

# Pest Animals in Urban Forest Remnants

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## Introduction

I work for the pest animals section, Biosecurity Department of the Wellington Regional Council. I'm responsible for the western half of our region, which covers, four cities and one District Council. Our pests include possums, rabbits, magpies, wasps, mustelids, rooks and feral goats.

This presentation will focus on possums in urban forest remnants. I will mainly cover Wellington City examples.

- Wellington City in particular is clothed with a living cloak of forest with houses inserted off streets on this steep hilly terrain.
- From a distance this meshing of housing/urban life and the forest canopy is evident.
- This creates in effect, a continuous habitat for animal pests such as possums. As you can appreciate it creates special problems in controlling possums and yet balancing issues of public safety.
- The most simple request, from the public, involves pesky possums annoying householders with their:
  - blood curdling shrieks at night
  - taking up residence in house walls, floors, ceilings or chimneys
  - feeding on prime garden specimens especially roses, just starting to grow at this time of year
  - balcony planter boxes are also targeted
  - possum droppings are left behind on paths

These singular nuisance problems are best treated with a Timms trap. The urban saviour for possum control.

- However some possum problems are on a large scale. Bush remnants, urban conservation type parks are often surrounded by housing. Home owners rightfully point out that the possums are coming from council land and it is up to the council to control them. The four cities throughout the greater Wellington area have these types of complaints. These complaints are not efficiently treated with Timms traps on the residential fringe. A complete possum control operation is required to target possums through the reserve network.
- The Wellington Regional Council's Biosecurity Pest Strategy has made provision for the control of possums in the interest of environmental values as well as the usual economic values, such as TB vec-

tor control, forestry and horticulture.

It was realised that possum control for conservation reasons is not a financially rewarding undertaking for landowners. Therefore regionally funded possum control in such ecosystems is justified.

Our pest strategy makes provision for the control of possums for conservation reasons under the Key Native Ecosystem (KNE) programme. This involves surveying bush remnants using a scoring process and developing a priority scoring to decide which areas are eligible for regionally funded possum control.

## The KNE Process

- The process starts with a local landowner or council reserves officer approaching us with a request to treat possums in a native forest remnant or reserve.

We conduct a KNE survey, assessing and scoring the following points:

- Recording all plant and animal species present.
- Preparing comment on protected status, fencing, previous surveys, vegetation association, site specific issues.
- Allocating a DoC score for plants.
- Allocating a DoC score for animals.
- Allocating a DoC score for vulnerability to possum damage.
- Allocating a regional score based on public access and regional value.
- Following the final KNE score, a decision is made on whether to fund possum control.
- Wherever possible we try to involve the landowner in a partnership for possum control. This ranges from half share of costs with city councils, to materials and set-up provided by WRC with landowners providing their labour.

The information that we gather during the survey is fed back to the DoC natural areas database. On several occasions we have discovered endangered or regionally rare species and a DoC "Species Record Sheet", is completed e.g. *Gastrodia*, Large Leafed Milk Tree, Mistletoe, tree gecko etc.

- During the survey process and from initial identification of potential KNE survey sites, the Wellington Botanical Society has been excellent at provid-

ing plant species lists and background information on management areas. I commend this society for their supportive approach with information sharing.

## Actual Operation in Urban Areas

Our constraints are:

- Continued public access to reserves during operations
- Household pets, particularly cats and dogs
- Child safety concerns
- Interference with baits and bait stations, through to theft of traps.

## Leg-hold Traps

There are various bylaws for each city. Wellington City Council trapping bylaw requires us to obtain a three month period permit to use approved leg-hold traps. Conditions state no trapping within 200 metres of houses or within 20 metres of tracks. We must put up signs that indicate possum control is in progress, advising people to stay on the tracks, but we don't advertise directly that traps are being used to prevent them being stolen. In some instances trapping is halted over school holidays principally to reduce the chance of theft.

## Poisons

Poisons are dispensed from secured bait stations. Bait stations are laid out on a cut grid pattern to ensure that the bait stations uniformly cover the block and possums will readily encounter bait.

It is best to place bait stations within 400mm of the ground so that possums will encounter them promptly. However it is an option to put them higher in trees where pets or children may have access. Using black bait stations helps to make their presence less obvious.

We use anti-coagulant poisons that have antidotes and are of less danger to principally dogs. We can never assume that dogs will always be under constraint by their owners, even though the law requires dogs to be kept under control, and on a leash in most reserves.

## Operational Process

- (1) Initial KNE survey.
- (2) Negotiate and plan access with all landowners.
- (3) Pre-operational trap catch monitoring.
- (4) Ministry of Health approval.
- (5) Public relations, public notification.
- (6) "Actual operation" - traps, acute poison followed by chronic poison.

(7) Post-operational trap catch monitoring.

(8) Public relations follow-up.

## Measuring Success

- Comparing pre-operational possum trap catch with post-operational trap catch.
- Monitor predators before and after the operation.
- Set-up canopy vegetation assessment plots and measure before, and two years after control.
- Conduct bird surveys.
- Publicly advertise the success to ensure political support for funding.

## Wellington City Successes

- During 1998 bellbird was heard in the suburbs of Karori and Wilton for the first time since the 1950s.
- Otari - Wilton's Bush treated in 1993/94 was re-measured in 1995 and the response to vegetation was compared as good as occurs on off-shore islands following possum eradication. Kohekohe fruit most notable.
- Wellington City Council is now committed to an ongoing possum control programme in their conservation value reserves.
- We are now moving towards continuous areas of treated native forest. We are starting to roll the possums back.

## Case Study; Trentham Memorial Park, Upper Hutt City

- This 17 ha bush remnant was treated for possums in 1995
- After 3 months of Brodifacoum applied from bait stations there were no possums left and chances of invasion are extremely low.
- Gastrodia orchids are noted in Jan 1996
- UHCC adopt a wandering Jew weed eradication programme
- 1997 discover the yellow mistletoe *Ileostylus micranthus*
- UHCC fence tracks and forest margin, with posts and wire and chicken mesh to reduce trampling of the under-storey
- The regionally endangered plant, *Teucrium pariflorum* is planted in this restored forest remnant.

## Long-term Strategy

- Parts of the Wellington Region have methodically received possum control for various purposes from

Bovine TB vector control, to conservation reasons. Every year this is being expanded on, and in some areas it is difficult to find a road killed possum.

In parts of the Wairarapa and the Tararua ranges various species of endemic mistletoe that were formally thought extinct are re-appearing following extensive possum control.

- Wellington City Council with their commitment to continuing possum control, and the peninsula based nature of the city along with urban barriers, lends itself to the possibility of a staged programme to roll the possums back.
- Involve volunteers from conservation groups in possum control programmes and assist with their initiatives. e.g. Karori Wildlife Sanctuary Trust, Forest and Bird "Bring Back the Birds" proposed programme and Upper Hutt Branch of Forest and Bird with their possum control projects.
- It is imperative, that once possum control is started, you make financial provisions for subsequent operations to maintain possum at low numbers.
- Biological control of possums is currently in the research phase, but ultimately must be perfected in order to, sustainably maintain biodiversity.