



A4.2

KILL TRAPS

A GUIDELINE TO TRAP POSSUMS, FERRETS,
STOATS AND FERAL CATS USING KILL TRAPS



PRODUCED BY



National Pest
Control Agencies

ABOUT NPCA AND BIONET

This document was published by NPCA (National Pest Control Agencies) which, until part way through 2018, provided a co-ordinating forum for agencies and stakeholders to address vertebrate animal pest control in New Zealand. In 2018 its role was transferred to the Ministry for Primary Industries under its Bionet brand.

PUBLICATIONS

Most of NPCA's publications on animal pest control were partially updated in April 2018 and transferred to the library section of the Ministry for Primary Industries' 'Bionet' online portal. The updates reflect the transfer and also acknowledge the change in the regulatory regime during 2017 and 2018, while not fully incorporating these changes in the interim, pending further reviews of the publications. Written by experienced practitioners, the main titles cover:

- best practice guidelines on controlling and monitoring vertebrate pests; and
- information about relevant regulations.

The transferred publications can be found at www.bionet.nz/library

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This guideline was developed by Bruce Warburton (Landcare Research). Illustrations by Jen McBride and Grant Morriss.

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SUMMARY OF AMENDMENTS IN THIS EDITION

This edition is an update of the preceding May 2009 edition. The changes comprise only minor updates to organisation names, website links and some reformatting.

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PART 1. INTRODUCTION

1.1 Purpose

This guideline describes the use of kill traps for capturing possums, ferrets, stoats and feral cats. There are a number of factors that need to be considered when undertaking any trapping programme including the type of kill trap, its ease of use, maintenance, possible restrictions on use, user safety, animal welfare aspects, and ways to maximise target captures while minimising non-target captures. All these factors need to be taken into account in planning and implementing your trapping programme, so please –read the whole booklet!

1.2 Definition of kill traps

Kill traps are designed to close onto a captured animal with sufficient force to render it irreversibly unconscious.

1.3 Limitations of this guideline

No endorsements

This guideline does not endorse particular traps for particular target species, nor does it imply, because a trap is not mentioned, that the trap should not be used.

Killing performance

Trappers need to be aware that the time taken to kill target animals varies considerably between different trap models and that the killing performance has implications for animal welfare. A formal test for assessing the killing performance of kill traps has been developed and some of the traps mentioned in this guideline have been tested and performed satisfactorily but other more recently developed models had not been tested at the time of publication, so their killing performance was unknown. Therefore, readers should not assume that all traps mentioned in this guideline have passed the killing performance test and should regularly check for the latest trap test results at

<http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps>

This guideline does not provide detailed instructions on how best to use every trap, so trappers should initially follow the instructions provided by the trap suppliers until they have developed sufficient experience to adapt trap use to their own particular requirements.

PART 2. TRAPPER SAFETY

Recent kill trap designs have become very powerful to better meet animal welfare quick killing performance requirements. Therefore, trappers must take every precaution when using these traps to avoid serious injuries to their hands and/or fingers and face.

All trappers **MUST**:

- Use appropriate safety devices supplied with the trap when setting and baiting a trap.
- Ensure fingers and/or hands are not placed within the jaws of the trap when adjusting trigger pressures or baiting the trap unless an appropriate safety device is used.
- Be aware that some setting tools might be thrown out from the trap if the trap fires accidentally when it is being set (e.g. Holden Multi-kill and Set-n-Forget traps).
- Be aware that some kill traps have trigger levers that can fly up and potentially injure your eye (e.g. Sentinel trap and Possum Master).
- Be aware that if a trap is attached to a tree and you get a hand captured, you may not be able to free yourself, especially if the springs need to be opened using a two-handed lever (e.g. Conibear-type traps).
- Ensure someone knows where you are setting traps in case you get captured and cannot remove either your hand or the trap from the site.
- Ensure children do not have access to kill traps.
- Minimise the exposure of non-target species to kill traps (see sections 5 and 6.2.)
- **TREAT KILL TRAPS AS TOOLS – THEY ARE NOT TOYS!**

PART 3. TRAP PREPARATION AND MAINTENANCE

Most kill traps need adjustment (fine-tuning) either before or when being set to capture an animal.

Before use, check all traps to ensure they operate correctly. Take special care to ensure the trap can be triggered with an appropriate amount of force. A trap with a trigger set too light or too heavy will increase the chance that the animal is struck incorrectly and might therefore survive for extended periods in the trap.

The following recommendations are guidelines for good trap maintenance and use. They are not compulsory but we recommend that you adopt them as good practice.

3.1 Surface treatment

This treatment applies only to all-steel traps such as the Conibear types.

1. Remove any oil coating either by cleaning with steam or using hot water.
2. Leave newly cleaned traps outside in damp conditions to weather. Treat the light coating of rust that results with a rust inhibitor (obtained from a hardware store) or dye the traps with trap dye (made from walnut hulls boiled in a cloth or pantyhose bag with the traps for 30 or more minutes). This process protects traps from further rusting and also darkens them to better 'hide' them from the target animals.
3. As a further protection, traps can be waxed; this also lubricates them and helps increase the speed that the trap closes. Pure paraffin wax (obtained from supermarket or hardware stores) can be used. Wax the traps using either of the two methods below.
 - (i) Melt wax by itself and then lower the traps singly or in small bunches into the wax. Hold them in the hot wax for several minutes to heat up and then draw them slowly from the wax, and hang to cool, or
 - (ii) Melt wax in hot water (the wax floats on the surface, so requires less wax than using wax alone). Use a large container that accommodates bundles of five or more traps. Heat 5–10 litres of water and add sufficient wax to ensure there is a complete layer of wax across the surface of the water. Place a bundle of traps into the hot water and leave them in the water for several minutes to heat up before raising them up through the wax layer. If the traps are not sufficiently heated they will be coated in a thick layer of wax that will easily flake off. After waxing, clean any wax from the trigger mechanism.

