Course Syllabus

ANTHROPOLOGY 4813
ZOOARCHAEOLOGY of Birds and Fishes
Spring 2014

Tuesday 6:30-9:00 pm
McMillan G056
Lucretia Kelly, Instructor
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Zooarchaeology is the study of human relationship with animals through the analysis of animal bones from archaeological sites. This course provides an introduction to the use of animal bones in archaeological research and focuses on bird and fish bones. Students will gain hands-on experience identifying bird and fish bones and will learn major theoretical and methodological issues in the use of animal bones as a source of information about prehistoric societies.

The course will be made up of lecture and laboratory sessions. Topics to be covered include:

- basic identification and recording of bird and fish bones concentrating on taxa from the Midwestern United States. Lectures will cover evolutionary trends, taphonomic perspectives, problems and methods of quantification and determination of seasonality, recognition of human from non-human deposition/damage of bones, hunting strategies, among others.

- there will be quizzes covering bone identifications and to a lesser extent the assigned readings.

- students will be required to compile a laboratory notebook (a 3-ring loose-leaf is requested) of annotated drawings of animal bones covered in the class. It is preferred that students hand draw the bones being studied, but because of limitations on access to the lab to complete the drawings, drawings may be supplemented with those taken from osteological manuals, pictures taken with personal cameras, and/or taken from reputable internet sites. Drawings must include key characteristics used in identification of taxa. The notebook should also be supplemented with pertinent references and additional information regarding the identification of the studied taxonomic groups. Class notes, key-assigned readings, worksheets, and other class related papers should also be included. The goal of this requirement is to provide a useful resource that will aid in future field study of animal bones. It is very important to work on the notebooks as the course progresses. Notebooks are due at the time of the final exam and no late notebooks will be accepted.

- students may have the opportunity to process a fish and a bird for their bones as a class activity depending upon the availability of fish and birds to process as well as the processing facility. This exercise is to help students visualize and learn first hand how each type of skeleton is articulated. It is often difficult to conceptualize a whole skeleton (particularly that of a fish) when working with fragmentary archaeological specimens. This project may be worked on in pairs depending on how many are in the class. This also provides a view of
what some may believe to be the “down-side” of zooarchaeology - preparation of an osteological comparative collection. This is not a mandatory activity and a student’s grade will in no way be affected if they choose not to participate.

• graduate students and students in the accelerated University College program will be required to prepare a paper (around 7-10 pages) on the an aspect of zooarchaeological research that relates to birds or fish. You should include the amount of work that has been done in the area of research you choose, as well as major gaps that exist, and the direction of future research. (Undergrads may also do a shorter paper for extra credit – see grading below).

• Grading: Please note that plagiarism, copying from other students, and other forms of cheating will not be tolerated. Violations of standard rules of academic integrity will be reported to the Dean and may lead to disciplinary action, which could result in expulsion from the University.

Quizzes: 70%;
Notebook: 20%
In-class activity: 5%
Class attendance: 5% (see note below)
Papers: 20% (students writing papers for credit will be graded on a 120 point scale)
Extra credit work: no more than 5%

PRELIMINARY COURSE OUTLINE: Subject to change

PLEASE NOTE: It is very important to attend every class because it will be very difficult to make up a class due to the hands-on nature of the course. Time will be given for drawing of bones during some of the class periods. However, additional time in the lab outside of regular class time may be necessary and will have to be arranged with the instructor. The instructor must be notified before class if a student will be absent.

Readings other than those from the required texts may be obtained on Blackboard in the Course Documents section. See note below regarding the readings before you print them out.

Week 1. January 14
Introduction to Zooarchaeology and course orientation; introduction to avian evolution and avian skeletal terminology
Readings: Reitz and Wing 2008, chps. 1, 2, 3 (to pg. 44); Serjeantson 2009, chps. 1-2; Driver 1992; Gobalet 2001; Bochenski 2008

Week 2. January 21
Continue avian skeletal terminology; introduction to Avian axial osteology; seasonality
Readings: Continue readings from Week 1; Van Neer et al. 2002; Serjeantson 2009, chap. 3 to pg. 53, 256-259.
Week 3. January 28
Introduction to Avian appendicular osteology; bird taphonomy.

Week 4. February 4
Possible Bird Maceration; Review for 1st Quiz
Readings (relate to processing of carcasses. If we are unable to macerate you don’t have to do the readings): Holden 1914; Baker et al. 2003; Greenfield and Freer 2002; Davis and Payne 1990

Week 5. February 11
1st QUIZ - Bird axial and appendicular Osteology (15%).
Lecture after the quiz: Introduction to miscellaneous avian elements; measurement of bird bones, bird domestication; finish bird maceration if started.
Readings: Serjeantson 2009, chps. 11 & 12; [Von den Driesch 1976, pp. 103-129 (reference only)]

Week 6. February 18
PAPER TOPICS DUE. Introduction to fish evolution and skeletal terminology; begin introduction to bones of the neurocranium; discussion of recovery techniques.

