

Possums

Trichosurus vulpecula

Advisory animal Eradication Progressive containment **Sustained control** Site-led

Keep possums from affecting native plants and animals and from damaging high value biodiversity sites.

WHY POSSUMS ARE PESTS

Production threat

Environmental threat

Public threat

Possums were introduced to New Zealand between 1837 and 1898 to establish a fur trade. Initially a protected animal, this status was lifted in 1947 when it became apparent that the environmental damage caused by possums outweighed any profit from the sale of its skins. Today, possums are considered to be the major ecological and agricultural vertebrate animal pest in New Zealand.

Possums are a serious environmental threat because they:

- browse and destroy native and exotic trees, feeding on leaves and berries and stripping bark
- browse and damage orchard trees, shelter belts, crops and pasture
- feed on native birds (eggs, fledglings and adults)
- feed on native invertebrates, such as insects
- compete with native birds for habitat and food.

Possums eat the fruits of at least 65 species of native plants and they can destroy farm crops in a few days. They also scavenge the carcasses of deer and pigs and spread bovine tuberculosis (TB) in cattle and deer, which poses a serious threat to the ability of New Zealand's dairy and meat industries to meet internal and international trade standards.

Possums live in a wide variety of habitats, as they only need cover for nesting and a suitable and varied food supply. They can be found in all types of indigenous forest from sea level to tree line, in scrublands, grasslands, exotic forests, shelter belts, orchards and cropping areas, thermal regions, swamps, sand dunes and in urban and city areas. Forest pasture margins however are their preferred habitat, particularly in mixed hardwood forests. In North Island mountain ranges they regularly forage above the snowline in beech forest.

Their nests are dens in trees, hollow logs, under tangled masses of vegetation, limestone crevices, in hay sheds and even in the roofs of buildings. Higher concentrations are in 'unmanaged' areas where there is plentiful food.



Photo: Nga Manū Images

IDENTIFYING FEATURES

Possums are generally similar in size to a cat but their size, weight and colouring can vary greatly throughout New Zealand. They are a marsupial, which means they carry their young in a pouch. They reach maturity between one and two years old and have an average lifespan of four years.

- Possums have a small head with a pointed snout and oval ears.
- They have large eyes and catlike whiskers characteristic of nocturnal animals.
- Their thick, woolly fur is brown or grey (or a combination of both shades).
- They have a long black bushy tail.
- They have a darkly stained sternal gland on their chest.

RESPONSIBILITY FOR CONTROL

All landowners/occupiers within a Priority Possum Control Area (PPCA) in the Waikato are required to allow council staff and its contractors to monitor and control possums on their property.

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- protect and enhance biodiversity (including improving the stability of catchments)
- enhance farm production
- maintain the gains of previous or existing possum control.

All PPCA control work is funded by Waikato Regional Council via rates.

Waikato Regional Council also provides advice, information and pest contractor contact information to those landowners/occupiers in the Waikato who wish to control possums on their land but whose properties do not lie within a PPCA.

Extensive possum control is also carried out by the Department of Conservation (DOC) to reduce the effects of possums on protected public conservation land. TBfree New Zealand controls possums in order to eradicate bovine TB. In many cases, our council and these agencies work together to manage possums.

CHECKING FOR SIGNS OF POSSUMS

To check for possums, look out for the distinctive signs of possum browse. Possums usually feed on foliage by holding branches in their paws, using their teeth to tear the leaves. They usually leave behind the leaf stalk, base and midrib and some tattered leaf remnants. Look out for discarded and partially eaten leaves, flowers and fruit beneath feed trees. Heavy and persistent possum browsing will kill a tree.

Other signs of possums to look out for include:

- 'runs' (tracks) used nightly by possums to travel to and from feeding areas (very distinctive in grassed areas)
- claw marks on trees, fence posts and gates
- bark biting (horizontal bites) on trees
- possum droppings scattered under food trees and in the forks of trees
- droppings approximately 2.5cm long and slightly thicker than a pencil.

DISCOURAGING POSSUMS

Repellents, tree guards and fence barriers

- There are a number of repellents designed to deter possums and other browsing animals from damaging young trees, however, they do not provide total protection. Repellents are not practicable for tuberculosis (TB) control or protecting native forests.
- Tree guards are physical barriers used to keep possums from damaging young trees and seedlings. Sheet metal strips or bands (40 to 45cm wide) effectively stop possums from climbing a tree.

Habitat manipulation

Reduce suitable possum habitat by removing piles of logs, dead trees and stumps. Where possible, block off entry into sheds, roofs and buildings.

