

Science for Saving Species

Research findings factsheet

Project 7.4



National Environmental Science Programme

The impact of pet cats on Australian wildlife

Every loose cat is a threat to wildlife

Just over one-quarter of Australian households (27%) have pet cats, and about half of cat-owning households have two or more cats: the total pet cat population in Australia is about 3.8 million.

Pet cats that are kept contained 24 hours per day (either inside a house or contained in an outdoor cat run) are safe for wildlife. In Australia, 1.1 million pet cats are contained in this way 24 hours per day by responsible pet owners.

The remaining 2.7 million pet cats – 71% of all pet cats in Australia – are able to roam and hunt, and present a major threat to the wildlife in their local areas.

Many people are unaware that their pet cat is leaving the house and roaming. A radio-tracking study in Adelaide found that of the 177 cats whom owners believed were inside at night, 69 (39%) were sneaking out for nocturnal adventures.

Many owners believe their cats don't hunt because they never come across evidence of killed animals.

However, studies of pet cats using video-tracking collars or scat analysis have established that the vast majority (85%) of the animals killed by pet cats are not brought home.

Feral cats are an enormous problem for wildlife – across Australia, feral cats collectively **kill more than three billion animals per year**.

Cats have played a leading role in most of Australia's **34 mammal extinctions** since 1788, and are a big reason why populations of at least **123 other threatened native species** are declining.

Many species of native mammal cannot persist in **the presence of even a few cats**.

Pet cats, despite their valued role as companion animals, are also a major threat to native wildlife. We undertook an analysis that compiled the results of 66 different studies on pet cats to gauge the impact of Australia's pet cat population on the country's wildlife. This analysis considered only owned (pet) cats, and the results were compared to earlier work which has quantified the impacts of feral cats on wildlife.*

On average, each pet cat that is allowed to roam (even for only part of the day or night) kills 186 reptiles, birds and mammals per year in Australia. This number includes 110 native animals (40 reptiles, 38 birds and 32 mammals). This means that each roaming pet cat kills, on average, more than two native animals every week. Collectively, roaming pet cats kill 390 million animals per year in Australia.



Keeping your pet cat indoors will not only be beneficial for your cat, but will also enable you to enjoy more of the nature around you. Image: Jaana Dielenberg

Every cat counts

Some cat owners may think the contribution of their own cat doesn't make much difference. However, we found that even individual pet cats have driven the decline and complete loss of populations of some native animal species in their area.

Documented cases have included: a feather-tailed glider population in south-eastern New South Wales; a skink population in a Perth suburb; and an olive legless lizard population in Canberra. Anecdotally, many people have experienced that native birds become scarce or absent in their gardens once a pet cat (their own, or that of a neighbour) takes up residence.

Killing animals is not the only significant impact of pet cats on wildlife. When cats prowl and hunt in an area, wildlife have to spend more time hiding or escaping. This reduces the time spent feeding themselves or their young, or resting. In Mandurah, Western Australia, the disturbance and hunting of just one pet cat and one stray cat caused the total breeding failure of a colony of more than 100 pairs of fairy terns.

*A roaming pet cat kills on average 186 mammals, bird and reptiles each year.
Image: Pacto Visual, Unsplash*

Fast facts about pet cats in Australia

Total pet cat population:	3.8 million
Percentage of households with pet cats:	27%
Size of animals cats can kill:	up to 4 kg
Percentage of pet cats that roam:	71%
Mean home range of a pet cat:	2 hectares (about the size of two playing fields)
Average density of pet cats in Australian suburbs:	39 to 70 per km ²
Average number of animals (mammals, birds and reptiles) killed per roaming cat per year:	186
Number of all mammals, birds and reptiles killed by pet cats per year:	390 million
Number of native mammals, birds, reptiles killed by pet cats per year:	241 million

Pet cats collectively kill 28–52 times more mammals, birds, reptiles per km² in urban areas than feral cats kill per km² in natural environments

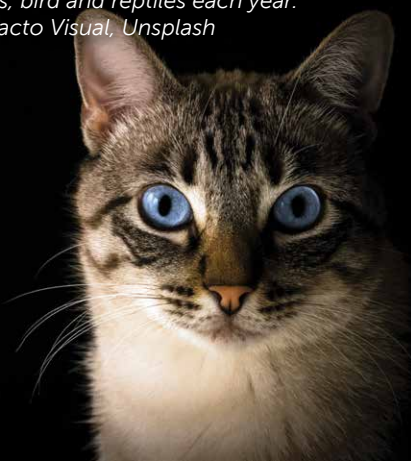
Concentrating the problem

On average, [an individual feral cat](#) in the bush kills 748 mammals, birds, reptiles per year – four times the toll of an individual pet cat that roams. But pet cats are concentrated at much higher densities in our cities and towns, where you'll find 39 to 70 roaming cats per square kilometre. In the bush there's only one feral cat for every three to four square kilometres.

So, while each pet cat kills fewer animals than a feral cat, their high density means the predation toll per area is very high in urban areas. We calculated that pet cats collectively kill 7,200 to 13,100 animals per square kilometre each year in urban areas, compared to 204 animals per square kilometre for feral cats in the bush.

About 38% of the animals killed by pet cats are introduced species like rabbits, house mice, house sparrows and Indian mynahs, whereas about 23% of a feral cat's prey are introduced species. But even considering the toll on native species alone, pet cats kill 4,440 to 8,100 animals per square kilometre each year, which is 28–52 times more native animals per square kilometre per year than feral cats kill in the bush (157 animals per square kilometre).

Like feral cats, pet cats also kill frogs and invertebrates, but the available data on these prey groups were too patchy to estimate overall predation rates and tolls.



