



Earwi'GO!



Earwigs are an important part of garden ecosystems, providing **pest control** and possibly pollination services. They also have an interesting life cycle, showing a level of parental care that is unusual amongst insects. While they can cause minor damage to buds / petals, they don't deserve their bad press – and we want to prove it, with our new earwig-focused investigations.

The project starts in **June**, as this is when young earwigs tend to be on the move.



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The goal of this project is to find the best way to make **earwig hotel** shelters for these helpful insects. This will allow earwigs to be moved around within in the garden to emphasise their pest control skills – rather than nibbling on soft plants.

Previous years of the Earwi'GO project have shown us some things about earwig hotel preferences, but the extreme weather (first heatwaves, then a very wet summer) of the last two years have also shown that the original hotels were prone to becoming too hot or too wet very easily. We want an all-weather option, so for 2024 we are returning to a simpler design and method – which should hopefully be more robust!

It will also allow us to reduce or eliminate use of plastic in this method too.

Equipment

For the hotels:

- **Old / spare ceramic mugs.** 2x of these, which you don't mind leaving outside.
- **String.** For tying pots in place / holding filling inside. Try and avoid plastic string.
- **Cardboard (not shiny).** Roll up / fold to make tight 'tunnels' in the pots.
- **Straw / dry grass.** Stuff into the pots to make a cosy shelter.
- **Mesh / netting.** Needs wide enough holes that earwigs can get through (at least 5mm holes). These instructions used plastic mesh from a lemon bag, because it is easy to find, but you can use other things (particularly if you are good with string).

For counting earwigs:

- **A white / pale tray.**
- **A digital / phone camera.**



Note: these are not *essential*, but they make counting easier! (See 'Data Collection' later for details)

Making the hotels

You will need to make **two** hotels. One with a cardboard filling, one with straw / grass.

- 1) For the **cardboard hotel**: Trim card down so it fits into mug pot without sticking out. Fold / squash card so it packs in snugly (see picture below for example).
- 2) For the **straw hotel**: Firmly pack the straw / grass into the pot.
- 3) For **all hotels**. Secure the filling in place so it does not fall out when held upside down. The examples below re-use some mesh from a fruit bag, but you can use other mesh or string as well. Remember: the mesh must be wide enough for earwigs to get inside! And you will need to be able to take the filling out to count the residents.



<- Fill mug with rolled cardboard tubes



Use mesh or string (or both!) to secure the cardboard filling into the mug. Use the same method for the straw hotel.

Positioning the hotels

Hotels will be positioned **upside down**, open side downwards.



Hotels need to be **in the shade**. They can be underneath shading plants or any sort of shelter. Earwigs do not like to be too hot!

Both hotels should be placed in as **similar positions** as possible in the garden (same amount of sun / shade; same sort of surroundings), but not right next to each other.

Hotels need to be **slightly raised off the ground**, so the filling does not get wet from rain / surface water. You could put them on a little layer of stones or sticks, make short 'legs' from sticks to support the mug – whatever works for your space!

If the filling of any hotel gets very mouldy or gets damaged, please replace it (or we will just get slugs eating the wet cardboard).

Data collection – counting invertebrates

Counting will be **once every two weeks**, June – October (approximately 10 counts in total). Your first count will be **two weeks** after you have installed the hotels.

To count a hotel:

- 1) Remove hotel from its position, and place into a tray / container that will let you catch and count any residents.
- 2) Carefully remove the filling and put it on the tray.
- 3) Record any invertebrates that fall out (see recording sheet attached).
- 4) Place the filling material back inside. Don't try and put the invertebrates back.
- 5) Release the invertebrates on the ground near the hotel location.
- 6) Replace hotels.

Earwigs are very distinctive, but please try and at least broadly identify any other invertebrates you find. **Photographs** are always useful to us, because we can either identify creatures ourselves, or pass them to experts on different types.

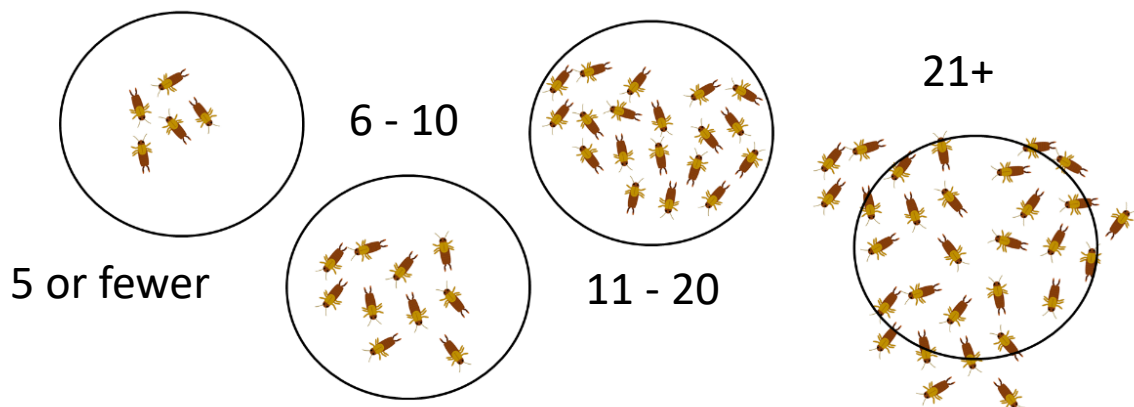
Note: **if you miss / are unable to do a count**, please mark it as **skipped** on the recording sheet. It's not a problem if you do, but it's important for us to know if a blank is 'no insects' or 'not counted', because the analysis needed is different.

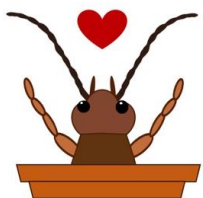
Alternative counting methods:

If your earwigs are too energetic or numerous to count easily, you could try:

- 1) Tip the earwigs into a tray and take a photo of them quickly before they escape, then count from that.
- 2) Do an **approximate** count. Ideally use categories of:
5 or less 6 – 10 11 – 20 21+

To illustrate why we've chosen these categories, here are this many earwigs on 'trays':





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Recording sheet

(print as many as you need)



US
UNIVERSITY
OF SUSSEX

Your name:

Recording month:

Date of each recording (<i>write</i>)	Count 1	Count 2	Count 3 (if needed)
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Count the insects seen once every two weeks. If you miss / are unable to do a count, please mark it as '**skipped**'. Please take photographs if you can!

CARDBOARD hotel	Count 1	Count 2	Count 3
Earwigs			
Other invertebrates <i>(Try to identify if possible, even if broad; e.g. 'beetle')</i>			

STRAW / GRASS hotel	Count 1	Count 2	Count 3
Earwigs			
Other invertebrates <i>(Try to identify if possible, even if broad; e.g. 'beetle')</i>			