



# POSSUM MONITORING



Possum abundance may vary considerably between areas depending on habitat and food availability. Monitoring of distribution and abundance can provide useful information to check the effectiveness of possum control.

**INDICATORS** of possum presence include scratch marks on trees, runs, foliage damage, poo presence, calls heard, bite marks on trees or wax tags and actual sightings.



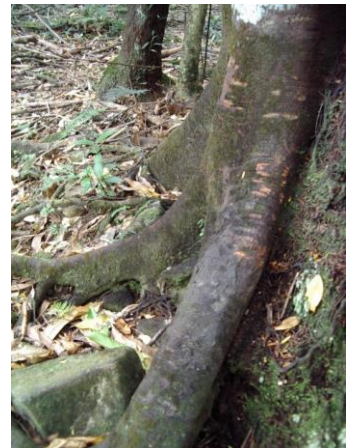
SCRATCH MARKS



RUNS



POSSUM POO



BITE MARKS

Possum **DENSITY INDICES** can be derived using bite marks on wax tags and the following protocol. Skulls of possum and rats, with incisors intact, can help identify bite marks in wax tags.

## PROTOCOL

## EQUIPMENT

The following equipment is enough for 1 transect of 500m

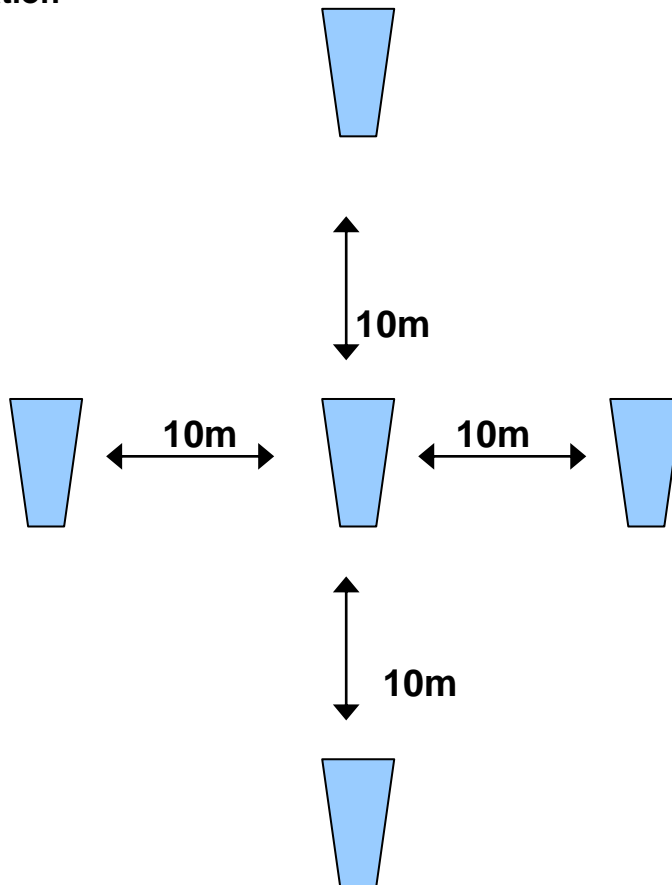
- 25 waxtags - available in packs of ten for \$7 from Connovation, [orders@connovation.co.nz](mailto:orders@connovation.co.nz)  
Or alternatively they are easily made in ice-cream containers using a mix of paraffin and bees wax, a drop of rose oil and ice cream sticks.
- flagging tape
- 100m tape measure or similar device
- Spray bottle of 9 parts soya bean oil to 1 part rose oil

## METHOD

Tag Station Index or TSI is the proportion of tags that contain possum bite marks.

- Tag stations consist of 5 WaxTags spaced at 10m intervals and located in a cruciform shape.

Figure 1. Tag Station



- All tags are located 20cm above the ground on trees.

Flagging tape

Wax Tag



- A lure of 9 parts soya bean oil and one part rose oil is sprayed on each tag with a spray bottle.
- Tag Stations are placed along a transect at 100m intervals.  
Department of Conservation use 400m transects that have been randomly selected. However if you are using a transect that has already been set up and have several comparative transects adjust accordingly.
- Stations are left in the field for two days, day one laying, day two collecting and recording.

## CALCULATIONS

TSI - Tag Station Index

$$\text{TSI} = \frac{\text{no. of stations with tags bitten}}{\text{total no. of stations}} \times 100$$

**(NOTE: if 500m transect is used total no. of stations =5 )**

PAI - Possum Activity Index is also recorded

$$\text{PAI} = \frac{\text{total no. of tags bitten}}{\text{no. of stations with tags bitten}}$$

**NOTE: A high PAI that is 4 or 5 will indicate a high density and high activity**

### WAXTAG DATA RECORD SHEET

Recorder \_\_\_\_\_ Location \_\_\_\_\_

Date Tags put out \_\_\_\_\_ Date Tags checked \_\_\_\_\_

Habitat \_\_\_\_\_

Weather \_\_\_\_\_

Survey: pre-control / post—control / maintenance (circle)

Line Number	Tag Station Number	Number of Tags in Station bitten by possums (max = 5)	Number of Tags in Station bitten by non-targets (record species)	Number of Tags in Station with unknown bite-marks
<b>1</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
	<b>5</b>			
<b>2</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
	<b>5</b>			

NOTE: The above record sheet is suitable for 2 transects of 500m long. Adjust accordingly to suit.