Arid Zone Monitoring
Species Profile

Yellow-spotted monitor

Varanus panoptes

Language names

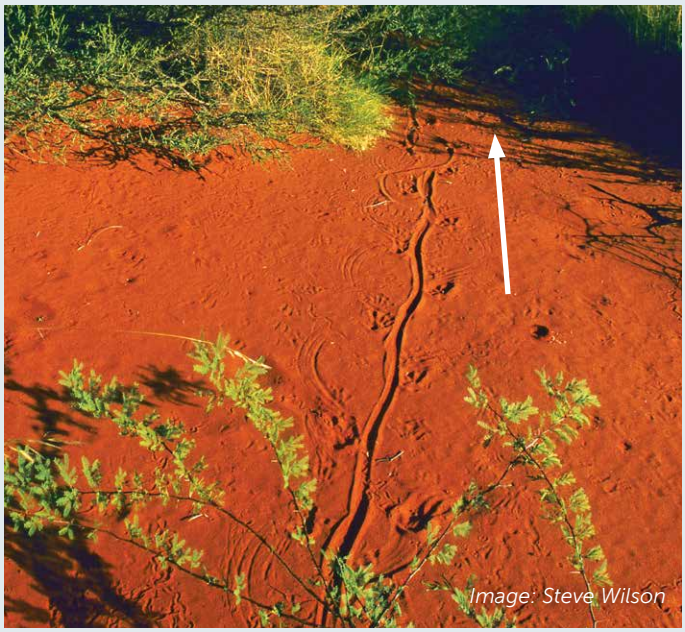
Jalangarti, Kalawurru, Maruntu, Parnka, Wirlka

National status: Not listed

IUCN Red List: Least concern

Yellow-spotted monitor.

Goanna scat.



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

Animal Description

A large powerful goanna, reaching over a metre in length. The yellow-spotted monitor is light yellow to blackish brown with pale yellow spots, and a tail with a pale-yellow tip. It is sometimes confused with the Gould's goanna (or the sand goanna, *Varanus goudii*), but the yellow-spotted monitor is stockier. The yellow-spotted monitor will often stand up on its back legs and tail (tripoding) to get a better view, or to look scarier if they feel threatened. They are really fast runners, and will dash off to the nearest tree if they are chased.

Key threats

Yellow-spotted monitors are killed in northern Australia if they eat cane toads. In the deserts, cats and foxes may eat young monitors, but the species is not under great threat there.

Habitat

The yellow-spotted monitor is a versatile predator that prefers to live and hunt near water or drainage lines. They are great diggers, building burrows to shelter in if there are no existing burrows available.

Scat

Reptile scats contain uric acid and usually have a small white hard section.

Tracks

Goannas leave a set of footprints with a tail drag through the middle.

Animals that might be confused with the yellow-spotted monitor during survey

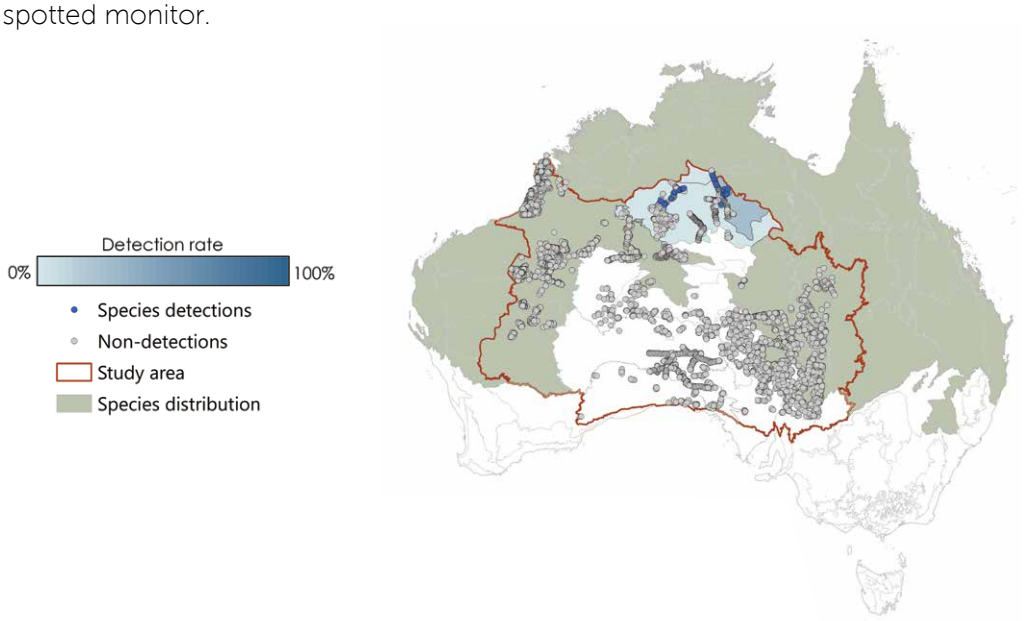
- Sand goanna (Gould's goanna)
- Perentie

It can be hard to tell these species of goanna apart from their tracks. The yellow-spotted monitor and perentie have a straighter drag and larger set of paired front and hind foot prints on each side, compared with the smaller Gould's goanna.

Yellow-spotted monitor detection rates

The map summarises detections of yellow-spotted monitors in the AZM dataset. The map shows that yellow-spotted monitors occur mostly in the northern parts of Australia and not in the central arid region. Each blue dot shows a survey site where yellow-spotted monitors were. The grey dots show all the other sites that were surveyed, but where yellow-spotted monitors 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[1].

Yellow-spotted monitors were detected at less than 1% of all surveys in the AZM dataset: of 14,435 site surveys, they were detected only 35 times. It was 10th most commonly recorded reptile species. The AZM database includes almost 2000 records of 'goanna' that are not identified to species – some of these may be the yellow-spotted monitor.



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, let us know.

Things to think about when surveying for yellow-spotted monitor

- 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).
- If you want to see changes over time, you will need to go back to the same areas to sample over several years. If you want to see if management actions (feral animal culling or fire) are working, you need to sample many different sites, before and after the action. You might need help from a scientist to make the sampling design strong.

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.

Cite this publication as NESP Threatened Species Recovery Hub, 2021. Arid Zone Monitoring Species Profile: Yellow-spotted monitor, Project 3.2.5 findings factsheet.