Arid Zone Monitoring Species Profile

Dingo

Canis familiaris dingo

Language names

Akngwelye, Arengk, Arnapar, Arnwer, Artnwer, Artnwere, Inura, Itnura, Jarntu, Kngulya, Kurriti, Maliki, Marrany, Ngupanu, Nupanu, Papa, Wanapari, Warnapari, Winkkalki

National status: Not listed

IUCN Red List: Not assessed

Dingo.

Animal Description

Dingoes have a long nose (muzzle), pointy-upright ears and strong claws, a ginger coat, sometimes with white markings on their feet, tail tip and chest. Their bushy tail is 25–37 cm long. Coat colours of dingoes can vary and include red-ginger, sandy yellow, black, pale sandy yellow or black with tan patches.

Key threats

Dingo populations are stable in parts of their range, and absent or declining in other parts of their range due to:

- Hybridising with domestic dogs
- Habitat loss in eastern and southwestern Australia
- Persecution from people

Habitat

Dingoes are highly adaptable, found in many habitats, and in all states and territories except Tasmania. Dingoes need to drink water regularly, and that means they can't live in desert areas if there is no water available. They hunt other animals, especially kangaroos and wallabies, but also eat a lot of invertebrates, fruits and other plant material, and they eat carrion.

Dingo scat

Dingoes like to leave their scats on top of bushes and rocks. Dingo scats look like pet dog scats and are larger than fox scats, with a smoother surface and less hair and bone fragments.

Old dingo scat.

Dingo tracks

Dingo tracks are larger than cat tracks. They are large and round, with claw marks. Two front-foot pads are nestled between the middle pads, making the track round. When walking, the back foot is placed in front and to the side of front foot. The front footprint is larger than the back footprint.

Dingo print.

Dingo track (arrow shows which way it is going).