Warnings:

- Do all trap waxing outdoors
- Take care to ensure hot wax does not get onto your skin.
- If using wax by itself, take care to ensure it does not ignite (i.e. keep naked flames away from the container), and ensure the traps are dry before placing them into the wax because hot wax can explode on contact with water.

3.2 Triggers

The trigger mechanism of all new and used traps needs to be checked for correct functioning.

If necessary adjust to ensure that:

- the bait can be aligned correctly (see the appropriate baiting instructions in Section 4), and
- the trap will fire with an appropriate pressure on the trigger from the target animal.

Most kill traps require their triggers to be baited to entice the target animal to actively bite, pull or push the baited trigger. However, some kill traps have treadle triggers (e.g. DOC 150, 200 and 250) and some can be modified to work with a treadle trigger (e.g. Conibear). The wire-prong-like triggers of Conibear-type traps can also be left unbaited and rely on the target animal pushing the wires to get at a bait behind the trap. Both treadle and unbaited wire-prong-like triggered traps are passive traps in that they do not require the animal to bite, push or pull a bait.

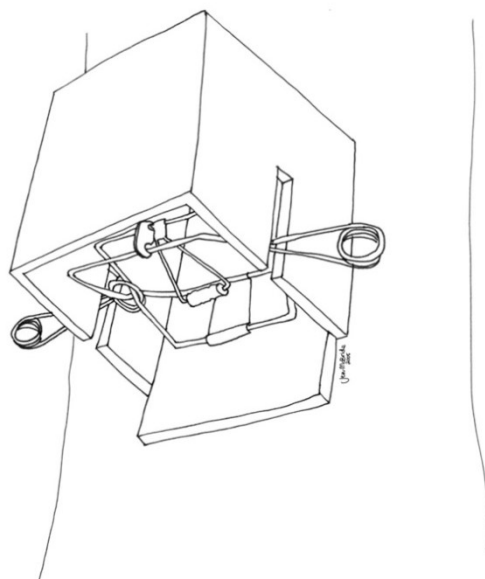
Note: A baited trigger generally provides a greater probability that the target animal will be struck consistently in a desired (lethal) position. In contrast, treadle or wire-prong-like triggers can allow animals to enter a trap at varying speeds and distances before the trap is triggered, sometimes resulting in poorly located strikes.

3.3 Trigger pressure

Adjust the trigger pressure so that it is high enough to eliminate capture of smaller non-targets, but not so high that the target animal cannot easily trigger the trap. This applies to both baited and treadle triggers. Each trap will have different ways of adjusting the trigger pressure and trappers need to become familiar with the traps they are using and experiment with them to optimise the trigger operation.

3.4 Trap covers

Most recently developed kill traps come with covers (cubbies) that cover the trap and force the animal to enter the trap through the jaws of the trap. Two trap models (Possum Master and Warrior) have the cover as an integral part of the trap. Others, such as the Holden Multi-kill, Set-n-Forget and Sentinel have detachable plastic covers that must be used with the trap. The Conibear-type traps do not come with a cover but can easily be set in a wooden cubby either on the ground or above ground on a tree trunk (see diagram).



Conibear-type trap set in a wooden cubby up a tree. Note attachment chain not shown.

3.5 General maintenance

Traps often get treated roughly when in use (i.e. thrown into vehicles and packs, and dumped onto the ground), so they occasionally end up with bent components. Moreover, recently developed traps are very powerful and setting them off without anything in the trap means the trap absorbs the kinetic energy held in the spring, which then dissipates through the trap occasionally resulting in damaged components. Poorly maintained traps should not be used because they will increase the chance that animals will be struck incorrectly and not killed quickly by the trap.

! Therefore, trappers should:

- after use, clean all traps of dirt, fur and blood; check for mechanical defects and adjust as necessary;
- regularly check all traps for breakages or damage, including broken welded joints or distorted components;
- repair or replace any defective parts.

PART 4. TRAPPING OPTIONS FOR DIFFERENT SPECIES

Kill traps come in a wide range of designs. Some, such as the Conibear-type traps can be set in a wide variety of ways but models more recently developed in New Zealand provide little opportunity for adapting or modifying the way the trap is set.

In this section, the main types of traps appropriate to each target species are listed and general information is given about the placement of traps, baiting and how to maximise captures. Specific guidance and illustrations are provided for some traps to assist with visualising the mechanisms or to give practical tips and pointers on use. For further information to assist with trap selection and use see:

- 'A4.4 Possum and Ferret Traps: a report to advise and inform users of trapping products', available from publications section, www.bionet.nz
- Trap test results at <http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps>

4.1 Possums

TRAP OPTIONS	
Passed formal testing	Other traps, including traps that have not been tested or have been tested but failed
BMI 160 Sentinel Set-n-Forget Warrior	Carac Holden Multi-kill Possum Master2* Timms1**

* The Possum Master failed the kill test because some larger possums were captured in front of the ears. The trap is now sold with a modified trigger, but the trap with this modification has not been tested.

** The Timms trap only just failed the kill test and requires careful positioning of the bait (see diagram in section 4.1.1 below).

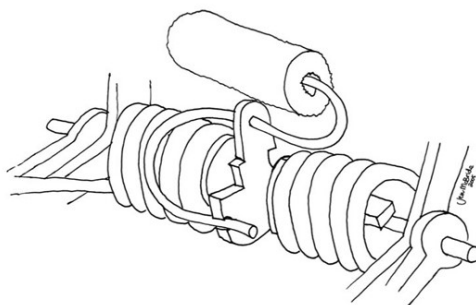
4.1.1 Baiting

General pointers

- Traps can be made more attractive to possums by applying either peanut butter, lured flour, jam, or feeder paste to the bait, onto the front lip of the trap and onto the ground, branch or trunk in front of the trap opening. Some species or individuals of a species may be reluctant to enter a trap that is totally enclosed within a tunnel or cubby, so baiting can be critical for achieving good capture efficiency.
- All baited kill traps suffer, to greater or lesser extents, from rat and sometimes mouse interference, so when using them in areas where rodent numbers are high, carry out trap checks and bait replacement at more frequent intervals than in areas where rodent interference is low.

