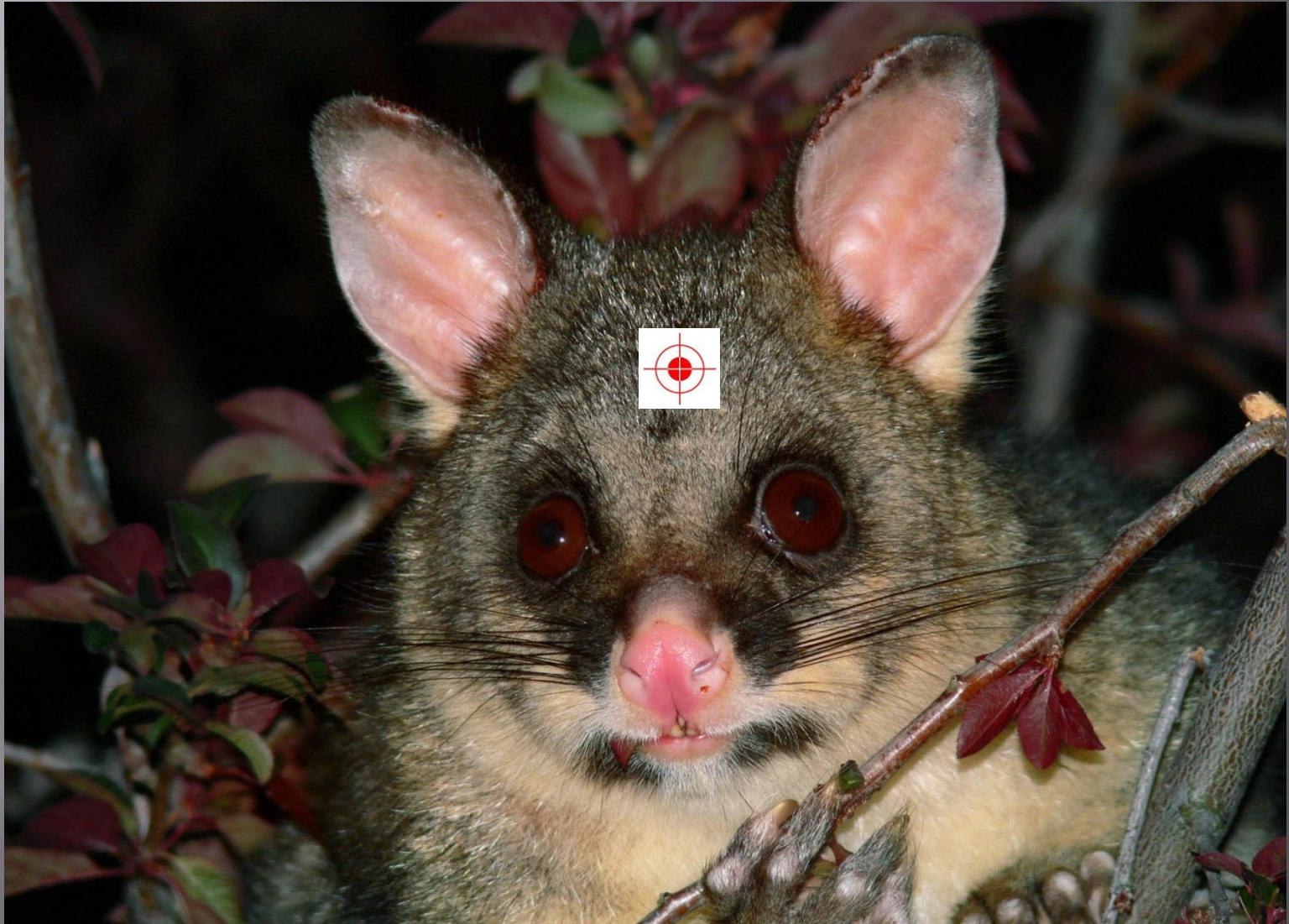


# POSSUMS

Dave West

Taranaki Regional Council

# Brush-tail Possum (*Trichosurus vulpecula*)



# Cute and cuddly



# Content

- ▣ Threats
- ▣ Possum presence
- ▣ Behavior
- ▣ Control options
- ▣ Effectiveness
- ▣ More Information

