Arid Zone Monitoring
Species Profile

Tjakura, great desert skink

Liopholis kintorei

Language names

Arrarn, Minijarti, Mitjitji-mitjitji, Mulyamitji, Tjalapa, Warrana

National status: Vulnerable

IUCN Red List: Vulnerable

Tjakura (great desert skink).

Animal Description

Tjakura (great desert skinks) are quite large, they can be up to 40 cm long. They have a blunt head. Their body is reddish-brown above, and the smooth scales have dark brown edges.

Key threats

- Predation by cats and foxes
- Habitat change from too much grazing by feral herbivores (livestock, camels, rabbits)
- Wrong-way fire (too often, too intense, too big)

Habitat

Tjakura (great desert skink) likes sandy soils in spinifex sandplains, shrublands and woodlands. It lives in family groups, and builds burrows to shelter in.

Tjakura (great desert skink).

Burrows

Tjakura (great desert skinks) create a complex burrow system with multiple (up to 20) entrances. Some exits are concealed under shelter, such as a clump of grass. Burrows are about 10 cm wide. The entrance has a flat bottom.

Tjakura (great desert skink) skink burrow.

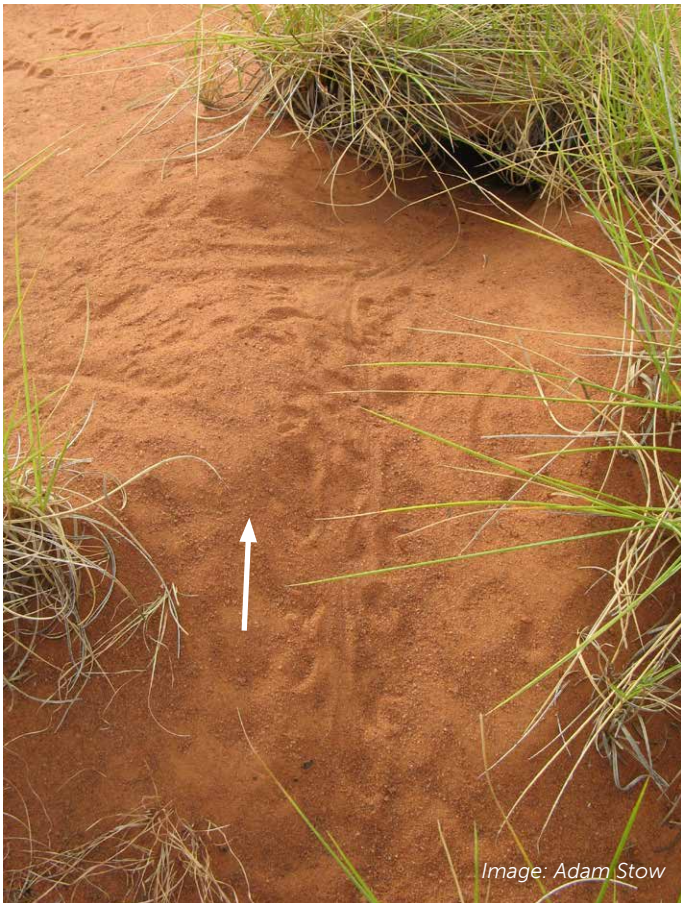
Tracks

Tjakura (great desert skinks) tracks have a straight line made by the tail drag, with claw marks close to this tail drag. The tracks are most obvious at the entrance to the burrow.

Animals that might be confused with the Tjakura during survey

- Other large skinks

Tjakura tracks can be confused with tracks from other large skinks, but Tjakura are larger. The complicated burrows of Tjakura help to tell them apart from other large skinks. Check out the species profile for 'large skinks' to compare.



Tjakura (great desert skink) tracks (arrow shows which way it is going).

Latrine site

Tjakura (great desert skinks) use a shared site for poo (a latrine site), close to their burrows. Individual scats are dark with small white pieces and are about 5 cm long and 1 cm wide.

