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LEGHOLD TRAPS

A GUIDELINE FOR CAPTURING POSSUMS, FERRETS AND FERAL CATS USING LEGHOLD TRAPS

PRODUCED BY

Bionet.NZ

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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The guide may be updated from time to time, so please check that your version is current by checking the publications section on www.bionet.nz

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 and some reformatting.

CONTENTS

PART 1. INTRODUCTION

1.1 Purpose

This guideline describes the use of leghold traps for capturing possums, ferrets and feral cats.

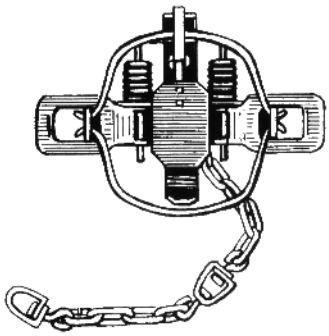
There are a number of factors that need to be considered when undertaking any trapping programme including the type of trap, its ease of use, maintenance, possible restrictions on use, user safety, animal welfare aspects, and ways to maximise target captures while minimising non-target captures. All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

This guideline does not cover the use of cage or box traps, but the general principles, especially those related to the welfare of the captured animals still apply.

1.2 Definition of leghold trap

Leghold traps are traps designed to close onto the lower limb or foot of an animal and hold it until the trapper returns. Because they capture and hold the animal alive, leghold traps (and cage traps) are often referred to as 'restraining traps'. Leghold traps come in two distinct designs: long springs and double-coil springs.

Long-spring trap. ***ILLEGAL*** *since 2007*



Double-coil-spring trap

Leghold traps are also often referred to as foot-hold traps or gin traps. In New Zealand, the term gin trap is a generic name for traps similar to the Lanes-Ace trap, which was used for many decades for trapping rabbits and possums. However, in the 1980s smaller designs imported from North America became more popular. In 2007 all gin or Lanes-Ace type long spring traps became **illegal** (Animal Welfare (leg-hold traps) Order 2007). At the same time, use of any double-coil spring trap larger than No. 1 size (or larger than 1.5 if padded) also became **illegal**,

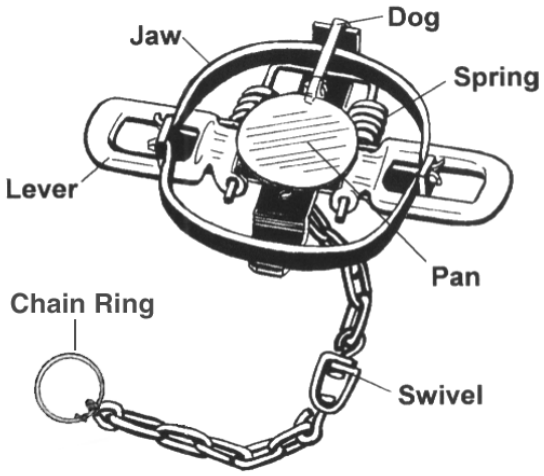
1.3 Limitations of this guideline

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.

PART 2. TRAP PREPARATION AND MAINTENANCE

All leghold traps need adjustment (fine-tuning) either before or when setting to capture an animal. Before use, check all traps to ensure they operate correctly and that there are no sharp metal edges that will unnecessarily injure the captured animal.



Trap parts

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

2.1 Surface treatment

1. Remove any oil coating from new traps either by cleaning them with steam or using hot water. Cleaning is not necessary for the recently introduced galvanised models as the galvanising protects them against rust, precluding the need for a protective coating.
2. Leave the 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 minutes or more). This process protects traps from further rusting and also darkens them to better 'hide' them from the target animals.
   Remember that one advantage of leghold traps is that they can be set totally hidden and therefore catch animals that are unaware of the trap's presence. Consequently, dark-coloured traps might have some advantages over bright galvanised ones.
3. In contrast, some trappers paint their traps to make them more obvious to curious possums. It is recommended, however, that any visual luring should be done using a separate item such as flour, white card, or photo-luminescent strip () rather than using the trap itself. Increasing the visibility of the trap might either repel the possum or encourage investigation, resulting in a faulty capture or a sprung and empty trap.

4. 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 it. Hold the traps in the hot wax for several minutes to heat up and then draw them slowly from the wax, and hang to cool.

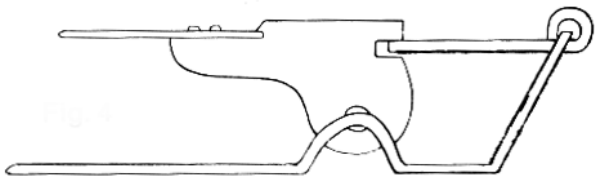
   (ii) Melt wax in hot water traps (the wax floats on the surface, and this method requires less wax than using wax alone). Use a large container that accommodates bundles of 5 or more traps. Heat 5–10 litres of water and add sufficient wax to ensure there is a complete layer of wax across the surface 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 pan notch, dog, and trap jaws.

