

Final Exam - Plant Reproductive Ecology

Name:

Answer this question and submit the exam (with your answer) as a Word, rtf, or pdf document.

1. Now that you are a knowledgeable and well trained plant reproductive ecologist you have been assigned the task of analyzing the reproductive biology of an endangered plant species (it's a fictional species). Here is what you know about it:

- a. It is a short-lived herbaceous perennial.
- b. It grows in small populations in upland prairie sites of the Willamette Valley.
- c. It's in the snapdragon family (Scrophulariaceae) and has bilaterally symmetrical flowers with a long floral tube.
- d. The flowers are red in color with some yellow near the corolla throat.
- e. Plants appear to be self-incompatible, but this is based on anecdotal observations.
- f. There are typically around 100 ovules per flower, but seed set is very low and the populations seem to be declining for the lack of seedling establishment.

You have been asked to investigate the reproductive biology of this species to determine the primary causes of low seed set. Describe in detail what steps you would take. First identify possible causes, then describe how you would analyze each cause. Make sure to include alternative scenarios- for example, if you find X in the first experiment you will need to analyze the possibility of A, but if you find Y, then that will change your plan to focus on B, etc.

2. Read the three papers from TREE that express different opinions about the “global pollinator crisis.” Write a persuasive essay or a critique of arguments made by these authors. Use the information in these papers and any other information you can find to support your point of view (take any point of view you wish). Read all three papers before you start. Cite and list any outside papers you use.

If you have any questions send me an email or ask in class.