

BSC 337 WILDLIFE FIELD METHODS

Fall 2015

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Text book: NONE.

Focus, Scope, and Content

This class is a field based, sampling intensive class designed to teach students the fundamental techniques most commonly used in data collection by wildlife biologist. Students will get hands on experience by doing. This is NOT a class where we go out and listen to a talking head or an expert speak on this or that. In this class we do the activity or employ the technique of interest. Many of these techniques will become rote or ritualistic over time, but rest assured that the assignment will have value.

The focus of this class in general will be three fold. The first part will be devoted to vegetation sampling techniques. Vegetation sampling is not as glamorous as catching a wild animal, but it is the most important source of data you can collect. It provides the context under which you interpret and draw inference from your animal data. So we will employ techniques for sampling herbaceous, shrub, and woodland vegetative communities in terms of density (how many), frequency (how often), dominance (how much). You will get tired of measuring vegetation, but you will like it.

The second part will be two fold: Capture and marking techniques, and Estimation of animal abundance. We will be limited to an extent on what we can attempt to capture, but at the very least we will use Sherman live traps to capture mark and estimate population size of rodents; drift fence pit fall traps for herps, and mist netting/bird banding for birds. We will employ our capture data when possible to estimate population and community statistics such as richness, diversity, and abundance. Other sampling techniques will include transect sampling for bird abundance, radio-telemetry, and maybe nighttime spotlight counts for whitetailed deer.

The third part of this class will be devoted to data analysis of the parameter estimation. This will involve calculation of a population estimates from rodent mark recapture work, density estimates of bird populations from distance sampling, and other important parameters. Some of this will be by hand, some will be on the computer, assuming they work.

On days when the weather is bad, we will lecture in the classroom. Periodically, I will handout readings that pertain to the technique we will be utilizing and learning.

Where will we do these great things?

Our work will be conducted on university property which includes the constructed wetlands south of town, the Irwin Bottom wetlands north of town, and various areas of the university farm. If the need arises and can be addressed there, we may try and go to Cooper Lake State Park. We will meet at the classroom and leave as a group. Carpooling would be very efficient and appreciated.

Grading. Like GIS, it makes no sense to have exams in this class. So there will be no exams. But we still need to do something that allows me to give you a grade. So, I have developed some exercises that will coincide with the field work we do. We collect the data, I will cover how to do the analysis, and you analyze the data you collect. In some cases, journal articles will be given pertaining to the technique we actually did, with questions for you to answer. You will be graded on exercise write ups involving some aspect of data analysis of the exercise we are involved in. There will be in class exercises for points that will complement the field work. Although each analysis and write up may differ in length and complexity, the point values will be the same for each exercise (25 pts.).

General outline of exercises.

1. Vegetation I. Herbaceous plant communities. Quadrat sampling, visual obstruction.
2. Vegetation II. Woody plant communities. Quadrat sampling, DBH, Line Intercept.
3. Population I. Indices. Pellet group counts for deer and rabbits.
4. Population II. Mark-Recapture; Sherman Live traps.
5. Population III. Distance sampling.¹
6. Radio-Telemetry. Triangulation, homing, habitat use, survival.

¹ Dependent upon access to suitable site.

Total points possible: 150. Grades are points earned/points possible x 100%. Due dates will be assigned when the exercises are assigned.

What you need for this class. First, you need all the necessary items for working in the open field. Sun block, bug spray, hat, good boots or other field compatible footwear. If you own a compass, and binoculars that would be helpful as well, but not required. You will also need a clip board. If you are allergic to the natural world, then you should have whatever medicine you need to deal with that...rescue inhalers, epi-pens, etc. If you feel the need to wear snake leggings, we have some in the equipment closet.

You will need the proper attitude. Vegetation work (e.g., habitat work) is not glamorous, but important. There will be tendency to get bored and impatient. Your thoughts will turn to charismatic megafauna. And you may come to hate vegetation. But you need to recognize that this is for a purpose, that may or may not be immediately realizable...it may not pay off in the immediate sense. Attitude is important.

Obligatory statements:

Code of Conduct. All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment (see Student's Guide Handbook, Policies and Procedures, Conduct).

Plagiarism is a criminal activity. You must cite all sources of information. Copying of material, whether parts of sentences, whole sentences, paragraphs or entire articles will result in a grade of zero for your assignment and can result in further disciplinary action. Note that this is true throughout the University and we do have plagiarism detecting software in place. Further information for avoiding this activity will be provided with your written assignments.

Students with disabilities: The Americans with Disabilities Act (ADA) is federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: **Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, (903)-886-5150, or (903)-886-5835, FAX (903)-468-8148, StudentDisabilityServices@tamu-commerce.edu.**

*The instructor reserves the right to change, alter, modify, this syllabus as needed (rain, ice/snow, bigfoot invasion, arrival of the mothership); such changes will be announced in class before hand, so as to ensure a '*no surprises*' approach to the class.