Arid Zone Monitoring
Species Profile

Small goannas

Small goannas are often detected during track-based surveys, but it can be very hard to say what species left the track or sign. This profile shows some of the small goannas that may be detected across the deserts.

Spiny-tailed monitor

Varanus acanthurus

Language names

Jalangarti, Kalawurru, Maruntu, Parnka, Wirlka.

Animal Description

Large lizard with red, brown or black skin and cream/yellow spots, striped neck and a very spiny tail.

Habitat

The spiny-tailed monitor lives in rocky country, and shelters in burrows, under or between rocks.

Spiny-tailed monitor.

Black-headed monitor

Varanus tristis

Animal Description

Long, round keeled tail. Pale grey to black/brown with dark rings and spots on the back. Head and neck black. Tail black with spots forming rings on the base.

Habitat

Widespread in rocky outcrops in semi-arid and arid regions. Can be found under bark, in hollow wood, rock crevices and unused fairy-martin nests.

Black-headed monitor.

Short-tailed pygmy monitor

Varanus brevicauda

Animal Description

Small monitor about 23cm long, reddish-brown with dark round markings on the body.

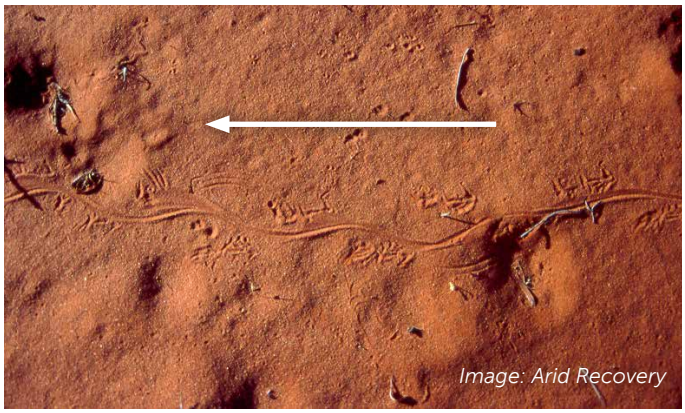
Habitat

The short-tail pygmy monitor lives in sandy desert country with spinifex grass.

Short-tailed pygmy monitor.

Tracks

Small goannas have tracks showing a tail drag mark with claw prints on either side. If they are running, the tail may be held off the ground.



Goanna walking tracks (arrow shows which way it is going).

Goanna running tracks.

Burrow

Small goanna burrow.

