BSC 597 – Wildlife-habitat Relationships

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Course objectives:
Habitat is a central concept in the fields of wildlife ecology, conservation and management and incorporates aspects of animal behavior, community ecology and population dynamics. Ecological topics including foraging ecology, dispersal, predator-prey and plant-animal interactions, and population dynamics can be linked through the habitat selection concept. The study of wildlife-habitat relationships primarily seek to describe how the distribution and abundance of resources used for food, cover and security, and constraints on the use of these resources influence the distribution of animals. This course will cover aspects of animal behavior related to how animals select habitat, theoretical models of habitat selection, the influence of inter- and intra-specific interactions on habitat selection, and habitat quality. In addition we will discuss study designs for wildlife-habitat studies, modeling habitat selection and data analyses

Grading
Grades will be based on attendance and participation in discussions during class, weekly writing assignments, presentation and final exam.

Attendance and Participation	20%
Weekly writing	20%
Presentation	30%
Final exam	30%

Textbook:

- Morrison, M.L., B.G. Marcot, and R.W. Mannan. 2006. Wildlife-habitat Relationships: concepts and applications

Additional Reading*:*

- Additional journal articles and book chapters will be assigned.

Expectations and responsibilities of students:
1. Regular attendance in and participation in lecture is expected. The final exam will cover material from the entire course.

2. Students are expected to read the text chapters and journal articles prior to the lecture in which the topics are discussed.

Obligatory Statements:
All student 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 score of zero for your essay 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 a 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, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148,** StudentDisabilityServices@tamu-commerce.edu

Lecture Schedule (Tentative)

Week	Topics
1) 1/19	**T:Introduction** **TR: Concepts of wildlife-habitat relationships** Reading: Chapters 1-3 Morrison et al. 2006
2) 1/26	**T: Habitat selection and animal behavior** Reading: Alcock 1984; Mayr 1974 **TR: Studies of the behavior of habitat selection** Reading: Wecker 1963; Klopfer 1963; Tordoff et al. 1998
3) 2/2	**T: Cues for habitat selection** Reading: Davis and Stamps 2004; Hamerstrom et al. 1973; Parejo et al. 2004 **TR: Cues for habitat selection** Reading: Ward 2005; Hahn and Silverman 2006; Campomizzi et al. 2008
4) 2/9	**T: Competition** Reading: Williams and Batzli 1979; Matter et al. 1989; Johnson et al. 2000 **TR: Predation** Reading: Werner et al 1983; Mao et al. 2005; Thomson et al. 2006
5) 2/16	**T: Habitat selection and environmental scale** Reading: Weins1985; Orians and Wittenberger 1991 **TR: Hierarchical habitat selection and limiting factors** Reading: Rettie and Messier 2000; Dussault et al. 2005
6) 2/23	**T: Heterogeneity** Reading: Chapter 8 Morrison et al 2006; Kie et al. 2002; Winnie et al. 2008 **TR: Theoretical models of habitat selection** Reading: Rosenzweig 1991; Fretwell and Lucas 1969
7) 3/2	**Sources, sinks and ecological traps** Reading: Pulliam and Danielson 1991; Gates and Gysel 1978; **Habitat quality** Reading: Van Horne 1983; Brown et al. 2002; Johnson 2007
8) 3/9	TBD
9) 3/16	Spring Break
10) 3/23	**T: Measurement of wildlife-habitat relationships** Reading: Hall et al. 1997; Morrison 2001 **TR: Measurement of wildlife-habitat relationships** Reading: Chapters 4-6 Morrison et al. 2006
11) 3/30	**T: Measurement of wildlife-habitat relationships** Reading: Chapters 4-6 Morrison et al. 2006 **TR: Study considerations** Reading:; Beyer and Haufler 1994; Garshelis 2000; Barry and Elith 2006
12) 4/6	**T: Study designs for habitat selection** Reading: Alldredge and Griswold 2006; Thomas and Taylor 2006 **TR: Modeling habitat occupancy** Reading: Mackenzie 2006; Kroll et al. 2007
13) 4/13	**T: Resource selection functions** Johnson et al. 2006; Slauson et al. 2007 **TR: Resource utilization functions** Reading: Marzluff et al. 2004; Millspaugh et al. 2006
14) 4/20	**Habitat Management** Reading: Chapter 11 Morrison et al. 2006; Klar et al. 2008
15) 4/27	**Student Presentations**
16) 5/4	TBD
5/11	Finals week