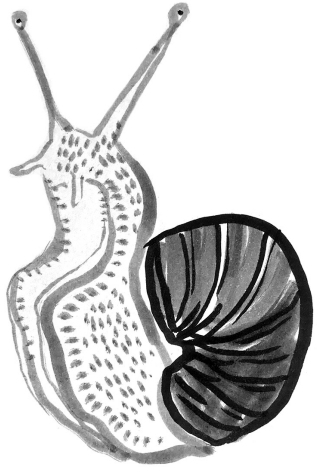
WHAT YOU'LL NEED

ACRYLIC PAINT PENS
of different colours (*nail polish can be used as an alternative*)

A **LOG** for keeping records. *You can print or digitally edit the one we've provided, or make your own. Download additional forms:*

www.urbanfieldnaturalist.org/resources



A FEW OTHER IMPORTANT POINTS

- Wear gloves and wash your hands afterwards. The main potential concern with handling snails is that they could transmit rat lungworm. In most parts of the world this is extremely unlikely. Just to be safe though, wash your hands and avoid touching your face while interacting with snails.

  For this reason, you should also try to move snails when you aren't being watched by curious children or dogs who may want to explore the site of activity and end up eating (*potentially dangerous*) snails.

- Be careful looking under logs and in other dark parts of the garden. While snails are unlikely to cause harm, be sensible about other potential dangers.

- Be mindful of snail welfare. In particular, keep your markings on their shells (*not their skin*), and don't move them around in weather conditions that are likely to cause them stress, or into places that can't support them.

- Avoid moving snails into other people's backyards or places where they're likely to annoy others. Not everyone wants more snails...

The URBAN FIELD NATURALIST Project

WWW.URBANFIELDNATURALIST.ORG

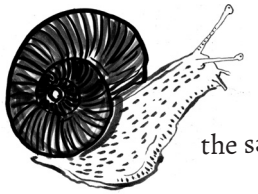
Wildlife exists all around us: in our backyards, on our balconies, in parks and disused industrial areas. The urban environment is home to a diverse array of other living creatures, from ants, spiders, and snails, to birds, possums, lizards, and even those wayward weeds emerging through cracks in the footpath. If we pay attention, each of them is an invitation into a unique and intricate mode of life, into an entire world of growth and decay, of communication and sensation, going on right under our noses.

WORDS: Thom van Dooren | DESIGN: Zoë Sadokierski

The URBAN FIELD NATURALIST GUIDE to SNAIL HOMING

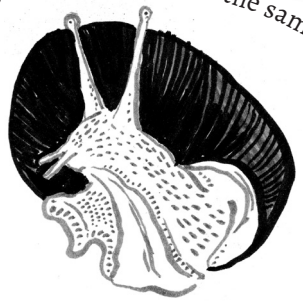
Have you ever wondered how the snails in your garden get around?

Are the snails you see on Monday in amongst the lettuce,



the same ones you see on Tuesday resting quietly under that pot in the corner of the garden?

Do snails tend to move around in the same areas,



or do they travel far and wide?

This 'how to study' guide has been designed to show you some ways you can investigate these slimy questions for yourself.

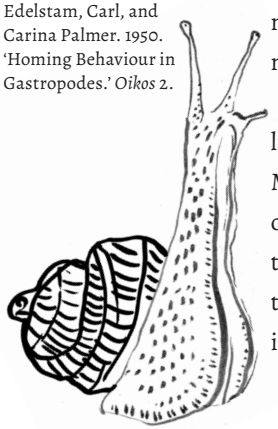
THE POINT OF THIS EXERCISE is to allow interested people to observe some of the intriguing facets of snail life going on in their gardens. It is not to provide data for a larger study of snail behaviour. Amongst all of the aspects of snail behaviour that we might consider, our focus here is on snail homing, and specifically the question of whether a snail that is moved from its 'home' (*resting place*) to somewhere else, will return to where it was found.

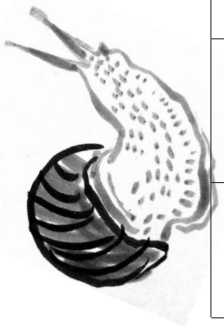
We don't know an awful lot about the daily movements of snails. The few studies that have been conducted have shown that some snails return to the same general area, or even the same exact spot, to rest during the warm daylight hours each day. Other snails seem to be much less predictable in their movements. Some snails that are relocated by people have been shown to cross distances of tens of metres to get home, other snails have tended not to return if they're moved more than a few metres away.

