

# FERAL CATS - KILL TRAPPING

## EQUIPMENT

### Impact on animal welfare

[Kill traps have been assessed](#) to determine if they meet an acceptable standard of humaneness. The tests relate to the welfare performance of the traps, NOT to their capture efficiency, safety, costs, or target specificity. The following results were obtained in tests against feral cats:

<a href="#">BMI 160 in wooden tunnel</a>	Fail
<a href="#">Conibear 220 in wooden tunnel</a>	Fail
<a href="#">Set n Forget</a>	Fail
<a href="#">Steve Allan set at top of leaning board</a>	Pass
<a href="#">Timms</a>	Pass
<a href="#">Twizel cat trap set in a Philproof Fenn trap tunnel</a>	Pass
Belise SuperX in wooden tunnel	Pass

### Maintenance of traps

#### New Traps

- Steve Allan (SA) Conibear traps frames are made from stainless steel, however, the springs are made of carbon steel and must be lubricated (e.g. with fish oil). Springs are prone to rusting, especially in coastal environments.
- Timm's traps do not require additional treatment.
- Belisle Super X220 should be treated to prevent traps rusting excessively. Coating should not repel cats or attract non-targets, and should be user friendly. Examples of protective coatings are:
  - Dipping the traps in melted preserving wax,
  - Nothing (in dry conditions),
  - Traps should **not** be electroplated. Electroplating quality is highly variable. Done poorly, rust becomes worse than no treatment, occurring under the plating where follow up with other protection is difficult.

#### Traps in use

- DoC provides excellent [detail on trap-setting](#) for different types of traps.
- Traps should be regularly cleaned with wire brush. This removes mould, fur and bits of dead animals and allows for identifying what species has escaped in the case of an empty sprung trap.
- Un-sprung traps must be set off when bait is changed or at monthly intervals. In coastal environments, traps should be sprung at least fortnightly. 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 weakened springs and oiling the spring and trigger mechanism. The trigger should not be allowed to become stiff.

## **Baits**

- Key elements are: high palatability, a field-life aligned with the frequency of checking, 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 may differ with location and with the natural diet of cats in that location.
- Effective baits include:
  1. fresh or salted rabbit, hare, or possum
  2. fresh/frozen/salted fish
  3. dehydrated meat baits (see below)
- The Allan traps are designed for use with 'sloppy' baits such as minced meat or 'sloppy' cat food. This ensures the cat triggers the trap with its head.
- The Timm's trap and Belisle Super X220 are designed to take solid meat bait (e.g. [Connovation's dehydrated Erayz bait](#), or [Trappers Cyanide dehydrated hare meat](#)).
- Baits should be changed regularly (timing will depend on environmental conditions) and disposed of away from the trap. Rotting bait close to the trap station may deter cats.

## **TECHNIQUE**

### **Trap layout and setting**

- 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 over-lapping, home ranges [1]. Densities of feral cats, where measured, ranged 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.
- Look for fresh sign when locating additional traps or consider moving those traps which are not catching animals. Individual cats follow particular routes and the areas they hunt can sometimes be very specific, taking the trap to the cat often works.
- In areas of dense vegetation, consider cutting tracks if none exist. Tracks are often utilised by cats in this type of habitat.
- The Timms trap can be set on the ground, but should be set above ground if there are kiwi or weka present. If not being used in tunnels, the Allan traps must be set above ground, using the metal shelf provided to clip the trap into, and secured using the chain provided. Bait is then placed at the back of the metal shelf so the cat has to push the trigger wires to access the bait.
- 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.
- A good track infrastructure is important, and each trap station should be numbered 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.

### **Timing of operations**

- Timing is critical and depends on the species being protected, and the biology of cats and their prey at the site. Example 1: To protect species such as brown teal, weka, dotterel, kiwi, and wrybill it is necessary to control cats year round. Example 2: To protect yellow eyed penguins, cat

control should occur before (1 month+) and during the penguins' breeding season in September – March. Cats may become more easily trapped during times of seasonal food shortage.

### **Efficient use of kill traps**

- The frequency of checking traps will depend on (i) trap occupancy rate (of both target and non-target species), and (ii) field life of the bait used. Frequency of checking may vary from weekly (or more frequently) during high cat numbers, to monthly in winters with low cat numbers and when bait is not rotting. Localised site protection inspections may need to take place on a more frequent basis (i.e. daily).

### **LIMITATIONS**

- 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 where people have concerns about domestic pets, farm animals and children.
- Careful placement of traps in high public usage areas is important. Cats are highly valued by many people.

### **SUSTAINING CONTROL OVER THE LONG TERM**

- It is essential that conservation outcomes are monitored in order to judge effectiveness of the control programme. Currently there is no effective result monitoring technique for feral cat control operations. Control operations are useless unless outcomes are achieved.
- Cat abundance is strongly correlated with food availability.
- Techniques such as shooting, dogging and cage trapping can supplement trapping strategies.
- Good data collection helps operations to be more effective and efficient over the long term. What is recorded depends on what the project wants to know.
- Dogs trained to target cats under DOC's national predator dog programme can be useful to check for the presence of cats and whether areas that require additional traps.

### **REFERENCES AND FURTHER READING:**

- 1 Gillies, C.; Fitzgerald, M.B. 2005: Feral cat. In: King, C. M. ed. The Handbook of New Zealand Mammals. 2nd edn. Oxford University Press, Melbourne. Pp. 308-326.
- 2 Poutu, N.; Warburton, B. 2001: The killing effectiveness of a modified Steve Allan Conibear trapping system for capturing feral cats Landcare Research: 1 - 4.
- 3 Warburton, B.; Poutu, N. 2003: Evaluation of the effectiveness of the Belisle Super X220 for killing feral cats Landcare Research Contract Report, No. LC0304/039. Landcare Research Ltd., Lincoln, NZ. 6 p.
- 4 Warburton, B.; Poutu, N.; Domigan, I. 2002: Effectiveness of Timms traps for killing feral cats Landcare Research Contract Report, No. LC0203/008. Landcare Research Ltd., Lincoln, NZ
- 5 Poutu, N.; Warburton, B. 2006: Effectiveness of the Set-n-Forget trap for possums and feral cats [3896] Landcare Research Contract Report, No. LC0506/152. Landcare Research, Lincoln, NZ. 5 p. docdm-265471
- 6 Warburton, B.; Poutu, N. 2002: Effectiveness of three trapping systems for killing feral cats DOC Science Internal Series, No. 50. Department of Conservation, Wellington, NZ

