### Hands-On at Home: Habitat Characterization

You're now a citizen scientist, and you'd like to make your backyard more welcoming to local wildlife. How do you start? The first step is habitat characterization! The goal of your study is to find out:

- What type of habitat is present
- What wildlife already lives there, its biodiversity

### **Materials**

Paper for notes Writing utensil Gardening gloves (optional) Digital camera or phone camera (optional) Magnifying glass (optional)

## Step 1: Define the Study Area

Before doing a habitat characterization you have to determine the area you're studying. It can be your backyard, a local park, or other area of interest to you.

- 1. Draw a map of the boundaries of the study area, using an aerial view.
- Fill in locations of things like structures (house, shed), large vegetation (trees, shrubs), bodies of water, roads, etc.
- 3. What is the terrain like? Is it flat? Are there hills?



### **Step 2: Field Data Collection**

Gather your materials and go to your study area. You will be choosing microhabitats to study in more detail. Try to choose at least five microhabitats to observe, choosing some that are different from each other (dry vs. damp, shade vs. sun, understory vs. shore) and some that are similar (both dry, both shady).

1. Choose the first microhabitat to observe. Mark the location on your study area map, as shown on the example above.

What plants do you see? Identify them if possible, you can always make a sketch or take a photo for later identification using a dichotomous key or web application.

- If identifying later make sure to note pertinent details such as the shape of the leaves, the stem structure, and any visible flowers or fruit. This will make identifying easier.
- Make sure to use your gloves if handling any unidentified plants.



# What animals do you see? Identify them if possible, or sketch/photograph to identify later.

- Bugs count as animals.
- You may want to turn over rocks or look under leaf litter. Look for signs of wildlife as well such as tracks, feathers, eggshells, etc.





#### What is the soil like?

- Is it dry? Wet? What is the texture? The color?
- You may want to dig in it and note any plants or animals observed.

2. Repeat observations for multiple microhabitats, marking the location of each on your study area map.

3. Identify any plants/animals that need it. There are many apps that can help with this, some of which also allow you to contribute to citizen science projects. One example is iNaturalist. You can upload images, add observation notes, and even get help identifying organisms.

#### Step 3: Make a Report

Your report is where you look closer at the data you collected. Answer questions such as:

- How many species were observed?
- Did you observe any invasive species?
- Any native species?
- What similarities and differences did you note between the microhabitats?