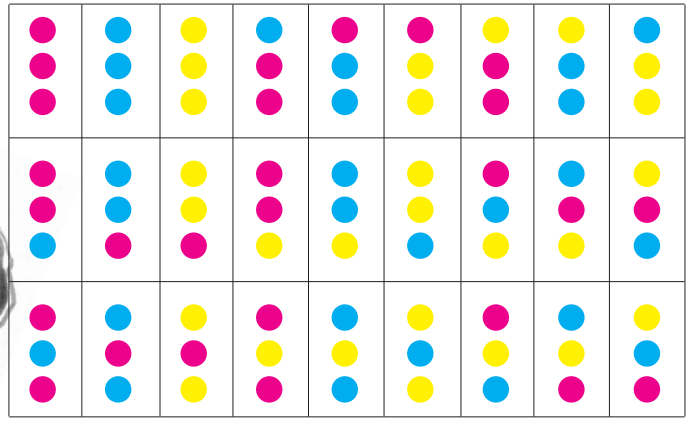
In all these movements, snails rely on 'chemoreception', something like a highly developed version of our own senses of smell and taste. Most snails are deaf and pretty much blind. The large, eye-like, bulges on the end of the tentacles on their heads are primarily used to taste the air for chemical signals. In a similar fashion, the smaller tentacles that most snails have are generally used to touch and taste the ground in front of them.

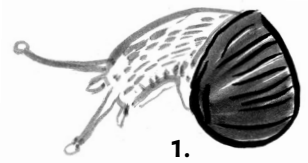
Dunstan, D J, and D J Hodgson. 2014. 'Snails Home.' *Physica Scripta* 89 (6).

Edelstam, Carl, and Carina Palmer. 1950. 'Homing Behaviour in Gastropodes.' *Oikos* 2.





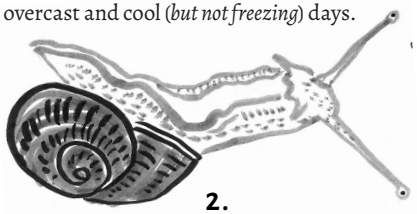




STEPS:

1.
LOCATE SOME RESTING SNAILS

Resting garden snails can generally be found in dark, cool, damp places, like under pots, around the edge of rocks, at the base of walls, and tucked under thick leaves. As snails can dry out, they tend to rest, often in groups, and avoid moving around in the hottest parts of the day. If you move snails during this time, especially if you put them somewhere unprotected from the elements, they are likely to become stressed and may even die. For this reason, it is best to move snails around in the late afternoon and early evening, or on overcast and cool (*but not freezing*) days.



2.
CAREFULLY MARK THE SNAILS SO THAT YOU CAN IDENTIFY THEM LATER

Ideally, you want to be able to recognise individual snails. Most of us can't do that with- out some help. The best option is to use an acrylic paint pen (*available from art stores and newsagencies*), or failing this, nail polish will do the trick. Either way, make sure you only mark the snail's shell and don't get any paint on their skin. Don't colour in the whole snail shell either. A small mark is all that is needed. If your paint pen is thin enough and your hand is steady, you might be able to give each snail a unique number. Alternatively, you can use a system of coloured dots. With three different colours, using them in different three-dot combinations, you can distinguish between twenty-seven different snails. Make sure that you hold each snail the same way when you mark it, perhaps hold them with their foot away from you and their head end upwards.

3.
MOVE THE SNAIL SOME DISTANCE

Find another suitable spot, similar to the one where you found the snail, and carefully relocate it, for example under some damp leaf litter. Ideally, you would find multiple snails and move them different distances from their resting spot(s). Distances of anywhere from 1 to 20 metres are likely to produce interesting results.

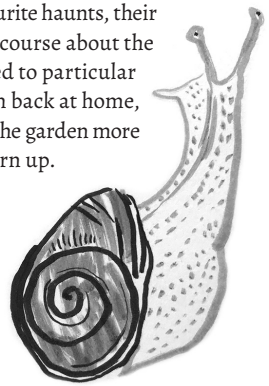
4.
KEEP GOOD RECORDS

Take note of how you marked the snail, where you found it, where you moved it to, when you moved it, and how far you moved it. You might want to use the provided record log, or something similar.

5.
CHECK BACK REGULARLY

Over the next couple of weeks, check back regularly at the spots where you initially found the snails. It is probably best to do these follow up checks during the day, when the snails are likely to be resting. Again, try to disturb them as little as possible. Record this information too, taking note of the dates you check and whether any marked snails have returned. When new snails do return, calculate how many days it took them.

Through this process you're likely to learn a lot more about the snails that make their homes in your garden, about their favourite haunts, their ranges of movement, and of course about the extent to which snails are tied to particular places. If you don't find them back at home, you might also try searching the garden more widely to see who you can turn up.



SNAIL NUMBER:

SNAIL DESCRIPTION / TAG:

DATE MOVED:

DISTANCE OF MOVE:

LOCATION FOUND:

LOCATION MOVED TO:

DATE RETURNED HOME:

OTHER OBSERVATIONS:
eg. other places the snail was seen

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