

Feral cat ecology and control



A descendant of the African wild cat (*Felis silvestris lybica*), the common 'house' cat (*Felis catus*) has now been domesticated for about 4000 years. Although the domestic cat has a long history of association with humans, it retains a strong hunting instinct and can easily revert to a wild (feral) state when abandoned or having strayed from a domestic situation.

Semi-feral cats live around dump sites, alleys or abandoned buildings, relying on humans by scavenging rubbish scraps and sheltering in abandoned structures. The true feral cat does not rely on humans at all, obtaining its food and shelter from the natural environment.

Declaration details

The feral cat is declared as a Class 2 species under the *Land Protection (Pest and Stock Route Management) Act 2002*. Declared species represent a threat to primary industries and natural resources, and have a social impact on other human activities.

Legislation describes a feral cat as one that is not fed and kept by someone. The word 'kept' specifically means that the cat is housed in a domestic situation.



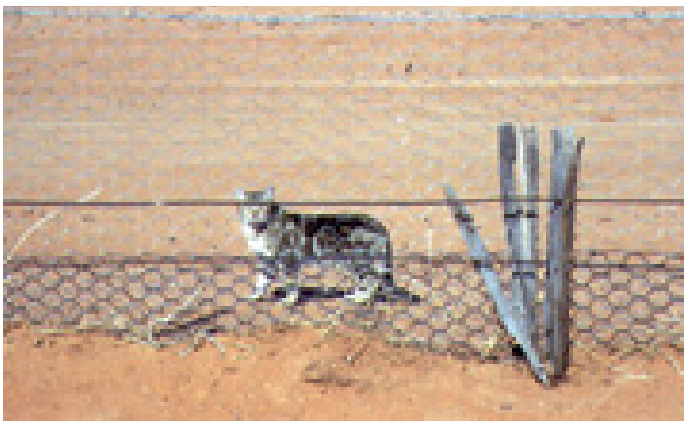
Description and general information

The feral cat differs little in appearance from its domestic counterpart; however, when in good condition, the feral cat displays increased overall muscle development, especially noticeable around the head, neck and shoulders, which gives the animal a more robust appearance. The average body weight of male feral cats is 3–6 kg, while females weigh 2–4 kg. Body weights vary with condition, with some extremely large specimens documented.

Australian feral cats are predominantly short-haired, with coat colours that range between ginger, tabby, tortoiseshell, grey and black. White markings may be present on the feet, belly, chest and throat; completely white feral cats are extremely rare. In established populations, coat colours are the result of a natural, genetically selective process. Terrain, predators and the ability to capture prey limit coat colours to those that provide the most suitable camouflage and cause a predominance of these colours in subsequent offspring. Ginger cats are more likely to be found in the semi-arid and desert areas, while grey and black specimens generally predominate in scrub and more heavily timbered habitats.

The feral cat is most active at night, with peak hunting activity occurring soon after sunset and in the early hours before sunrise. At night the cat displays a distinctive green eyeshine under spotlight, making it easily distinguishable from other animals. During the day it will rest in any number of den sites, which may include hollow logs, dense clumps of grass, piles of debris, rabbit burrows, and even the hollow limbs of standing trees.

The most obvious and characteristic field signs of feral cats are their scats (droppings). Unlike the domestic cat, the feral cat does not bury its scats, but leaves them exposed at prominent sites to warn other cats of its territorial boundary.



History of introduction and dispersal

There is some evidence to suggest that the cat was present in Australia long before European settlement. This may have occurred as a result of Dutch shipwrecks and regular visits to northern Australia by early South-East Asian vessels as long as 500 years ago.

Post-settlement dispersal resulted from cats straying from areas of early colonisation. In the late 19th and early 20th centuries, large numbers of cats were purposely released in many rural areas to combat plague numbers of rabbits. Unwanted cats continue to be released into urban and rural areas by irresponsible pet owners.

The feral cat is now present Australia-wide, thriving under all climatic extremes and in vastly different types of terrain.

Population dynamics

Male cats attain sexual maturity at about 12 months, whereas females are capable of reproduction at approximately seven months. Annually, and under ideal conditions, an adult female can produce up to three litters—each of usually four kittens, but varying from two to seven.