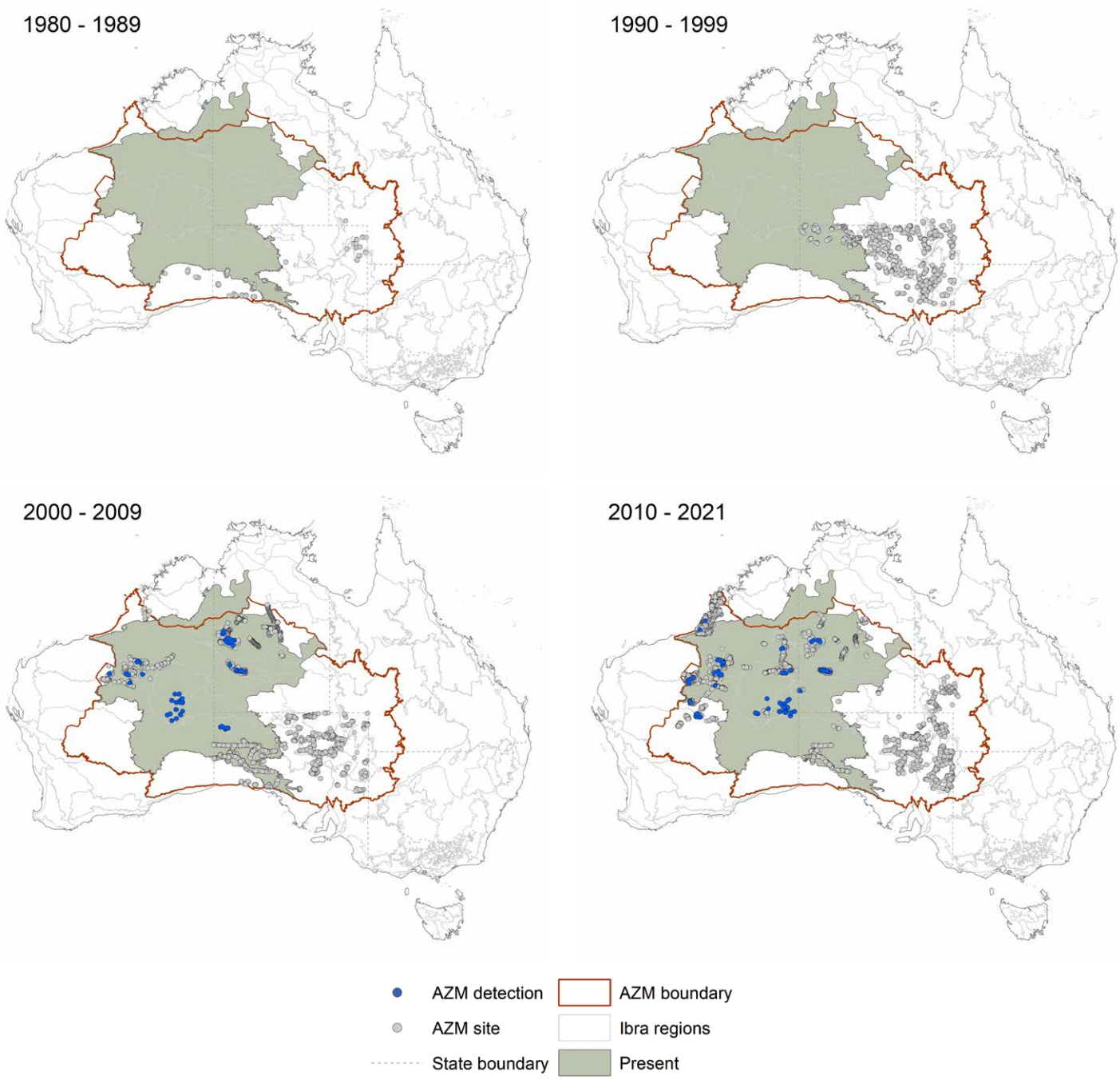
Latrine site of Tjakura (great desert skinks).

Close up of latrine site of Tjakura (great desert skinks).

Arid Zone Monitoring project findings

Tjakura (great desert skink) distribution

The maps summarise detections of Tjakura (great desert skink) over time in the AZM dataset. They show that Tjakura (great desert skinks) are found in the north-western deserts, including in some areas just outside their accepted range. Each blue dot shows a survey site where Tjakura (great desert skinks) were recorded in that decade. The grey dots show all the other sites that were surveyed in that decade, but where Tjakura (great desert skinks) 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 Australian Faunal Directory[1], and from IUCN[2].



