

FERAL CATS – LEG-HOLD TRAPPING

TECHNIQUE

Trap station layout

- Effective population control in areas where cats are abundant (see below) requires an extensive trap layout: set traps 100-200 metres apart along linear landscape features (fence lines, forest edges, waterways, roads and tracks), in isolated patches of cover and other preferred microhabitat, and in areas with high prey abundance. There should be at least one trap station within a cat's home range. They have large (46-2083 ha), often overlapping, home ranges [1]. Densities of feral cats, where measured, range from 0.19 cats/km to 1.18 cats/ha. The highest densities are in areas with the most prey e.g. seabird islands, farmland and/or high rabbit population areas.
- Cat abundance is strongly correlated with food availability.
- Highest numbers of cats tend to be concentrated around human settlements, causing problems in nearby habitats.
- Localised threatened-species protection requires an intensive trap layout: set traps about 50 metres apart around the area being protected. There must be enough traps available to be confident a cat will encounter a trap.
- In areas of dense vegetation, consider cutting tracks if none exist. Tracks are often utilised by cats in this type of habitat.
- Supplementary trapping around farm buildings, offal pits and rubbish dumps may help reduce the cat population and slow reinvasion. The large home range of cats means these animals may be the same ones entering conservation areas.
- Number each trap station for ease of relocation and data collection. This reduces the risk of missing a trap during checking and allows capture data to be related to each trap site.
- Look for fresh sign when locating additional traps or consider moving those traps which are not catching animals. Taking the trap to the cat often works because individual cats follow particular routes and the areas they hunt can sometimes be very specific.

Timing of operations

- Timing is critical and depends on the species being protected, and the biology of cats and their prey at the site. Examples:
 - To protect species such as brown teal, weka, dotterel, kiwi, and wrybill it is necessary to control cats year round.
 - To protect yellow eyed penguins, cat control should occur before (1 month+) and during the penguins' September – March breeding season.
- Cats may become more easily trapped during times of seasonal food shortage.

Dispatching trapped cats

Animals should be killed humanely and checked to ensure they are dead. Dispatch techniques should: minimise the potential for escape, reduce the suffering of the animal, and minimise stress or injury to the trapper. Techniques that meet these requirements are:

1. A single shot to the head from a .22 cal rimfire rifle.
 - Wait until the animal is motionless. Accuracy is important to ensure a humane death.
 - The shot should be taken from as close as possible e.g. 3-5 cm from head to ensure maximum impact of the bullet and reduce bullet ricochets.
 - If taking a frontal shot, the rifle should be aimed at the centre of the head slightly below a line drawn midway between the ears. If shooting from the side, aim

behind the ear so that the shot passes through the brain towards the opposite eye. The shot should destroy the major centres at the back of the brain near the spinal cord[2]

- Trappers must hold a firearms licence if a rifle is being used to despatch cats.
2. A blow to the head with a stout stick or heavy implement to render the animal unconscious immediately, followed by cutting the carotid arteries. This technique, for experienced trappers only, requires a quiet approach so as not to disturb the cat. Once disturbed the cat is likely to attempt to vigorously extricate itself from the trap, and would experience pain and suffering as a result.

EQUIPMENT

Trap type

Key requirements are: catch effectively, kill humanely, easy to use and maintain, light weight, portable and cheap. [Traps have been assessed](#) against the National Animal Welfare Advisory Committee (NAWAC) standard for killing-performance against feral cats, with the following results:

Trap model	Result
Belise SuperX in wooden tunnel	Pass
Timms	Pass
Steve Allan (two springs) set in a Philproof Fenn trap tunnel	Pass
Twizel cat trap set in a Philproof Fenn trap tunnel	Pass
BMI 160 in wooden tunnel	Fail
Conibear 220 in wooden tunnel	Fail
Set n Forget	Fail

- The holding chain should be centrally mounted underneath the traps. This reduces injuries by allowing the trap to twist freely with the trapped animal.
- Either a 'bungee' or a spring connecting the ends of the chain. These act as shock absorbers, reducing the likelihood of animals pulling out of traps and reducing injuries.

