

Arid Zone Monitoring Species Profile

Cat

Felis catus

Language names

Alknge atherrke, Mangwe, Miinau, Miiyawu, Mintja, Minyawu, Miyawu, Mulku, Ngaya, Nyarrapeng, Pirni, Pujukarti, Putji, Putjikata, Putjikatu, Pwethekate, Wiilyka

Introduced species: Predation by feral cats is listed as a Key Threatening Process in national environmental law



Image: Hugh McGregor

Cat.



Image: Tangentyere Landcare

Cat scat.



Image: Sandy Schultz

Cat tracks. Arrow shows which way the cat is moving.



Image: Arid Recovery

Cat tracks in soft sand.

Impacts

- Cats hunt and kill native animals
- Cats have caused many Australian mammal species to become extinct, and still cause declines and local extinctions of animal populations
- Cats carry diseases that affect wildlife and people
- Reducing the number of cats can allow native animal populations to grow

Animal Description

Feral cats look like pet cats. The most common coat colour of feral cats is tabby, ginger or black. They mostly live alone, except when they are mating or when females have kittens. They can be active during the day or night, but usually they are active at night and spend most of the day in the safety of a shelter such as a rabbit burrow, log, or rock pile.

Habitat

Cats are found right across Australia, in every habitat, from rainforests to deserts.

Cat scat

Cat scat is usually buried under the sand. Sometimes there are signs on the disturbed sand such as scrapes, small diggings and tracks in many directions. The scats are about the width of a finger and sausage shaped, with slight twists. The scats can contain hair, bone fragment, bits of insect.

Cat tracks

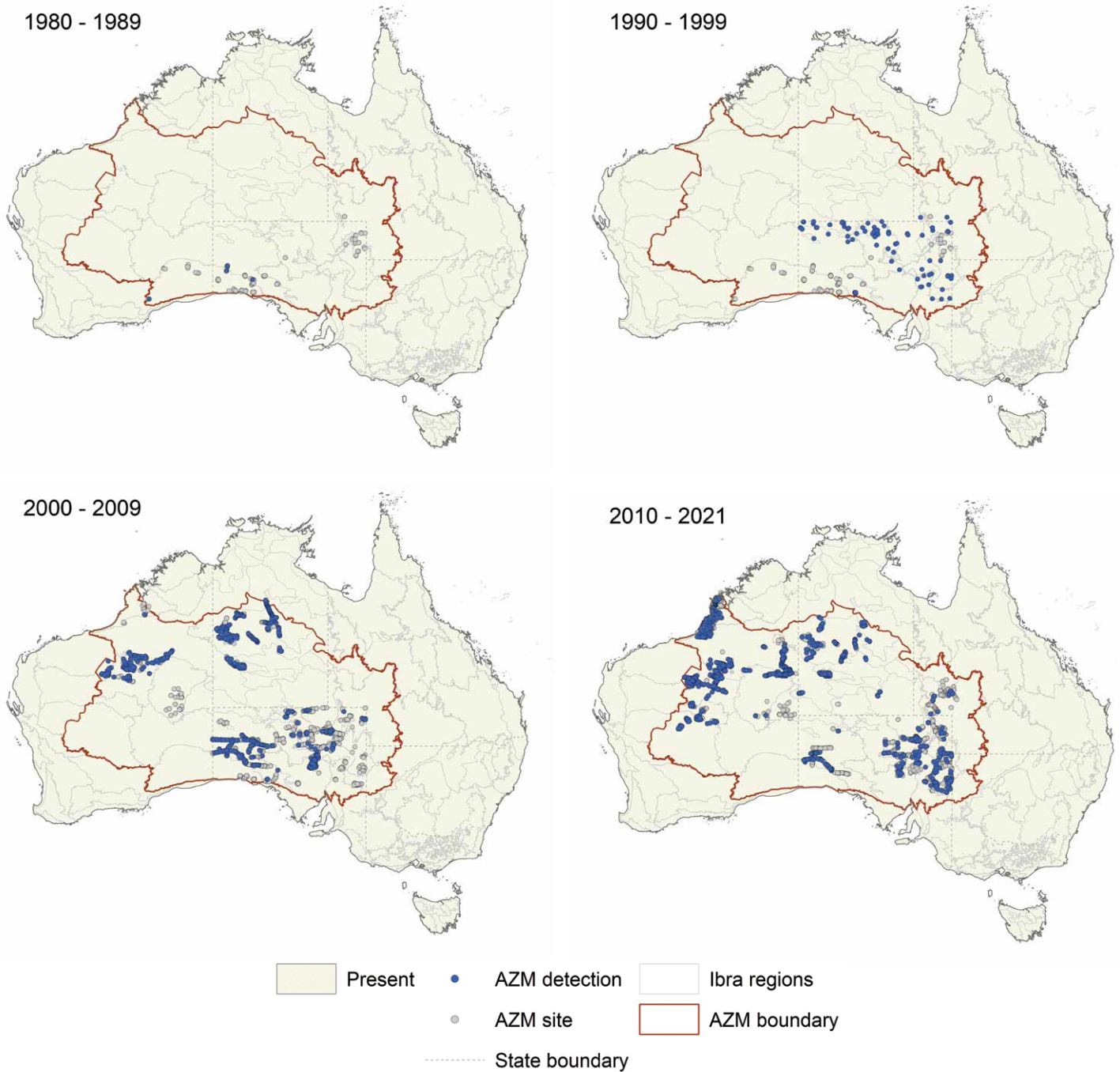
Cat tracks are round and show all four toe pads sitting around the front and sides of the large central pad. Cats usually only leave a faint imprint.

