



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS

Name of the Student : Momi Das
Roll Number : 146141016
Programme of Study : Ph.D.

Thesis Title: **A study on the Ceramics (Pottery) of Myrkhan Neolithic Site (East Khasi Hills District), Meghalaya Plateau, India**

Name of Thesis Supervisor(s) : Prof. Sukanya Sharma
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Abstract

The thesis entitled “**A study on the Ceramics (Pottery) of Myrkhan Neolithic Site (East Khasi Hills District), Meghalaya Plateau, India**” deals with the detailed study of the ceramic (pottery) assemblages recovered from the excavated site of “Myrkhan”. The study incorporates quantitative analysis of the morphological variations of the pottery fragments and the physiochemical and elemental analysis of the pottery fragments of Myrkhan. It is a site specific study that will try to understand the site formation process and the different cultural forms which developed there. Archaeological sites are windows into the past, preserving the material remains of ancient way of life. By studying these sites, we can unravel the rich tapestry of human heritage, safeguarding it for future generations. For the present study ceramic (pottery) assemblages have been chosen from the excavated area for its most important criteria of long durability and being one of the most informative artifact found in the archaeological sites to understand the site formation process and other related information on that region and the people living there. Another reason of selecting the site is the study area was excavated most recently and no prior work has been done on the ceramics found in the site to reveal any site information.

The site Myrkhan has been understood as a tool manufacturing site or factory site. Stone tools in different stages of development, hammer stones, anvils have been recovered from the site. There is a high concentration of debitage or stone flakes, which was a major criterion for calling it a factory site. Along with tools pottery and other artefacts like iron slags, ring stone, small beads have been found.

One of the important fact about the site is the C14 dates of the lower layer Cal BP 3500 ± 30 BP2 which gives the earliest Neolithic date in the Neolithic culture of the entire Northeast region. Less occurrences of evidences like pottery in comparison to the high density of unfinished stone tools indicates that this place was a temporary seasonal camp of small groups of people possibly and not used for permanent settlement.

A circular stone structure found in the excavated area make it more complex to understand the sites context.

The current investigation is broadly divided into two sections is aimed at studying the pottery found in the site. The first section will focus on morphological analysis, encompassing classification based on several criteria, including pottery type, design, color, thickness, and the reconstruction of pottery shapes. This morphological classification will aid in comprehending the similarities and differences among pottery samples from four distinct layers identified during excavation.

The second section will delve into physiochemical and elemental analysis of the pottery samples to discern pottery provenance, the source of raw materials, the manufacturing process, and firing temperature. Various scientific methods, such as Powder X-Ray Diffraction (XRD), Fourier Transform Infrared Spectroscopy (FTIR), Energy-Dispersive X-ray Spectroscopy (EDX), Mohs' Scale Hardness Test, Porosity Test, and Thin Section Petrography, have been used in this phase.

A comparative evaluation of these two phases of analysis aids in comprehending the temporal progression of the culture, the developmental phases of the craft, and the identification of local or non-local products by tracing the sources of raw materials and the movements of the people who practiced the craft during the Neolithic period.