



Module 7 : Prehistoric and Ancient Tools

Lecture 17 : Cave Art, Hand Tools

The Lecture Contains:

 Cave Art

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Altamira Cave Paintings- 14,000-10,000 B.C (Spain Discovered in 1868 by a local hunter Modesto Peres)

15,000 BC: Lascaux cave paintings (France)

In order to survive in the wilderness human beings had to learn a few basic realities. Solving the problems for survival is more pressing than anything else. Therefore, exploring material and converting their concepts in reality for survival started since the beginning of mankind. Expressing in the form of wall-paintings and various hand tools for their survival are found from France and Spain as early as 15000 BC. At the dawn of human civilization survival is the most important virtue which man had to face in day to day life. Therefore, they had to explore locally available material for food and shelter became the most sought after commodity. Rock, timber and clay are the most common indigenous materials that are found in most places. Characteristics of each material became vital. The hardness of rock provides stability, timber has the elasticity of bending and clay has the ability to shaping in various forms. At this stage basic tools are used and in most cases handheld tools are used for giving the desired shapes and forms.



Plate 1A Hand Impressions
(20000-15000 BC)



1B Serra da Capivara, Australia



1C Horse Painting Lascaux, France
(15000-10000 BC)

(Source : <http://www.google.co.in/search?q=cave+paintings&hl=en&tbo=u&tbm=isch&source=univ&sa=X&ei=bC75UNzUDYmErQfhs4CoAg&ved=0CDwQsAQ&biw=1318&bih=600> ; January 18, 2013)

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The cave-paintings are the earliest manifestation of human creativity which is executed directly on the rock surfaces. At this stage (Paleolithic Period) paintings are related to their survival (magic). In most cases the paintings are done by hands. Use of brush or any other tool is not found for the application of color on the rock surface. However, it is found that the hollow bone pipes are also used for blowing (blow-pipe) spray colors on the wall. In some case scratch lines are also visible. The color pigments are natural and mineral mixed with water or natural adhesive. Various shades of red, brown and yellow ochre are commonly used in the paintings. Imprints of palm are found in plenty. The palm impressions (plate 1A) have significant role in their artistic activities. The piercing arrow or spear-head on the body of bison or other animals (plate 1B & 1C) are associated with the magic performance. The magical power would harvest killing of wild beast for their survival is one of their important activities. In each case man started inventing their indigenous technique and material.

Hand Tools

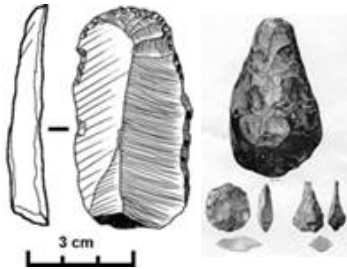
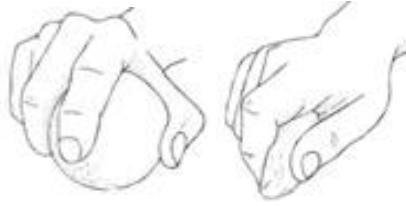


Plate 2A Stone Tools



2B Hand Tool Grip



2C Handheld Tool

(Source: https://www.google.co.in/search?hl=en&q=Grip+for+hand+held+tools&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=bBAGUcnzH8L7rAeOwoCwBQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Show+handgrip+for+handheld+paleolithic+tools&oq=Show+handgrip+for+handheld+paleolithic+tools&gs_l=img.12...244944.259997.6.262930.13.13.0.0.0.0.598.3435.0j6j3j2j0j2.13.0...0.0...1c.1.DPmDWEIr7cQ&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&fp=3ab84e5e54264c02&biw=1318&bih=600 ; January 28, 2013

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Plate2B : https://www.google.co.in/search?hl=en&q=Grip+for+hand+held+tools&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=bBAGUcnzH8L7rAeOwoCwBQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Grip+for+hand+held+primitive+tools&oq=Grip+for+hand+held+primitive+tools&gs_l=img.12...8778.11319.0.13461.9.9.0.0.0.211.1079.0j8j1.9.0...0.0...1c.1.TEu7AAGlpbo&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&fp=3ab84e5e54264c02&biw=1318&bih=600&imgsrc=JWp-Az51MiVWOM%3A%3B2ln5JT6BQsbTM%3Bhttp%253A%252F%252Fars.els-cdn.com%252Fcontent%252Fimage%252F1-s2.0S0047248411000492gr1.jpg%3Bhttp%253A%252F%252Fwww.sciencedirect.com%252Fscience%252Farticle%252Fpii%252FS0047248411000492%3B712%3B238 ; January 28, 2013
http://en.wikipedia.org/wiki/Stone_tool ; January 11, 2013)

Invention of tools is one of the major steps toward the future development of human civilization. Stone tools (plate 2A) are, in general made of stone only. In some cases they had attached other material like wooden rod for holding or grip. It is perhaps the beginning of understanding man's own anthropocentric measurement for proper grip (plate 2B) that would exert the maximum force. The shape and length of hand and palm becomes the basic standard. Each handheld tool (plate 2C-crusher, hammer, scrapper, etc.) is created based on such parameters. Although stone tool-dependent societies and cultures still exist today, most stone tools are associated with prehistoric, particularly Stone Age cultures that have become extinct. Stone has been used to make a wide variety of different tools throughout history, including arrow heads, spear-points, etc. Stone tools may be made of either ground stone or chipped stone.

As early as the Stone Age period human beings examined and tested the characteristics of stone for different tools and household applications. The hardness of stones helped them to decide Chipped stone tools. The hardness of stone is tested by striking stone flakes from a core of material using a hammer-stone or similar hard hammer fabricator. In general terms, chipped stone tools are nearly present in every place in all pre-metal-using societies because they are easily manufactured, the tool stone is usually plentiful, and they are easy to transport and sharpen.



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Better weapons were eventually developed such as barbed harpoons, darts, spear throwers, and bows and arrows with these more advanced weapons, humans were able to hunt large and powerful animals such as wild pigs, reindeer, horses, and bison. Many pre-historic cave art illustrates such activities around the world including in India (*Bhimbatka*, M.P near Bhopal). (Read more: <http://www.markville.ss.yrdsb.edu.on.ca/projects/classof2008/chong2/gosse/toolsandweapons.htm> ; January 17, 2013)

Interestingly since the beginning of human race searching for problem solution has remained more or less same. Man has inherited the quality of inquisitiveness from its earlier forefathers. "Chimpanzees are well-known tool-users, capable of fashioning spear-like weapons from branches for hunting and using stones as hammers and anvils in the wild." (Source : <http://nanopatentsandinnovations.blogspot.in/2012/08/bonobostonetoolsas-competent-as.html> January 28, 2013)

Similar characteristics are found among the apes in various part of the world. In each step man's inquisitive has revealed solutions. However, each time the problem based on its location and environment has inspired to take challenges in a new path. The above questions have always helped man to lead towards solutions.

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