

ANTHROPOLOGY 186Z  
LAB COURSE IN ZOOARCHAEOLOGY  
M/W 11:00-12:15  
HSSB 1021

Professor: Dr. Amber VanDerwarker

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Office Hours: M/W 9-10am or by Appt.

### I. Course description

This course is designed to provide a relatively comprehensive understanding of zooarchaeology, in addition to hands-on experience working with animal skeletal remains. We will focus primarily on vertebrates, although we will minimally discuss invertebrates as well. We consider the history of the discipline, field and lab methodology, the uses of zooarchaeological data to reconstruct environment and subsistence, spatial versus temporal analysis, quantitative methods, and taxonomy. Readings cover the above topics, in addition to several case studies. Class will be divided between seminar/lecture and lab time. Students will be involved in hands-on identification, and will collectively conduct an analysis of a zooarchaeological assemblage, in addition to a final project report.

### II. Course Requirements

Students will be evaluated by attendance and participation in seminar and lab; brief annotations of readings assignments due weekly; weekly labs; an animal habitat project; and a final project that is the outcome of the zooarchaeological analysis conducted by the class in the lab sessions. Extra lab time will be required to study for Osteology quizzes and to identify bones for the final project report. Extra lab time will be Mondays and Wednesdays 12:00-1:30.

#### **Grading**

- |                         |     |
|-------------------------|-----|
| • Seminar Participation | 10% |
| • Reading Annotations   | 15% |
| • Lab Attendance        | 10% |
| • Quizzes (4 = 5% each) | 20% |
| • Habitat Project       | 15% |
| • Final Project         | 30% |

#### **Readings Annotations**

Readings are required and students should be prepared to discuss them in seminar. Students are required to annotate each reading, providing a 100-200 word summary of pertinent information. These are due each Monday in class. Annotations should be single spaced and handed in at the end of class. See course schedule for reading assignments. Each week, one or two graduate students will be in charge of leading seminar discussion of the articles during weeks 6-9.

#### **Seminar Participation**

It is expected that students will come to class regularly and participate in class discussion during the seminar. While students will not be directly penalized for missing class, attendance will be taken; students who do not regularly attend will suffer in their participation grade. Seminar discussion will be led by graduate students in the course (weeks 6-8) – it will be their job to prepare discussion questions about the readings and to **prepare together in advance** of the seminar.

#### **Lab Attendance**

In addition, you are expected to show up for the lab component of the class. If you do not regularly attend the lab component of the class, then you will fail your ID quizzes, and you will not complete the identification of your samples, which are necessary in order to complete your final class project. In order to have sufficient time to study for quizzes and

complete your sample identification, extra lab times are available prior to class (**see below for the open lab study time schedule**). It is unlikely that you will pass your quizzes without spending extra time in the lab.

### **Open Lab Study Times:**

	<u>Mondays</u>		<u>Tuesdays</u>		<u>Fridays</u>	
	<b>dates</b>	<b>times</b>	<b>dates</b>	<b>times</b>		
Week 2	4-Apr	3-5pm	5-Apr	9-11am	8-Apr	12-2pm
Week 3	11-Apr	3-5pm	12-Apr	9-11am	15-Apr	12-2pm
Week 4	18-Apr	3-5pm	19-Apr	9-11am	22-Apr	12-2pm
Week 5	25-Apr	3-5pm	26-Apr	9-11am	29-Apr	12-2pm

### **Animal Habitat, Seasonality, and Ageing/Sexing Project**

For this project, the class will be divided into groups of 2-3 students. Each group will be assigned an animal (you will be able to choose) native to the Roanoke River Valley of Virginia and will research information related to the animal's habitat/habits, seasonality of its life cycle and reproductive cycle, and osteological methods of ageing/sexing. Most of the information will be general, but there may be some specific information related to habitats that pertains to the region. Each group will prepare a well-written, organized, and well referenced handout for each classmate (1 page max, front and back – may be designed as a brochure if you like). Group presentations will be held on Wednesday of Week 6 (May 4th).

### **Final Project**

The final project will comprise the remaining 30% of the final grade. At the end of the quarter, Dr. VanDerwarker will provide a dataset from a faunal collection from the Roanoke Valley of Virginia (all data will be in excel spreadsheet format). This database will be distributed to students during **Week 7**. Each student will then conduct a quantitative analysis and write a report including sections on methods of identification and analysis, summary of basic results, a detailed quantitative data presentation, and final interpretations. For the undergraduates, the report should be 7-10 pages of double-spaced text; Graduate student reports should be 14-16 pages of text. All reports should be accompanied by supporting tables and figures. More specific guidelines will be forthcoming. **The final project report will be due on the Friday of Final Exam week (June 10th, 5pm PST)**. This will give everyone 4 weeks for data analysis and write-up. You can consider the final project report as a take-home final exam.

### III. Readings

All of the readings (with the exception of readings from the 2 books below) are available as PDFs on Gaucho Space. See the course schedule below to see the order of readings. Books are listed here, but the articles are listed only in the course schedule. You are expected to have already read the assigned reading prior to the day it is listed. Your annotations will be due at the end of each class for which you were assigned readings. The books below are on sale at the bookstore, or you can order them online.

- Reitz, Elizabeth J. and Elizabeth S. Wing, 2008, Zooarchaeology. Cambridge Manuals in Archaeology, 2<sup>nd</sup> Edition. University of Cambridge Press.
- Lyman, R. Lee, 1994, Vertebrate Taphonomy, Cambridge Manuals in Archaeology, University of Cambridge

## IV. Class Schedule

Each week will be divided into discussion/seminar format and lab format. Mondays are reserved for discussions/lectures, and Wednesdays for labs. Both will be held in HSSB 1021, the department's teaching lab.

