

**ANTHROPOLOGY 3310B
ZOOARCHAEOLOGY**

Winter 2017, Tues 1:30 – 4:30 pm, SSC 2257

Instructor: Dr. Lisa Hodgetts
Office Hours: Mon 11am-noon or by appt

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Course Description and Objectives:

This course aims to introduce you to the wide range of information that can be gleaned about past human groups from the animal remains they left behind after butchery, meals, toolmaking and other activities. You will also gain practical experience in the identification and analysis of faunal remains. The course will be divided into two parts: one lecture and one lab each week. The lectures (first half of each class) will cover topics in zooarchaeological theory and practice including taphonomy, quantification, seasonality, prey selection, domestication and behavioural ecology. The labs (second half of each class) will teach the basics of skeletal identification for the most common types of vertebrate remains recovered from archaeological sites: fish, birds, carnivores, rodents and ungulates. They will also provide experience in the identification and recording of fragmentary archaeological remains.



Learning Outcomes:

By the end of the course, students will be able to:

- 1) identify complete and partially fragmented skeletal remains of fish, birds and mammals to skeletal element and class (order for some mammals)
- 2) identify a range of factors that impact an animal bone assemblage before it arrives in a zooarchaeology lab for analysis, and describe how each factor affects the assemblage
- 3) effectively use MS Excel to graph archaeological datasets
- 3) apply a range of theoretical and methodological approaches to the interpretation of animal bones from archaeological sites in order to reconstruct past human behavior
- 4) utilize other lines of archaeological evidence to support their interpretations of zooarchaeological evidence
- 5) evaluate the strength of others' interpretations of zooarchaeological evidence.

Required readings:

All of the required readings are available online through OWL. You can also access the lab manual in OWL. Please print yourself a hard copy of the manual.

Evaluation:

3 Assignments	30% (10% each)
4 Bone quizzes	20% (5% each)
Lab Exam	20%
Final exam	25%
Participation	5%

Your course grade will be determined based on your performance in both the lecture and laboratory components. Knowledge of lecture topics will be evaluated in a series of three assignments, each of which will ask you to interpret a small data set, and in a final exam during the exam period. Knowledge of the lab component will be evaluated in four short bone identification quizzes that will take place at the beginning of lab sessions (as outlined in the course schedule). Each quiz will include *all* of the material covered up to that point. It will also be assessed through a final lab exam, which will include a bone identification component, as well as objective and short answer questions based on material from the labs. Your participation grade will be determined based on your attendance and the quantity and quality of your contributions to class discussions.

Course Policies:

PREREQUISITES: ANTH 2229F/G is a prerequisite for this course. Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

ASSIGNED READINGS: You are responsible for all assigned readings unless notified otherwise by the instructor. Please read them before class each week since we will discuss them in class.

ATTENDANCE: Attendance forms part of your participation grade. Since much of the course material is not in the readings, and the labs require hands-on interaction with the bones, it is important that you attend every class. Please keep in mind that all material covered in class may be tested on the exams. If you are unable to attend a class, please let me know in advance if possible, or as soon as possible afterwards, and be sure to get notes from a classmate.

ASSIGNMENTS

Submission: Assignments must be submitted both electronically, through the Assignments tab in OWL, and as a hard copy in class. Your assignments will not be considered complete until BOTH the electronic and paper copies are submitted. If you are unable to submit a hard copy of your assignment in class, you may leave it in the drop box outside the Anthropology Main Office (SSC 3326). The drop box is emptied each morning and stamped with the previous day's date. Please do not submit assignments as e-mail attachments or by sliding them under my door. Because it is not fair to other students in the class if a few people have extra time to complete an assignment, late assignments will be penalized 5% per day (including weekends and holidays) unless Academic Counselling supports your request for an extension. Your online submission must be completed before midnight on the due date to avoid late penalties. **Unfortunately, assignments will NOT be accepted if they are submitted more than one week after the due date.** Make sure to back up all your work, including lecture notes and written assignments. Computer-related problems are not justification for extensions or accommodations.

Format: All written assignments must be typed, double-spaced, 12 point Times New Roman font, with 2.5 cm (1 inch) margins, and stapled (no paper clips please!). You may print double-sided. Number all pages except the title page. The title page must have your name, the professor's name, the course number, and the assignment title.

Note: Additional instructions for each assignment will be provided in class and on OWL.

ACCESSIBILITY, PLAGIARISM and SCHOLASTIC OFFENCES, MEDICAL ACCOMMODATION:

All students should familiarize themselves with Western's current academic policies regarding accessibility, plagiarism and scholastic offences, and medical accommodation for missed deadline, quizzes or exams. These policies are outlined (with links to the full policies) at:

http://anthropology.uwo.ca/undergraduate/course_information/academic_policies.html

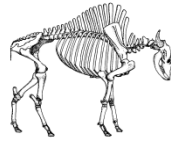
Missed deadline, quizzes or exams: Unfortunately, no accommodations can be made without acceptable documentation.

