

# Possums' End Pest Control Report 2016

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## Forward

This report records the numbers of pest animals we removed during 2016. This is important to record because it allows us to assess bush regeneration and native animal numbers in relation to the removal of pests. It highlights trends over time and allows us to adjust our operation to counter new threats as they appear. Some of the detail may help others embarking on pest control projects. We also use these reports to apply for future funding.

We must make it absolutely clear - we take no pleasure in killing animals, quite the contrary. They are stunning, beautiful animals (yes, even the rats), but they shouldn't be in New Zealand. Mustelids, rodents, possums and hedgehogs must be controlled if our native animals and plants are to thrive. There is no disputing the science that demonstrates this.

## Background

We have been controlling pest animals at Possums' End for ten years. During this time our approach, methods, equipment and techniques have evolved significantly. This means that it is generally unhelpful to compare year on year results. The most significant change during this time was in late 2013 when we began a move away from poison based rodent control to trap based control. Also in 2013 professional possum control by the Otago Peninsula Biodiversity Group started in our part of the Otago Peninsula, which made a significant dent in the local possum population.

Our controlled area has expanded to 10 hectares, all of which is now under a Queen Elizabeth II National Trust covenant. We deploy the following traps: -

- 20 x Boxed Victor snap traps.
- 10 x Goodnature A24 gas powered rat traps.
- 5 x DOC150 traps.
- 5 x DOC200 traps.
- 3 x DOC250 traps.
- 10 x Timms traps.
- 1 x Cage Trap.

We have found, during 10 years of trapping, that the best bait for rats by far is peanut butter. We stiffen ours with rolled oats and add in chopped pumpkin and sunflower seeds. Despite repeated efforts we have had little success with chocolate-based baits such as Nutella. Recent academic research disagrees with us. We back our 10 years experience against a single academic paper.

We bait our DOC series of traps with a whole range of goodies. Nothing particularly stands out as successful except perhaps Erayz by Connovation and Goodnature’s rabbit paste.

Twice a year, once in the spring and once in the autumn, we pulse an anti-coagulant rodenticide in a network of approximately 30 bait stations. In 2016 we used brodifacoum wax blocks under the trade name “Talon”. In the spring this reduces rodent numbers at a critical time for nesting birds. In the autumn it reduces rodent numbers when they are typically very high. We have no way of knowing or estimating the number of rodents killed by the rodenticide.

The A24 Goodnature traps are a recent introduction. We have deployed them around the perimeter of the pest controlled area in difficult to access places. We have found either, dead rats under them or watched video footage of them killing rats, 19 times. However the counters on the traps suggest that they are killing significantly more than this and the bodies are being scavenged. We are unable to make an estimate of how many rats they are actually killing because they are also effective at killing mice and we have no way of telling whether the counter is indicating a mouse kill or a rat kill.

We work 2 large, middle-aged Labrador dogs in the controlled area on a daily basis. They are excellent at detecting possum incursions and either track the animals or alert us that a possum is about. They also leave a scent, which is likely to be off putting to predators, and mop up nests of rabbits in the spring, which may explain why we encounter so few mustelids. The single female ferret caught this year fell to a DOC250. This lack of mustelids is also corroborated by not seeing any on our trail cameras and CCTV cameras.

## Results

|          | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | TOTAL |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Rat      | 10  | 8   | 17  | 17  | 16  | 13  | 6   | 8   | 6   | 4   | 2   | 3   | 110   |
| Hedgehog | 4   | 7   | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 1   | 2   | 2   | 20    |
| Possum   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 1   | 1   | 11    |
| Ferret   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     |

## Rats by trap

|      | Victor | A24 | DOC150 | DOC200 | DOC250 | Total |
|------|--------|-----|--------|--------|--------|-------|
| Rats | 75     | 19  | 8      | 6      | 2      | 110   |

## Hedgehogs by trap

|           | Cage | DOC150 | DOC200 | DOC250 | Victor | Timms | Dogs | Total |
|-----------|------|--------|--------|--------|--------|-------|------|-------|
| Hedgehogs | 5    | 3      | 5      | 3      | 1      | 1     | 2    | 20    |

## Possums

|         | Timms trap | Treed by Dogs | Total |
|---------|------------|---------------|-------|
| Possums | 5          | 6             | 11    |

## Possums by year

|         | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total |
|---------|------|------|------|------|------|------|-------|
| Possums | 32   | 23   | 9    | 7    | 6    | 11   | 88    |

## Rats by year since move to trapping

|      | 2014 | 2015 | 2016 | Total |
|------|------|------|------|-------|
| Rats | 28   | 60   | 110  | 198   |

## Monitoring

Bird numbers are currently very high, particularly tui (rarely seen 10 years ago) and bellbirds. We take particular note of rifleman, as they are an excellent indicator species. Their numbers at Possums' End are currently very good. This is in part down to our rat control and in part to our 12 Rod Morris designed rat proof nest boxes. We may be at rifleman holding capacity.

We also closely monitor tomtits – a rarity on the Otago Peninsula. We sighted a pair close to, or inside, our controlled area on a number of occasions this year. We believe that they bred successfully, as young birds have recently been reported in neighbouring areas.

A number of plant species have begun to appear that weren't present at Possums' End 10 years ago. Most notable amongst these is Pate (*Schefflera digitata*) and Mikoikoi (*Libertia ixioides*). A significant proliferation of Punga – Silver Fern (*Cyathea dealbata*) has recently begun.

## Conclusions

- We caught a lot of rats last year.
- Possum numbers are low, but they still persist.
- Boxed Victor rat traps are significantly more effective at catching rats than the DOC series of traps.
- Peanut butter with rolled oats and seeds is the best rat lure.
- Dogs are great at keeping pest numbers low providing you don't have ground nesting birds to protect.
- Tracking dogs are especially useful when possum numbers are low and the animals are trap wary.
- Bird numbers are excellent.
- Native plants are either reappearing or proliferating.

Possums' End  
January 2017