What can pet owners do?

Keeping your cat securely contained 24 hours a day is the only way to prevent it from killing wildlife. Even if you keep it in at night, it can still hunt birds and lizards by day.

It's a myth that a good diet or feeding a cat more meat will prevent hunting; even cats that aren't hungry will hunt.

Various devices, such as bells on collars, are commercially marketed with the promise of preventing hunting. While some of these items may reduce the rate of successful kills, they don't prevent hunting altogether. These devices also don't prevent cats from disturbing wildlife, which is also a serious problem.

Desexing cats before they are sexually mature (i.e., by five months of age) has multiple benefits for their health and wellbeing; by preventing unwanted breeding you will also prevent your cat from contributing to Australia's feral cat population.

Microchipping, and putting identifying information on your cat's collar, will ensure that if it 'escapes' or roams beyond your property it can be returned to you.

Registering your cat with your local council will help to support responsible pet management programs in your local area.

Keeping your cat securely contained 24 hours a day is the only way to prevent it from killing wildlife and to avoid serious hazards such as road traffic and fighting.
Image: Oleksandr Kinshov, Unsplash



What can councils do?

Cat owners are primarily responsible for allowing their pet cats to roam. But local councils also have a key role in the management of pet cats, at least in part because pet cats can be a nuisance to people other than their owners. Although often operating with inadequate resources, many councils operate trapping programs and can impound roaming or dumped pet cats. Local councils can strengthen and improve by-laws and management of pet cats through the following measures:

- Setting up appropriate cat registration fee structures that incentivise desexing of cats, and dis-incentivise keeping cats that are not desexed
- Introducing by-laws requiring mandatory registration and early-age desexing of cats, coupled with subsidised desexing programs
- Setting limits for the number of cats per household
- Introducing cat-free or cat-contained areas (especially in new suburbs)
- Introducing by-laws for 24-hour containment or curfews
- Encouraging/promoting responsible cat ownership, including showing benefits for cat welfare
- Reducing populations of stray cats
- Setting up a registration system that allows staff to keep track of cat breeders in local government areas
- Dedicated resourcing for regional cat management officers, who can work with multiple councils towards consistent management of pet cats. They can also work on measures to help address complex issues as they arise (hoarding, 'backyard' breeding)
- Working in collaboration with adjoining council areas towards consistent regional management of cats.

These measures need to include appropriate resourcing for compliance and enforcement and relevant infrastructure, and may involve collaborations with veterinary practices.

* NESP Threatened Species Recovery Hub. (2019). *The impact of cats in Australia*. Project 1.1.2 Research findings factsheet.

Murphy, B. P., et al. (2019). Introduced cats (*Felis catus*) eating a continental fauna: The number of mammals killed in Australia. *Biological Conservation* 237, 28–40. <https://doi.org/10.1016/j.biocon.2019.06.013>

Woinarski, J. C. Z., et al. (2017). How many birds are killed by cats in Australia? *Biological Conservation* 214, 76–87. <https://doi.org/10.1016/j.biocon.2017.08.006>

Woinarski, J. C. Z., et al. (2018). How many reptiles are killed by cats in Australia? *Wildlife Research* 45, 247–266. <https://doi.org/10.1071/WR17160>

Losing nature where we live

Most of us want to see native wildlife in our towns and cities, local parks and gardens. But that vision is being compromised by the extraordinary levels of predation of wildlife by pet cats, especially as our cities expand and the human population grows, along with the population of pet cats. For example, the Critically Endangered western ringtail possum is found in suburban areas of Mandurah, Bunbury, Busselton and Albany, in Western Australia. The possum did not move into these areas – rather, we moved into their habitat, and predation by our pet cats makes their persistence more precarious.

Previous studies have shown that pet cats living near bushland roam further and hunt more frequently, reducing the value of natural areas that should be havens for wildlife and that are also favoured recreational places for people.

Australia is in a very good position to make change. Compared to many other countries, the Australian public are more aware of how cats threaten native wildlife and more supportive of actions to reduce those impacts. More than one million of Australia's pet cats are already being safely contained, so reducing the impacts of roaming cats is clearly possible if owners take responsibility for them.

Benefits of a life indoors

Keeping cats indoors helps protect pet cats from injury and disease, avoids nuisance behaviour and prevents **unwanted breeding**.

Cats allowed outside often get into fights with other cats, even when they're not the fighting type (they can be attacked by other cats when running away). They can also be badly injured or killed by other animals, especially dogs and snakes.

Roaming cats are also very prone to getting hit by vehicles. According to the Humane Society of the United

States, indoor cats **live longer** than those allowed to roam. Indoor cats can be **happy and exercised too**.

Indoor cats have lower rates of infectious diseases, some of which can be spread to humans. For example, the cat-borne disease **toxoplasmosis** can cause illness, miscarriages and birth defects in humans.

Keeping your pet cat indoors 24 hours per day is not only beneficial for your cat: you will also be able to enjoy more of the nature around you.

Further reading

Dielenberg, J., Murphy, B., Dickman, C., Woinarski, J., Woolley, L.-A., Calver, M. and Legge, S (2020) **One cat, one year, 110 native animals: lock up your pet, it's a killing machine**, *The Conversation*, 14 May 2020

Harvey, A. and Malik, R. (2020) **Don't let them out: 15 ways to keep your indoor cat happy**, *The Conversation*, 21 May 2020

Legge, S., Woinarski, J. C. Z., Dickman, C., Murphy, B. P., Woolley, L.-A., Calver, M. (2020). **We need to worry about Bella and Charlie: The impacts of pet cats on Australian wildlife**. *Wildlife Research*. <https://doi.org/10.1071/WR19174>

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