As the breeding instinct is triggered by the increasing length of daylight, litters are less frequent in winter. Most reproduction occurs during the spring and summer months, and is generally limited to two litters per year. Birth follows a gestation period of 65 days, and kittens may be reared in a single den site or may be frequently shifted to other sites within the female's home range. Family and litter bonding begin to break down when the kittens are approximately seven months old. The female's ability to bear litters does not decrease with age, so reproduction continues for the course of her life.

Social organisation and behaviour

Feral cats maintain stable home ranges, the sizes of which depend upon the relative abundance of food and the availability of suitable den sites. Dominant male cats may have territories of up to 8 km², while the territories of females are smaller and may even be halved while kittens are being reared.

Scent glands are present on the chin, at the corners of the mouth, and in the anal region. Territorial boundaries are maintained by scent marking with the cheek glands, pole-clawing, urinating and leaving exposed faecal deposits.

Although feral cats are often thought of as being solitary animals, studies show this behaviour is generally limited to hunting activities. At other times feral cats display a degree of social interaction that peaks during the breeding season. Group behaviour has been observed in semi-feral populations, and it has been suggested that such behaviour is exhibited also in feral populations.

Groups usually comprise several related adult females, their young of both sexes, and an adult male—whose range may include other groups of females. Young females usually remain in a group, while young males either leave or are driven from the group as they reach sexual maturity.



Effects on wildlife

The energy expended by an adult male cat requires it to consume 5–8% of its body weight in prey per day, while females raising kittens require 20%. Based on these figures, one study concluded that 375 feral cats on Macquarie Island would consume 56 000 rabbits and 58 000 sea birds per year. Where present on the mainland, rabbits may comprise up to 40% of a feral cat's diet. Cats are successful as a control mechanism only when rabbit densities are low. At other times cat predation does little to halt the build-up or spread of rabbit populations; rabbits merely help to support a larger number of cats. When seasonal shortages of rabbits occur there is a corresponding rise in the number of native animals taken by cats.

The feral cat is an opportunistic predator, and dietary studies have shown that small mammals, birds, reptiles, amphibians, insects and even fish can be taken as prey. Cat predation is particularly harmful in island situations, and a number of species have become extinct due to the introduction of cats by early sealers and lighthouse keepers. On the mainland, native animals—which already suffer due to the destruction of their habitats by man and other introduced animals—may be endangered further by cat predation. Actual competition for prey can cause a decline in the numbers of native predatory species such as quolls, eagles, hawks and reptiles.

Not only do native animals bear the brunt of predation, but they also suffer the effects of a parasite that reproduces only in the intestine of the cat. This disease (toxoplasmosis) is particularly harmful to marsupials, which may develop blindness, respiratory disorders, paralysis, and suffer the loss of offspring through abortion and stillbirths.

Exotic disease—rabies

Due to their widespread distribution, feral cats may prove to be a major vector for this fatal viral disease if it ever enters Australia. Overseas studies have revealed that wounds inflicted by rabid cats are more dangerous than those caused by rabid dogs. While the bites of rabid dog are generally inflicted on the arms and legs, the cat attacks the head of its victim, biting and clawing viciously. These head and facial bites reduce the time taken for the virus to enter the central nervous system, lessening the chance of success from subsequent remedial treatment.

Prevention

Central to the management of feral cat populations, is the control of owned and stray cat populations that constitute a source of cats capable of moving into the feral cat population. Promoting responsible cat ownership and limiting food sources for stray cats such as by fencing garbage dumps are examples of effective control strategies that assist in feral cat management.

Control

The Australian Government has recognised feral cats as a key threatening process under federal legislation and has published a Threat Abatement Plan (TAP) for Feral Cats which provides a framework for feral cat control. The TAP acknowledges that it is very difficult to control feral cats and that feral cats will never be fully eradicated. Instead the TAP places an emphasis on the eradication of feral cats from high conservation areas. As an example, feral cats have been successfully eradicated from North West Island, Queensland and Tasman Island Tasmania and exclusion fencing has been successfully used to form mainland 'islands' prior to feral cat eradication in Queensland, Northern Territory, Western Australia and South Australia.