ELECTRONIC DEVICES:

No electronic devices will be allowed during quizzes, tests and examinations. Please turn your phone off and keep it out of sight during class time so that it does not disturb others. You are welcome to bring your laptop/tablet to class for the purpose of taking notes. Please avoid using it for other things (Facebook, YouTube etc), as it is distracting to those around you. I'll give you one warning in such cases, and if you continue to disturb others in this way, I will ask you to put the device away.

USEFUL WEBSITES

- A range of student services is available at: <https://student.uwo.ca>
- Student Services in UCC: <http://westernusc.ca/services>
- Anthropology Department: <http://anthropology.uwo.ca>
- Office of the Registrar: <http://www.registrar.uwo.ca>
- Student Development Services: <http://www.sdc.uwo.ca>
- Writing Support Centre: <http://www.sdc.uwo.ca/writing/>
- Plagiarism and Citing Sources: www.lib.uwo.ca/essayhelp

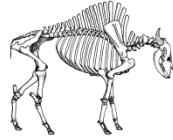


CLASS SCHEDULE

DATE	TOPIC	Assignments, Quizzes and Exams
WEEK 1 Jan. 10	<p>Lecture: Introduction: What is zooarchaeology?</p> <p>Lab: The vertebrate skeleton</p> <p>Readings: Reitz & Wing 1999: Chapter 2; Davis 1987: Chapter 2</p>	
WEEK 2 Jan. 17	<p>Lecture: Taphonomy—the formation of the zooarchaeological record. Pre-depositional and post-depositional processes</p> <p>Lab: Fish vertebrae and selected cranial elements</p> <p>Readings: Davis 1987: pp. 22-28; O'Connor 2000: pp. 19-27; Erlandson et al. 2007; Munson & Garniewicz 2003</p>	
WEEK 3 Jan. 24	<p>Lecture: From the field to the lab: recovery, processing, identification and recording</p> <p>Lab: Bird skeleton—axial bones</p> <p>Readings: Davis 1987: pp. 28-36; Shaffer 1992; Harland et al. 2003</p>	
WEEK 4 Jan. 31	<p>Lecture: Quantification: Counting bones—NISP, MNI, MNE and MAU.</p> <p>Lab: Bird skeleton—appendicular bones</p> <p>Readings: Lyman 1994; Grayson 1979</p>	<p>Bone quiz 1</p> <p>Assignment 1 handed out</p>
WEEK 5 Feb. 7	<p>Lecture: Species representation—what we can learn from the rank importance of different taxa?</p> <p>Lab: Mammalian skeleton—axial bones</p> <p>Readings: Davis 1987: pp. 61-72; Tellkamp 2014; Badenhorst & Driver 2009</p>	<p>Assignment 1 due in class</p>
WEEK 6 Feb. 14	<p>Lecture: COMPUTER TUTORIAL—MS Excel SSC 1032</p> <p>Lab: Mammalian skeleton—forelimb bones</p> <p>Readings: NONE</p>	<p>Assignment 2 handed out</p>

Feb. 21	READING WEEK – no classes	
WEEK 7 Feb. 28	<p>Lecture: Identifying butchery and transport in the faunal record of hunter-gatherer communities—body part representation and meat utility indices</p> <p>Lab: Mammalian skeleton—hind limb bones</p> <p>Readings: Lyman et al. 1992; Faith et al 2009; Hoffman et al. 2000</p>	Bone quiz 2
WEEK 8 March 7	<p>Lecture: Seasonality: using bones to determine the season of occupation of a site</p> <p>Lab: Mammalian skeleton—feet</p> <p>Readings: Davis 1987: Chapter 4; Rowley-Conwy 1995; Landon 2008</p>	Assignment 2 due in class Assignment 3 handed out
WEEK 9 March 14	<p>Lecture: Prey selection and domestication—sexing bones, and determining age at death</p> <p>Lab: Mammalian dentition</p> <p>Readings: Davis 1987: Ageing & Sexing, Domestication; Payne 1973; Reher 1974</p>	Bone quiz 3
WEEK 10 March 21	<p>Lecture: Animal bones and evolutionary ecology models of human behaviour</p> <p>Lab: Ageing, sexing, seasonality and taphonomic markers</p> <p>Readings: Winterhalder 1981; Smith et al 2014; Stiner et al. 2000</p>	Assignment 3 due in class
WEEK 11 March 28	<p>Lecture: Animal bones and human social organization</p> <p>Lab: Identifying and recording archaeological materials; Review of lab component of course.</p> <p>Readings: Reitz & Wing 1999: pp. 273-278; Stokes 2000; Sharpe and Emery 2015</p>	Bone quiz 4
WEEK 12 April 4	<p>Lab: LAB EXAM (1 hour)</p> <p>Lecture: Final course review.</p> <p>Readings: none</p>	Lab Exam

FINAL EXAM: 3 hours during Exam Period



READINGS ARE TAKEN FROM THE FOLLOWING SOURCES:

