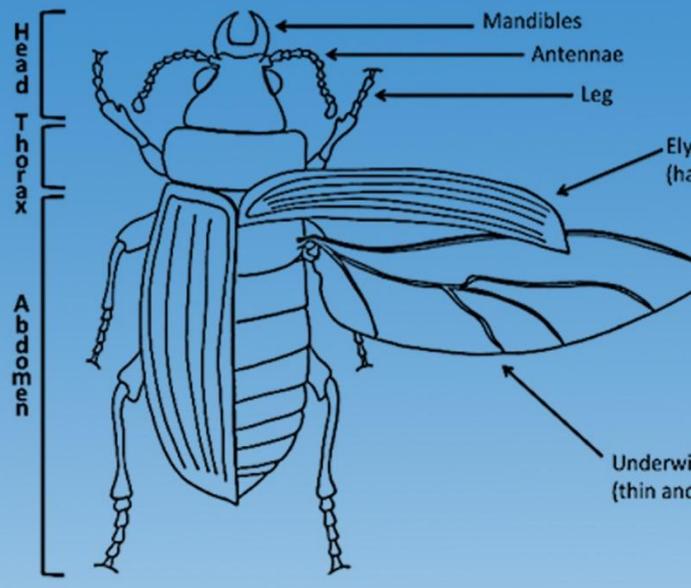


Sustainability Agriculture &



Entomology

Image 2.
Dragonfly's network of wing veins (*Aeshnidae* sp)



Saskatchewan

Activity Guide

How to Build a Simple Pitfall Trap

Time: Half an hour building time – traps should be checked after 24 hours.

What you will learn

How to catch terrestrial insects like beetles or ants safely.

What you need

- A plastic container like a plastic cup or jar
- A trowel
- A plastic funnel or a flexible material shaped into a funnel
- Some dog food, cat food, sugar or honey to use as bait
- Your field notebook

Instructions

1. First, check the weather forecast and ensure there will be no rainfall within the next three days. This will help you trap living specimens – you don't want to drown any insects.
2. Next, take your plastic container and funnel and find an area outside that you have easy access to but won't be disturbed by other people. Your own backyard is usually the best place to start.
3. Use your trowel to dig a hole in the ground about the same shape and depth as your plastic cup. Try digging in a shady, quiet spot.
4. Place your plastic cup into the hole and pat the soil down around it so that the top of the container is flush with the land around it. It's very important that the lip of the plastic container should not rise above the level of the land.
5. Once you are satisfied, bait your trap with dog or cat food if you are looking for ground beetles, or honey or another sweet bait if you are looking for ants. Only a little bit of bait is necessary (four or five pieces of cat or dog kibble, or half a teaspoon of sugar or honey).
6. Finally, place the funnel on top of the trap. The funnel should also be flush with the surrounding land. The trap works by enticing insects with the smell of food, and as they come to investigate, they slide down the funnel into the container below ground, unable to escape until the trap is checked.

7. It's important to write in your field notebook where you set your trap so you don't forget! Once the trap is set, it can be left for up to 24 hours. Insects left for too long can starve.
8. Around the 24-hour mark, return to your trap and carefully check to see if anything has fallen in. If not, the trap can be reset (bait renewed and checked again in another 24 hours). If there is an insect present, carefully remove the jar or cup, keeping the funnel overtop to prevent the insect from escaping.
9. Congratulations! You now have a ground dwelling specimen to identify, describe and draw in your field notebook. Make sure to release the specimen where you found it once you have finished describing it. Never keep a living specimen longer than an hour as this may stress it out.

Discussion

Did your trap work after the first 24 hours? Why do you think so?

What conditions do you think impact the effectiveness of pitfall traps (e.g. temperature, time of year, weather, etc.)?

Why do you think it's important to release insects back into the wild where you found them once you have finished observing them?