

Lithic Technology: Knapping, Analyzing and Reconstructing Behavior

Syllabus v.2

Course Objective: This course is designed to introduce students to flaked stone technology and analysis. The overall goal is for students to learn how to make, identify, classify and analyze flaked stone artifacts to the extent that they feel comfortable working with stone artifact collections in research and CRM settings. We will also consider, albeit in less detail, theoretical and methodological approaches to interpreting human behavior from stone artifacts. Students are encouraged to work with their own data sets if they have one.

Prerequisites

You are expected to have taken a course equivalent to ANT 2000 (General Anthropology), and/or ANT 2140 (World Archaeology), and/or another Upper Division archaeology course. If you have not had at least one of these courses, you can still take the course. But I **strongly advise** you to read at least one introductory archaeology text in method and theory (e.g. Thomas, D.H. and R. Kelly 2011. *Archaeology: Down to Earth*. 3rd Edition. NY. Cengage) as I will expect you to be familiar with the basics of archaeological method and theory and world archaeology.

Some knowledge of basic statistics and the ability to use Microsoft Excel is recommended, but not required

Class Meetings:

Wednesdays, Periods 4-6, 10:40 am-1:40 pm, B357 Turlington Hall

Office Hours and Communication

- Office hours: B368 Turlington Hall, Tuesday and Wednesday, 3-4 pm (or by appointment).
- Telephone: Office: 392-2253, x234;
- E-mail: sbrandt@ufl.edu
- Lectures and PDF's will be posted to E-Learning (Sakai)
- Web page: web.me.com/archorn

Teaching Assistant/Grader: Chris Altes

- Office hours: Fridays, 3-5 pm, B353 Turlington Hall
- Telephone: 352-392-2253 x229
- E-mail: christopher.altes@gmail.com>

Required Readings

- Whittaker, J.C. 1994. *Flintknapping: Making and Understanding Stone Tools*: Austin: U. Texas Press.
- Holdaway, S. and N. Stern 2004. *A Record in Stone*. Canberra: Aboriginal Studies Press.
- Andrefsky, W. Jr. 2005. *Lithics: Macroscopic Approaches to Analysis*. Cambridge: Cambridge University Press. 2nd Edition
- Selected journal articles and book chapters (provided in pdf format)

Recommended Readings and Books on Reserve (more to be added)

- Keeley, L.H. 1980. *Experimental Determination of Stone Tool Uses: A Microwear Analysis*. Chicago: U. Chicago Press
- Kooyman, B.P. 2000. *Understanding Stone Tools and Archaeological Sites*. Calgary: University of Calgary Press.

- Odell, G. 2004. Lithic Analysis. New York: Plenum

Web Sources (more to be added)

- The "Lithic Site" Web Page: <http://wings.buffalo.edu/anthropology/Lithics>
- YouTube videos on flintknapping

Equipment and Supplies: I am requesting that each student contribute \$20-25 toward the purchase of obsidian raw material, plastic bags, marking pens and other misc. items, to be collected during the second week of classes (provided free of charge: some raw materials, gloves, ground sheets, goggles, pads, billets, band aids, some calipers, some goniometers)

Examinations and Grading

Grades will be based on: 1) three non-cumulative exams (identification of artifacts and their characteristics, and half-page mini essays) each worth 100 points; 2) three sorting assignments; and 3) a project (sorting, analyses and write-up of a lithic collection). Your grade will be based on the total accumulation of points, as follows:

First Exam	50
Second Exam	50
Third Exam	50
Sorting Assignments	50
Project	100
Total Points	300

A	90-100% (269-300 points)
B+	86-89%(257-268 points)
B	80-85%(239-256 points)
C+	76-79%(227-238 points)
C	70-75%(209-226 points)
D+	66-69%(197-208 points)
D	60-65%(179-196 points)
E	<60% (<149 points)

Research Paper Option: Students have the option of substituting a ~10-15 page research paper for either the first or second exam (but NOT the third). The topic must be cleared by the professor at least three weeks prior to the end of the semester.

Attendance: Attendance is mandatory. Failure to attend lectures without an official excuse (see below) will result in the loss of points, as follows:

- 1 missed 0 points subtracted from total points
- 2 missed 30 points subtracted from total points
- 3rd missed 60 points subtracted from total points
- 4th missed **Automatic E for the course**

Official UF, Medical Or Religious Absences And Make-Up Exams

Except for medical/disability reasons, religious reasons or official university business, there will be **no** makeup exams or excused absences. A letter signed by a physician or a university official must be obtained **before** a makeup exam will be scheduled or an absence excused. Likewise, any religious reason for missing an exam or section must also be discussed with the professor and/or TA **before** a makeup exam will be scheduled or an absence excused. If you have a disability that could affect your class performance, please discuss this with the professor or TA during the first week of class.