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 it does not ignite (i.e. keep naked flames away from the container) and ensure traps are dry before placing them into the wax because hot wax can explode on contact with water.

2.2 Pan and dog adjustments

All new and used traps need to be checked for correct alignment when set and, if necessary, adjusted to ensure that, when the trigger dog is finely set into the pan notch, the pan is level (i.e. parallel to the base of the trap). To get the pan to sit horizontal or slightly below this (never sloping upwards), bend the part of the frame that holds the dog, either forward or back, depending on whether the pan is sitting too high or too low. Avoid adjusting the trap so the pan sits too low because this can result in the trap not triggering at all or, if it does, the trap levers possibly catching the edge of the pan and preventing the trap from closing correctly.



A side view of a trap showing the correct location of the dog in the trigger notch and a horizontal pan

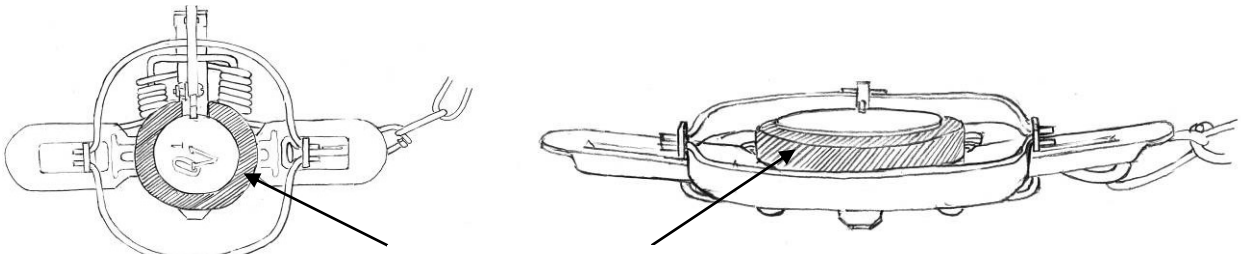
2.3 Trigger pressure

Traps should trigger with little downward movement of the pan but require sufficient downward pressure that they are not triggered by rain, litter fall or light non-target animals. The required trigger pressure can be adjusted by:

- Using the nut and bolt that holds the pan in place. Generally, the nut and bolt should not be relied on to control trigger pressure because the pressure changes when traps have

been carried in packs and variable amounts of rust, grit or moisture captured in the gap between the pan, and the support lugs change the friction between these two surfaces.

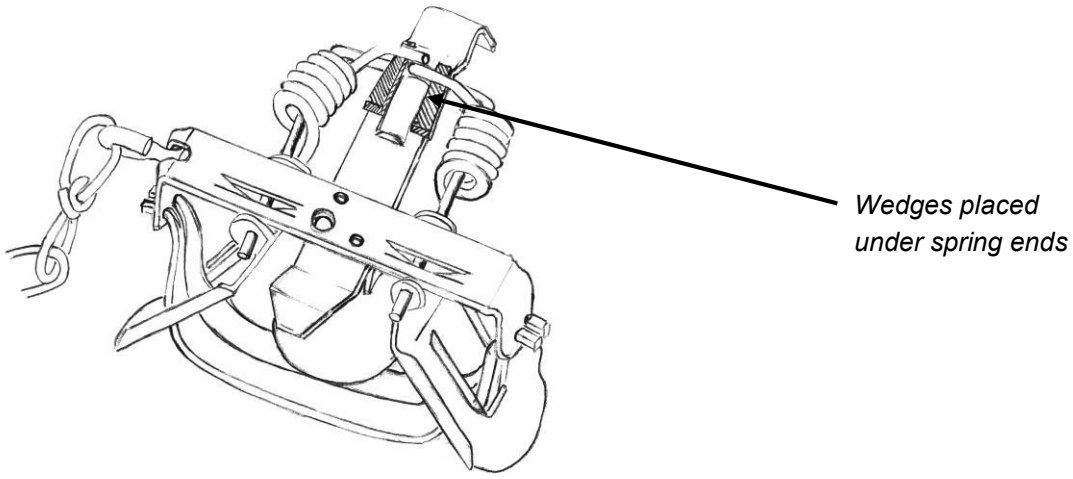
- Therefore, a pan-tension device is also recommended. These are not commercially available in New Zealand but can be easily made using closed-cell foam. To make such a device use a disc of closed-cell foam slightly smaller than the trigger plate and thick enough to fill the space between the plate and the bottom trap frame. You will need to experiment with different densities of foam to get the trigger pressure required.