HOW TO CONTROL POSSUMS

Shooting

Shooting helps to maintain low possum numbers. Every person who is shooting must either hold a firearms licence, or be under the supervision of a person who holds a firearms licence. You should inform your neighbours of where and when you intend to be shooting.

When night shooting, ensure your spotlight battery is fully charged and you know the area well. Make sure you positively identify your target before shooting. For example, the 'eye-shine' of possums and rabbits is red-pink, while the 'eye-shine' of sheep and cattle is yellow-green. Note that repeated night shooting in the same area may become less effective, as possums can become shy of light and guns.

Trapping

There are several different types of trap available. The following traps are discussed below.

- Leg-hold traps – don't kill captured animals and must legally be checked within 12 hours after sunrise.
- Kill traps – do kill captured animals and can be a safe and effective method of removing possums from urban areas and household gardens.
- Live capture traps – don't kill captured animals and must legally be checked within 12 hours after sunrise.

To improve your catch rate, use a 'lure' to attract possums to your traps. Make your own 'lure' by mixing oil essences and powdered spices (such as cinnamon, curry powder) with five parts flour and one part icing sugar to sprinkle around traps.

Leg-hold traps

Place the traps where possums will find them during normal movements, for example the base of trees and posts showing possum signs, and on possum 'runs'. Place the traps on level ground. This ensures captured animals don't hang over steep banks or ledges.

- Clear away material from around the trap that could hurt a struggling animal.
- Rub 'lure' onto a tree or post directly behind each trap to help attract possums.
- Don't place lure directly on the trap to prevent animals being caught by the nose or face.
- Ensure the chain is connected to a solid object such as a tree or post, with as short a length as possible.
- Inspect your traps within 12 hours after sunrise.

The Victor No.1 coil-spring trap is a good example of a leg-hold trap. It is small, light and its non-serrated jaws can hold possums without causing major injury.

Only specific leg hold traps are legal. To find out if your traps are permitted, check out www.biosecurity.govt.nz/regs/animal-welfare/stds/traps.

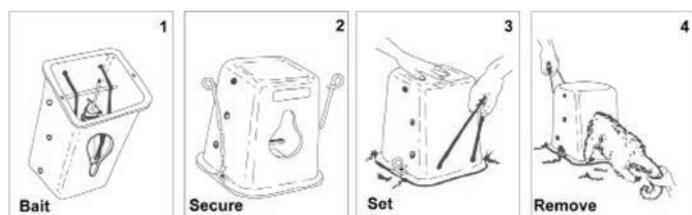
Where there is a risk of catching non-target animals or ground birds such as kiwi, you will need to do the following:

- Place traps on raised boards.
- Secure the trap chain at a 45 degree angle behind the tree.
- Ensure the chain is long enough to allow the trapped animal to fall to the ground without being left hanging.

Kill traps

Kill traps are typically lightweight and easy to set. There are many different designs but the principle is to quickly and humanely kill the possum. These traps can effectively control possums in small to moderate sized areas, such as urban gardens and lifestyle blocks. The main advantage of kill traps is that they don't need to be checked daily. Traps may be left in place for long periods and they are cost-effective as a long-term control technique.

Timms trap



The Timms kill trap is a popular example of a kill trap. They can be set:

- on the ground – make sure it is secure by pegging it into the ground
- attached to a tree, fence or roof – drill holes into the back and sides of the trap, thread strong cord or bungy cords through the holes and tie to a branch or platform.

When using Timms traps:

- Keep fingers clear of the front opening at all times.
- Set traps late afternoon/early evening and bait with a piece of fruit, such as quarters of fresh apple or orange or pieces of carrot. Don't use meat or fish as bait as it will attract cats to the trap.
- Keep family pets indoors while the trap is set.
- Release the set trap early morning.
- Replace bait every two days.

Live capture traps

Live capture traps (cage traps) can be purchased from most farm supply stores. For those living in Hamilton, Hamilton City Council offers the hire of live capture traps for catching possums. Live capture traps are mainly used in urban areas where there is a higher likelihood of catching pets.



Long life biodegradable baits attached to trees can be left out for several months.

- Leave new traps outside to weather for a few days before using them.
- Put the trap close to possum-damaged plants or trees or beside a possum pad run.
- Place the trap on firm ground and check that the door closes properly when triggered.
- Make sure the trap faces the direction possums are most likely to approach from.
- Ensure the trap is placed so that a possum can't climb down on top of it, triggering the door to close too early.
- Attach bait to the trigger arm of the trap. Use apple, kiwifruit, orange or carrot.
- Set the trap by lifting the door and holding it open with the trip pin. Insert the trip pin only far enough to prevent a light wind from releasing the door.