- Badenhorst, S. and J.C. Driver
2009 Faunal changes in farming communities from Basketmaker II to Pueblo III (A.D. 1-1300) in the San Juan Basin. *Journal of Archaeological Science* 36: 1832-1841.
- Davis, Simon
1987 *The Archaeology of Animals*. Yale University Press, New Haven.
- Erlandson, J.M., T.C. Rick, P.W. Collins, D.A. Guthrie
2007 Archaeological implications of a Bald Eagle nesting site at Ferello Point, San Miguel Island, California. *Journal of Archaeological Science* 34(2): 255-271.
- Faith, J.T., M. Dominguez-Rodrigo and A.D. Gordon
2009 Long-distance carcass transport at Olduvai Gorge? A quantitative examination of Bed I skeletal element abundances. *Journal of Human Evolution* 56: 247-256.
- Grayson, D.K.
1979 On the Quantification of Vertebrate Archaeofaunas. *Advances in Archaeological Method and Theory*, vol. 2, edited by M.B. Schiffer. Academic Press, New York, pp. 199-237.
- Harland, Jennifer F., James H. Barrett, John Carrott, Keith Dobney and Deborah Jaques
2003 The York System: An integrated zooarchaeological database for research and teaching. *Internet Archaeology* 13.
http://intarch.ac.uk/journal/issue13/harland_index.html
- Hoffman, B. W., J.M.C. Czederpiltz and M.A. Partlow
2000 Heads or tails: The zooarchaeology of Aleut salmon storage on Unimak Island, Alaska. *Journal of Archaeological Science* 27(8): 699-708.
- Landon, David B.
2008 Seasonal slaughter cycles and urban food supply in the Colonial Chesapeake. In *Case Studies in Environmental Archaeology, 2nd edition*, edited by E.J. Reitz, C.M. Scarry and S.J. Scudder, pp. 375-390 of 463. Springer, New York.
- Lyman, R.L.
1994 *Vertebrate Taphonomy*. Cambridge University Press, Cambridge.
- Lyman, R.L., J.M. Savelle and P. Whitridge
1992 Derivation and application of a meat utility index for Phocid seals. *Journal of Archaeological Science* 19: 531-555.
- Munson, Patrick J., R.C. Garniewicz
2003 Age-mediated survivorship of Ungulate mandibles and teeth in Canid-ravaged faunal assemblages. *Journal of Archaeological Science* 30(4):405-416.
- O'Connor, Terry
2000 *The Archaeology of Animal Bones*. Texas A&M University Press, College Station.
- Payne, S.
1973 Kill off patterns in sheep and goats: The mandibles from Asvan Kale. *Anatolian Studies* 23: 281-303

- Reher, C.A.
1974 Population study of the Casper Site bison. In *The Casper Site. A Hell Gap Bison Kill on the High Plains*, edited by G.C. Frison, pp. 113-124 of 266. Academic Press, New York.
- Reitz, E. J. and E.S. Wing
1999 *Zooarchaeology*. Cambridge University Press, Cambridge.
- Rowley-Conwy, P.
1995 Meat, furs and skins: Mesolithic animal bones from Ringkloster, a seasonal hunting camp in Jutland. *Journal of Danish Archaeology* 12: 87-98.
- Shaffer, Brian S.
1992 Quarter-inch screening: understanding biases in recovery of vertebrate faunal remains. *American Antiquity* 57(1): 129-136.
- Shaffer, Brian S. and C.P. Schick
1995 Environment and Animal Procurement by the Mogollon of the Southwest. *North American Archaeologist* 16(2): 117-132.
- Sharpe, A.E. and K.F. Emery
2015 Differential animal use within three Late Classic Maya states: Implications for politics and trade. *Journal of Anthropological Archaeology* 40:280-301.
- Smith, C.B., C.E. Ebert and D. J. Kenett
2014 Human ecology of shellfish exploitation at a prehistoric fishing-farming village on the Pacific Coast of Mexico. *Journal of Island and Coastal Archaeology* 9(2): 183-202.
- Stiner, M.C., N.D. Munro & T.A. Surovell
2000 The tortoise and the hare. Small game use, the broad-spectrum revolution and Paleolithic demography. *Current Anthropology* 41(1): 39-73.
- Stokes, P.
2000 A cut above the rest? Officers and men at South Shields Roman Fort. In *Animal Bones, Human Societies*, edited by P.A. Rowley-Conwy. Oxbow Books, Oxford, pp. 145-151.
- Tellkamp, M. P.
2014 Habitat change and trade explain the bird assemblage from the La Chimba archaeological site in the northeastern Andes of Ecuador. *Ibis* 156(4): 812-825.
- Winterhalder, B.
1981 Optimal foraging strategies and hunter-gatherer research in anthropology: Theory and models. In *Hunter-Gatherer Foraging Strategies*, edited by B. Winterhalder and E. A. Smith, pp. 13-35 of 268. University of Chicago Press, Chicago.