Foam pad placed under trigger pan

2.4 Spring tension

The strength of coil springs varies between trap makes, even for the same size of trap, and all springs deteriorate with use. Clamping force can reduce by as much as 60% after a trap has been set and fired only a 100 times. Consequently, if you notice your traps are getting easier to set, you should restore the trap's original clamping force by either buying replacement springs from the suppliers of the traps or, for a more temporary fix, by levering small metal wedges between the spring ends and the base-frame of the trap. Use the wedges commonly used for wedging into axe handles.



Wedges placed under spring ends

2.5 General maintenance

Traps often get treated roughly when in use (i.e. thrown into vehicles and packs, and dumped onto the ground), so they can occasionally end up with bent lever arms, jaws that pop free, broken chains, lost pans or bent frames.

! Therefore, trappers should:

- after use, clean all traps of dirt, fur and blood, and check them to ensure they have no mechanical defects, and readjust if necessary;
- regularly check all traps for breakages or damage; and
- repair or replace any defective parts.
- Poorly maintained traps should not be used because they will increase the chance of animals escaping, which may result in injured animals surviving and potentially suffering for extended periods after escaping, or becoming trap shy. Consequently, animal control will be ineffective.

2.6 Chain attachments and chain springs to improve animal welfare

Most traps are sold with the chain attached to one end of the trap frame. Exceptions are the Victor Soft Catch and BMI Cushion Catch traps, which come with centre-mounted chains. Although not robustly proven, there is anecdotal evidence that traps with centre-mounted chains cause lesser injuries because the trap has less leverage on the captured limb than end-mounted traps. However, centre-mounted chains are sometimes more difficult to set in a stable bed, especially in rocky ground or on raised platforms. Consequently, trappers need to decide whether to change end-mounted chains to centre-mounts or to have a selection of both for use in different sets, bearing in mind that not all traps come with a centre hole that easily allows for chain mounting positions to be changed.

Although most traps are sold without chain springs, the addition of an appropriately sized chain spring can significantly reduce injuries by eliminating the sudden pressure applied to the captured limb when the animal reaches or is struggling with a fully extended chain. The spring should be strong enough to prevent the chain from extending fully, but not so strong that it provides little cushioning when the captured animal attempts to extend the chain.

PART 3. CHOOSING A TRAP APPROPRIATE FOR THE TARGET SPECIES

As a general rule, always use the smallest trap that will reliably hold the target species. Using larger traps than necessary will result in the animal being caught high on the leg, thigh or shoulder, resulting in unnecessary injuries. Factors to consider include:

- The size of trap chosen should not be based solely on the size of the animal because some species, such as feral cats, are often held better in smaller traps than other similar-sized animals, such as possums.
- Although padded traps such as the Soft Catch and Cushion Catch models decrease the frequency and intensity of injuries caused to captured animals, they often have unacceptably high escape rates and, for this reason, are not commonly used for pest-control operations.
- Remember, use of any long spring type trap and any double coil spring trap larger than No.1 (or 1.5 if jaws are padded) is **illegal** (Animal Welfare (leg hold traps) Order 2007).

PART 4. SETTING TRAPS

When setting traps two factors need to be kept in mind.

1. **Your safety.** Respect the power of the trap you are setting and keep your fingers from inside the jaws. Always adjust the sensitivity of the trigger with your fingers under the trap jaws.
2. **Trap robustness**. Excess force applied to the springs or levers (as can happen when using feet to compress the springs or trap levers) can twist the levers and trap frame, and weaken the springs. It is recommended therefore that all trappers learn to set leghold traps using their hands with the trap either on their knee, foot or ground. If you cannot manage to open a trap using your hands then, when compressing the levers of a double-coil-spring trap with your feet, make sure that only sufficient force is used to be able to open the jaws.

If you have followed the trap maintenance step outlined in 2.2 above, the trap pan should be level or slightly below level when the trap is held horizontally. If it is not, then adjust accordingly. This is the stage when the trap should be checked for other defects and, if it is not operating correctly, it should be replaced or necessary maintenance carried out.

All leghold traps should be securely attached to a tree trunk, root, log, post or, if using traps in tussock country, long pegs such as reinforcing rod. Chains should be attached so as to make the chain as short as possible. A short chain is less likely to be wrapped around vegetation and decreases the impact of a lunge when the animal tries to escape.

All traps must be stable to prevent the trap from tipping if one side of the trap is stood on. For ground sets, set the trap into a small hollow in the ground to allow the trap jaws to rest on the ground and prevent any movement. The trap should be aligned so that the trigger dog is towards the lure and bedded about a hand-width in front of the lure.

