## Teaching Notes for Wolf Spider Foraging Case Study

### By *Cindy Bennington*

### Department of Biology, Stetson University, DeLand, FL 32720

*cbenning@stetson.edu*

**Course Information**

Department: **Biology**

Level: **Lower Undergraduate**

Course type: **Ecology and Evolution is a 200-level course required of Biology and Environmental Science majors (lab and lecture)**

Students: **Majors**

Number of Students: 48

**Module Information**

Module Name: Wolf Spider Foraging Case Study

Files associated: Lecture Powerpoint, Figure from Mayntz et al. (2005)

Learning Goals:

* To reinforce understanding of predator-prey cycles.
* To reinforce understanding of scientific method and experimental design.
* To introduce optimal foraging and the role of natural selection in determining a foraging strategy.

**Teaching Notes**

This case study was created to complement Predation, Herbivory and Parasitism SimUText chapter (SimBio, <http://simbio.com/products-college/simutext-ecology>) and was developed while participating in SimBio’s FMN. Prior to the presentation of the case study, students will have been introduced to natural selection and predator-prey interactions.

This is a Clicker/Interrupted Case (based on the case types listed by the National Center for Case Study Teaching in Science). Multiple choice questions will be presented so that students will answer them individually in a polleverywhere survey, with short discussion following the reveal of each answer. Open-ended questions will be presented to students with a chance to think-pair-share before opening the discussion to the class and then moving to the next portion.

The Notes section of each PowerPoint has correct answers noted and additional information in some cases.

**Adapting the case:**

There are several ways the case could be made shorter and/or more focused. For example, Greenstone’s 1979 study, and questions about its limitations, could be eliminated to make a quick ~10 min study related to the Mayntz et al. (2005) paper. Conversely, to make it longer, students could be asked to design an experiment that might address some of the limitations of Greenstone’s observational one before being introduced to the study of Mayntz et al. (2005).