



Wildlife Notes

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Sand Pads - Using Tracks to Monitor Fauna

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Author:	Peter Mawson and Peter Orell

INTRODUCTION

Many people are interested in knowing what species of fauna are present on their property, or still occur in their local bush reserve. Although the most reliable identifications of animals are made by seeing them up close, the survey techniques that enable this to be done are intrusive and require skill to reduce the risk of injury and unnecessary stress to animal and observer. These techniques are generally not suited to community projects without the involvement of skilled people. Other techniques that rely on remote observation of animals or the many traces that they leave in their environment are much easier to employ with far fewer associated risks.

One such survey technique is the use of tracks to identify the presence of various species of fauna. This is particularly useful for surveying reptiles and small, nocturnal or otherwise secretive and inconspicuous mammals, and can also be used to monitor fox and cat activity. The technique entails clearing a series of square plots of sand and placing a bait or lure at the centre of each plot to entice animals onto it so that they leave identifiable tracks in the sand.

'FOOTPRINTS IN THE SANDS OF TIME'

As an animal moves over a soft surface, it leaves footprints. These can be used to determine what types of animals passed by and, occasionally, something about their behaviour. In exceptional circumstances, the prints may be preserved for millions of years, such as the Euripterid tracks in the Murchison Gorge in Kalbarri National Park.

Reading tracks in the wild is not always easy, the soil has to be just right to hold an imprint. It is also useful to have a series of prints, as the stride length helps to

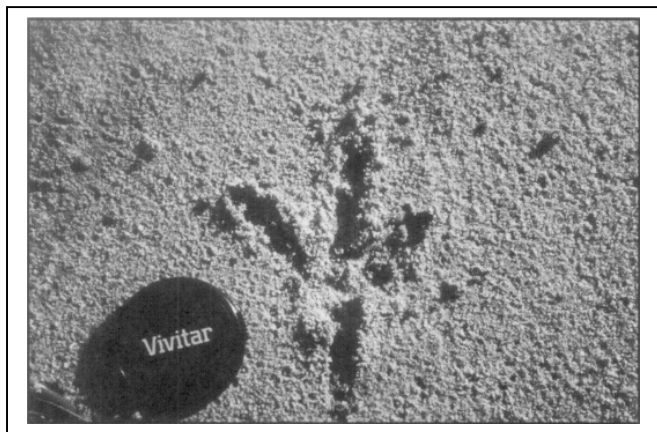
give an idea of the size of the animal. Thus it is a good idea to prepare a special surface to receive tracks - the sand pad.

SETTING UP A SAND PAD

Tracks are most identifiable in clean, firm and slightly damp sand. Where this type of sand occurs naturally at a survey site, pads can be made simply by clearing and raking smooth a square plot at the desired locations. Where such sand forms the main substrate along extensive vehicle tracks and firebreaks the technique can actually be extended to using the tracks as a 'plot' by smoothing a 1.5-2m wide strip with a heavy drag towed from a vehicle. In other cases sand will have to be brought in specially to create the sand pads. The best sand to use is the yellow brick-layers' sand often used on building sites but it is very important that this sand is clean and certified free of weeds as well as *Phytophthora spp* and other known plant pathogens.



Smoothing a sand pad. (photo: Claire Hall)



Mallee fowl track, note lens cap to give scale. (photo: John Riley)

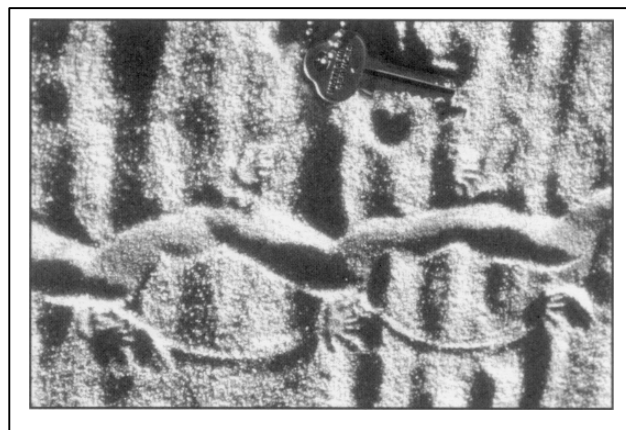
Sand for pads can be laid down directly on top of existing soil and leaf litter. Use a watering can to create a firm, damp consistency, then smooth with a flat rod or stake.

Sand plots are generally about one half to one square metre in size (1 m x 1 m), large enough to ensure that any animal coming to investigate the bait or lure cannot reach it without setting foot on the sand. The bait or lure can be a small cube of meat or a ball of universal bait (peanut butter, oats and sardines) placed either on top of the sand or buried (about 50mm) below the surface, or a small (1 ml) drop of linseed oil placed on the surface. Burying the bait is preferable as it prevents birds such as ravens and currawongs from removing it and also provides some protection from ants.

The distance between neighbouring sand pads will depend on the species targeted and the size of the area being surveyed. For small lizards and small mammals such as phascogales, dunnarts or rodents, sand plots can be as close as 50m. For medium-sized mammals (e.g. chuditch, quenda, woylies and possums) and as a general purpose survey, 200m is a better distance between sand plots. The sand plots can be split up into separate transects of 10-20 plots each to cover a wider area and range of habitats. If an existing firebreak is being used as the sand plot, then the entire length of the firebreak can be used, but obviously this will take longer to check in the morning. It is not necessary to place baits or lures any closer together than 200m on continuous plots on firebreaks.

IDENTIFYING THE TRACKS

Use a field guide to help identify the tracks (see reference below). Also search the area for droppings or other signs which will help to identify the animals. Tracks are most identifiable in the early morning before the sand has dried and the wind has blurred them, and are



Bobtail tracks. (photo: Penny Hussey)

more easily seen when the sun is still low in the sky. This is also a good time for photography as slanting shadows show up the outlines clearly.

Tracks can usually be identified to family or genus but often it is difficult to distinguish tracks of closely related species unless there is a marked difference in size and shape. There may also be differences in size of tracks between sexes and different age groups within a species. The use of other information such as scats and known distributions and habitat preferences can help to narrow the identification to species level.

FURTHER INFORMATION

Sand pads are only one form of monitoring tool, more detailed survey and recording can be done as time permits. Contact *Land for Wildlife*, or refer to the publications below.

ACKNOWLEDGEMENTS

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FURTHER READING

- Sanders, A. 1999. *How to Conduct a Community Fauna Survey*. Land for Wildlife, Department of Conservation and Land Management, Perth.
- Triggs, Barbara. 1996. *Tracks, Scats and Other Traces: a field guide to Australian mammals*. Oxford University Press, Melbourne.

About the authors

Peter Mawson is Senior Zoologist and Peter Orell Western Shield Zoologist at the Department of Conservation and Land Management, Kensington.