# What are the threats?

- ▣ Agricultural
- ▣ Horticulture
- ▣ Forestry
- ▣ Animal health
- ▣ Indigenous biodiversity

# Identifying Possum Presence

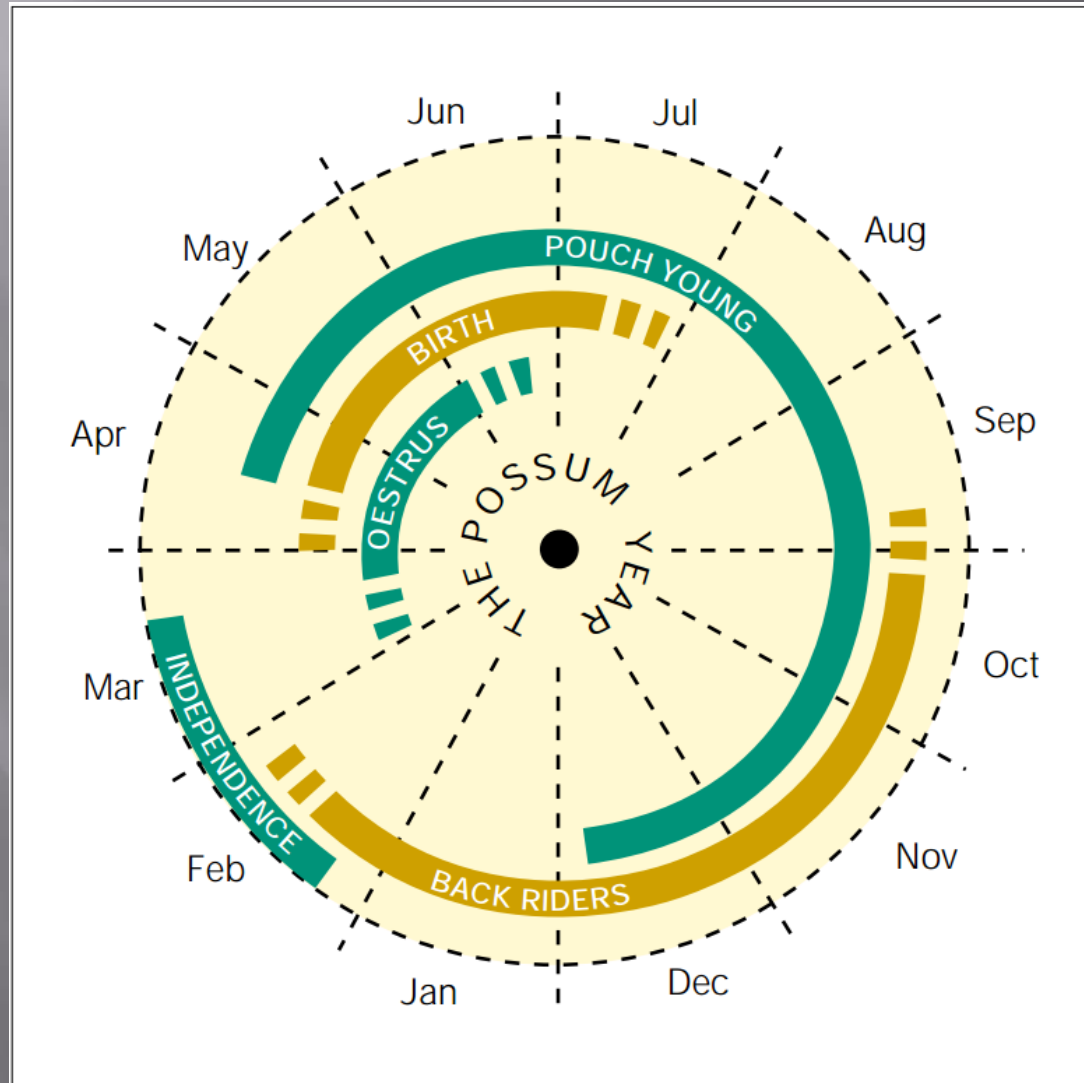


# Predation



# Possum Breeding Year

Department of Conservation





# Yearly browse chart of possum



# What tools can I use?

## Means of achievement

- Protection covers (metal, plastic)
- Repellents
- Firearms
- Traps (kill, live capture, leghold)
- Chemical (pestoff, pindone, cholecalciferol, cyanide)

# Protection sleeves



# Repellants

## ***Possum repellent recipe 1***

5 fresh eggs

600 ml of water

150 ml acrylic paint

Stir the mixture well and spray 20 ml per tree.

