

# Forest Protection Survey Program

Survey Guideline - Elliott Trapping (V2)



## Acknowledgements

### Author

Ryan Chick

Jenny Nelson, Arthur Rylah Institute for Environmental Research

Jamie Molloy, Project Manager Forest Protection Survey Program

### Photo credit

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# 1. Small Mammal Elliott Trapping

## 1.1 Context

Some of the threatened small mammals detected via camera trapping may not be identifiable to species level. This can be due to a paucity of suitable close-up high-quality images or because some small species cannot be distinguished by camera trap images alone.

Elliott trapping is required to confirm the identity of some species. For example, Common Dunnarts and White-footed Dunnarts can only be distinguished from each other by physical examination in-hand.

The Common Dunnart and the White-footed Dunnart are considered Medium Priority species for targeting in the FPSP. Detection of the Common Dunnart triggers harvesting prescriptions in the Central Highlands only.

Other threatened small terrestrial mammal species of Medium to High Priority in the FPSP which may be trapped are the Smoky Mouse, New Holland Mouse, Broad-toothed Rat, and Swamp Antechinus.

## 1.2 Objectives

To trap selected species which may have been detected via camera trapping surveys or that may be a priority survey target, to identify the individual to species level.

## 1.3 Survey effort

Grids of Elliott (type A) traps will be employed. Traps are to be spaced at 10 m intervals along lines 25 m apart for four consecutive nights.

If the survey is a follow-up to camera trapping, or CHASS identified sign (e.g. Broad-toothed Rat runways/scat) then a grid of 25 traps in 5 lines of 5 traps each will be used at the above spacing and duration, centred on the former location of the camera trap station, or animal sign (for 100 trap nights at each site).

A second trapping session at the former camera/animal sign site(s) is recommended if target species were undetected in the first trapping session (for a total of 200 trap nights for both sessions).

If the survey is a stand-alone effort to detect small animals, then two grids of 20 traps each at the above spacing and duration per 5 ha of coupe area will be used (for 160 trap nights per 5 ha). A maximum of 5 hectares of highest quality habitat for the target species will be surveyed on any given coupe.

Staff may expect to spend up to one-person hour checking and clearing each grid.

If repeat surveys are undertaken, then the relevant grid(s) shall remain closed for at least 3 nights between trapping sessions to allow animals to recover.

## 1.4 Staff requirements

A field survey team of at least two people.

Each team member to be experienced with Elliott trapping for small animals including extensive experience handling and identifying small mammals.

Familiarity, preferably via first-hand experience, with the small native and introduced mammal species likely or possibly present in the program area.

Be able to identify small mammals in-hand, especially distinguishing between Common Dunnarts and White-footed Dunnarts via the pads on their hind-feet.

## 1.5 Equipment for the technique

- |                                                                                                                              |                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Elliott type A traps (Elliott Scientific Equipment) or same-size equivalent (e.g. Sherman trap)     | <input type="checkbox"/> Bait – peanut butter, rolled oats and golden syrup, rolled into a ball |
| <input type="checkbox"/> Bedding material (Dacron or Hollofil – do not use any material that absorbs water like cotton wool) | <input type="checkbox"/> Small rounded/safety scissors (for trimming animal fur)                |
|                                                                                                                              | <input type="checkbox"/> Small animal scales                                                    |
|                                                                                                                              | <input type="checkbox"/> Cloth handling bags                                                    |

- Gloves
- GPS units and spare batteries
- Sighting compass
- Cameras with macro/close-up function
- Flagging tape and texts
- Paper scat sampling bags
- Small plastic hair sampling bags
- FPSP Small Mammal Trapping Data Sheets on electronic-based pro-formas
- Back-up hard copies of data sheets on waterproof paper on clipboards

## 1.6 Site preparation

Trap grids may be installed at the former locations of camera trap stations where the target species was photographed in the camera trap survey, or where animal sign was located during CHASS.

Any additional new sites will be selected by the contractor based on identifying the best available habitat on the coupe for the target species.

If conducted as stand-alone surveys for small mammals then the location of trapping grids may be pre-determined (e.g. via desktop assessment or CHASS). Selection of trap grid locations shall sample a variety of habitats appropriate to each of the Common Dunnart, White-footed Dunnart, Smoky Mouse, Broad-toothed Rat, and Swamp Antechinus. Small animal sign shall be considered in any on-ground habitat assessment (e.g. the distinctive scats and runways of the Broad-toothed Rat).

