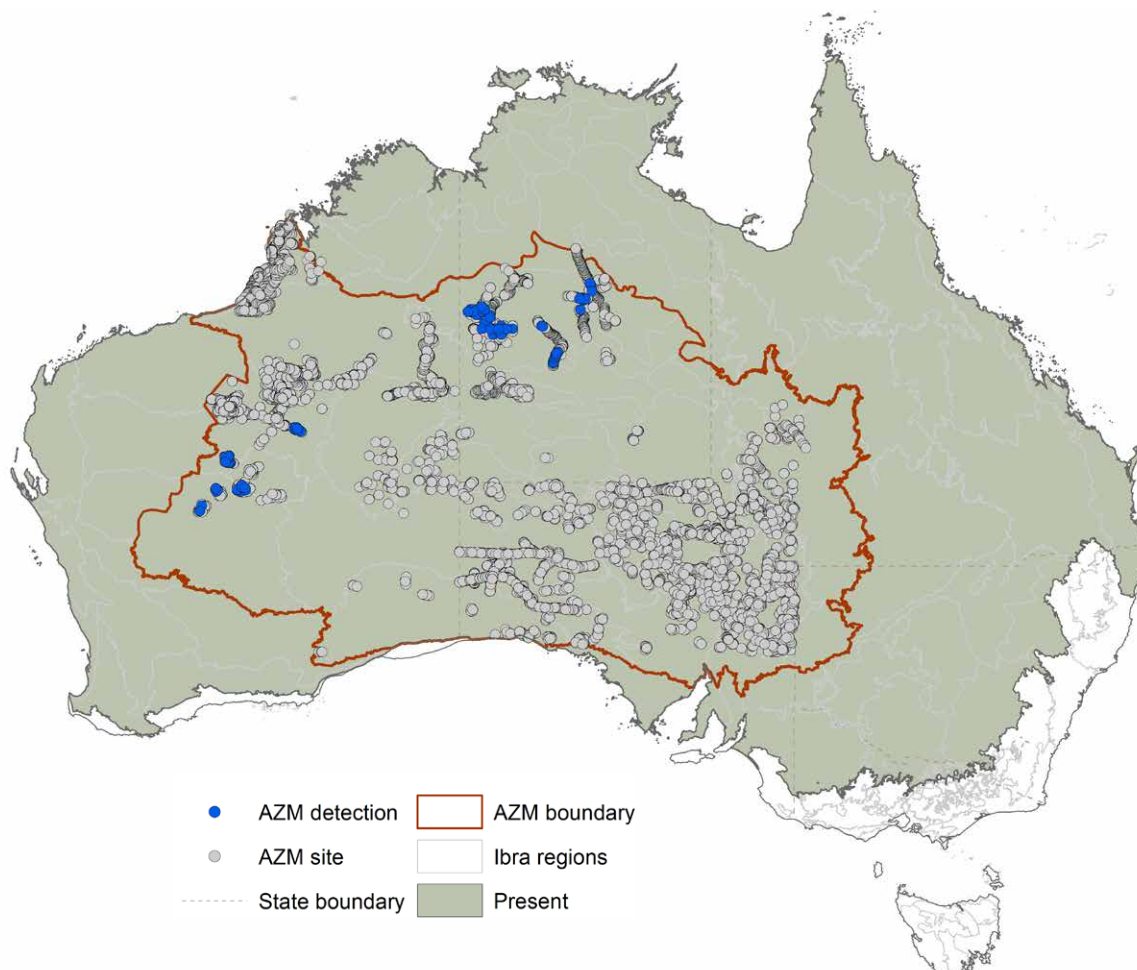
Snake tracks



## Arid Zone Monitoring project findings

### Mulga snake detections

The map summarises detections of mulga snakes in the AZM database. Each blue dot shows a survey site where mulga snakes were recorded. The grey dots show all the other sites that were surveyed, but where mulga snakes were not recorded. These records were made by Indigenous Ranger groups, land councils, NGOs, government agencies and university researchers. The information about the overall distribution in the map background is taken from the IUCN <sup>1</sup>.



