

Types of Cultural Artifacts Found

- A. Chipped Stone
 - 1. Unifaces
 - a. Scrapers (various kinds)
 - b. Other unifaces (gravers, edged-modified flakes, etc)
 - 2. Bifaces
 - a. Projectile points (arrow, dart)
 - b. Other bifaces (perforators, preforms, gouges, choppers, spoke shave, scrapers, and other tools)
 - 3. Lithic By-products
 - a. Cores
 - b. Flakes (various categories)
- B. Ground Stone
 - 1. Manos and metates
 - 2. Hammer stones
 - 3. Ornaments (pendants, beads, gorgets)
 - 4. Abrading stones
- C. Bone
 - 1. Implements (awls, flakers, needles)
 - 2. Ornaments (beads)
- D. Shell
 - 1. Implements
 - 2. Ornaments
- E. Ceramics
 - 1. Sherds
 - 2. Reconstructed vessels or partial-whole vessels
- F. Historic Artifacts (European materials often found in upper levels of prehistoric sites: metal, glass, etc.)

Types of Chipped Stone Artifacts Found

1. **Tested Cobbles**—larger cobbles with cortex and some flakes removed by hard hammer stone.
2. **Cores**—cobbles with more extensive flake removal but still retaining some cortex. No wear from use. Cores were used to produce flakes and blades for use as they are, or to modify with additional chipping into a more finely made and/or specialized tool.
3. **Core Tools**—cores with wear from use as a tool. Commonly used to break bone for marrow, crush or chop plant or animal matter, or use as a hammer stone, or to dig or chop wood.
4. **Unifaces**—thick or thin unifaces that are modified by further flake removal from only one face. No cortex remaining for most. When used they will show edge wear like scalar scars, step scars, or half-moon scars, polish, striations, and/or rounded corners.
Types: graters, scrapers/gouges/burins, blades, Clear Fork Uniface, and others¹.
5. **Bifaces**—thin or thick bifaces. No cortex except in some thick bifaces like Butted Knife. May show edge wear (like scalar scars, step scars, or half moon scars, polish, striations, and/or rounded corners) and/reworking or modification. Types: dart points, arrow points, knives, drills/perforators, scrapers, choppers/axe/adze, Bristol Biface, Bronson Biface, Clear Fork Biface, Corner-Tang Knife, Gahagan Biface, Guadalupe Biface, Friday Biface, and many others.
6. **Utilized Flakes**—used flakes with edged wear and/or modified with further flaking of the edge or not.
7. **Un-utilized Flakes**—no edge wear or edge modifications.

¹ See Turner and Hester, 1999, A Field Guide to Stone Artifacts of Texas Indians, for more types of artifacts and their description.

How to Identify Used Artifacts

Chipped stone tool use can be identified by characteristic patterns of wear on the tool surfaces². These polishing, scarring and chipping patterns on the tool are known as **edge wear**. We can use edge wear to determine if a cultural artifact or flake found in the field was “used” by the prehistoric peoples—then we can say it was a “used tool”. For our purposes 10x to 25x magnification is adequate, for a more scholarly analyses of tool use higher magnification, 100x to 400x, is required and lots of experience and a good imagination.

In fact, trained archeologists can identify the type of use the tool was put to with reasonable certainty (maybe 75% of time they are right), such as to work wood, bone, antler, hide, plant or meat. And if it was used to **cut** or **saw**, **chop**, **plane**, **bore**, **scrape** or **grave** these materials.

The edge wear you and I are looking for consists of **polish** and/or **striations** on one or both surfaces of the tool; chipping of the working edge to form **half-moon scars**, or **scaler scars** or **step scars**; and **rounded corners**; or a combination of these wear characteristics—known as a **wear pattern**. Keep in mind these wear scars come in a range from small to large, deep to shallow, and short to long. More importantly these usually are tiny scars so you have to clean the artifact and look carefully in good light with at least a 10x hand lens to see them. Easier to see is the use wear on large cores/choppers that consist of crushed or highly fractured impact areas where the tool was used as a hammer stone or for breaking bone. If it was used for chopping wood the use wear will be a combination of faint polish on both faces, striations perpendicular to the working edge, and a range of deep to shallow, large scalar and step scars. Whereas cutting meat leaves few scars on the tool, mostly faint polish from rubbing against the meat.

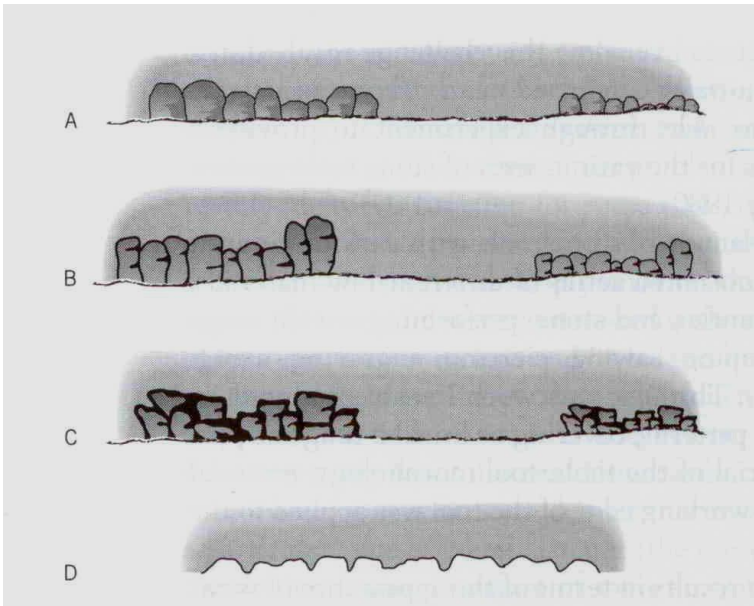
To add to our difficulty in determining if an artifact was used, is that many natural events can cause scars similar to tool wear scars. Such events as: being dropped or washed down a creek or being walked on when on the surface causes chipping, and erosion over time causes striations. However these chips and striations tend to be different in location, pattern, and shape from tool use wear. Also an edge that has use wear scars may be retouched (pressure flaked to resharpen) resulting in a mixture of wear scars and pressure flake scars.

Tool wear striations are thin grooves that appear to the eye as fine more or less parallel lines on the surface of the artifact. While polish is a smoother, shiny, glassy looking, and slick

² Taken from Lawrence Keeley, 1980, *Experimental Determination of Stone Tool Uses: A Microwear Analysis*. University of Chicago Press; and from Kenneth Feder, 2008, *Linking to the Past: A Brief Introduction to Archaeology* (2nd ed.), Oxford University Press.

feeling area resulting from fine abrasion of the tool surface by the material it was used on such as wood, plant, meat, antler, or bone.

The following figures attempt to show what some of these tool wear chip scars look like. Figure A shows what deep scalar scars look like on the edge of a tool, large deep scars on left (2mm) and smaller deep scars right (1/2 mm). Scalar means scale like, as in fish scales. Figure B illustrates what shallow scalar scars look like; again large shallow scars on left, smaller shallow scars right. Figure C shows what step scars look like; larger step scars on the left (2mm) and smaller on the right (1/2 mm). Figure



D shows what the half-moon scars look like; the crescent scars range from 1 to 10 mm across.

In the field these use scars rarely look so nice and uniform, but they usually occur together as a group of scars.

Frequently the scalar and step scars are thought to be edge work of prehistoric tool makers; they call it “nibbling” retouch or “fine” retouch. It is not retouching, it is use wear.