Even though broad scale control is difficult, a range of management options is available to individuals and local governments to assist in minimising feral cat impacts. Feral cats can be controlled by shooting, trapping and baiting, as long as the control is done in a humane manner. Research has shown that feral cat populations can increase after increases in prey animal numbers (e.g. after a mouse plague). Impacts can be worst after prey numbers decline and the cats switch to native animals as prey. In areas with established rabbit populations, there is a relationship between feral cat and rabbit numbers. It is best practice to control feral cats and rabbits at the same time.

Control after feral cat numbers have increased and when prey numbers are on the decline is advocated.

Exclusion

Fencing is the only feasible method of control when special areas need protection from cats. Feral cats have been successfully prevented from climbing over netted fences that use an electrified wire mounted 15 cm from the top and 10 cm outward from the fence. Non-electrified fencing should incorporate a netted ceiling, or a curved overhang, which prevents the cat from climbing straight up and over the fence.

Shooting

Night shooting is assisted by the cat's distinctive, green eyeshine. Cats have been successfully attracted by the use of a fox whistle.

Poisoning

Commercial processed or fresh meat baits poisoned with 1080 may be used for controlling feral cats. The 1080 poison and processed baits can only be obtained through licensed Biosecurity Queensland officers and local government operators.

Under the Health (Drugs and Poisons) Regulation 1996, administered by the Queensland Department of Health, 1080 use is subject to strict regulatory control including that baits must not be laid within two kilometres of any habitation (i.e. any dwelling except that of the owner of the land being baited) or public amenity, or within five km of a town area, unless authorised by Biosecurity Queensland and the landholder must give at least three days notice of the intended laying of baits to every resident and/or occupier of the land adjoining or having frontage to the holding, road or reserve on which the poisoned baits are to be laid.

Trapping

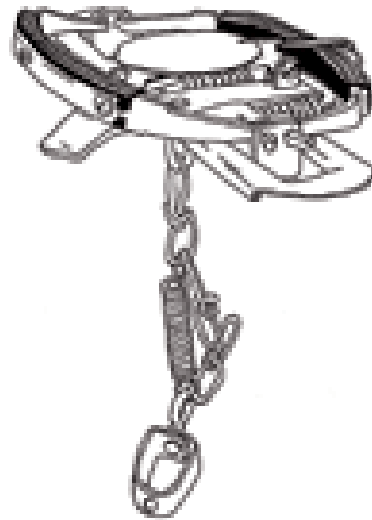
Rubber-jawed, leg-hold traps (see below) can be laid in the same manner as they are laid for dingoes and foxes. Leg-hold traps can work well with true feral cats, which would normally avoid the live-capture box traps.

Ideal sites are those where territorial markers, such as faecal deposits and pole-clawing, are noticed. Tuna fish oil has shown some success as an attractant; however, feral cats seem more readily attracted to a site by some visual stimulus such as a bunch of bird feathers hung from a bush or stick.

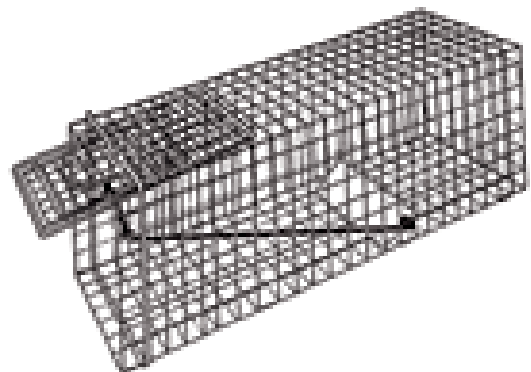
Cats are easily trapped in wire 'treadle-type' box traps (see diagram at right). This method is most practical for semi-feral urban cats. Attractants/lures may be of meat or fish and should be placed so that they cannot be reached through the wire and be retrieved by clawing.

A number of local governments lend cat traps for the purpose of removing stray and feral cats in urban situations.

Rubber-jawed leg-hold trap



Treadle box trap



Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland (call 13 25 23 or visit our website at www.biosecurity.qld.gov.au).

Fact sheets are available from Department of Department of Agriculture, Fisheries and Forestry (DAFF) service centres and our Business Information Centre (telephone 13 25 23). Check our website at www.biosecurity.qld.gov.au to ensure you have the latest version of this fact sheet. The control methods referred to in this fact sheet should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, DAFF does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.