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

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

Animals that might be confused with the dingo during survey

- Cat
- Fox

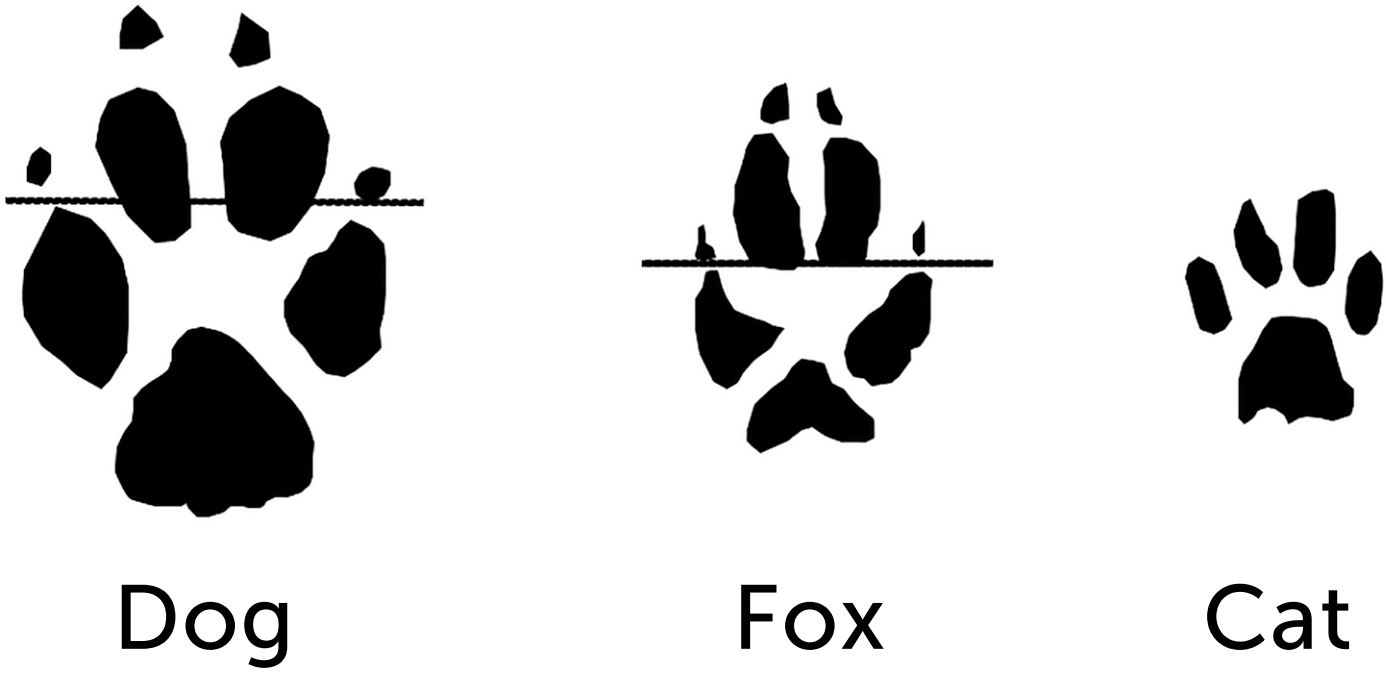


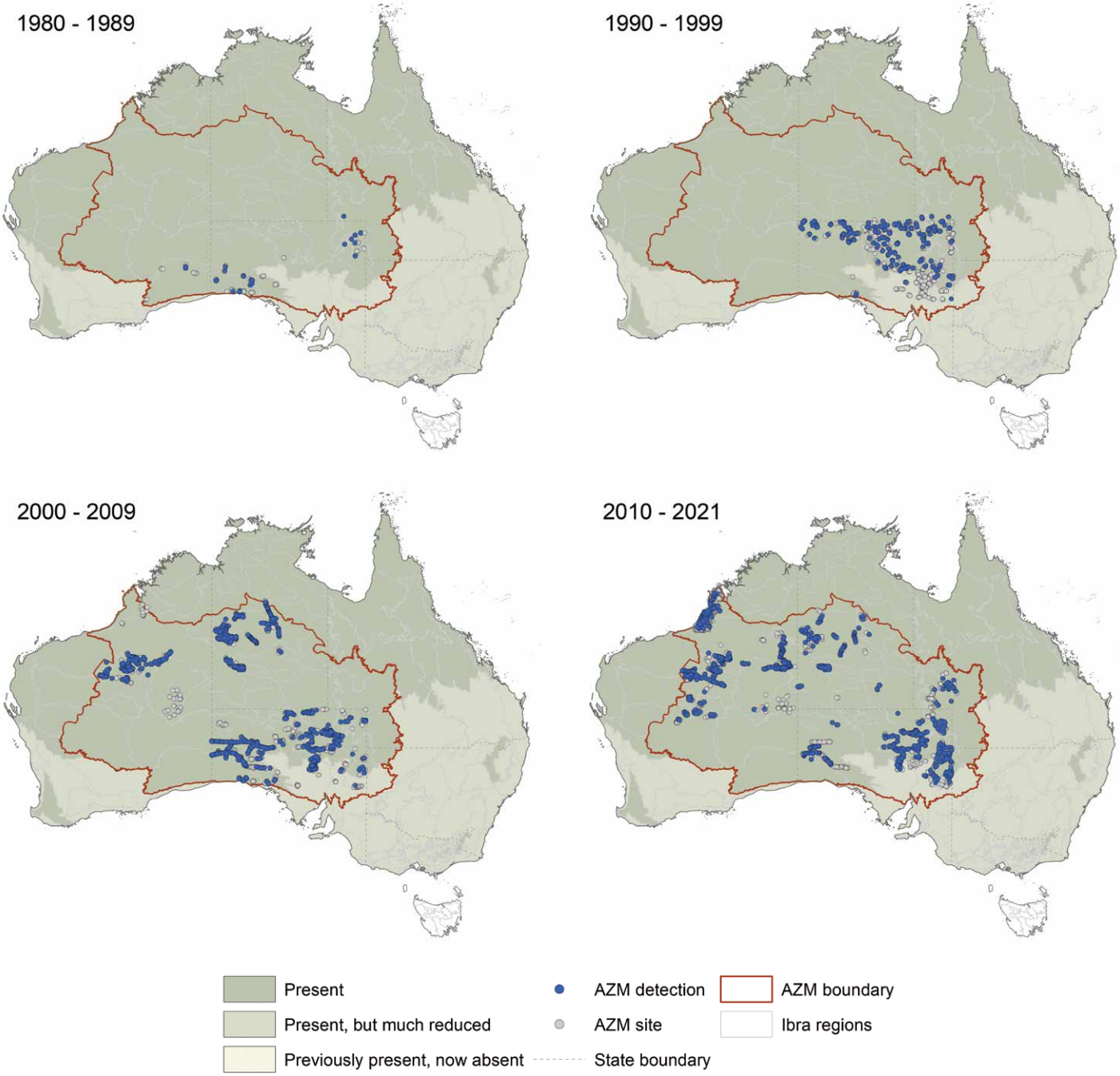
Image: Naomi Indigo

To tell the difference between these species check the position and alignment of the toe pads and the presence of claw marks – dingoes and foxes leave claw imprints in the sand whereas cats do not. Dingo tracks are larger and wider than fox and cat tracks. The two front toe pads of foxes stick out further in front of the two outer toepads, compared to dingoes.

