

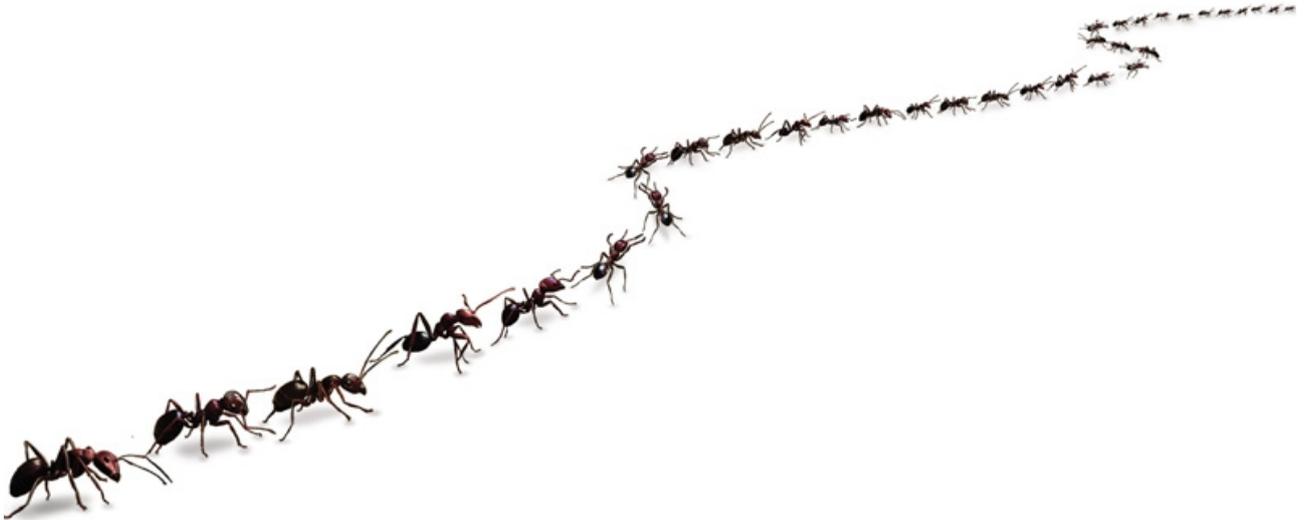


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Future Keepers: Ant sampling citizen science project

Seasonal sampling protocols



Site name _____

Date _____

Time of collection _____

General weather conditions

Did anything go wrong? (it is ok if it did, we just want to know).

Please return this booklet with your samples

Instructions for collecting ants using different diets.

To collect the ant samples for each time period:

1. Prepare to collect on a day that is fine and warm: ideally between 10am and 2pm (if not too hot).
2. Find the *Season pack* for the appropriate season/year – they are labelled.



An example of a *Season pack* from your Future Keepers sampling box

3. Take the two bags out of the *Season pack* in an office/ lab area to prepare the diets before taking them out to the sites.



Each *Season pack* has two bags each filled with six 50ml tubes. One bag is for samples for the *Warming Chamber*; the other bag is for samples in the *Open* area adjacent to the *Warming Chamber*.

4. Each 50ml collection vial has its own unique label (one on the outside of the vial and a small piece of paper inside the vial). **Do this step one bag at a time.**

For the warming chamber samples:

a) Pour the oil diet (from the 5ml vial) into the 50ml vial to saturate the cotton wool ball.

b) Pour the water (control) diet (from the 5ml vial) into the 50ml vial to saturate the cotton wool ball.

c) Each of the powder diets need to be mixed with the water provided (both in 5ml vials). There are 4 powder diets – salt, amino acid, sugar and honeydew. Add the water to the powder, put lid back on and shake vigorously. Check that the powder has not settled in the bottom of the 5ml vial.

Be careful not to lose the small paper label inside each 50ml vial (they stay inside the vial) – its OK to get some diet mixture on it!



Matt McKenzie (Thalgarrah EEC) shaking the amino acid and water mix in a 5ml (small) vial.

Take lid off and quickly pour this liquid into the 50ml vial to saturate the cotton wool ball.



Matt pouring the amino acid/ water mix into the 50ml collecting vial

Make sure you add the liquid diets vials to the correct collection 50ml vial that it was within – do not mix them up (WHY? each collection vial has its own unique label).

Put the six 50ml vials back into the plastic bag ready for taking out to the *Warming Chamber*

Repeat Step 4 for the *Open* site samples (6 x 50 ml vials).

5. You should now have 6 x 50ml vials premixed with each diet for the *Warming Chamber* and the *Open* site



The pre-mixed samples in the 50ml collecting vial. One bag is for samples for the *Warming Chamber*; the other bag is for samples in the *Open* area adjacent to the *Warming Chamber*.

6. Take the 50 ml vials for the *Warming Chamber* and the *Open* samples out to the site.
7. Take the *Warming Chamber* vials into the *Warming Chamber*. Now shake the 50ml vial once to move the moist cotton wool ball up and down the vial – this will help attract the ants. The cotton wool ball can be in the middle/top of the vial.



Shake each 50ml vial to slide the wet cotton wool ball up to the lid then back down to the middle/bottom of the vial. The vials can now have the lid taken off and be placed on the ground ready to collect.

8. Take the red lid off, and place each vial on its side. Put all six vials on their side in a circle about 30cm away from each other. Make sure the vial opening is on the ground – you can push it into the ground if needed. **Put all six lids back in the plastic bag** and leave in the corner of the warming chamber.



The *Warming Chamber*; with the six diet vials put out ready to collect ants.



Vial with cotton wool ball in the bottom half of the vial after shaking up and down to help attract the ants.

Repeat Step 8 for the *Open* samples – do the sampling close to the *Open* Stevenson weather station.

Fill in the date and time you started sampling on the front page of this booklet.

9. Leave the vials out for an hour.

10. After an hour, collect up the samples – putting lids quickly on each vial as you pick them up. Try not to disturb the other vials during this process.

11. Put the *Warming Chamber* vials into their original clip lock bag, and the *Open* chamber into their original clip lock bag.

12. If you have a lot of ants running around in the 50ml vials, take the clip locks bags to a fridge and place in the fridge for 10 minutes to settle down the ants. If you find the ants still too active return them to the fridge for a further 5 mins.

13. Gently turn the 500ml vial full of ethanol doused cotton wool balls up and down to moisten all the cotton wool balls with the ethanol.



Turn the ethanol vial up and down a few times to moisten up the top cotton wool balls.

14. For the *Warming Chamber* vials: remove from the clip lock bag; add 4 ethanol doused cotton wool balls to each 50ml vial using the green forceps; then return

the vials to the *Warming Chamber* clip lock bag and clip up. **Do this even if you cannot see any ants in the vial (they may be small)!**



Use the green forceps to put four ethanol wetted cotton wool balls into each 50ml collecting vial

15. Repeat this for the *Open* samples; then return all vials to their *Open* clip lock bag.

16. Put both bags into the *Season pack* bag and clip up.

17. Put the *Season pack* into the parcel post bag, seal it and place into a postbox: the address label should be on the parcel post envelope all ready. Remove the tracking sticker, and put in your diary (just in case it doesn't arrive).



The *Season pack* with sample vials from the *Warming Chamber* and *Open* samples ready to be sent. Remember to take the tracking sticker off!

Thank you for supporting the project

Any problems or questions: email me on nigel.andrew@une.edu.au