PART 5. MAXIMISING CAPTURES

Successful trapping requires three stages.

1. An animal encounters (or visits) the trap site.
2. The animal interacts with, or triggers, the trap in such a way that it is caught.
3. The trap holds the animal until the trapper returns.

Some of these requirements are general across different species but some species have specific requirements.

5.1 Trap encounters

To increase the chance that a target animal will encounter a trap, either the trap has to be placed at a site the target animals frequents or a lure has to be used to encourage a target animal to visit a trap site, or both. The first method requires some knowledge of the target species' behaviour, seasonal movements, habitat use and food preferences.

5.1.1 Possums

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 on 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.

Trap density and the number of nights for which traps 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 in controlled areas as low a 0.5 per hectare. 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.

Lures

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).
- In tussock country, use of backing boards with white flour applied to the boards to make them highly visible, clearly increases possum catch compared with that from traps set with the same amount of flour placed on the ground.
- 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.

Raised sets

Various raised sets have been designed including wooden shelves, various wire brackets, plastic boards and wooden boards. Most have to be self made because, although some bracket designs might be commercially available, no distributors of such products were known at the time of publication. Generally, raised sets will catch fewer possums per night than ground-set traps. However, if traps are set on leaning boards or logs, the catch can be as high as or higher than that obtained from ground sets.

If using leaning boards or logs:

- Use a narrow board or log to force the possum over the trap with no opportunity to walk around and avoid the trap. (This is similar to the hazing of ground-set traps described in section 5.2 below.)
- Place bait at the bottom of the board and above the trap to encourage possums to walk up and over the trap.
- Ensure the trap is stable and that, when triggered, it releases from the board and allows the captured possum to rest on the ground. This is very important for animal welfare reasons.
- Ensure the chain is tucked under the board or bracket to prevent possums from pulling the chain and dislodging the trap.
- ***Where weka and/or kiwi*** are present, leaning boards need to be on at least a 55º angle and the trap should be at least 70 cm above ground level for kiwi, and 100cm if weka are present. Rubber bands or rings of inner tubing can be used to hold the trap to a board.

5.1.2 Ferrets and feral cats

Ferrets and feral cats 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. However such summer trapping will increase the chances of capturing females with dependent young and therefore conflicts with trying to minimise any welfare impacts (see ‘Remember’ below).

Compared to possums, ferrets and feral cats occur at low densities (i.e. usually less than three per square kilometre or 0.03 ferrets per hectare) and have much larger home ranges (at least one square kilometre). Therefore:

- Adjust the number of traps used and the trap spacing accordingly;
- Leave traps in place for more nights (up to 10) than might routinely be done for possums;
- Concentrate your traps in places favoured by ferrets and feral cats such as rabbit burrows, riparian vegetation bordering streams and ponds, culverts, hedgerows, fences, barns and other structures where rodents might be present;

- If a fresh kill or freshly scavenged carcass is found, set traps nearby as this will increase the chances of capture.

If trapping ferrets in late winter and early spring when they are more difficult to trap, traps will need to be left in place for more than 10 nights to capture a high proportion of the ferrets present.

REMEMBER! Every effort should be made to restrict trapping to the non-breeding (late summer, autumn, and winter) to reduce the risk of young in burrows or nests being abandoned if a parent animal is captured.

Baits and lures

- Traps set for ferrets and feral cats are usually baited with meat baits (rabbit or possum meat, dead mice or rats, fish-based cat food, fish meal, or freeze-dried rats). However, it is unclear which of these baits is best or whether such baits attract these predator species 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 whether such lure trails have any consistent benefits.