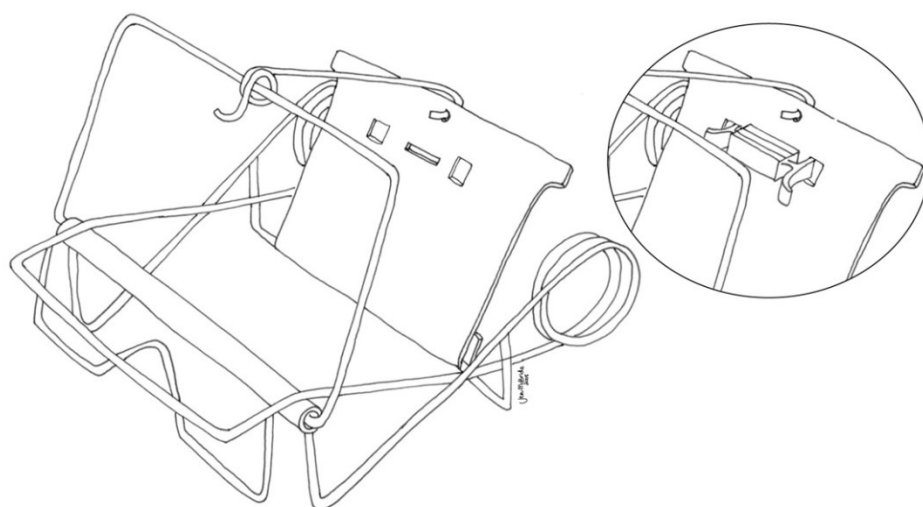
Notes on specific trap models

The Holden Multi-kill, Set-n-Forget and Warrior traps have triggers that allow for easy attachment of cylindrical bait that can be obtained from the trap suppliers.



Cylindrical bait placed on the bait wire of a Set-n-Forget trap and Holden Multi-kill trap.

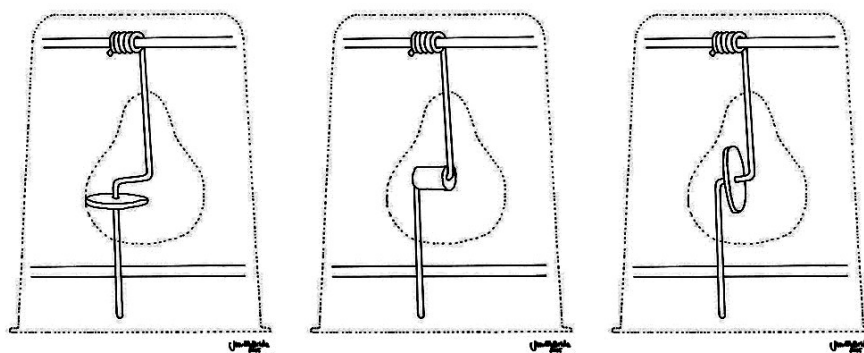
The Sentinel trap can be used with a clip-on 'rat-resistant' bait block, although it can also be set by tying on a cylindrical bait similar to those used in the other kill traps.



Sentinel trap showing the plastic 'rat-proof' bait block inserted in the trigger plate.

The Possum Master trap kills by strangulation with a noose around the captured animal's neck. It is important that the bait is far enough back to ensure the killing noose tightens around the neck and behind the ears of the possums. This is especially important if trapping in an area with large (>3kg) possums.

When baiting the Timms trap it is important that the bait is orientated to encourage the possum to keep its head horizontal. If the possum has to turn its head onto one side to bite a bait, the trap jaw when triggered will hit the possum on the side of the neck, resulting in a protracted time before the animal dies or possible escape. It is important to bait this trap correctly because it is not very powerful and the rotating jaw needs to clamp onto the ventral (underside) surface of the neck so the carotid arteries are blocked.