### WEEK 1: Getting Started

- Monday, March 28
  - ❖ Outline of Course Objectives
  - ❖ Lab Orientation & Tour of Facilities
  - ❖ Mammalian Osteology lab (includes intro to terminology)
- Wednesday, March 30, Lecture
  - Readings:
    - Reitz and Wing, *Zooarchaeology*, Chapters 1-3 (**annotate EACH chapter**)

### WEEK 2: An Overview of Zooarchaeology & History of Research

- Monday, April 4, Lecture
  - Readings:
    - Lyman, *Vertebrate Taphonomy*, Chapters 1-3 (**annotate EACH chapter**)
- Wednesday, April 6, Lab
  - **Quiz** on Mammalian Osteology (elements, orientation, taxonomic identification)
  - Avian Osteology Lab

### WEEK 3: Preservation/Taphonomy of Zooarchaeological Assemblages

- Monday, April 11, Lab
  - Continue Working on Avian Lab
- Wednesday, April 13, Lab
  - **Quiz** on Avian Osteology (elements, orientation, taxonomic identification)
  - Reptiles/Amphibians Lab

### WEEK 4: Sampling, Recovery, & Quantification

- Monday, April 18, Lecture
  - Readings:
    - Reitz and Wing, *Zooarchaeology*, Chapter 5
    - Peres, 2010, Methodological Issues in Zooarchaeology, *Integrating Zooarchaeology and Paleoethnobotany*, pp. 15-36.
    - James, 1997, Methodological Issues Concerning Screen Size Recovery Rates and Their Effects on Archaeofaunal Interpretations. *Journal of Archaeological Science* 24: 385-397.
    - Grayson, 1989, Sample Size and Relative Abundance in Archaeological Analysis: Illustrations from Spiral Fractures and Seriation. In *Quantifying Diversity and Archaeology*, ed. by R. Leonard and G. Jones, pp. 79-84. CUP, New York.
- Wednesday, April 20, Lab
  - **Quiz** on Reptiles/Amphibian (elements, orientation, taxonomic identification)
  - Bony & Cartilaginous Fishes Lab

### WEEK 5: Ageing and Sexing & Research Design

- Monday, April 25, Lecture
  - Readings:
    - Reitz and Wing, *Zooarchaeology*, Chapters 6-7 (**annotate EACH chapter**)
- Wednesday, April 27, Lab
  - **Quiz** on Fishes (elements, orientation, taxonomic identification)

### WEEK 6: Basic subsistence reconstruction

- Monday, May 2, Seminar
  - Readings:

- Reitz and Wing, *Zooarchaeology*, Chapter 8
- VanDerwarker, Amber, 2006, Chapter 5, Hunting, Fishing, and Trapping: Analysis of the Animal Data, in *Farming, Hunting, Fishing in the Olmec World*, pp. 116-181.
- Pavao-Zuckerman, Barnet, 2000, Vertebrate Subsistence in the Mississippian to Historic Transition. *Southeastern Zooarchaeology* 19(2):135-144.

- Wednesday, May 4, Animal Habitat **Presentations**

### WEEK 7: Butchering, Transport, and Body Part Indices

#### [Prof VanDerwarker to distribute Assignment Specifications and database for final project]

- Monday, May 9, Seminar
  - Readings:
    - Grayson, 1989, Bone Transport, Bone Destruction, and Reverse Utility Curves. *Journal of Archaeological Science* 16:643-652.
    - Lyman, *Vertebrate Taphonomy*, Chapter 7
    - Metcalfe and Jones, 1988, A Reconsideration of Animal Body-Part Utility Indices. *American Antiquity* 53(3):486-504.
    - VanDerwarker and Stanyard, 2009, Bearsfoot and Deer Legs: Archaeobotanical and Zooarchaeological Evidence of a Special-Purpose Encampment at the Sandy site, Roanoke, Virginia. *Journal of Ethnobiology* 29(1): 129-148.
- Wednesday, May 11, Lab
  - Sorting/Identifying Deer Samples

### WEEK 8: SOCIAL COMPLEXITY

- Monday, May 16, Seminar
  - Readings:
    - Peres, 2008, Foodways, Economic Status, and the Antebellum Upland South in Central Kentucky. *Historical Archaeology* 42(4):88-104.
    - Scott, 2008, Who Ate What? Archaeological Food Remains and Cultural Diversity, in *Case Studies in Environmental Archaeology*, ed. by E. Reitz, C. M. Scarry, and S. J. Scudder, pp. 357-374. Springer, New York.
    - VanDerwarker, 1999, Feasting and Status at the Toqua Site, *Southeastern Archaeology* 18(1):24-34.
    - Zeder and Arter, 2008, Meat Consumption and Bone Use in a Mississippian Village, in *Case Studies in Environmental Archaeology*, ed. by E. Reitz, C. M. Scarry, and S. J. Scudder, pp. 337-356. Springer, New York.
- Wednesday, May 18, Lab
  - Sorting/Identifying Deer Samples

### WEEK 9: LAB, LAB, LAB

- Monday, May 23, Lab
  - Sorting/identifying deer/identifying deer samples
- Wednesday, May 25, Lab & Course Wrap-up!
  - Sorting/identifying deer/identifying deer samples

### WEEK 10: WORK ON YOUR FINAL PROJECT REPORTS!

**FRIDAY, June 10<sup>th</sup>** – Final Project Reports are due by 5pm in electronic format, emailed to [vanderwarker@anth.ucsb.edu](mailto:vanderwarker@anth.ucsb.edu).