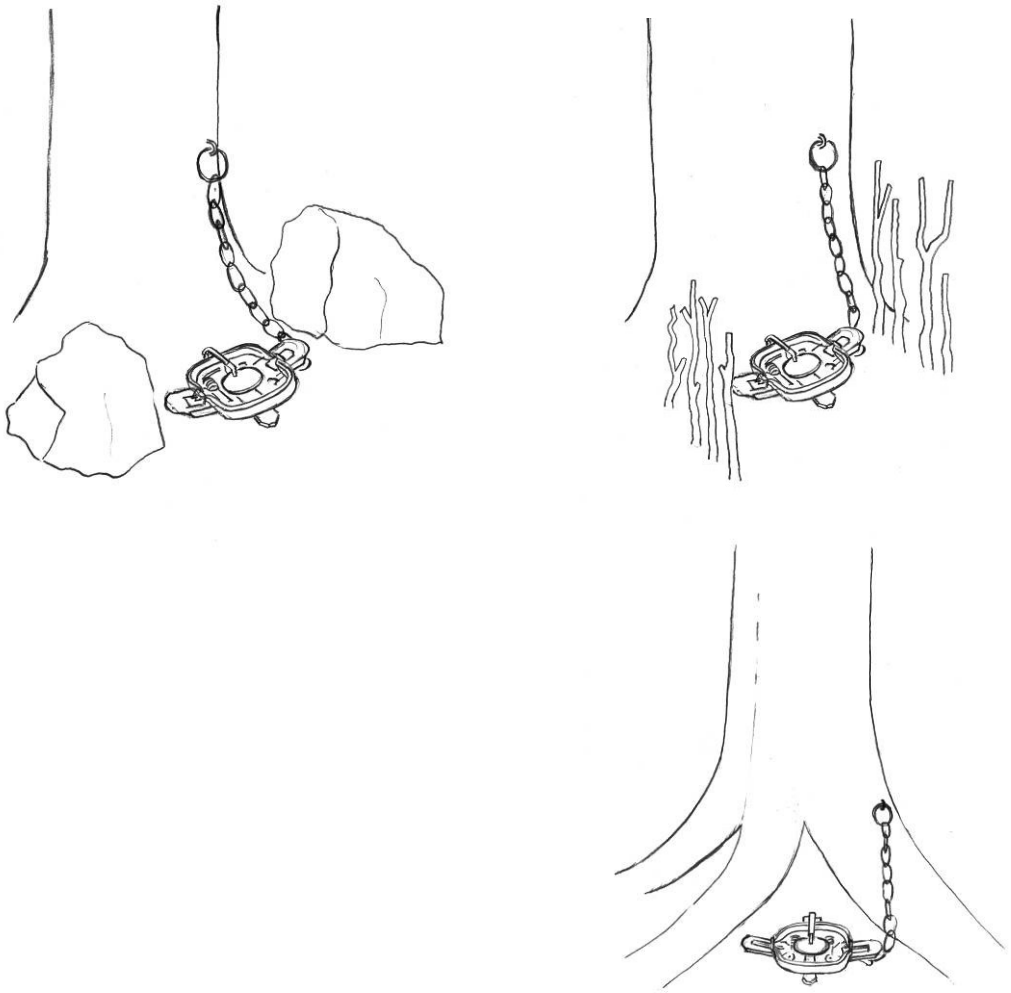
REMEMBER! If leghold traps are being used with meat baits there is a very high risk that harrier hawks and hedgehogs will be captured, so conceal or cover sets as much as possible so as to minimise the risk to these species. Even when traps are placed down rabbit burrows, harrier hawks still manage to identify the presence of meat baits so, to minimise hawk captures, use a bait that does not attract flies.

5.2 Trap interactions

Once an animal encounters a trap site it must become interested enough to interact with the trap and trigger it. To increase the chance that this happens:

- Set traps with bait positioned in such a way that the animal will be encouraged to walk over the leghold trap and accidently step onto the trap's pan.
- Use palatable bait that interests the animal and keeps it at the site; the longer an animal is interacting with the trap site, the greater the chance that the trap will be triggered.
- Use hazing to encourage animals to stand on the trap pan by minimising their ability to move around and avoid the trap. Hazing is a barrier of sticks or rocks used as a fence on each side of the trap to force the animal to step on the trap rather than beside it.

REMEMBER! All leghold traps should be set bedded lightly into the ground so they remain stable and cannot be easily tipped or moved by a cautious animal. For possums, ferrets and feral cats set the trap about a hand-width out from any bait to ensure the animal has to walk over the trap to reach the bait.



Hazing using rocks, sticks and root buttresses

Generally, select trap sites where vegetation, rocks, banks and holes do not offer places for the trapped animal to either get the trap chain entangled or lever itself free. For ferrets and feral cats, access to a rabbit burrow might provide some security and reduce the amount of time the animal struggles against the trap. So, if trapping either ferrets or feral cats in areas with rabbit burrows, set traps close enough to the burrows so the chain enables the animal to seek refuge in the burrow.

5.2.1 Possums

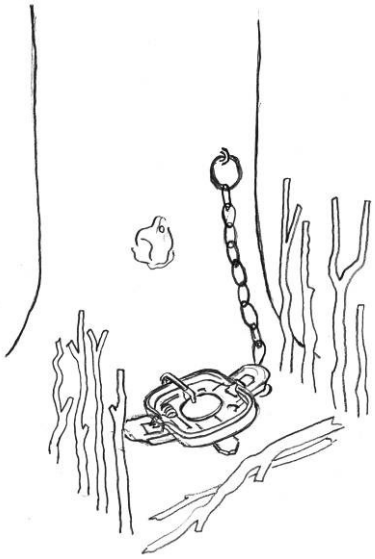
Possum baits include flour with icing sugar, jam, peanut butter, commercial pastes and pieces of fruit. Use hazing as much as possible but ensure that any sticks or rocks are unlikely to become entangled in the trap chain following capture.