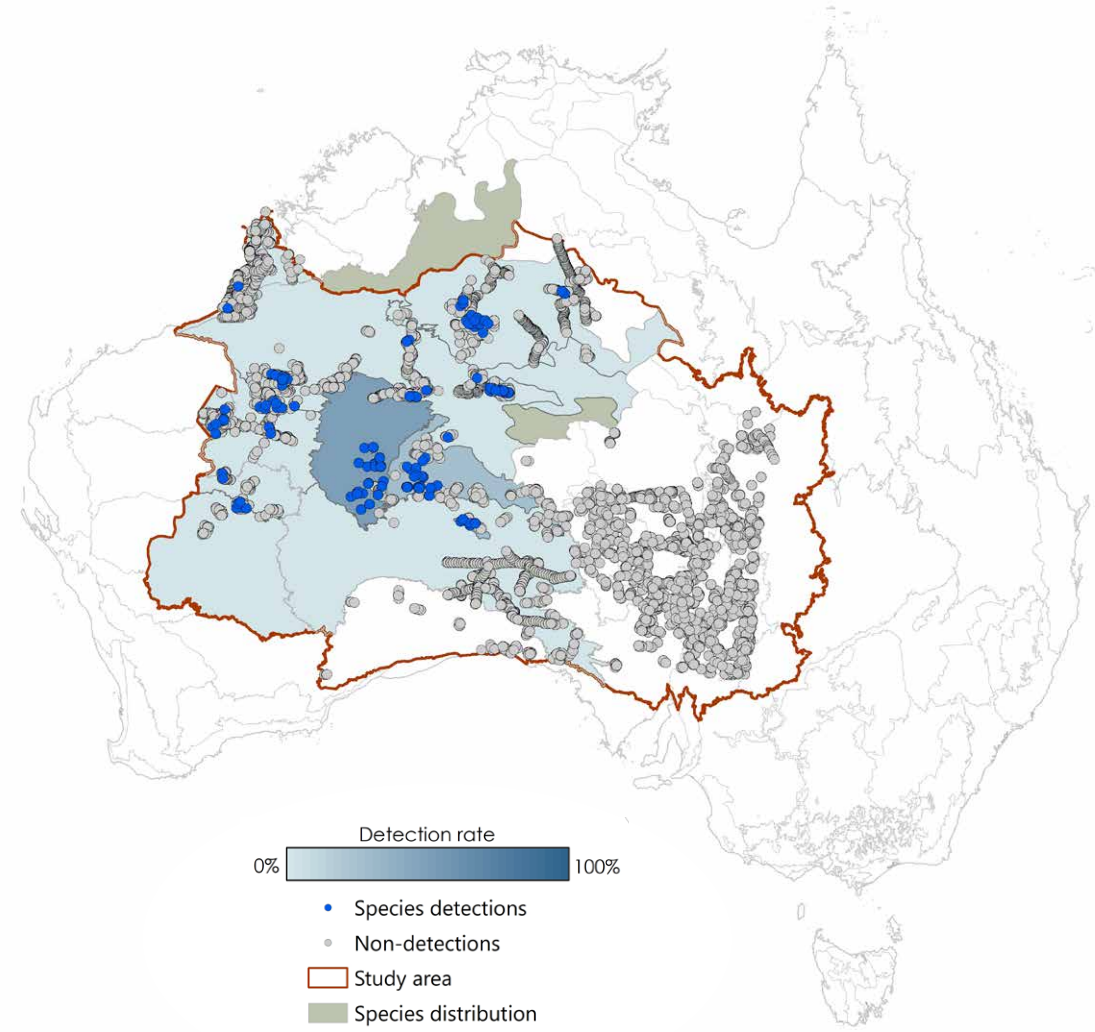
The maps above show data shared by data providers with the AZM project. The data are from track and sign surveys. This method is great for detecting species that live in sandy deserts, but not as good for species that prefer rocky habitats, or species with distributions that are mostly outside the central 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 that have not yet been shared. If you see 'gaps' in the maps that you could fill by sharing your data, let us know.

Tjakura (great desert skink) detection rates

Tjakura (great desert skinks) were detected at over 2% of all surveys in the AZM dataset. It was the third most commonly recorded reptile species.

The map shows the detection rate for Tjakura (great desert skinks) across all surveys carried out in each bioregion, since the 1980s. Detection rates have been highest in the western deserts (darkest blue shading). This could be because many surveys in that area targeted Tjakura, which would make them seem more common than they really are.



