

Preregistration for BIOL548T project

16 September 2022

Data collection

Yes, we already collected the data.

Hypothesis

This project aims to address two questions qualitatively:

- Does abundance of *Plethodon cinereus* change between 2004 and 2019 in Bruce Peninsula National Park?
- Do abundance trends differ between the two *P. cinereus* colour morphs (redback and leadback)?

Dependent variable

Salamander abundance is the dependent variable. To collect this metric, the number of *P. cinereus* individuals are counted in multiple plots in Bruce Peninsula National Park.

Conditions

[UNDER CONSTRUCTION]

Example 1: Two conditions: Offering summer program: yes vs no.

Example 2: 12 conditions in a mixed design lab study. Participants will be assigned to one of four conditions: math training, verbal training, memory task, or control (4 between-subject conditions). Each participant will complete a math test, a verbal test, and a memory test (3 within-subject conditions).

Analyses

[UNDER CONSTRUCTION]

Example: Linear regression predicting the simple average GPA in the semester after the intervention with a dummy variable indicating whether the participant was offered the summer program or not (intention-to-treat analysis). We will also conduct the same regression controlling for simple average GPA during the semester before the intervention, gender, & household income (an 8-point scale ranging from 1 = below \$20,000 and 8 = above \$150,000).

Outliers and exclusions

[UNDER CONSTRUCTION]

Example 1: We will compute the overall mean and standard deviation across all conditions, and winsorize at 2.5 SD above/below the mean. Example 2: We will exclude participants who incorrectly answer at least 2 of our 3 attention check questions. Example 3: We will exclude any participants who complete the survey in less than 30 seconds.

Sample size

[UNDER CONSTRUCTION]

Example: We will offer the program until 500 people have agreed to participate in it or until June 30, 2016 (whichever comes first).

Other

[UNDER CONSTRUCTION]

Example: We will include a battery of questions for exploratory purposes, including life satisfaction, amount of videogame playing, and family activity. We will also provide an additional survey with 24 questions assessing achievement orientation. We will not report the results of those analyses for the project being pre-registered. NOTE: If you leave this blank it will read 'Nothing else to pre-register.'

Study type

This pre-registration is for a class project.

Some random citations

To force the document to knit with a references section

Noël *et al.* (2007)

Wiggins *et al.* (2011)

References

- Noël, S., Ouellet, M., Galois, P. & Lapointe, F.-J. (2007). Impact of urban fragmentation on the genetic structure of the eastern red-backed salamander. *Conservation Genetics*, 8, 599–606.
- Wiggins, P., Smith, J., Harris, R. & Minbiole, K. (2011). Gut of red-backed salamanders (*Plethodon cinereus*) may serve as a reservoir for an antifungal cutaneous bacterium. *Journal of Herpetology*, 45, 329–332.