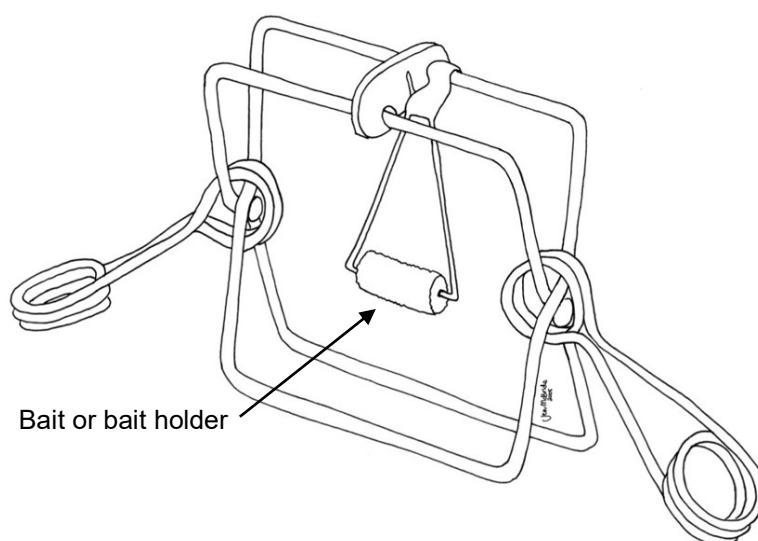


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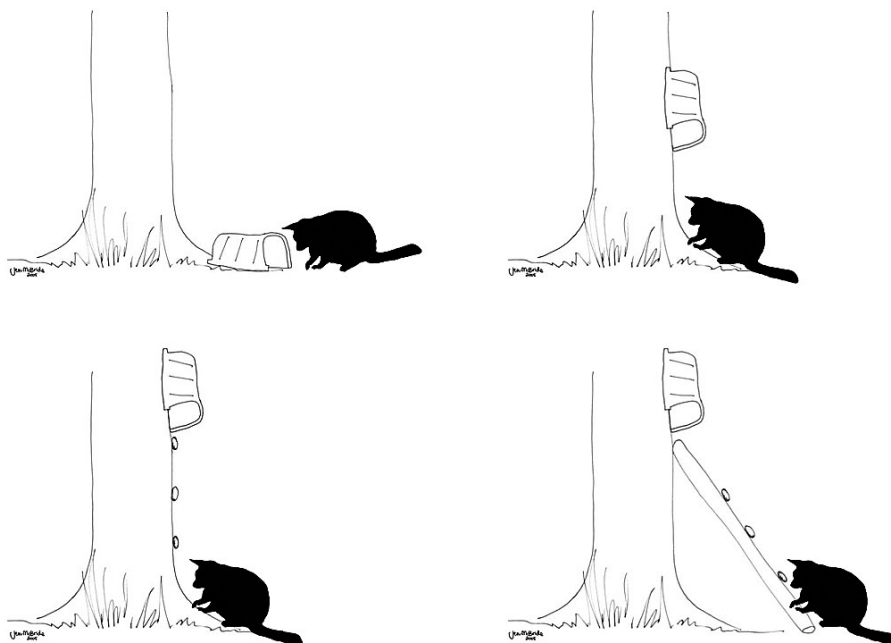
Bait placement and alignment in the Timms trap.



Conibear (BMI) type trap showing bent trigger tips holding a cylindrical bait. (This bait can be a piece of dowelling with peanut butter smeared over the surface).

4.1.2 Trap placement and anchoring

Most kill traps for possums can be set on the ground, or on the trunk and branches of trees.



Four possible sets for kill traps

As most kill traps are not made with an anchor attachment (e.g. chain) it is important to secure traps on the ground using pins (for the Timms trap) or a piece of wire or rope (for the Holden Multi-kill, Possum Master, Sentinel, Set-n-Forget and Warrior traps). When set on the trunks or branches of trees, traps such as the Holden Multi-kill, Possum Master, Sentinel, Set-n-Forget and Warrior have attachment points for 'locking' the trap to the tree. The Possum Master should be set with the attached chord stapled to the tree. The Conibear type traps are supplied with a chain and can be easily secured.

If setting kill traps off the ground for possums, set them at about 350–400mm above ground-level, which enables the possums to access the bait while sitting on the ground. If setting traps above this height (you may be required to do this if the area contains kiwi or weka – see section 5 and 6.2), they are best set at about one metre high. If readily available at the trap site, lean a broken branch against the tree trunk as a natural run leading up to the trap to help improve capture rates. Always place bait (peanut butter, feeder paste or flour/icing sugar mix) below traps to encourage animals to move up to the trap.

4.1.3 Maximising captures

The chances of possums encountering set traps can be maximised by placing traps where possums are known or likely to be present.

- Look for their 'sign', such as faecal pellets, well-worn pads (tracks), bark with urine stain, scratches, bite marks and partially eaten leaves or leaves that have been rejected and fallen to the ground. Set traps on well-used pads or trees.
- Target possums' seasonal foods such as budding willows, pine pollen, native fruits or crops such as brassicas.
- In habitats where nest sites are limited, such as some plantations or areas of tussock lands, windthrows in plantations and rocky outcrops in tussock country can be productive trapping sites.

To further increase the chance that a possum will encounter a trap, lures can be used.

- The most common lure is a mixture of flour and icing sugar (mixture of five parts flour to one of icing sugar). Field evidence suggests this mixture acts mainly as a visual lure especially when applied as a white smear of the mixture up the trunk of a tree but, once a possum is at a trap, the more palatable icing sugar probably increases the time the possum stays at the site and therefore increases the chance that it will be caught.
- Recent trials indicate that using photo-luminescent strips as visual lures might also result in increased possum encounters with traps.
- The value of using odour lures such as aniseed, cinnamon, cloves etc. is unclear, but research results tend to indicate that they do little to increase encounter rate.
- Some limited testing of auditory lures (beeps, not possum vocalisation) suggest more possums would enter a trap with the sound than without.

Trap density and the number of nights for which they are set also affects the number of captures, as does possum density. Densities of possums in uncontrolled areas can be as high as 10–20 per hectare and as low as 0.5 per hectare in controlled areas. Generally, when using traps for possum control (not fur recovery) traps are set at about 30-metre intervals along lines 100–150 metres apart, with the traps set for up to 7–10 nights depending on the catch.

4.2 Ferrets

TRAP OPTIONS	
Passed formal testing	Other traps, tested but failed.*
DOC 250 I	Holden Multi-kill Set-n-Forget Possum Master Timms Timms Tunnel Warrior

* This is not a complete list so see:

