

## Community Composition Paper: FINAL DRAFT

### Goals:

\_ To explore and test alternate explanations for differences in community composition

\_ To learn how seed removal and seed germination rates vary between habitats

In a broader sense, we are interested in whether differences in these removal and germination rates might explain the differences in the plant communities in the steppe and forests.

Our primary research questions have been:

- 1) How do the chances of seed predation and germination differ between forest and steppe habitats?
- 2) Do these results vary with different types of seeds?

You now have data that summarizes 1) seed removal rates in forest and steppe habitats and among two seed types, 2) seed germination success in forest and steppe habitats and among two different seed types, and 3) micrometeorological data (temperature, wind speed, RH, radiation) in the two habitats. It is now up to you to integrate all these data to try to explain why we see different plant communities in forest vs. steppe habitats.

You already have part of this paper written (in the form of the seed removal paper), but now you will be able to integrate seed germination and micrometeorological data to perhaps better explain patterns of plant composition in these two different communities.

You should have at least two hypotheses for this paper: One addresses differences in seed removal rates and one addresses differences in seed germination rates. You can use micrometeorological data to support both of these hypotheses.

**Your final draft of this paper is due in lab on the week of November 17<sup>th</sup>**

**Introduction / Set up the background and hypotheses:**

	Earned	Possible
The paper topic is placed in a broad ecological context addressing how both biotic and abiotic forces shape plant communities		10
Background information is clear and builds to hypotheses		5
Clearly stated research hypotheses		4

**Methods:**

Clear, accurate description of experimental protocols and methods		4
Description of statistical analysis		3

**Results / Figures**

Results complete and concise <u>including statistical results</u>		15
Three figures illustrating the results of study		6
Appropriate labels and data arrangement on figures		3
Statements about data made in context of hypotheses		2

**Discussion:**

Outlines and explores results of study in an ecological context (this is not simply restating your results)		15
Identify and explain sites of experimental error		4
Explore one topic for future investigation		3

**Scholarship:**

Evident that the subject was well researched (>8 primary references)		5
Statements properly cited with literature		5

**Writing:**

Well organized, concise, scientific writing style		10
Each paragraph develops from a strong topic sentence		3
Proper grammar, spelling, and punctuation		3
<b>Total</b>		<b>100</b>