

Name: _____

Lab Exercise 10 Bone Taphonomy

Objectives

The objective of this lab is for you to learn to recognize and interpret different taphonomic properties of archaeological faunas and to replicate some of the process of bone butchery using stone tools.

Grading: Completion of tasks: 50 points
Questions: 25 points

Materials

1. Samples of archaeological bone
2. Stone flakes and tools
3. Chicken drumsticks

Procedures

1. Volunteers will be asked to attempt to cut through bones using a denticulate and a large flake. Cutting will proceed for two minutes, and the results will then be tabulated below. Then answer Question 1.

	Depth of cut (mm)	Morphology of cut
Denticulate		
Flake		

2. The TAs will then break bones using cobble hammerstones and a stone anvil. The resulting fragments should then be looked at and described by the class.
3. Examine samples of weathered and unweathered bone. Look at the bones and how they differ across various stages of weathering in terms of characteristics such as cracking (longitudinal and transverse), surface texture (flaking, smooth, pitted, etc.), color, etc. Then, answer Question 2.
4. Now take a chicken leg and select a flake and a denticulated flake. Cut through the fattest part of the muscle (and skin) on one side with the flake, and on the other side with the denticulated flake. As you cut, pay attention to the effort required.
5. Now use the same tools to cut through tendons and into the bone. Now answer question 3.
6. Last, replicate a “bird bone bead” using the “ring and snap method”. This is the way Plains Indians made their bird bone vests you have probably seen. Chose your stone tool based on the results of your previous cutting experiments. First cut a complete groove around the bone shaft near one end. Then insert the end of the bone into the vice and snap it. If it will not break you need to cut the groove deeper. If you want, you can attempt the second break to make the bone shaft into a tubular bead.

Questions

1. Did the denticulate or the flake perform better in cutting the bone? Why? (5 points)

2. Compare the unweathered bone and the various stages of weathered bone. Describe characteristics of the different stages of bone weathering that you can use to tell that a bone is more weathered? In other words, an unweathered bone looks like.... Or a very weathered bone looks like..... **(10 points)**

3. Which artifact (flake or denticulate) performed better in cutting through meat? Does this help you understand why these serrated tools were so common in the Middle Paleolithic sites of Europe? **(5 points)**

4. Do carnivores create any damage that you could confuse with human processing of bone?
Why or why not? (*5 points*)