<http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps>

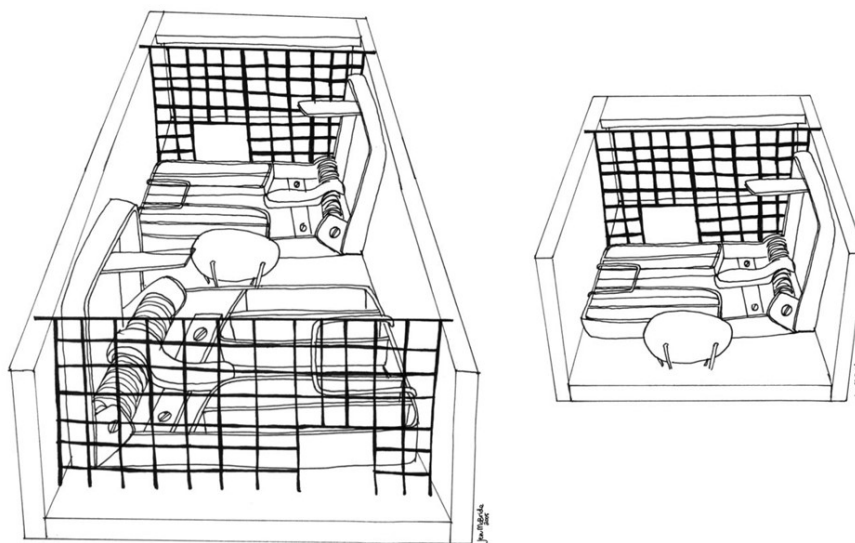
4.2.1 Baiting

General pointers

The preferred baits are eggs, fresh meat including rabbit, hare, possum, beef, horse, chicken, etc. It is accepted practice to replace baits every 4–5 days, depending on the weather and rate of decay. Salted meats have been used to extend the life of the bait and freeze-dried rats have also been used. Artificial long-life rabbit-flavoured ferret bait (Erayz) can be obtained from Connovation Ltd and dried hare meat bait from Trappers Cyanide Ltd. A salmon-flavoured lure can be obtained from Pest Management Services. Some species or individuals of a species may be reluctant to enter a trap that is totally enclosed within a tunnel or cubby, so baiting can be critical for achieving good capture efficiency.

Notes on specific trap models

The DOC 250 trap must be set in a tunnel (usually made of wood) with wire-mesh ends to exclude non-target species. These traps can be set singly or in pairs with a meat bait or egg placed between the traps. When setting the traps in pairs, have the traps face opposite each other with the treadles in line with the holes in the wire mesh. When placing the bait in a tunnel set with one of the DOC traps ensure the bait is close enough to the trap that the stoat cannot jump over the treadle to feed on the bait.



DOC 250 kill trap set as a double set (left) and a single set (right) for ferrets. Note egg held by nails, and mesh to prevent access by ground birds. Note entrance holes are aligned with trigger plate of trap.

Baiting of the Holden multi-kill and Set-n-Forget traps is best done using the artificial baits available, although meat can be tied onto the trigger wire using either twist-ties, string or lacing wire.

4.2.2 Maximising captures

To increase the chances of ferrets encountering set traps, take into account the following factors.

- Ferrets favour farmland and are found in highest numbers where rabbit numbers are high.
- Ferrets also appear to have a very clear seasonal pattern of trappability, especially females, being relatively easy to catch in summer and autumn but more difficult to catch in late winter and spring.
- **REMEMBER!** Every effort should be made to restrict trapping to the non-breeding seasons (late summer, autumn and winter) to reduce the risk of young in burrows or nests being abandoned if a parent animal is captured.
- Concentrate traps in areas that ferrets favour such as rabbit burrows, riparian vegetation bordering streams and ponds, culverts, hedgerows, fences, and barns and other structures where rodents might be present.
- If a fresh kill or freshly scavenged carcass is found, set traps near these.
- Traps set in the entrance of, or slightly down, rabbit burrows appear to be effective at catching ferrets.

Various techniques have been tried to lure ferrets to traps with indeterminate results.

- It is unclear which of the meat baits (see baiting above) are best or whether such baits attract ferrets to the trap site or just encourage them to enter the trap once there.
- Noise lures have been tested for attracting ferrets, using sounds of squealing rats, but results were highly variable with no consistent response detected.
- Dragging dead rabbits along the ground between traps to encourage ferrets to follow the scent trail and therefore encounter a trap is recommended by some trappers, but results have been unclear as to whether such lure trails have any consistent benefits.

Ferrets occur at low densities compared with possums (i.e. usually less than three per square kilometre or 0.03 per hectare) and have much larger home-ranges (at least one square kilometre) than possums. Therefore you need to adjust the number of traps used and trap spacing accordingly. Leave traps in place for more nights (up to 10) than might be routinely done for possums.

In late winter and early spring when ferrets are more difficult to trap, it appears that traps need to be left in place for more than 10 nights to capture a high proportion of the ferrets present.

4.3 Stoats

TRAP OPTIONS	
Passed formal testing	Other traps, including traps that have not been tested.*
DOC 150 DOC 200 DOC 250	Holden Multi-kill Set-n-Forget Victor snapback rat trap

*** This is not a complete list so see:**

<http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps>

4.3.1 Baiting

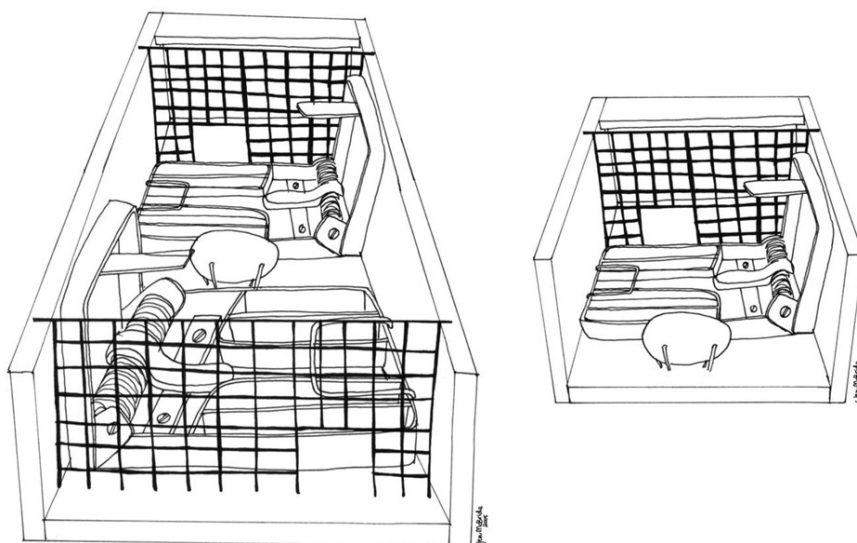
General pointers

A variety of baits have been used for trapping stoats including rabbit, possum, beef mince, poultry, tinned cat food, dead rodents, freeze-dried rats and eggs. Hen eggs, especially broken ones, and hard-boiled eggs appear to work better than other bait options. Some species or individuals of a species may be reluctant to enter a trap that is totally enclosed within a tunnel or cubby, so baiting can be critical for achieving good capture efficiency.