The value of covering traps is unclear and the practice has not been widely adopted by trappers in New Zealand. Some trappers suggest that exposing the trap and changing its colour will increase the chances of capturing a possum even when trap-shy. If you choose to cover your traps it is best to use very friable soil or sand rather than larger objects such as leaves and sticks as these will sometimes prevent the trap from closing completely and may assist the captured animal to escape.

Human scent does not appear to deter possums and may encourage them to investigate a trap site.

5.2.2 Ferrets and feral cats

These two species of carnivore appear more cautious than possums when interacting with traps, so a prudent approach is to ensure meat baits are fresh, human scent and disturbance is minimised, and traps are covered. As with traps set for possums, traps set for predators should be suitably hazed to encourage the ferret or cat to step onto the trap. When trapping feral cats, the trap can be set with one or more sticks placed horizontally across the front of the trap to encourage the target animal to step over the stick and onto the trap pan.



Hazing for feral cats, using sticks placed horizontally across the front of the trap.

5.3 Escapes, sprung-and-empty traps and non-target captures

Escapes, sprung-and-empty traps, and non-target captures all contribute to a reduced capture of the target animal, so these trap outcomes need to be reduced as much as possible.

Some traps, especially padded traps or unpadded traps that have had a lot of use, are more prone than others to letting animals, especially possums, escape. Escapes appear to be more significant with possums than with ferrets and feral cats, and this is probably partly a result of possums having fur that is readily shed, helping to lubricate the contact between the trap jaw and possum limb. If you are getting more than 10% escapes you need to look carefully at your traps and check they have not lost too much of their clamping force. Additionally:

- check that the traps are not being set too lightly, enabling possums to trigger the trap without having their full weight on the trap pan;
- check that traps are not being set at sites that have vegetation, vines, roots and holes that possums can use to lever themselves out of the trap.

If you follow the correct maintenance and setting procedures recommended in earlier sections, the number of sprung-and-empty traps should be very low.

Apart from kiwi and weka, which are discussed above in relation to raised sets, the other common non-target species caught are rats and hedgehogs.

- Minimise the number of rat captures by ensuring the trigger pressure is sufficiently high (400grams) to allow a rat to walk over the trap without triggering it, but not so high as to prevent possums being captured. To better standardise the trigger pressure use pan tension devices as discussed above. Such a trigger pressure should also eliminate captures of birds such as blackbirds, robins and smaller species.
- Hedgehogs are difficult to keep out of traps so if trapping where this species is common, set traps slightly above ground-level where possible, to prevent them gaining access.

If trapping is being carried out in areas where stock are present (especially lambs), common sense must be used to set traps at sites where these animals cannot gain access.

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 leghold trap principles set out in sections 6.1.1 – 6.1.4 below which, though not mandatory are recommended.

Leghold traps are used for commercial and non-commercial pest control and commercial harvesting of fur, skins and meat. 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 Leghold trapping principles

6.1.1 Leghold Trap Principle 1

! All animals must be captured with a minimum of injuries

This principle aims to ensure physical injuries resulting from the trap are minimised and, as a consequence, pain is reduced to a minimum. The trapper has a responsibility to minimise injuries through careful selection of the trap type and how it is used.

Trappers should address this principle, in the following ways.

- Use the smallest leghold device available for the species being targeted.
- Use chain springs to minimise any injuries.
- Use ‘Soft Catch’ type leghold traps if escapes are not significant.
- Set leghold traps at sites where the trapped animal cannot increase leverage on its captured limb by entering holes or wrapping itself around vines and branches.
- Ensure the traps are checked for captures as early as possible the following day. And in any case not later than 12 hours after sunrise (Animal Welfare Act 1999).

6.1.2 Leghold trap Principle 2

! All animals must be captured with the minimum of distress

This principle aims to ensure trapped animals are not unduly stressed from either being captured, being harassed by predators such as dogs, or by being subjected to extreme heat or cold.

Trappers should address this principle, in the following ways.

- Ensure traps are checked for captures as early as possible, even during the same day if the target species is diurnal.

- During the warmer months place traps in the shade or where captured animals can find shade.
- When approaching a trapped animal, do so as quietly as possible and either release it or kill it as quickly as possible (see below).
- When approaching a trapped animal do not allow dogs to harass the animal.

6.1.3 Leghold trap Principle 3

! Capture 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 could cause significant injuries.