## ***Possum repellent recipe 2***

10 parts melted mutton fat

1 part kerosene.

Mix well and allow mixture to set. Then wipe each tree with lightly greased gloves or a cloth.

# Firearms

- ▣ License requirements
- ▣ Appropriate choose of firearm
- ▣ No shooting within urban areas
- ▣ Observe the 7 golden rules
- ▣ Target possums at night (spotlight)
- ▣ Can be used in combination with other control tech

# Traps



COMPARISON OF TRAP TYPES (CONTINUED)						
	Kill traps		Live traps		Leg-hold traps	
	✗	Can catch weka unless a protective cover is used.			✗	Can capture native birds such as kiwi and weka unless set above the ground.
<b>Cost</b>	≈	Cost more than leg-hold traps. Approximately \$25 - \$30 each	✗	Most expensive option costs \$100 - \$250 each.	✓	Cost \$13 - \$16 each
<b>Animal welfare</b>	✓	Use traps that have been shown to be humane using scientific trials. I.E. they render possums unconscious within 3 minutes	✓	Most humane option as possum is only contained within the cage trap. If possum is killed it need to be done so using a humane method.	✗	Least humane option. Possums can spend several hours in the trap with leg-injuries.
<b>Commercial</b>	≈	Less suited to fur recovery unless plucking machine used.	✗	Not suitable for fur recovery.	✓	Suitable for fur recovery.
<b>Ease of use</b>	✓	Daily checking not legally required.	✗	Daily checking legally required.	✗	Daily checking legally required
	✓	Trap kills the possum.	✓	Easy to set.	✗	You have to kill the possum.
			✗	You have to kill the possum.	✓	Lightweight and less bulky, so suitable in remote areas and where numerous traps are required.
			✗	Bulky, so unsuitable for remote areas or where numerous traps are required.		
<b>Effectiveness</b>	✗	Baits can be eaten by rats which makes them ineffective.	✗	Some possums are wary of entering live traps so not all possums can be captured.	✓	High catch rates can be achieved.
	✓	High catches can be achieved and possums can be reduced to low levels				
<b>Risk to non-target species</b>	✓	Less risk to pets and stock.	✓	Any non-target animals can be released unharmed.	✗	Can capture pets and stock.

# Chemicals



Feratex®



Feracol  
Sizes: 4.5kg or 10kg Pail



20 gram Sachets  
Sizes: 50 to 500 units



Defenders  
Sizes: 4 to 50 units



Pellets  
Sizes: 50 to 500 unit



# Bait stations



# Chemical selection

	<b>Brodifacoum</b> (Pestoff®)	<b>Pindone</b> (Pindone Pellets for Possums and Rats)	<b>Cholecalciferol</b> (FeraCol®, No Possums Cholecalciferol Gel Bait, Decal)	<b>Cyanide paste baits</b> (Trappers cyanide)	<b>Encapsulated cyanide</b> (Feratox®)
<b>Licence requirements</b>	✓ No licence required	✓ No licence required	✓ No licence required	✗ Licence to use required	✗ Licence to use required
<b>Effectiveness</b>	✓ Effective against possums that have developed bait shyness or when possum numbers are very low.	✓ Effective against possums that have developed bait shyness or when possum numbers are very low.	✓ Effective for reducing medium to high possum populations to low levels.	✗ Possums develop bait shyness which leads to decreased catches.	✓ Effective for reducing medium to high possum populations to low levels
<b>Cost</b>	✗ Expensive if possum numbers are high.	✗ Possums must eat large amounts of bait to be killed.	≈ More expensive than other baits, although prefeeding can make it cost-effective.	✓ The cheapest bait option available.	≈ More expensive than cyanide paste but offers greater safety to the user.
<b>Risk to non-target species</b>	✗ High risk of secondary poisoning of non-target species.	✗ High risk of secondary poisoning of non-target species.	✓ Low toxicity to birds.  ✓ Low risk of secondary poisoning.	✓ Low secondary poisoning risk.  ✗ Risk of poisoning ground birds such as kiwi and weka.	✓ Safer to use than cyanide paste.  ✓ Low hazard to non-target species.  ✗ Risk of poisoning ground birds such as weka.
<b>Environmental factors</b>	✗ Persistent in the food chain and high risk of wildlife and game contamination.	✓ Less persistent in the environment than brodifacoum.	✓ Poison does not persist in the soil or water.	✓ Low environmental persistence.	✗ May persist in the environment for 2-3 months.
<b>Animal welfare</b>	✗ Possums take 2-4 weeks to die. Possum die from internal bleeding.	✗ Possums take 2-4 weeks to die. Possum die from internal bleeding.	≈ Possums generally die from a heart attack. However sub-lethal amounts can lead to emaciation.	✓ The most humane poison as it kills possums rapidly.	✓ The most humane poison as it kills possums rapidly.