Arid Zone Monitoring project findings

Dingo distribution

The maps summarise detections of dingoes over time in the AZM dataset. They show that dingos are found throughout central Australia. Each blue dot shows a survey site where dingoes were recorded in that decade. The grey dots show all the other sites that were surveyed, but where dingoes were not recorded in that decade. 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 Mammal Action Plan[1] and Australian Faunal Directory[2].



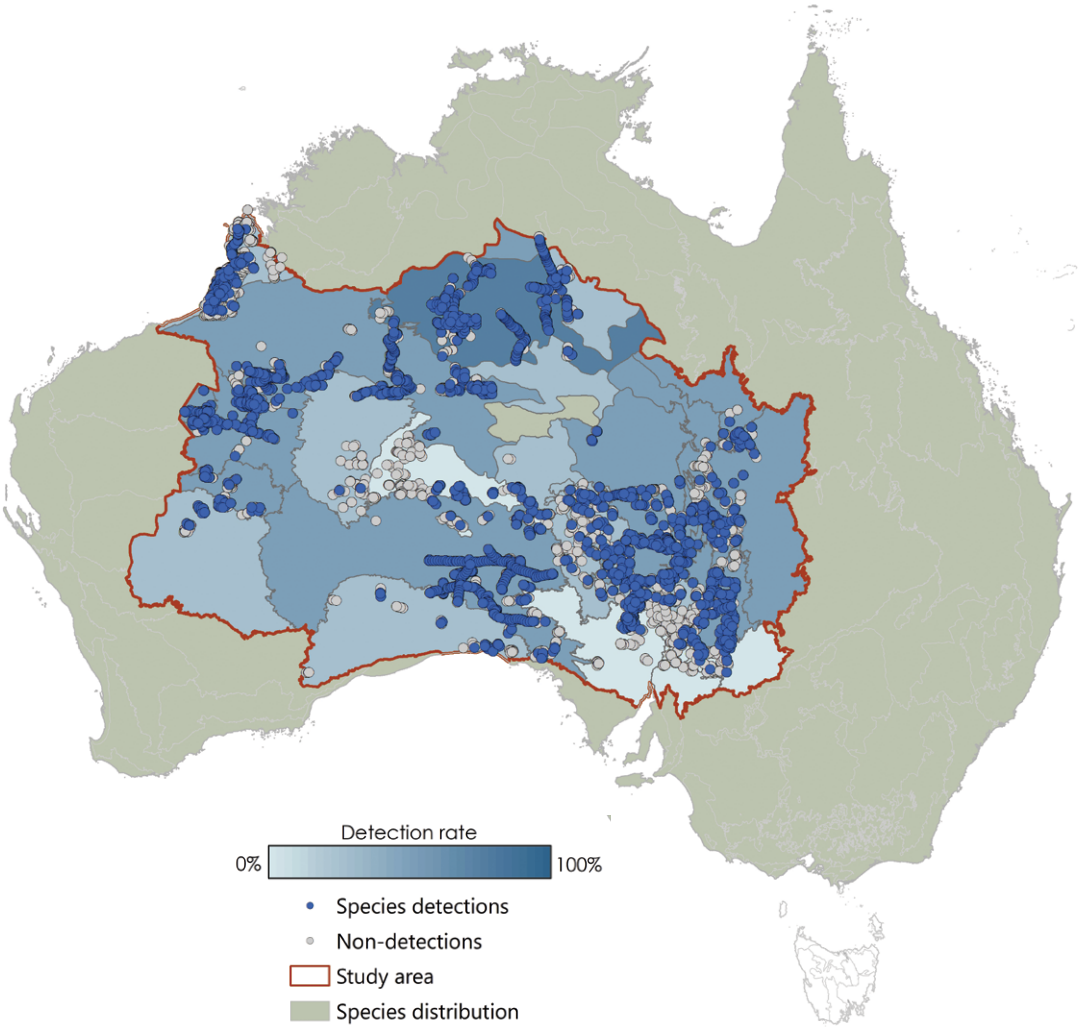
The maps above show data shared by data providers with the AZM project. The data are from track and sign surveys. This method is great for detecting species that live in sandy deserts, but not as good for species that prefer rocky habitats, or species with distributions that are mostly outside the central 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.

Dingo detection rates

The dingo was detected in one third (over 33%) of all surveys in the AZM dataset. It was the second most commonly recorded mammal species, and the most commonly recorded native mammal species.