Trapping grids can be flagged either in advance or during the initial trap deployment. Trap lines are to be installed along magnetic bearings using a sighting compass.

Mark the ends of the trap lines in a GPS. In particularly dense vegetation, consider marking each trap's location with the GPS.

Mark each trap's location using sequentially numbered flagging tape (above the trap location but not so close as to disturb foraging animals).

## 1.7 Conducting the survey

### *Trap deployment*

Only deploy as many traps as can be expected to be cleared comfortably by the number of staff available within two hours.

Make sure hands are clean and not scented by perfumes, insect sprays, etc when handling the traps.

Ensure traps are stable by placing them directly on the ground surface. The substrate can be scuffed flat using a booted-foot to ensure the trap is flush with the ground. The trap should not move when an animal steps inside it.

Place the trap on level ground wherever possible. If installed on a slope, then face upslope so that the bait and bedding cannot move forward and interfere with the treadle mechanism.

False triggers by animals climbing on and around the trap can be minimised by having the back, top and/or sides of the trap in dense cover, beside a log, etc.

Where possible take advantage of potential runways and place the traps perpendicular to them, opening onto them.

Do not place traps in areas of high ant activity.

Traps must be located where they provide some protection for captured animals (e.g. in dense shrubbery, beneath logs), ensuring traps are sheltered from the sun. If conditions are likely to be wet, place the closed end of the trap in a small plastic bag.

Always provide bedding, particularly in winter or when cool overnight temperatures are possible.

Ensure that there are no sticks or leaves immediately adjacent to the entrance which might interfere with the trigger mechanism or door.

Ensure that the trap is operational and that a light weight on the treadle will activate the mechanism, by testing it when installed. Adjust if necessary via bending the hook on the door release, or the body of the hook.

Place the bait in the back of the trap, ensuring it does not impeded the trigger mechanism.

### *Checking / clearing traps*

Check traps as soon as practicable after sunrise.

Have as many staff available as can clear all the deployed traps within two hours.

Make sure that hands are clean and not scented by perfumes, insect sprays, etc when handling the traps and animals.

Wear suitable gloves when checking traps.

Be wary of snakes that may be investigating trapped animals and may be hidden behind the trap or otherwise in close proximity.

Exercise caution when opening the trap. Be wary of trapped snakes or insects.

Follow standard procedures for handling small animals using gloves and handling bags.

Identify all animals captured and trim a small patch of fur on their rump to allow identification of recaptured individuals.

Captured target (or suspected target) species shall be photographed in-hand such that diagnostic features are evident. Take a photo or series of photos showing the animal plus any recognisable/revisitable location features.

Captured target (or suspected target) species shall be sexed and weighed and diagnostic features identified and photographed as necessary to support identifications.

If necessary to confirm an identification, scat samples (from the trap) and small hair samples may be taken.

Record the trap locations of all captured target (or suspected target) species on a GPS.

Released trapped animals immediately after processing at the point of capture.

For any animals suspected of being trapped three nights consecutively, consider closing the trap or traps that it has encountered to avoid further capture on the final night.

Implement all trapping permit conditions with regard to checking traps, handling animals with young, release of animals, trap deaths, non-natives, etc.

Shut down / close all the traps after checking them. Keep traps closed during the day and reopen (and rebaited as necessary) in the late afternoon.

Devise a system to ensure all traps are checked and cleared of animals (e.g. cross off trap numbers in a notebook). If staff separate to check different parts of the grid, then ensure that they compare notes on which traps have been checked when they meet up or via radio/phone.

Clean traps soiled with urine or faeces before resetting or replace with new traps as necessary.

Remove baits affected by ants and replaced with a spare bait mixture on reopening the trap.

Do not carry any collected scats of any species (especially predator scats) in the same box as the traps.

If the target species is not trapped in the four-night session (despite the previous indications of its presence from the survey cameras) then the survey shall be repeated.

Allow at least 3 nights between any repeat trapping sessions to allow animals time to recover.

If no more trapping surveys are to be conducted at the site, then ensure all the flagging tape marking trap locations is removed.

## **1.8 Data reporting requirements**

Data requirements are outlined in the Elliott Trapping data sheet

FPSP data is to be reported in accordance with the procedures outlined in the SOP.