Instructor: Gene “Geno” Schupp  
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Location: Quinney Library 222

Timing: 10:30-12:30 MWF through late October, then the class is finished. Done with. Over.

Office Hours: Instead of posting regular office hours, I work with an open door policy. I spend many hours in my office, and unless I am working under an urgent deadline I am available for questions or any other help virtually any time MY DOOR IS OPEN. If the door is closed, don’t bother knocking. If you have questions, worries, etc., please drop by the office, see me after class, or make an appointment by phone or e-mail.

Scope of Course: This course will take a broad view of Population Ecology. We will not restrict ourselves to a single level of organization – for example, consequences of population-level processes for community structure and dynamics will be addressed repeatedly. Nonetheless, the focus will be on the fates of individuals in populations, sometimes stressing the mean individual, sometimes differences among individuals, but definitely individuals. As such, though broad in scope, it will be reductionistic in approach, and very much concerned with mechanisms driving dynamics, not just patterns. We will consider the physical environment, but the emphasis will be on the biotic environment – competition with neighbors, seed dispersal, pollination, seed predation, herbivory, diseases, etc. Throughout, we will maintain an evolutionary perspective in an attempt to understand why and how, not just what. The goal is for you to develop an appreciation for, and basic understanding of, what we know and what we still need to know about the myriad of factors influencing plant population dynamics.

IDEA Objectives:
1) Gaining factual knowledge (terminology, classifications, methods, trends) Important
2) Learning fundamental principles, generalizations, or theories Essential
11) Learning to analyze and critically evaluate ideas, arguments, and points of view Essential

Format: Most class periods will consist of a 2-hr “lecture/discussion,” including a small break after about the first hour. See below for more details. The remainder will be for student-led discussions of assigned journal papers related to lecture topics.

Readings: There are no required texts for this course. However, there will be required readings for discussions and for lecture topics, as well as occasional recommended readings. These papers will be provided by web links for you to print out or, if not available electronically, a pdf will be posted on Canvas. When you receive your set of detailed notes for a new topic (see below), turn to the end to see any required or recommended readings for that section of material, get those materials, and read them carefully.
On the outline of topics at the end of the syllabus I also note relevant pages that can be read from two older texts. If you are interested in a topic these sources can be useful for further information and even in some cases alternative views. These texts are:


Although the Harper book is now older than you are, it is an incredible source of information and insight. Both are available in the library but have not been put on reserve.

**Lectures:** The purpose of the “lectures” is to cover the material that I think is important for understanding the dynamics of plant populations. Consequently, they are fairly structured in that I will be determining the topics and the examples presented; and as is always the case, whether stated or not, I will be presenting my biases. Hopefully, however, these will not simply be lectures in the classic sense where I am talking and you are sitting and writing. What I hope for is some level of discussion and give-and-take during the lectures, with you asking questions and with all of us discussing together the importance, implications, etc. of the material we are covering. To facilitate this in-class participation, I will post pdfs of detailed handouts – your textbook, in a sense, supplied chapter by chapter – to the course Canvas page in advance of the lecture. I expect these notes, as well as any assigned readings, to have been read and thought about before class. This should free you from non-stop note taking (we will be covering a lot of material) and give you an opportunity to think, to synthesize, and to question. The goal for the class period, then, is to have a PowerPoint-based review and discussion of the material that you have already read and thought about.

**Discussions:** Discussions serve a variety of purposes, such as learning to critically evaluate papers from the primary literature, providing practice expressing and supporting a scientific opinion, adding different perspectives to lecture material (perhaps even biases different from my own!), and providing insight into how issues in plant ecology can be formulated into testable hypotheses and evaluated. Consequently, these discussions should be prepared for seriously, whether you are leading the discussion or simply participating.

We will focus on relatively recent papers that are related to lecture material. Each student will be responsible for leading the discussion on one paper. See the handout for guidelines on leading a discussion.

**Written Assignments:** In addition to a written evaluation/critique of the paper you are leading the discussion on, there will be a minimum of one, perhaps more, short writing assignment(s) in this class. All assignments must be typed (word-processed) and double-spaced.

**Exams:** There will be only one exam, a final. This final will be a single essay question. Although grammar and punctuation will not be graded, you must write your answers carefully and clearly – in this class, as in the real world, knowledge is meaningless if you cannot clearly communicate what you know. Furthermore, full credit depends on the answer being concise as well as complete with respect to the level at which a topic was presented in class or in any additional required readings assigned during the course.
**Academic (Dis)honesty:** I am embarrassed to even mention this, but am required to. This course will have zero tolerance of cheating and plagiarism. Read and believe the statement on “Academic Honesty/Integrity” ([http://catalog.usu.edu/content.php?catoid=12&navoid=3140&hl=academic+dishonesty&returnto=search](http://catalog.usu.edu/content.php?catoid=12&navoid=3140&hl=academic+dishonesty&returnto=search)). If you have any question about what constitutes academic dishonesty, or what the consequences of dishonesty may be, see Article V, Section V-3, and Article VI of the USU Student Code ([https://studentconduct.usu.edu/studentcode/](https://studentconduct.usu.edu/studentcode/)). In brief, academic dishonesty is not only grounds for failing the course, but potentially for being expelled from the University.

**Students with Disabilities:** If you have any disability that requires some accommodation, such as the use of a reader, note-taker, interpreter, alternatives to print media (e.g., Braille, large print, or audio format), or extra time for exams, the University and I are more than happy to accommodate you to the fullest extent possible. However, you must document your disability and needs at the Disability Resource Center in University Inn 101 and talk to me as soon as possible. Without documentation I cannot accommodate your needs.

**Grading:**

- short writing assignment 30 (each)
- final exam 200
- lead on discussion paper:
  - in-class leading of discussion 40
  - written evaluation of paper 40
- general participation in discussions 50

At any time during the course you can get a **rough** idea of how you are doing by calculating the percent of possible points that you have received and comparing to the scale below. But remember, this is a **rough** idea.

A = 90-100%, B = 80-89, C = 70-79, D = 60-69, F = <60
## Tentative Outline

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<th>Topic</th>
<th>S&amp;C&lt;sup&gt;a&lt;/sup&gt;</th>
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<td>1</td>
<td>Introduction, History, Definitions</td>
<td>1 (2 &amp; 3)</td>
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<td>2</td>
<td>Life Tables and Population Models</td>
<td>p. 5-9, 122-135, ch. 6 (7)</td>
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<td>Dormancy &amp; Seed/Seedling Banks</td>
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<td>Herbivory: Effects on Populations and Communities</td>
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<td>Seed Dispersal</td>
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<sup>a</sup> = chapters or pages from Silvertown & Charlesworth, <sup>b</sup> = chapters or pages from Harper

Readings in ( ) will not be directly addressed in lecture, but would be interesting to read anyway.