Week 7. February 25
Finish introduction to bones of the neurocranium and jaws; fish taphonomy. Possible fish maceration.

Week 8. March 4
Introduction to bones of the gill covers and hyoid area; fish measurement. Review for Quiz 2 and lab time. Finish maceration if necessary.
Readings: Wheeler & Jones 1989, Chp. 9

Week 9. March 11
NO CLASS – SPRING BREAK

Week 10. March 18
Quiz 2 – Bird Osteology and Fish Osteology studied to date (15%).
Short lecture after the quiz: Determination of seasonality and trade from fish bones. Lab time.
Readings: Morey 1983; Wheeler & Jones, Chp. 11

Week 11. March 25
Introduction to bones of the pectoral girdle and other miscellaneous bones; recording of data.
Readings: Reitz and Wing 2008, Chapter 6; Wheeler and Jones 1989, Chp. 8
Week 12. April 1
Catch-up week – lab time, review for 3rd Quiz.

Week 13. April 8
3rd QUIZ: fish osteology with some bird osteology as extra-credit (15%).

Week 14. April 15
Quantification of faunal data with in-class activity (5%); Lab time.
Readings: Lyman 1994, Chp. 4, pp 97-113; Reitz & Wing 2008, Chp. 6 (continued);
Wheeler & Jones 1989, Chp. 10

Week 15. April 22
Review for Final Exam; finish notebook drawings. PAPERS DUE (20% for grad students; 5% extra credit for undergrads), short presentation given by those who wrote papers.

Week 16. April 29
FINAL EXAM (25%) covering total semester and NOTEBOOKS DUE (20%).

READINGS

Required Books for class:
Serjeantson, Dale

Wheeler, Alwyne and Andrew G. Jones

The following are readings that may be on quizzes, but information contained in them will be covered in lectures. Some of the readings are technical and not “easy” reads, but would like them to be read or scanned to give students a feel for the zooarchaeological literature. All the readings are on Blackboard in the Course Document section.

Baker, P. S. Davis, S. Payne, and M. Revill

Bochenski, Zbigniew M.

Davis, Simon and Sebastian Payne

Driver, J. C.
Gobalet, Kenneth W.

Greenfield, H. J., and S. Freer

Holden, F. Harvey

Jones, Andrew K. G.

Lyman, R. Lee

Morey, Darcy F.

Reitz, Elizabeth and Elizabeth Wing

Willis, Lauren M., Metin I. Eren, and Torben C. Rick

Van Neer, William, Katrien Noyen, Bea De Cupere, and Ingrid Beuls

**ADDITIONAL BIRD AND FISH OSTEOLOGY REFERENCES**

The following texts and articles are available in the lab to be used as references. They are not allowed out of the lab except to xerox and they must be signed out for this purpose.

Baumel, Julian J., Anthony S. King, James E. Brazile, Howard E. Evans, and James C. Vanden Berge
Branson, Branley A.  

Cailliet, Gregor M., Milton S. Love, and Alfred W. Ebeling  

Cannon, Debbi Yee  

Casteel, Richard W.  

Cohen, Alan, and Dale Serjeantson  

Daniels, Robert A.  

Davis, Simon  

Gilbert, B. Miles, Larry D. Martin, and Howard G. Savage  
1981  *Avian Osteology.* B. Miles Gilbert, publisher. Laramie, WY.

Gregory, William K.  

Hargrave, Lyndon L.  
1972  *Comparative Osteology of the Chicken and American Grouse.* Studies in Biology No 1, Prescott College, Prescott, AZ.

Hesse, Brian and Paula Wapnish  
Klein, Richard and Kathryn Cruz Uribe

Koch, Tankred

Krause, J. D.

Lepiksaar, Johannes

Lyman, R. Lee

Morales, Arturo and Knud Rosenlund
1979  Fish Bone Measurements. An Attempt to Standardize the Measuring of Fish Bones from Archaeological Sites. Steenstrupia, Copenhagen.

Mundell, Raymond L.
1975  An Illustrated Osteology of the Channel Catfish (Ictalurus punctatus). National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

O’Connor, Terry

Olsen, Stanley J.

Proctor, Noble S. and Patrick J. Lynch

Rackham, James R.

Reitz, Elizabeth and Elizabeth Wing
Schmid, Elisabeth  

Serjeantson, Dale  

von den Driesch, Angela  

Wheeler, Alwyne and Andrew G. Jones  

Wing, Elizabeth S., editor  

Woolfenden, Glen E.  
ANTHROPOLOGY 4813
STUDENT DATA SHEET

Student name: ________________________________

Student email and phone: ________________________________

Year in school (freshman, sophomore, graduate etc): ________________

Major: ____________________________________________

Minor: ____________________________________________

Please list other anthropology/archaeology courses taken: ________________

____________________________________________________________________

Why are you taking this course? (Be honest; it’s OK). ________________

____________________________________________________________________

Anything else you want me to know? ________________

____________________________________________________________________

Signature: ___________________ Date: ____________