

# TIEE

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Teaching Issues and Experiments in Ecology - Volume 20, February 2024

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## Materials

*Each student will need*

- transect tape (to measure 5-meter transect)
- 1 sweep net (to sample arthropods along the transect)
- 1 tupperware container with lid (to hold arthropods until they are identified)
- 3-4 small petri dishes (to isolate arthropods for identification)
- 1 lupe (to aid in identification via magnification)
- Smart phone or tablet with iNaturalist app installed
- 1 meter stick (to measure height of vegetation, i.e., grass)

## Observations

As we explore the NCMA park, make sure to observe the environment.

- What factors might affect arthropod diversity?
  - How can we measure each factor?
  - What arthropod requirements and characteristics would be helpful to refine these predictions?
- What niches are available to arthropods in the lawn vs uncut environments?
- Are there broader drivers (beyond the conditions in each environment) that might affect or drive arthropod diversity and distribution?

## Sample sites

Each student should plot and sample

- 1 transect in the cut lawn
- 1 transect in the uncut environment

Work with the other students to ensure that your transects are distributed across each environment. Pin your location on the shared Google Earth map, and label your transect (location and direction) with your group number.

## Methods practice

After you are positioned, practice your sweep net technique. Collect a pilot sample of arthropods and practice taking pictures and identifying with iNaturalist and field guides.

*Every group member should take a turn with the sweep net and identification, to ensure that you all perform the methods similarly.*

## Looking ahead

- What scientific question does your group want to investigate?
- Where should you plot your transects, to sample and compare different “treatments”?
- What data do we need to collect as a class, in order to address your question?
- How should we curate the class data in a shared spreadsheet?