Notes on specific trap models

The DOC traps can be set singly or as pairs, but must be used in the wooden tunnels designed for that purpose. Single-ended tunnels with one trap appear to work as well as double-ended tunnels with two traps (i.e. it is probably more effective to put out more tunnels with a single trap than fewer tunnels with two traps). If pairs of traps are used, place the traps in the tunnel so they are facing opposite sides and ensure the treadles are aligned with the holes in the wire mesh ends.

When placing the bait in a tunnel set with one of the DOC traps ensure the bait is close enough to the trap that the stoat cannot jump over the treadle to feed on the bait.



DOC 150 or DOC 200 kill trap set as a double set (left) and a single set (right) for stoats. Note egg held by nails and mesh to prevent access by ground birds. Note entrance hole is aligned with trigger plate of trap.

If the Holden Multi-kill trap is being used then use a meat-flavoured artificial bait, or tie a piece of fresh meat onto the trigger.

4.3.2 Maximising captures

Stoats have large home-ranges (females about 100 hectares and males about 200 hectares) with range lengths of about 2.5 kilometres for females and 4 kilometres for males.

Consequently, to ensure all stoats encounter a trap, traps do not need to be placed at densities more than about one per 5–7 hectares but, the further traps are set apart, the more days that they will need to be set to allow all stoats to encounter them.

To increase the chances of stoats encountering set traps, take into account the following factors.

- Often when trapping areas of forests, traps are spaced on a 100-metre grid. Within forest, there is some evidence that trap site has little effect on capture rates, however, traps are best sited along riparian areas if available.
- If trapping on farmland, locate traps along fences, near culverts and around barns.
- Pre-feeding stoats by placing eggs inside the trap tunnels before setting the traps has helped to trap stoats. Such pre-feeding will provide a greater period of time for stoats to find the traps and may help to overcome any initial shyness to the tunnel and traps.

The following techniques have been tried to lure stoats to traps.

- Dragging dead rabbits or possums along the ground between traps to encourage stoats to follow the scent trail and therefore encounter a trap is recommended by some trappers, but results have been unclear whether such lure trails have any consistent benefits.
- Traps set in bright-coloured tunnels appear to catch more stoats than traps set in dull-coloured tunnels, and bright yellow appears to be better than red.

4.4 Feral cats

TRAP OPTIONS	
Passed formal testing	Other traps, either not tested or tested and failed.*
Timms Allan Belisle SuperX	Holden Multi-kill Set-n-Forget Conibear 220 BMI 160

* This is not a complete list so see:

<http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/vertebrate-pests/traps>

4.4.1 Baiting

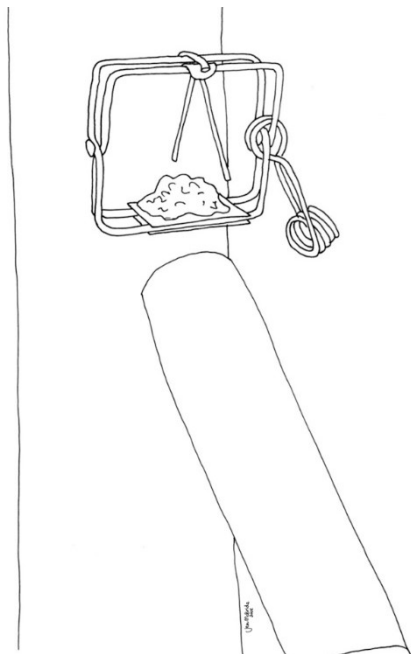
General pointers

Traps set for feral cats are best baited with fresh meat, especially fish, but rabbit, possum, beef, or dead chicks, mice or rats can also be used. These baits need to be securely tied to the triggers of the trap and should be replaced regularly to keep bait relatively fresh. Artificial baits can be obtained from Trappers Cyanide Ltd and these can be used in any of the five traps listed here. Catnip is known to attract some cats, but about one in three cats do not respond to it. Some species or individuals of a species may be reluctant to enter a trap that is totally enclosed within a tunnel or cubby, so baiting can be critical for achieving good capture efficiency.

Notes on specific trap models

The Timms, Holden Multi-kill and Set-n-Forget traps can be set on the ground.

The Allan trap must be set above ground, using the metal shelf provided to clip the trap into, and secured using the chain provided. Bait (diced or minced beef or salted rabbit) is then placed at the back of the metal shelf so the cat then has to push the trigger wires to get at the bait.



Allan kill trap set up tree using a bracket that also acts as a shelf to hold the meat bait

The Holden Multi-kill and the Set-n-Forget traps can also be set 300–400mm above the ground, so the cat can reach the bait from the ground, or higher, using a leaning branch as with the Allan trap.

4.4.2 Maximising capture

Feral cats have large home-ranges (range lengths of about 4 kilometres for females and >6 kilometres for males). Consequently, as for stoats, trap density can be quite low and traps are best placed at sites that cats might frequent in search of food such as rabbits, rats, mice, lizards and birds.