Trappers therefore need to be prudent about the following.

- Where they place traps e.g. above ground level to avoid kiwi and weka. Refer to Department of Conservation requirements.
- The trigger pressure they use e.g. increased pressure can reduce rodent captures in possum traps.
- When possible, minimise use of leghold traps and use cage traps that allow non-target captures to be released.

6.1.4 Leghold Trap Principle 4

! All animals captured must be released, killed quickly or handled so as to minimise injuries and distress

This principle is to ensure captured animals are dealt with humanely and, if necessary, killed quickly (see below).

Trappers should address this principle, in the following ways.

- Quickly kill any introduced non-target animal.
- Release any native non-target species that are uninjured.
- If releasing animals, check them for injuries before release and, if any significant injuries are noted, such as fractures, euthanase immediately if they are not endangered species. If you capture a threatened species (e.g. kiwi, kaka, or kea), and they are injured you should endeavour to get them to a veterinarian as quickly as possible.
- If killing the animals, approach them quickly and kill them as quickly as possible (see below).

PART 7. EUTHANASIA

The requirement for acceptable euthanasia is to render the animal irreversibly unconscious as quickly and painlessly as possible. No single euthanasing method is suitable for all the species that could be caught in traps because captured animals can range in size from a mouse to a large feral cat. People will also vary in their skills and confidence to apply different techniques. Therefore, three euthanasing options are described below.

7.1 Options

7.1.1 Blow to the head

This is the most commonly used method of euthanasing animals captured in leghold traps and is suitable for all species. It involves striking the animal on the head with a hammer, bar or stout wooden stick.

While this method can be very effective, it requires the operator to be confident and strong enough to ensure the blow(s) stun the animal immediately and/or kill it. Although some people can kill possums or feral cats by using only one or two strikes, less experienced people often use several strikes, resulting in a protracted period of stunning which is not acceptable.

- If the animal is likely to move before or as it is struck, restrain it first by holding the tail or using a net or forked stick.
- If there is any doubt about whether the animal is dead from blows to the head, the throat should be cut to ensure it dies from blood loss.

Many possums may be trapped either with a pouch young or a back-rider and it is important that these are killed humanely either by crushing the skull of larger back-riders or decapitation of pouch young.

Mice and small-bodied rats can also be killed quickly by cervical dislocation by placing a stick, pencil, or pen across the neck and lifting the tail and body upwards to break the neck.

7.1.2 Captive bolt

Captive bolts are firearms that use a .22 blank cartridge to force a 2–3-cm bolt into the skull.

However, weight, difficulty of effective use and, perhaps, the cost of these bolts limit their usefulness as a field tool.

The bolts cost about $980 and weigh 4 kg. The bolt extends only 3 cm when fired so it is necessary to place the end of the barrel against the head and place it at the intersection of imaginary lines drawn between the eye and the base of the opposite ear to ensure the correct trajectory. This can be difficult unless the animal is restrained in some way and, given the risk of the animal moving, the bolt may not enter the skull at the correct site, causing severe injury rather than instant death.

7.1.3 Firearms

Firearms can be an effective option for euthanasing larger animals. Animals can be shot from a distance, thus lessening the disturbance to the captured animal. However, to achieve a humane kill it is important the firearm user knows where to place the shot to achieve

maximum effectiveness. Using firearms at close range or in rocky terrain can pose risks from bullet ricochet to the user or observer, and caution must be observed at all times.

All users of firearms must be licensed or must operate under the direct supervision of a licensed person. Although a licence is not required to legally use air rifles and air pistols (provided the user is over 18 years of age), most pistols deliver muzzle velocities less than 120 m/sec, which are insufficient to kill possums or feral cats with a single shot.

PART 8. RESTRICTIONS ON TRAP USE

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 Primary Industries Minister, based on whether a trap is considered to cause unreasonable pain, suffering or distress.

8.1 Prohibitions and restrictions

In 2007 the Animal Welfare (Leg-hold Traps) Order 2007 was published, specifying the following restrictions:

From (1st January 2009

- ***Clause 8***. Leg-hold traps may not be used within 150m of any dwelling (excluding a hut on conservation lands) without the express permission of the occupier, or, in any area where there is a probable risk of catching a companion animal.

From 1st January 2008

- ***Clause 9***. No person may sell long-spring leg-hold traps of size 1½ or larger.

From 1st January 2009

- ***Clause 5***. Long-spring traps of size 1½ or larger may not be used.
- ***Clause 6***. Double-coil spring traps larger than size 1½ may not be used.