Arid Zone Monitoring project findings

Cat distribution

Cats were introduced to Australia by European colonists. They now occupy over 99% of Australia and most of the larger islands.

The maps below summarise detections of cats over time in the AZM database. They show that feral cats are found throughout central Australia, and have been detected wherever people have surveyed since the 1980s. Each blue dot is a survey site where cats were recorded in that decade. The grey dots show all the other sites that were surveyed, but where cats were not recorded in that decade. These records were made by Indigenous Ranger groups, land councils, NGOs, government agencies and researchers. The information about the overall distribution in the map background is taken from the Australian Faunal Directory¹.



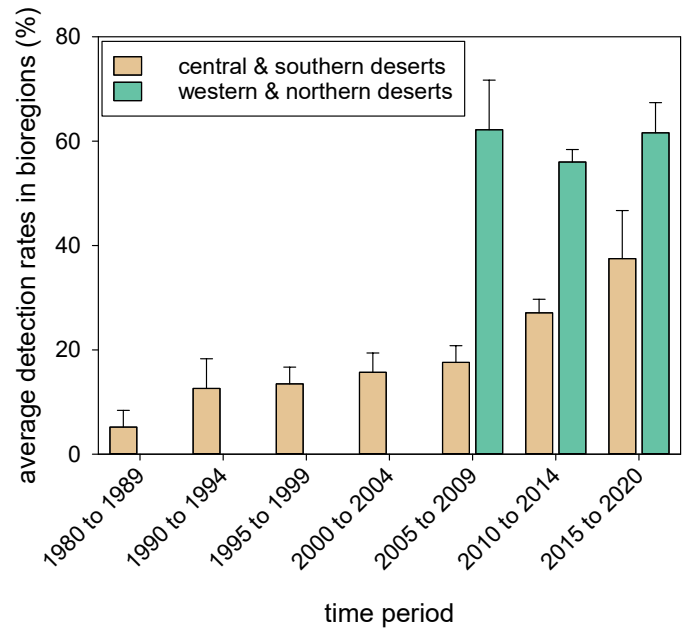
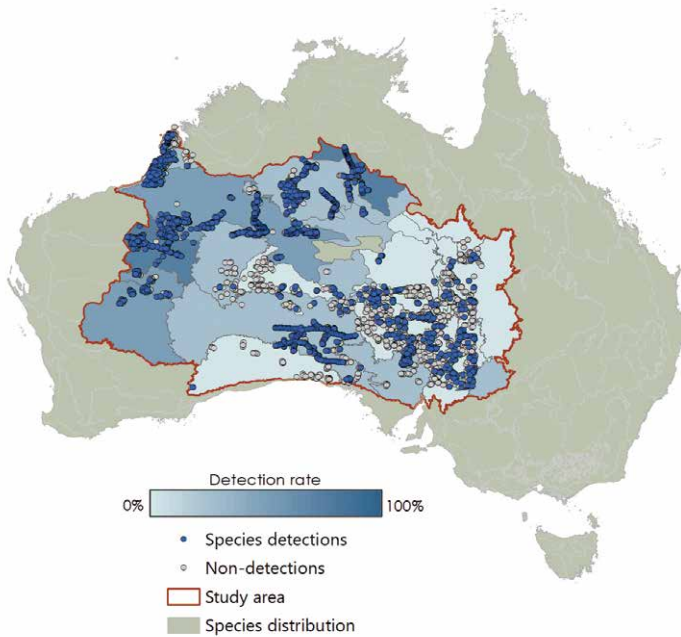
The maps above are based on data shared by data providers with the AZM project. The data are from track and sign surveys. This method is great for detecting species that live in sandy deserts, but not as good for species that prefer rocky habitats, or species with distributions that are mostly outside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

Cat detection rates

Cats were detected at 29% or almost a third of all surveys in the AZM dataset. Cats were the third most frequently recorded animal, behind rabbits and dingoes.

The map below shows the detection rate for cats across all surveys carried out in each bioregion, since the 1980s. Detection rates have been higher in the northern and western deserts (deeper blue shading), compared with the southern and central deserts. This pattern is also seen in the graph, which shows that the average detection rates across bioregions from northern and western deserts has consistently been higher over the past 20 years, than in southern and central desert bioregions. The graph also suggests that detection rates for cats in the southern and central deserts may have increased over time. A more detailed analysis of cat detections at a subset of AZM sites that were revisited over five or more years, shows that cats are detected more often soon after fire, and also when there is more green vegetation.