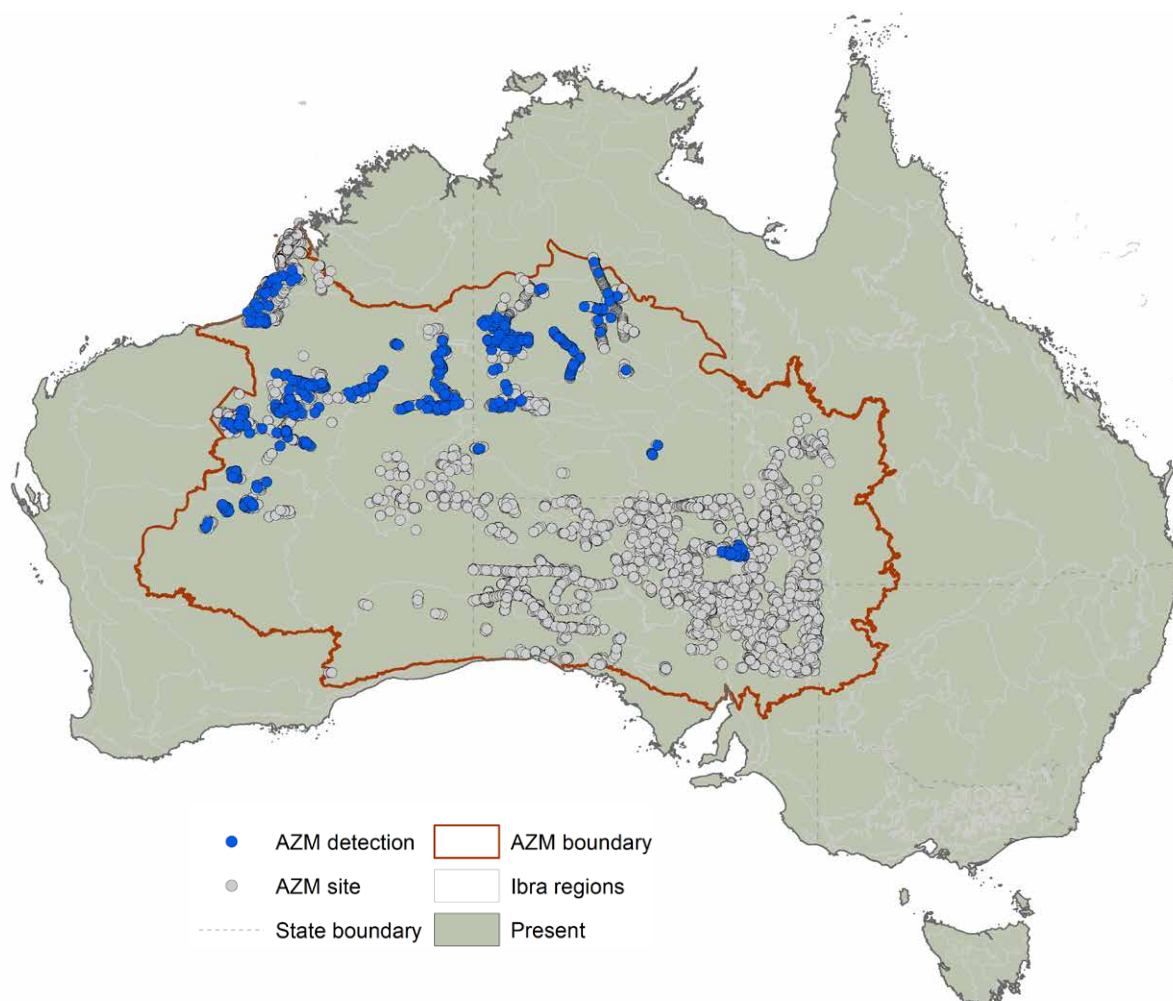
*The map above is based on data shared by data providers with the AZM project. The data are from track and sign surveys. This method is great for detecting species that live in sandy deserts, but not as good for species that prefer rocky habitats, or species with distributions that are mostly outside the central deserts. The method also works best for larger-bodied animals with tracks that are easily identified. It is possible that extra surveys have been carried out over the past 40 years that have not yet been shared. If you see 'gaps' in the maps that you could fill by sharing your data, please let us know.*

### Things to think about when surveying for large snakes

- Survey during good conditions (in the early morning is best, not too windy or straight after rain).
- Organise to do surveys at regular times every year – for example, before the wet or hot season (October) and in the early dry season or early cool time (April).
- Information collected by ranger groups can help improve knowledge about reptile populations and the impact of threats such as the cane toads as they spread through the northern part of WA.
- Don't pick up poisonous snakes! Doing a snake handling course is the best way to learn how to handle dangerous snakes the right way, if needed.

## Large snake detections

The map summarises detections of snakes in the AZM database. Snakes could refer to mulga snakes, western brown snakes, black-headed pythons, Woma pythons, carpet pythons, or some other large snake. Snakes were detected at over 3% of all surveys in the AZM dataset. Each blue dot shows a survey site where snakes were recorded and the grey dots show all the other sites that were surveyed, but where snakes were not recorded. These records were made by Indigenous Ranger groups, land councils, NGOs, government agencies and university researchers.



*The map above is based on data shared by data providers with the AZM project. The data are from track and sign surveys. This method is great for detecting species that live in sandy deserts, but not as good for species that prefer rocky habitats, or species with distributions that are mostly outside the central deserts. The method also works best for larger-bodied animals with tracks that are easily identified. It is possible that extra surveys have been carried out over the past 40 years that have not yet been shared. If you see 'gaps' in the maps that you could fill by sharing your data, please let us know.*

## Further information

Arid Zone Monitoring project:

<https://www.nespthreatenedspecies.edu.au/projects/arid-zone-monitoring-surveys-for-vertebrates-across-arid-and-semi-arid-zones>

## References

<sup>1</sup> Species distribution information compiled during a 2017 reptile assessment carried out by IUCN (<https://datadryad.org/stash/dataset/doi:10.5061/dryad.83s7k>), and updated by expert opinion (R. Tingley)



National Environmental Science Programme

This project received support from the Australian Government's National Environmental Science Program.

The Arid Zone Monitoring project is a collaboration between the NESP TSR Hub and over 30 Indigenous ranger groups and Indigenous organisations, 8 NGOs and NRM groups, 5 government agencies institutions, and many individual researchers and consultants. The project has gathered track and sign data from across Australia's deserts, using it to map the distributions of desert species and their threats. The national database includes almost 50,000 species presence records from over 5300 unique sites and almost 15,000 site visits, over the period from 1982 to 2020. The project area was defined by using IBRA subregional boundaries - the project boundary captures Australia's desert subregions where track and sign-based surveys are commonly used. The project showcases the collective work carried out by all groups working across the arid zone, and lays the groundwork for creating ongoing, national-scale monitoring for desert wildlife.

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