Project 2: Species Interactions

# Overview

Students will investigate what is known about how interspecific interactions impact their study system (or a system of their choice) and prepare a review of around 3 pages in length. As before, the spatial and taxonomic scale are up to the students. For well-studied systems (e.g., all mammals globally), the work does not need to be exhaustive but if there are relatively few papers for the chosen subject (20 or fewer) then all of them should be included. Topics should be broad enough that students read between 10 and 20 papers. These assignments don’t need to focus on all known interactions for that study system, but rather students should pick one or more types of interaction that are especially interesting for them or important for the system. For example, a student working on flowering plants might choose to look at the role of interspecific competition, herbivory, or pollination.

Roughly 2 pages of your assignment should focus on what is known about the chosen type(s) of interaction(s) in your system, while the 3rd page should focus on how these interaction(s) impact spatial or temporal diversity patterns in your system. Placing interactions into the context of coexistence is encouraged. For example, you might discuss how species coexist despite negative interactions (e.g., competition, predation) or how coexistence is facilitated by positive interactions (e.g., mutualisms). You are free (and encouraged) to re-use text from Project 1, however references from Project 1 don’t count toward the required 10-20 papers (but still make sure to cite them), unless they deal explicitly with measuring or testing interactions.

## Rationale

The goals of this assignment are to provide you with an overview of relevant species interactions in your system, familiarity with quantifying those interactions and their impacts, practice synthesizing knowledge from scientific publications, and experience with critical evaluation of scientific studies.

## Assignment Format

You will write around a 3-page (double spaced) summary of what is known about your chosen topic. Roughly 2 pages should focus on your chosen types of interaction(s), with the final page focus on how these interactions impact diversity patterns. This text should be written as though it was a portion of the introduction section of a paper that you’re writing. In addition to describing the interactions themselves, papers should include brief mentions of how interactions were quantified and tested, spatiotemporal patterns in the importance of interactions, and any limitations of current knowledge and studies. In-text citations and a complete reference section should be included, but they do not count against the page limit. Assignments will be submitted via Canvas.

## Grading

Students will be graded on both the scientific content of their work and the quality and style of the writing.

*Grade Breakdown:*

* At least ten papers were referenced in the text 30%
* One or more interaction types were discussed 30%
* Impact of the interaction on diversity patterns was discussed 20%
* One or more additional aspects (e.g. testing) discussed 10%
* Writing quality 10%
* Up to 10% will be deducted for excessive length -10%