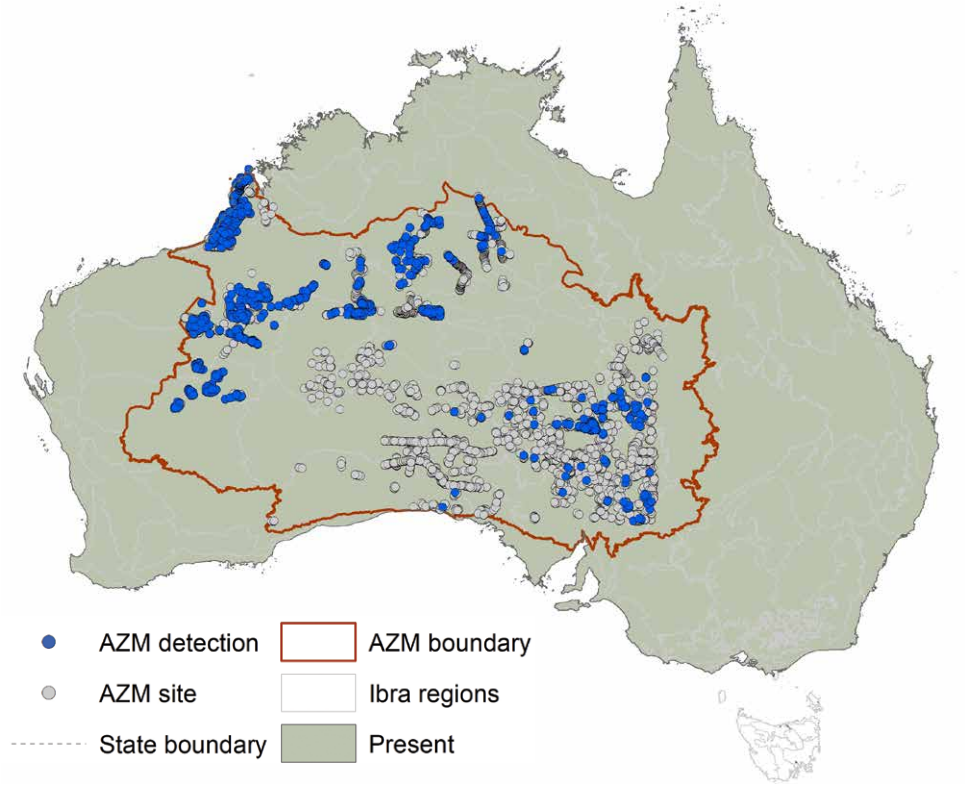
Scats

Goanna scat.

Arid Zone Monitoring project findings

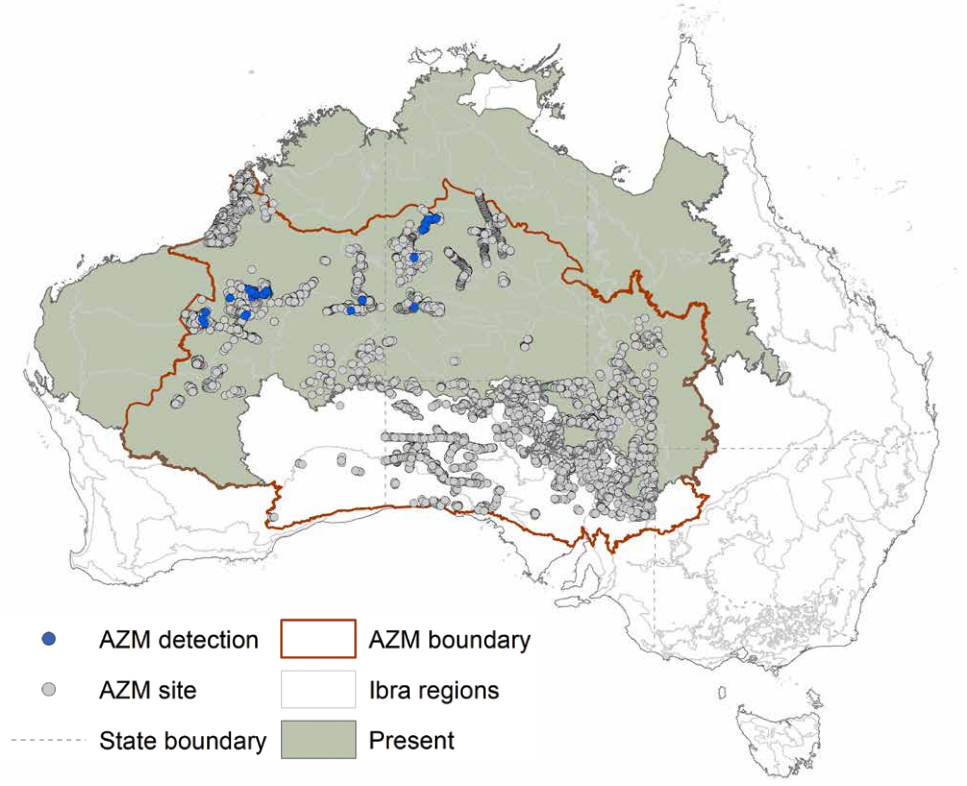
Unidentified goanna detections

The map summarises detections of unidentified goannas in the AZM database. Each blue dot shows a survey site where a goanna species was recorded. The grey dots show all the other sites that were surveyed, but where goannas were not recorded. These records were made by Indigenous Ranger groups, land councils, NGOs, government agencies and university researchers.



