Introduction to Lithic Technology: Workshop Syllabus

This two day workshop is designed to introduce the student to basic concepts of technological lithic analysis and the role of flintknapping by demonstrating a range of flaked stone technologies. This workshop will cover basic flake and flake scar attributes and provide hands-on opportunities to practice identification of these attributes. A review of common flake stone tool types and their diagnostic attributes will also be introduced. This workshop is designed to provide a beginning foundation from which the student can learn about the complexities of the prehistoric flaked stone commonly found in far western North America.

Workshop Duration: Two eight hour days per session. Each module will average approximately one hour and fifty minutes with scheduled breaks at the end of each module and for lunch. Scheduled workshop exercises within each module will allow for brief breaks as well. Two sessions are planned.

Materials Needed: Each student will need a notebook, pencils, 8x11 ½ inch sheets of paper, plastic baggies, paper sacks, bag tags or labels.

Day One

Day 1, Module 1 (Duration 2 hrs.): This module provides an introduction to the subject of lithic analysis, the difference between technological lithic analysis and other forms of flake stone study and an introduction to the uses and abuses of flintknapping. This module proceeds to a simple demonstration of direct free-hand percussion manufacture of flakes from cobbles. This module continues with a consideration of how culturally derived flakes may be identified and the attributes common to flakes. A handout diagramming flake attributes will be provided.

This module concludes with each pair of participants selecting 10 flakes from a prepared collection of the flintknapping debris and placing them dorsal side down, proximal end to the top of the page (*an 8xll1/2 sheet of paper per student group is required)*. The flake placements will require the recognition of the previously discussed flake attributes. The flake placements are reviewed by the instructor and discussed with the students. This exercise provides an applied review of the previous discussion on "what is a flake?" and relevant diagnostic flake attributes.

Fifteen minute morning break.

Day 1, Module 2 (Duration 1 hr. 45 min.): This module provides a brief review of the flake orientation exercise and answers any questions. This is followed by the handout of an article on cobble core types that provides some idea of some of the variability in past approaches to percussion flake manufacture from cobble style cores. The issue of identifying core types is then discussed, including the amount of data that is provided by the range of possible core typologies.

The module then proceeds with a demonstration of percussion blade and/or microblade manufacture. This includes a discussion of the ways in which blade/microblade industries might be identified in a prehistoric flaked stone collection. A handout on blade flake attributes and a bibliography of recommended readings on blade and microblade industries is provided.

This module also concludes with each pair of participants selecting 10 flakes from a prepared collection of the flintknapping debris and placing them dorsal side down, proximal end to the top of the page (*an 8xll1/2 sheet of paper per student group is required)*. The flake placements will require the recognition of the previously discussed flake attributes. The flake placements are reviewed by the instructor and discussed with the students. This exercise provides an applied review of the previous discussion on relevant flake attributes addressing the question of "how is a blade technology identified?".

Lunch break 30 minutes (longer lunch time optional by student vote).

Day 1, Module 3 (Duration 1 hr. 45 min.): This module briefly reviews the morning activities and answers any questions. The module proceeds with a flintknapping demonstration of the bipolar percussion flaking technique and a discussion of the diagnostic attributes of bipolar debitage. A handout that diagrams the attributes of bipolar flaking is provided.

This module also concludes with each pair of participants collecting 10 flakes from a previously prepared collection of flintknapping debris. Again, this exercise provides an applied review of the previous discussion, "how do you identify bipolar percussion?" and the relevant flake attributes. Time for additional questions is planned.

Twenty minute afternoon break.

Day 1, Module 4 (Duration 1 hr. 30 min.): This module briefly reviews previous activities and answers any questions. The module proceeds with a flintknapping demonstration of percussion biface flaking and a discussion of the differences in flaking technique from previous percussion techniques demonstrated as well as attributes diagnostic of biface percussion debitage. A handout that diagrams the attributes of biface thinning flakes and recommended readings is provided.

This module also concludes with each pair of participants collecting 10 flakes from a previously prepared collection of flintknapping debris. This exercise provides an applied review of the previous discussion on "how do you identify percussion biface flaking?" using the relevant flake attributes previously discussed. The students will have an opportunity to ask questions upon conclusion of this module.

DAY TWO

Day 2, Module 1, Part I (Duration 2 hrs.): This module begins with a review the previous day, especially the question of "what is a flake?" and provides an opportunity for student questions. This review transitions into a discussion on the "reading of flake scars" as the students began to do on the previous day with such dorsal attributes as found on blade and biface debitage types. The importance of reading "negative flake attributes" is emphasized by a discussion introducing the identification of flake stone tool types such as projectile points, knives, unfinished and failed bifaces, unifaces, drills and tools formed from previous types of tools. A set of handouts will be provided that illustrate some examples from the discussion. Time for additional questions is planned.

Fifteen minute morning break.

Day 2, Module 1, Part 2 (Duration 1 hr. 45 min.): This is a continuation after the break of the module elements listed above with addition of further considerations. These considerations will include a discussion of the attributes useful in the identification of impact damage and repair of projectile points. An illustrative handout will be provided. A brief flintknapping demonstration of biface pressure flaking is also provided.

A brief flintknapping demonstration of uniface flaking and the different types of uniface rejuvenation are provided. A handout discussing the different types of uniface retouch will be provided.

A discussion on the reworking of artifacts by bipolar and radial break percussion techniques will follow along with brief flintknapping demonstrations of these flaking activities. A single page handout on radial break percussion will be provided. Again time for additional questions is planned.

Lunch break 30 minutes (longer lunch time optional by student vote).

Day 2, Module 3 (Duration 1 hr. 45 min.): This module will review the mornings' activities and provide for a student exercise in the reading of flake scars. This exercise will use a provided set of specimens of pressure and percussion flaked specimens and may include specimens reworked by bipolar percussion as well as radial break percussion specimens.

As time allows, a discussion on the identification of use wear and other edge damage forms will follow along with several brief edge damage demonstrations. Also, as time allows, additional previous prepared examples of debitage collections produced by various flaking techniques and artifact fragments will be provide for student review, discussion and questions.

Twenty minute afternoon break.

Day 2, Module 4 (Duration 1 hr. 45 min.): This concluding module will include two student exercises.

Exercise 1: This exercise uses a previously prepared set of lithic specimens with a question asked for each one. The students will be provided time to formulate answers to each question. Then a discussion of the answers and an opportunity to review each artifact will follow. This exercise will provide an opportunity to apply the lessons learned in previous modules as well as provide an introduction to the much greater variability in flaked stone materials than could possibly be covered by a two day workshop.

Exercise 2: This concluding exercise will allow the students to use previously studied flake collections as well as collect additional lithic specimens of their choice from the flintknapping debris for a final review of flaking debitage and its diagnostic elements. As in previous exercises, this exercise will proceed by placing the flakes dorsal side down, proximal end to the top of the page. Flake placements are reviewed by the instructor and discussed with each student. This will provide the students with a final opportunity to double check what they have learned and clarify any uncertainties regarding the identification of flake attributes.

This module concludes with a wrap-up of the class through a general discussion with the participants on what they have learned, what more would they would like to know and how to learn it. This module will also provide an opportunity to ask any final questions.