Cheating

Needless to say, cheating in any way will not be tolerated and will result in a 0 exam score and/or possible dismissal from the course.

WEEKLY SCHEDULE OF LECTURES AND READINGS (Subject to Modification)

Note: an occasional extra article (in pdf) may be added as necessary

- 8/22 Introduction and Course Requirements; Why Study Stone Artifacts; Fracture Mechanics and Raw Materials; Direct Percussion
- 8/29 Practice Hard-Hammer Direct Percussion knapping.
- Flintknapping: Ch 1-4 (up to pg. 118, "Example 3")
 - Record: Ch 1: 1-17 (up to "Box 1.3)
 - Lithics: Ch 1-3
- Assignment 1 (10 pts): Laboratory sorting of your own knapped lithics. Due by beginning of class, Wednesday, 9/5.**
- 9/5 What is up, what is down, what is left and what is right? Describing and Classifying; Typology; The Oldowan – The World's First Lithic Artifacts; Practice Bipolar Knapping
- Record: Ch 3,5, 4, 6 in that order
 - Lithics: Ch 4
 - Leakey, M.D. 1971 *Olduvai Gorge*. Cambridge: Cambridge U. Press. Section on Oldowan Typology (to be available as a pdf).
- 9/12 Lower Paleolithic/Early Stone Age-Acheulian and Middle Paleolithic/Middle Stone Age Technology - Practice knapping and producing Acheulian and Middle Paleolithic/Mousterian artifacts;
- Flintknapping: Ch 8
 - Lithics: Ch 5
 - Kliendienst, M.R. 1962 Components Of The East African Acheulian Assemblage: An Analytic Approach. *Proc. 4th Pan-African Congress On Prehistory*. pp. 81-105 (pdf)
 - Bordes, F. 1961. *Typologie du Paleolithique Ancien et Moyen*. Bordeaux. Selected translations and illustrations (pdf)
- Assignment 2 (15 pts): Sorting, describing and measuring your knapped Acheulian and Middle Paleolithic artifacts. Due by beginning of class, Wednesday, 9/26 (not 9/19).**
- 9/19 **FIRST EXAM (first 1.5 hours);** Artifact Life Cycles, Reduction Sequences and *Chaine Operatoire*.
- 9/26 Upper Paleolithic/Later Stone Age/Paleoindian Technology: Indirect Percussion; Punch Technique; Backed Blade/Microlithic Technology
- Flintknapping: Ch 9
 - Lithics: Ch 6
 - Record: Ch 2
 - Upper Paleolithic/Later Stone Age Typology pdfs
- 10/3 Practice knapping and producing Upper Paleolithic/Later Stone Age artifacts.
- 10/10 Upper Paleolithic/Later Stone Age/Paleoindian Technology, Part 2: 1) Thermal Alteration, Pressure Flaking and Hafting.
- Flintknapping: Ch 7
 - Lithics: Ch 7
 - Paleoindian Typology pdfs
- Assignment 3 (15 pts): Sorting, describing and measuring your knapped Upper Paleolithic/Later Stone Age/Paleoindian artifacts. Due by beginning of class, Wednesday, 10/17.**
- Note: The next class will meet on Friday the 19th instead of Wednesday the 17th, same time and place**
- 10/19 Guest Lecture by Dr. John Shea, Stony Brook University, on hafting and composite tools: spears, spear throwers and bow and arrow technology; Artifact Illustration, Imaging and Documentation
- 10/24 **SECOND EXAM (First 1.5 hours);** Discussion and Assignment of Projects; Putting together a lithics report.

- 10/31 Determination of Stone Artifact Function- Natural vs. Human Modification; Analogy, Experimentation; Edge-Damage; Use-Wear; Microwear; Residue/Chemical Analysis
- Flintknapping: Ch 10, 11
 - Record: Ch 1: 1-17 (up to “Box 1.3)
 - Lithics: Ch 8
- 11/7 Squeezing Blood From Stones: Behavioral Interpretations of Stone Artifacts (Part 1). Agency and Materiality: Settlement and Subsistence Patterns; Work on Projects
- Record: Ch 7
 - Lithics: Ch 9
 - Additional pdf’s to be assigned
- 11/14 Lithics and CRM; Work on Projects
- Record: Ch 7
 - Lithics: Ch 9
- 11/21 Squeezing Blood From Stones: Behavioral Interpretations of Stone Artifacts (Part 3): The Ethnoarchaeology and Ethnohistory of Contemporary and Recent Stone-Tool Using Peoples. Work on Projects.
- **Readings to be assigned**
- 11/28 THIRD EXAM**
- 12/5 Projects Due by 5:00 pm.**