Although it is not proven, human scent on traps may deter cat encounters. Minimise handling of traps and use clean gloves to reduce human scent.

PART 5. NON-TARGET CAPTURES

5.1 Non-target native species

The non-target native species most likely to be caught in a kill trap are kiwi, weka and harrier hawks. However, if raised sets are being routinely used, trappers need to be aware of potential increased risks to other species such as kākā or kea. Also see section 6.2.

5.2 Non-target introduced species

Introduced non-target species might include rats, hedgehogs or domestic cats and dogs.

- The number of rat captures can be minimised by ensuring the trigger pressure is sufficiently high to prevent a baited trigger being pulled or a treadle trigger being lowered.
- Hedgehogs can be difficult to keep out of traps unless a tunnel is used with suitable baffles, so if traps are being set where this species is common, raise traps above their reach.

If trapping is being carried out in areas where stock are present, common sense must be used and, if at all possible, set traps above the reach of all stock.

PART 6. WELFARE OF TRAPPED ANIMALS

Trap users have a duty of care for the welfare of the animals they capture. Trap users are encouraged to operate in accordance with the kill trap principles set out in 6.1 – 6.3 below which, though not mandatory are recommended.

Kill traps are used for commercial and non-commercial control of pests in rural areas, and for control of commensal¹ pests such as rodents in urban areas. The conduct that is, and is not, permissible in relation to any animal is covered by the Animal Welfare Act 1999. Although hunting, fishing and pest control are exempt from the Act, its general provisions still apply; that is, to prevent unnecessary pain, suffering or distress. In particular, sections 32 - 36 of the Act relate specifically to traps, and section 57(f) details the functions of the National Animal Welfare Advisory Committee in relation to trapping and the hunting and killing of animals in a wild state. One such function is to encourage the development of guidelines such as these.

6.1 Kill Trap Principle 1

! All animals must be killed by the trap as quickly as possible

This principle aims to ensure any pain, suffering or distress of captured animals is minimised.

Currently, kill traps do not have to be tested or meet any standard before being sold, so there is potential for inappropriate traps to be used for some species. It is therefore important that trap users buy traps that either:

- have been tested and shown to kill the target species consistently and quickly. To be acceptable, kill traps need to render target animals irreversibly unconscious within 3 minutes; or
- through field use have been shown to operate effectively.

Because kill traps do not have to be checked daily, use of ineffective kill traps has the potential to cause significant and prolonged suffering. If you are using a new kill trap model for the first time then these traps should be checked at frequent intervals (at least daily) until you are confident that all animals are being killed quickly.

The killing effectiveness of a trap will sometimes depend on the position of the bait. For example, some kill traps kill quickly if they clamp the animal on the front and back of the neck but if the animal rotates its head and neck to bite a bait, and is caught laterally on the side of the neck, the animal may take significantly longer to die, or not die at all. Additionally, a kill trap designed to kill quickly by striking an animal across the chest, may not kill quickly if it strikes across the neck. Therefore, the position of the bait is often critical for achieving a quick kill and only the trapper can ensure bait positioning is done correctly.

Kill traps that operate by catching the animal laterally, such as Fenn traps, either across the head, neck or body, generally do not kill quickly and should be avoided. Traps that are triggered by the animal walking across a treadle will have variable strike locations and often will not kill the animal quickly. However, the recently developed DOC series of kill traps with

¹ 'Commensal', in this context, means an animal that is living close to humans and deriving food or other benefits like shelter from the humans, even though the humans may not encourage it.

treadle triggers have overcome this inconsistency of strike location by having multiple striking bars to ensure that at least one bar hits the animal in a vital location.

6.2 Kill Trap Principle 2

! Captures of non-target animals must be minimised

This principle has two components.

1. Aim to minimise the risk to native species that might be rare or endangered.
2. Aim to minimise unnecessary pain, suffering or distress to all non-target captured animals, including both native and introduced species. Because non-target species are often a different size to the target species, the selected trap either may not kill them quickly or may not kill them at all.

Trappers therefore need to be prudent about:

- Where they place traps e.g. above ground level to avoid kiwi and weka. Refer to Department of Conservation requirements (At time of revision 70 cm high for kiwi, and 100 cm for weka)..
- The need to cover or restrict access to the traps e.g. netting on tunnel ends to prevent access to hedgehogs or kiwi.
- The trigger pressure they use e.g. increased pressure can reduce rodent captures in possum traps.
- Selecting a kill trap that will *quickly* kill a range of species including target and non-target species. **Note:** meeting this criterion does reduce pain and distress but does not necessarily safeguard rare or endangered species.

6.3 Kill Trap Principle 3

! The capture efficiency of target animals should be maximised

This principle aims to minimise the risk to non-target species by maximising the capture efficiency of the target species. If the target species can be captured quickly then the time that the trap is set and exposed to non-target species can be minimised.

To maximise capture efficiency trappers need to:

- Place traps at sites that are favoured by the target animal.
- Pre-feed the site for several days to get the animal used to visiting the site before setting the traps.
- Overcome target species' possible 'trap shyness' and maximise target animals' interaction with the trap by using an attractive bait and/or a trap system that encourages the animal to enter the trap. Some species or individuals of a species may be reluctant to enter a trap that is totally enclosed.
- Maximise the encounter rate of the trap by using colour, smell or sound to attract the target animal to the site. (See sections 4.1.3, 4.2.2, 4.3.2 and 4.4.2 for more information in relation to species.)

- For species that might be trap-shy, leave traps unset for several days or weeks to enable animals to get accustomed to their presence before setting the traps.
- Use a bird or rodent repellent to minimise the non-target interference, if repellents have been found effective against the species involved.

PART 7. RESTRICTIONS ON TRAP USE

7.1 Prohibitions and restrictions

Section 32 of the Animal Welfare Act 1999 enables the Governor-General to declare a trap to be prohibited. Such a prohibition must be first recommended by the Minister of Agriculture and based on whether a trap is considered to cause unreasonable pain, suffering or distress.