# Legal requirements

BAIT CONTAINING	TYPE OR USE	PLACE WHERE LAID	SIGNAGE REQUIREMENTS
<b>Brodifacoum</b>	Using bait stations	Any place (signage is mandatory)	<p>Signs must be erected at every normal point of entry and in prominent places on the perimeter of the treatment area. Signs must remain in place for a minimum of 9 months after baiting has ceased but on lands to which the public ordinarily has access, signs must remain in place for 12 months after:</p> <ul style="list-style-type: none"> <li>- baits have been retrieved or</li> <li>- are no longer present.</li> </ul> <p>Signs must state that it is an offence for any person to remove the signs prior to clearance of the area, that it is an offence for any person (other than the operator) to remove baits from the area, must warn of the potential harm to dogs and must warn that feral animals may contain residues and must not be taken for food.</p>
<b>Pindone</b>	Using bait stations	Only when laid outdoors on land to which the public ordinarily has access.	Signs must be erected at every normal point of entry to the public place. Signs must remain for 2 months after baits have been retrieved or if baits are not retrieved, signs must remain for 8 months after the last baits were applied (no signage required on private land).
<b>Cholecalciferol</b>	When laid in a bio-degradable bait bag.	Only when laid outdoors on land to which the public ordinarily has access.	Signs must be erected and remain in place until baits are no longer toxic , but must remain for no less than 4 months after the last application of bait.
<b>Cholecalciferol</b>	Contained ground based applications.	Only when laid outdoors on land to which the public ordinarily has access.	<p>Signs must be erected and remain in place for no less than 3 months after:</p> <ul style="list-style-type: none"> <li>- baits have been retrieved or</li> <li>- are no longer present.</li> </ul>
<b>Cyanide paste</b>	Paste baits	Any place (signage is mandatory)	Signs must be erected at every normal point of entry to the treatment area. Signs must remain until baits have been removed or have disintegrated or have been destroyed or are no longer toxic but signs must remain for no less than 2 months after the last baits were applied.
<b>Feratox</b>	Encapsulated pellet baits	Any place (signage is mandatory)	Signs must be erected at every normal point of entry to the treatment area. If applied in biodegradable bait bags, signs must remain until the substance is no longer toxic but for no less than 4 months after baits were last applied. If applied in bait stations or other ground based means, signs must remain for no less than 2 months after baits have been retrieved.

# Outcome Monitoring

- ▣ Monitoring the effects
  - Waxtag
  - Trap-catch
  - chew cards
  - bait take
  - night counts

# Monitoring

WAXTAGS for POSSUM MONITORING



# Useful links

- ▣ [www.pestdetective.org.nz](http://www.pestdetective.org.nz)
- ▣ [www.npca.org.nz](http://www.npca.org.nz)
- ▣ [www.landcareresearch.co.nz](http://www.landcareresearch.co.nz)
- ▣ [www.connovation.co.nz](http://www.connovation.co.nz)
- ▣ [www.doc.govt.nz/nature/pests-and.../animal-pests/animal-pests](http://www.doc.govt.nz/nature/pests-and.../animal-pests/animal-pests)
- ▣ [www.predatorfreenz.org/useful-resources](http://www.predatorfreenz.org/useful-resources)
- ▣ [www.pestoff.co.nz](http://www.pestoff.co.nz)
- ▣ <http://www.ermanz.govt.nz/resources/publications/pdfs/er-cg-19-1.pdf>

QUESTIONS?