Disposing of possums

- It is illegal to release live possums in New Zealand. All live captured possums must be killed humanely. Be very careful when approaching trapped possums as they have sharp claws and teeth.
- To kill a trapped possum, approach from behind and grasp it by the end of the tail. Stun the animal by quickly delivering a sharp blow with a hammer or heavy stick to the head, between and slightly forward of the ears. Apply a second hard blow to the same area of the head to kill the possum.
- Dispose of possum carcasses by burying them in your garden, leaving them to decompose in the bush or putting them in your rubbish bag if you live in an urban area.

Poisons

Some poisons require a Controlled Substance Licence. For more information about this licence and application forms, visit www.epa.govt.nz or www.business.govt.nz/worksafe.



A bait station allows possums access to bait but discourages or excludes children, pets, stock and most birds and helps keep the bait dry.

When using poisons:

- READ THE LABEL thoroughly and follow all instructions and safety requirements.
- Make sure children recognise poison warning signs and know not to enter control areas.
- Seek medical assistance immediately if bait is eaten.
- Follow the first aid instructions supplied with the bait.
- Set bait stations in a tree so they are accessible to possums but away from pets and stock.
- Keep pets well fed so they are less likely to scavenge and check them regularly for symptoms, such as loss of appetite or vomiting.
- Use a mix of flour, icing sugar and spice (cinnamon, curry powder) around the bait station to encourage possums.

Seven poisons are currently registered for possum control in New Zealand:

- 1080
- cyanide
- phosphorus
- brodifacoum
- cholecalciferol
- pindone (possum and rats)
- sodium nitrite.

Only brodifacoum, sodium nitrite and cholecalciferol can be used by landowners/occupiers without the need for a controlled substance licence. Poisons are often the most effective way for landowners to control possums in large areas and are usually less labour intensive than trapping or shooting.

Poisons are usually put in bait stations, which helps keep the bait dry and away from non-target animals. By initially filling bait stations with a non-toxic form of the bait you intend to use (pre-feeding), you'll get a higher kill rate when using fast acting poisons like sodium nitrite and cholecalciferol. A pre-feed around one week before placing poison baits should be enough.

Most baits used in pest control are not designed to last for long periods in bait stations. If not clearly stated on the product label, remove, replace and dispose of remaining bait after about one month.

Poisons requiring a controlled substance licence

Cyanide, phosphorous, Pindone™ (possum and rats) and 1080 are deadly poisons. A licence is required to store, handle and use these poisons. For more information on obtaining a licence, contact WorkSafe New Zealand.

Disclaimer: Any product names mentioned above are not an endorsement nor are they a criticism of similar products not mentioned.

Summary of control methods

CONTROL METHOD	KEY POINTS
Shooting	<ul style="list-style-type: none">• Least effective of options unless carried out intensively or used with other methods.• Licence required.• Will cause 'gun-shyness' if used too often.• Effective at certain times of the year when possums browse on particular species.
Trapping	<ul style="list-style-type: none">• Effective against low density, poison/bait shy possums.• Can recover fur to offset cost of control.• Labour-intensive and time-consuming.• Traps are all now required to meet a minimum standard of humaneness.• Live capture traps (cage traps) and leg traps must be checked daily, within 12 hours after sunrise.
Brodifacoum	<ul style="list-style-type: none">• Possums can take one to two weeks to succumb to the poison.• Effective against low density, poison/bait shy possums.• Very persistent in environment (contamination of wildlife/game possible).• High secondary poisoning risk.• Antidote widely available.
Cholecalciferol	<ul style="list-style-type: none">• Expensive compared to other toxins.• Effective.• Low risk of secondary poisoning.• Low toxicity to birds.
Sodium nitrite	<ul style="list-style-type: none">• Quick acting toxin.• Biodegradable and no risk secondary poisoning.• Not persistent poison.• Requires pre-feeding.

WHERE TO BUY POSSUM CONTROL PRODUCTS

Visit www.waikatoregion.govt.nz/possumcontrol for a list of suppliers in the Waikato region.

MORE INFORMATION

Advice

- For advice and additional information on control methods, call our animal pest staff on freephone 0800 BIOSEC (0800 246 732).
- WorkSafe New Zealand 0800 030 040.

Publications

View, download or order the following publications at www.waikatoregion.govt.nz/publications or call our freephone 0800 800 401.

- Waikato Regional Pest Management Plan (RPMP) (free) (Section 6.12, pages 206-208)
- Waikato Regional Council pest guide (free)
- What makes a pest a pest? A summary of the Waikato Regional Pest Management Plan (free)

Web

- www.waikatoregion.govt.nz/possum
- www.waikatoregion.govt.nz/rpmp