

UF in Ethiopia
ANT 4930
Spring 2015
Steven A. Brandt

African Archaeological Analysis
Lithic Technology: Squeezing Blood from Stones

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

Class Meetings:

1/6-1/31: Daily except Fridays (unless otherwise noted)

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

Required Readings

- Inizan, M.L et al. 1999. *Technology and Terminology of Knapped Stone*
[http://www.mae.u-paris10.fr/prehistoire/IMG/pdf/Technology and Terminology of Knapped Stone.pdf](http://www.mae.u-paris10.fr/prehistoire/IMG/pdf/Technology_and_Terminology_of_Knapped_Stone.pdf)
- Selected journal articles and book chapters (provided in pdf format)

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

- Whittaker, J.C. 1994. *Flintknapping: Making and Understanding Stone Tools*: Austin: U. Texas Press.
- Andrefsky, W. Jr. 2005. *Lithics: Macroscopic Approaches to Analysis*. Cambridge: Cambridge University Press. 2nd Edition
- 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

- 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)

Grading

Final Grades will be based on the accumulation of 100 points, as follows:

1. Three Lithic Sorting Assignments due on Monday 1/12, 1/19 and 1/27	
@ 10 points each	30 points
2. Three spot pass/not pass until you pass “quizzes” – one each week based on readings and lectures@ 10 pts each	30 points
3. Ethiopian Museum and Field Participation	20 points
4. Incorporation of Lithic Discussion into Final Museum/Field Report	<u>20 points</u>
	TOTAL
	100 points
A	94-100 points
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	74-76
C-	70-73
D+	65-69
D	60-63
E	<60%

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 10 points subtracted from total points
- 3rd missed 30 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.

Mobile Phones, Laptops and Tablets

Mobile phones must be turned off or set to “Airplane/Vibrate only” mode during lectures and discussions. Laptops and tablets can only be used to take class notes, and with my permission to look something up.

WEEKLY SCHEDULE OF LECTURES AND READINGS

(Subject to Modification)

Week 1: 1/6-1/9

T 1/6: Introduction and Course Requirements;

W 1/7: Why Study Stone Artifacts; Fracture Mechanics and Raw Materials; Direct Percussion. Practice Hard-Hammer Direct Percussion knapping.

Assignment 1 (10 pts): Laboratory sorting and classification of your own knapped lithics. Due by beginning of class, Monday. 1/13.

Th 1/8:

- Life Cycles, Reduction Sequences and *Chaine Operatoire*
- What is up, what is down, what is left and what is right? Description and Classification.
- Typology, Culture History and Technological Modes
 - Early Stone Age/Lower Paleolithic Oldowan/Acheulian Technocomplexes

F 1/9: No Formal Class –Work on Assignment 1

Required Reading:

- Inizan: Introduction and Ch 1-4: pg. 13-60 up to “2. Predetermined debitage”

Required Browsing (uploaded to Canvas):

- Leakey, M.D. 1971 *Olduvai Gorge*. Cambridge: Cambridge U. Press. Section on Oldowan Typology (to be available as a pdf).
- 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)
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Recommended:

- Lithics: Ch 1-3
- Record: Ch 1: 1-17 (up to “Box 1.3); Ch. 3,5,4,6 in that order.

Week 2: 1/12-1/16

M 1/12: **Turn in Assignment 1.**

- Shaping and Retouch; Practice making Mode 1-2/Early Stone Age Bifacial and Unifacial Tools

Assignment 2 (10 pts): Laboratory sorting and classification of your own knapped lithics. Due at beginning of class, Tuesday 1/21

T 1/13

- Mode 3/”Middle Stone Age/Middle Paleolithic” Technology and Typology
 - Prepared Cores, Projectiles, Flake Tools, Composite Weapons and Hafting
- Practice knapping Mode 3 MSA/MP prepared cores and tools

W 1/14

- Attribute Analysis

- Continue knapping Mode 3 MSA/MP prepared cores and tools

Th 1/15

- Mode 4 Technology and the late MP/MSA- early Upper Paleolithic/Later Stone Age Transition
- Practice making Mode 4 Cores and Tools

F 1/16 No Formal Class –Work on Assignment 2

Required Reading

- **Inizan: Ch 4: 61(from “Predetermined debitage”) to Ch 4: 76 (up to “Pressure debitage of blades”).**
- **Brandt, S. A. Core, Flake and Tool Attribute Analysis Sheets; Mochena Borago Typology**

Required Browsing (uploaded to Canvas):

- **Debenath, A. and H. L. Dibble: Handbook of Paleolithic Typology. Philadelphia: University of Pennsylvania Press.**

Recommended:

- **Lithics: Ch 4-6**
- **Record: Ch 2:44-92.**

Week 3: 1/20-1/24

M 1/19: MLK Day - No lectures – class goes on field trip to see the movie *Selma*

T 1/20:

- **Turn in Assignment 2**
- Mode 5/ Later UP/LSA Technology and Typology:
- “Microlithization, microliths and backing”
- New Composite Tools: Spearthrowers and Bows and Arrows
- Practice Making Mode 5 cores and tools
- **Assignment 3 (10 pts): Laboratory analysis of your own knapped lithics. Due at beginning of class, Monday 1/26**

W 1/21:

- Pressure Flaking and North American Culture History
- Practice Pressure Flaking and Spearthrowing

Th 1/22:

- Reconstructing Activities, Social Organization and other Aspects of Human Behavior
 - Sourcing
 - Organization of Lithic Technology
 - Use-Wear and Residue Analysis
 - Experimentation
 - Ethnoarchaeology

F 1/23: No Formal Class –Work on Assignment 2

Required Reading:

- Inizan Ch 4:76 (from “Pressure...”) through Ch 6:100

Required Browsing (uploaded to Canvas):

- C. N. Nelson LSA Typology and H. Merrick Typology

Recommended:

- Lithics: Ch 7
- Record: Ch 1:28-29 -Box 1.6 (re-read); Ch 2: 44-106

Week 4: 1/26-1/27

M 1/26: No Formal Classes. Work on or **Turn in Assignment 3**

T 1/27: No Formal Classes. Work on and **Turn in Assignment 3 no later than 5:00 pm**