Maintenance of traps

New traps

- Traps should not be treated
Treating the traps can damage the rubber on the jaws.

Traps in use

- DoC provides excellent [detail on trap-setting](#) for different types of traps.
- Traps should be regularly cleaned with a wire brush. Removes mould, fur and bits of dead animals and allows for identifying what has escaped from an empty sprung trap.
- Traps in field use must be sprung and reset every 1-2 weeks. Un-sprung trigger mechanisms can rust, resulting in slow set-off times which risk missed or poor captures.
- A formalised maintenance regime is important. Traps should be regularly maintained, including checking for worn pivots, weakened springs. Periodic filing and application of graphite (e.g. a builders pencil) to the 'dog' and sear helps maintain fast set-off time.

Set/Cover

The set has three functions: i) orientate the animal relative to the trap, ii) disguise and protect the trap and iii) keep out non-target species.

Where no native ground birds are present the best sets are:

- The walk through set (baited or non-baited) with hazing (sticks and stones) to guide the animal through.
- A blind-end baited set.

Where native ground birds (e.g. kiwi, weka) are present place traps on raised sets (i.e. ≥ 700 mm off the ground). The chain on the trap must be long enough to allow a caught animal to sit on the ground.

If trapping in rabbit habitat, placing traps alongside rabbit burrows can provide the trapped animal with a refuge

Where bait is used to lure cats to the trap, it may have to be set under cover if there is a risk of capturing scavenging birds (e.g. harrier hawks).

Bait/lure

- Baiting of traps may work better than un-baited traps in areas of low food supply. The key elements are: high palatability, doesn't attract non-targets, easy to use and cheap. Where possible, baits should consist of local food sources used by cats. Cats are flexible and opportunist in their diet. The most effective baits will differ with location and natural diet of cats.
- Effective baits include: Meat - fresh and salted rabbit, hare, and possum and fish (fresh/frozen/salted).
- Baits should be changed regularly (timing depends on environmental conditions) and disposed of away from the trap. Rotting bait close to the trap may deter cats.
- Pre-baiting traps may increase capture rates. Pre-baiting can be a useful way of establishing best trapping locations before any traps are laid out. The baits can be left for several days before checking to assess best trap locations.
- If trap catch rate drops off, changing the bait type may result in more captures. Individual cats can become shy of particular baits through previous missed captures or a natural dislike for a particular bait type.
- Cats which escape from poorly set traps are often particularly hard to catch again.

STANDARDS

- Under the Animal Welfare Act 1999 all restraining (including leg-hold) traps must be checked daily within 12 hours after sunrise.
- Open traps (not set in tunnels) in areas with native ground birds (e.g. kiwi, weka, rail) must be ≥ 700 mm off the ground.
- Soft catch traps must be used on cats.

SUSTAINING CONTROL OVER THE LONG TERM

- Monitoring conservation outcomes helps to make control programmes more effective and efficient over the long term. Control operations are useless unless outcomes are achieved.
- Currently there is no effective monitoring technique for feral cat control operations.
- Shooting and cage trapping can be used to supplement leg hold trapping.

LIMITATIONS

- Leg-hold trapping is labour intensive. The traps must be checked daily within 12 hours after sunrise.
- Non-target interference via removing bait (e.g. rodents, wasps, possums) or closing traps (getting caught or setting off) can affect ability to catch cats.
- In areas close to human settlement household pets are at risk. Cage traps are an alternative in areas where people have concerns about domestic pets.
- Careful placement of traps in high public usage areas is important. Cats are highly valued by many people.
- Cats may be deliberately or negligently released by members of the public, creating an ongoing problem that may be better addressed by publicity around the programme.

REFERENCES

1. Gillies, C.; and Fitzgerald, M. B. 2005. Feral cat. Pages 308-326 in King, C. M., editor. The Handbook of New Zealand Mammals. Oxford University Press, Melbourne.
2. Sharp, T.; and Saunders, G. 2005. Trapping of feral cats using cage traps. Standard Operating Procedure CAT002-1 - Humane pest animal control, NSW Department of Primary Industries, Orange, NSW, Australia.