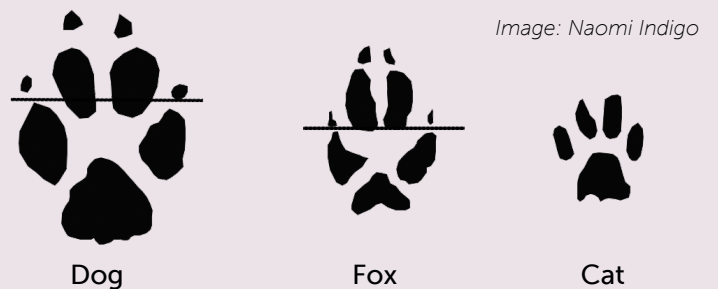
Animals that might be confused with the cat during survey

- Dingo
- Fox

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 claws leave an imprint in the sand whereas cats do not.

Dingo tracks are much larger and wider than cat tracks.

The two front toe pads of foxes stick out further in front of the two outer toepads, compared to dingoes.



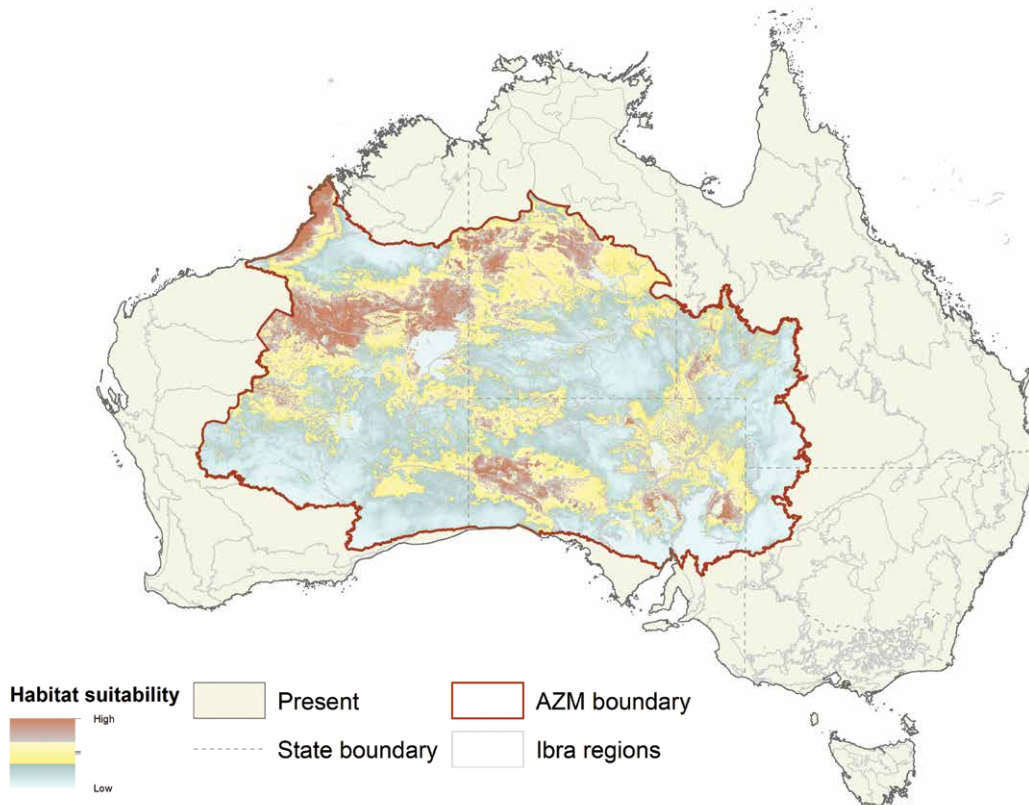
Things to think about when surveying for cats

- 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 cat tracks apart from other species such as dingoes and foxes before you go to survey.
- Look for tracks on the roads, as predators often use roads adjacent to sandplot sites.
- Pay extra attention to finding signs around logs and thick bushes, where cats might rest during the daytime.
- 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 (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.

Cat habitat suitability

The habitat suitability model can tell us about where the cat 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 green vegetation (NDVI) and fire frequency.

The model suggests that cats prefer areas of high temperature and moderate to low elevation. The map shows us that we can expect to find cats in all parts of the desert, and that they might be more common in some parts of South Australia and Western Australia, where the map shading is reddish brown. The map only shows habitat suitability inside the AZM project boundary, but cats are found right across Australia and might be common in other places too. 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

Summary about the impacts of cats on native wildlife:

<https://www.nespthreatenedspecies.edu.au/media/eeufmpqx/112-the-impact-of-cats-in-australia-findings-factsheetweb.pdf>

Summary of options for managing feral cats:

<https://pestsmart.org.au/wp-content/uploads/sites/3/2021/02/CISS-Glovebox-Guide-Cat-web.pdf>

Arid Zone Monitoring project:

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

References

¹ Australian Faunal Directory. <https://biodiversity.org.au/afd/home>. Accessed June, 2021.



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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