Although a range of kill traps have been tested for their killing performance and failed to meet the requirements of the NAWAC trap-testing guidelines, to date no kill trap has been prohibited or restricted.

7.2 Bylaws

City and district councils are empowered by the Local Government Act 2002 to make bylaws that apply to their territorial district.

In 2007, the Animal Welfare (Leg-hold Traps) Order 2007 superseded all the existing local trap-related bylaws that had been made under the Local Government Act 1974. However, it should be noted that, under the Local Government Act 2002, councils could impose stricter controls on some traps if desired, for instance, to protect public safety.

Before setting traps, trappers should contact the local council to check if there are any relevant local bylaws.

7.3 Permits

If traps are to be used on land other than your own, the landowner's permission must be obtained first. If the land is Crown land, then a permit to trap must be obtained from the Department of Conservation.

Landowners, especially the Department of Conservation, might place restrictions on how traps must be used. For example, in areas where kiwi or weka are present, traps will need to be set above ground level. Farmers may also restrict where traps can be set or the types of traps that can be used, to minimise risks to stock and/or pets.

All traps should be set in compliance with the landowner's lawful requests.

Although there are no legal requirements for signage to be used to alert the public to the potential risk of kill traps being set in the area, trappers should - depending on the site - consider this risk and use signage when appropriate.

FURTHER REFERENCES

A number of other Bionet publications may provide useful additional information of relevance to the use of kill traps for possums, ferrets, stoats and feral cats, including:

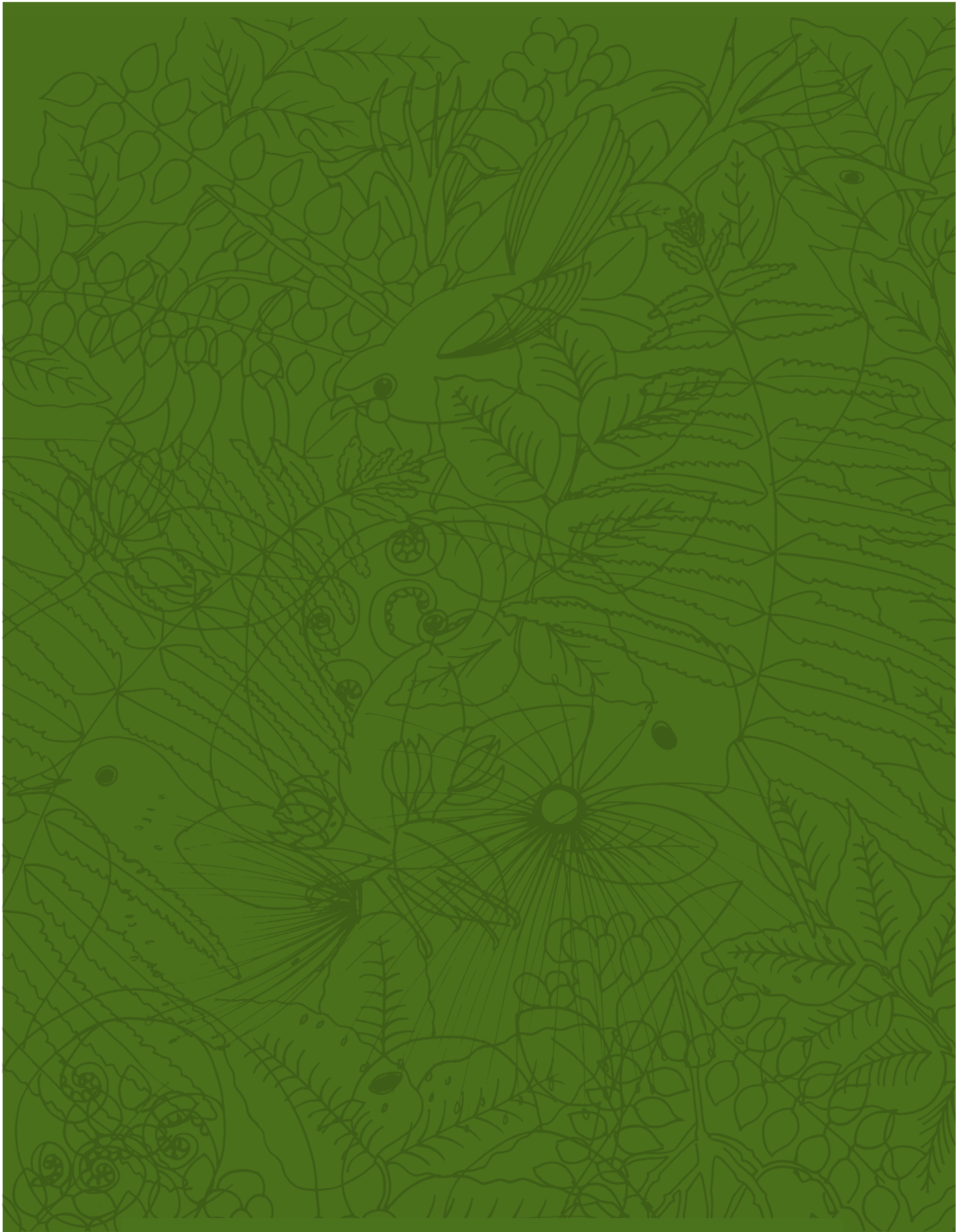
A4.4: Possum and Ferret Traps: A report to inform and advise users of trapping products

A8: Pest Mustelids - Monitoring and Control

A11: Feral and Stray Cats: Monitoring and control, a preliminary guideline towards good practice

A3 : Private Land Owners Guide to Possum Control

See publications section at www.bionet.nz to download



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