Spiny-tailed monitor distribution

Each blue dot shows a survey site where a spiny-tailed monitor was recorded. The grey dots show all the other sites that were surveyed, but where spiny-tailed monitors were not recorded. The information about the overall distribution in the map background is drawn from IUCN[1].

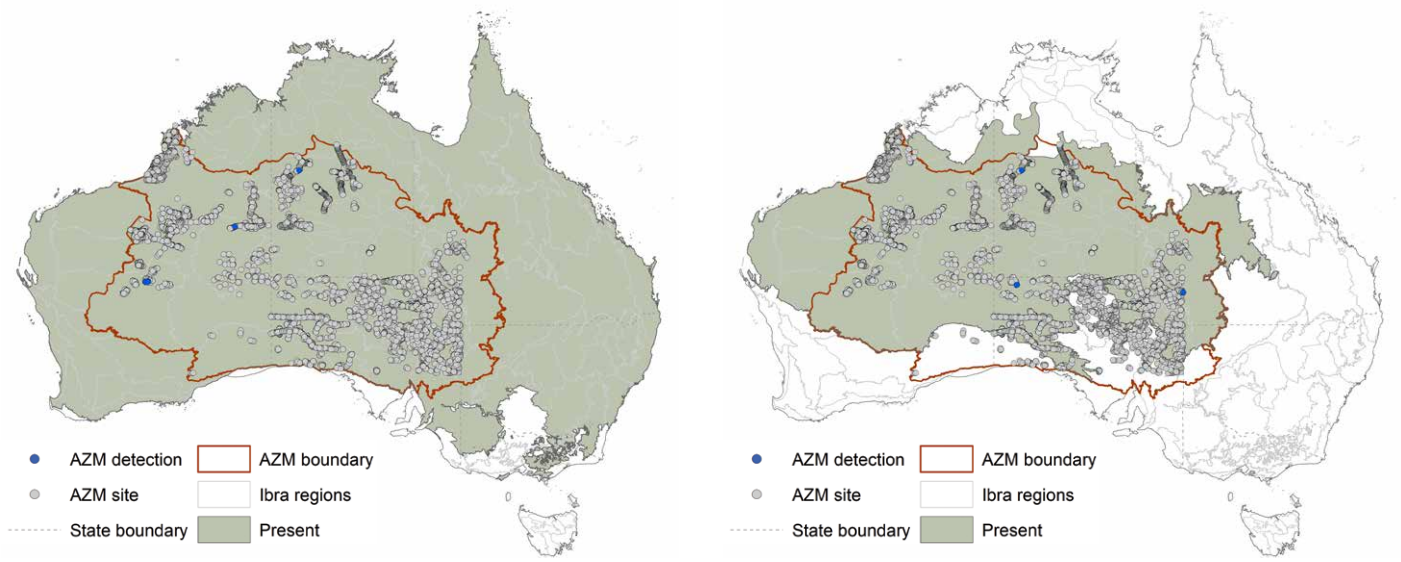


Black-headed goanna distribution

Each blue dot shows a survey site where a black-headed monitor was recorded. The grey dots show all the other sites that were surveyed, but where black-headed monitors were not recorded. The information about the overall distribution in the map background is drawn from IUCN[1].

Short-tailed monitor distribution

Each blue dot shows a survey site where a short-tailed monitor was recorded. The grey dots show all the other sites that were surveyed, but where short-tailed monitors were not recorded. The information about the overall distribution in the map background is drawn from IUCN[1].



The maps are 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.

Small goanna detection rates

Small goanna species detection rates in AZM data. Rank tells us how commonly the species was detected compared with outer reptile species that were recorded suring sandplot surveys.

Species name	Number of AZM detections	Number of surveys	% detection rate	Rank
Goanna	1944	14435	13	1
Spiny-tailed monitor	33	14435	0.22	15
Black-headed monitor	5	14435	0.03	25
Short-tailed pygmy monitor	3	14435	0.02	29

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

[1] 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).

Threatened Species Recovery Hub

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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