The map below shows the average detection rate for dingoes across all surveys carried out in each bioregion, since the 1980s. Detection rates have been lower in the far southeast of the project area, on the eastern side of the dog fence (lighter blue shading). A more detailed analysis of dingo detections at a subset of AZM sites that were revisited over five or more years, shows that dingos are sometimes detected less often in long-unburnt areas, but generally their detection rates don't vary consistently with time since fire, the amount of green vegetation, nor recent rainfall. This may reflect that they are an adaptable generalist, able to make a living in many situations.



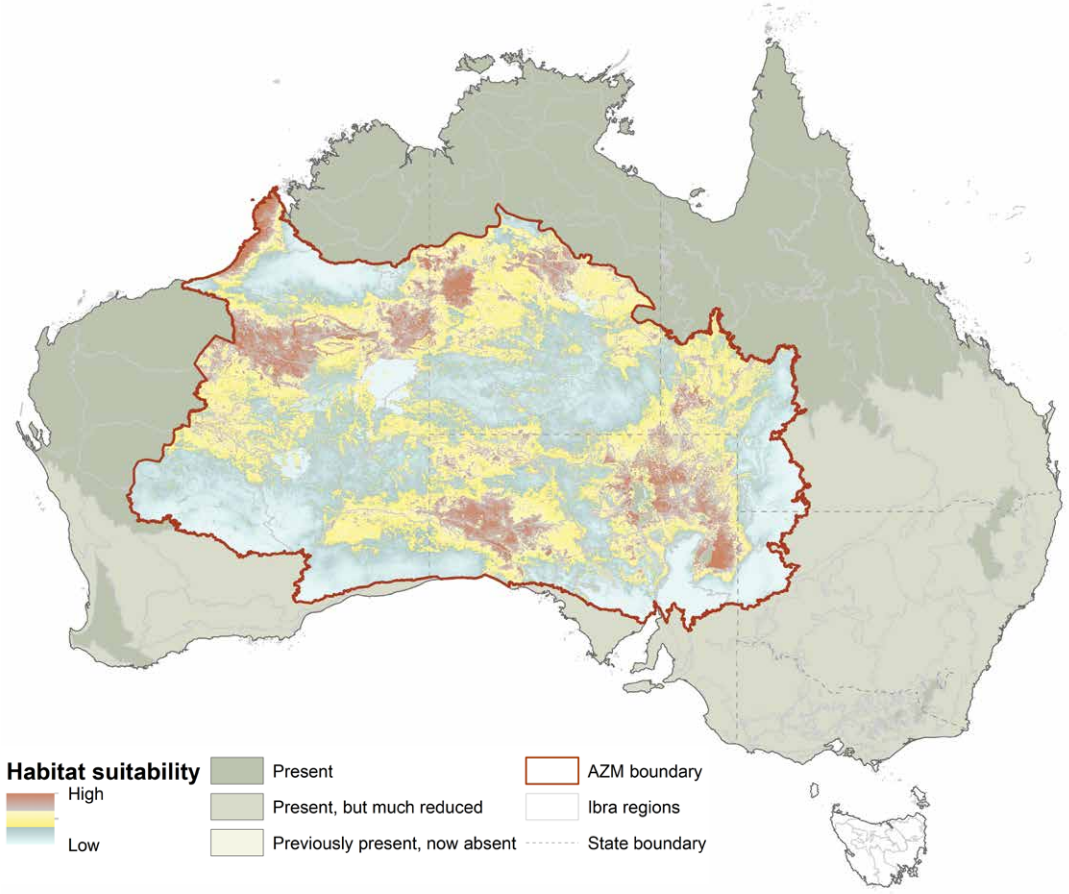
Things to think about when surveying for dingoes

- Survey during good conditions (in the early morning is best, not too windy and not 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 dingo tracks apart from foxes and cats before you go to survey.
- Look for tracks on the roads, as predators often use roads adjcent to sandplot sites.
- 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 (such as right-way 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.

Dingo habitat suitability

The habitat suitability model can tell us about where the dingo 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 analysis does not account for the Dingo Fence, which extends from Jimbour QLD to the Eyre Peninsula, SA, and limits the occurrence of dingoes to the east of it.

The model suggests that dingoes are found throughout the AZM project area, across a range of climate, landforms, soil types and fire frequencies. The map shows that the best areas, shaded red-brown, are spread right across the deserts. The map only shows habitat suitability inside the AZM project boundary, but dingoes are also found outside the project area. 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 or the Great Victoria Desert; getting more survey data from these areas would improve the model.



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] Woinarski J.C.Z., Burbidge A.H., Harrison P.L. (2014). The Action Plan for Australian Mammals 2012. (CSIRO Publishing: Melbourne).

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

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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