Things to think about when surveying for Tjakura (great desert skinks)

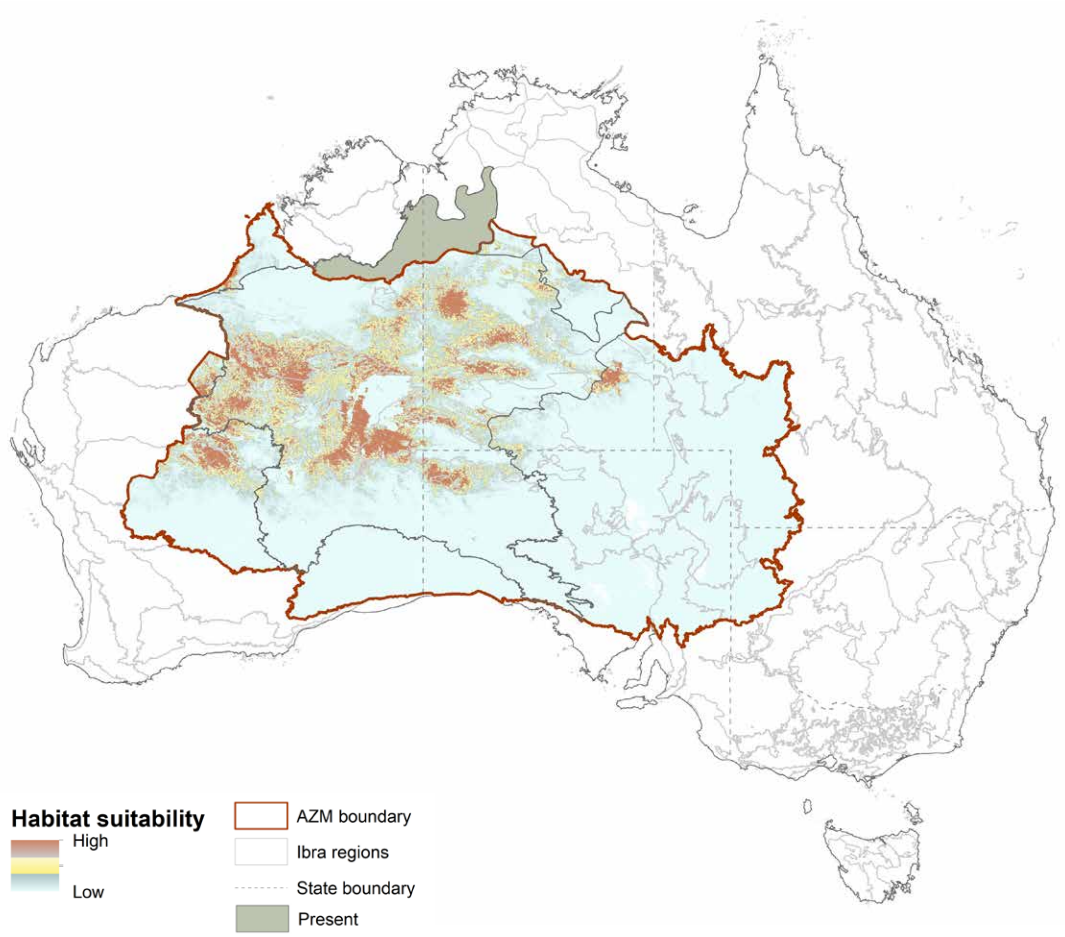
- Survey during good conditions (in the early morning is best, not too windy or straight after rain).
- Organise to do surveys at regular times every year – for example, before the wet or hot season (October) and in the early dry season or early cool time (April).
- Follow advice of experienced trackers - know how to tell great desert skink tracks apart from other small reptiles before you go to survey.
- 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.

Tjakura (great desert skink) habitat suitability

The habitat suitability model can tell us about where Tjakura (great desert skink) is most likely to be found. The analysis considered climate factors like annual, seasonal and daily temperature and rainfall; landform factors like elevation and slope; soil factors; and habitat factors like the amount of vegetation (NDVI) and fire frequency.

The model suggests that Tjakura (great desert skinks) are typically found in higher elevation areas (>350m) with warm temperatures (>20 degrees Celsius). These are the red-brown shaded areas of the map.

The habitat suitability model does not predict well in large areas where there has not been any sampling, for example in parts of the Great Sandy Desert; getting more survey data from these areas would improve the model for the Tjakura (great desert skink).



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] ABRS. Australian Faunal Directory. 2021; https://biodiversity.org.au/afd/home. Accessed June, 2021.

[2] 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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