From 1st January 2011

- ***Clause 7***. Double-coil of size 1½ may not be used, unless padded models.
- ***Still allowed***: - the commonly used No1 sized leg-hold traps (padded and unpadded)
  - the No1½ Soft Catch (padded) traps will still be allowed, even though the unpadded double-coil size 1½ will be banned after 1st January 2011.

Section 36 of the Animal Welfare Act details the obligations for inspecting traps. The key points are as follows.

- Persons who set traps to capture animals alive must inspect each trap within 12 hours after sunrise on each day the trap remains set.
- Any live animal found in a live-capture trap must be removed and cared for appropriately, or killed immediately.

8.2 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 can 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.

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

Permission must also be obtained from the occupier of any dwelling within 150m (excluding a hut on conservation lands). Refer Animal Welfare (Leg-Hold Traps) Order 2007.

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

FURTHER REFERENCES

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

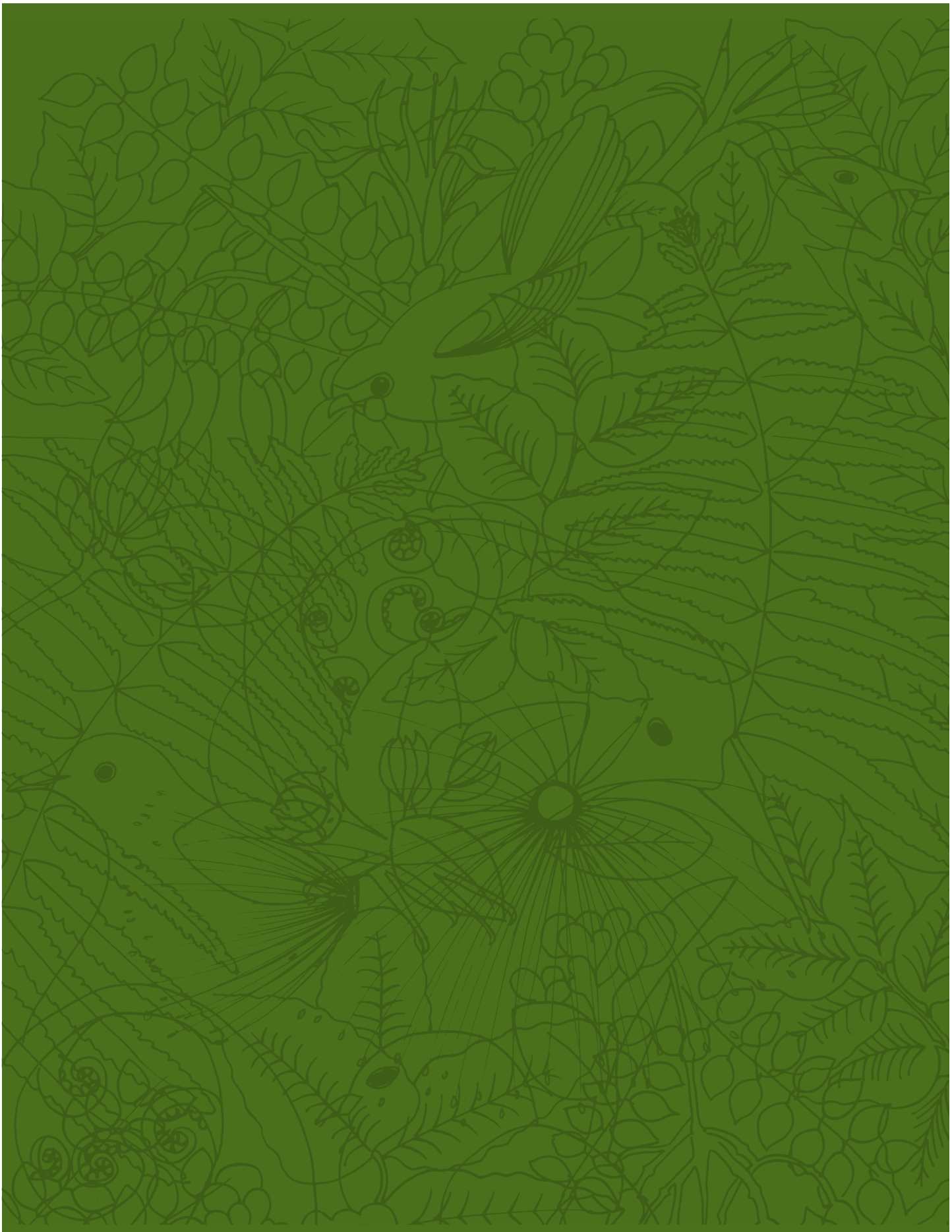
A4.4: Possum and Ferret Traps: A report to inform and advise users of trapping products

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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National Pest Control Agencies