
SHORT REPORT

Preliminary Report on the Excavations of Neolithic sites from Khasi Hills Meghalaya

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As far as the Neolithic period is concerned, Khasi and Jaintia hills of Meghalaya have revealed a good number of Neolithic sites on the evidence of surface finds. The typo-technology of the tools recovered from these finds showed uniformity throughout Khasi-Jaintia hills. The paper focuses briefly on the findings from two excavated sites; the site of Lawnongthroh, which was briefly reported in an archaeological journal, and a report from an ongoing excavation at Myrkhan Neolithic Sites, both located in East Khasi hills district of Meghalaya. The sites have been dated through AMS and conventional C14 dates. Lawnongthroh is a habitation site and the site of Myrkhan showed a mixture of both a factory and habitation site. The two sites offer closer insight on the typo-technological pattern of Neolithic materials from the region.

Introduction

The Khasi-Jaintia Hills of the central Meghalaya plateau inhabited by the Khasi-Pnar community is unique from an ethnographic point of view. The Khasis which is a collective term applied to the indigenous population of these hills, who are linguistically identified with the Monkhmer group of Austro-Asiatic language speakers, distinct from the other communities inhabiting North east India belonged to the Sino-Tibetan and Tibeto-Burman speaking population. It has been found that the Khasis also shares a high percentage of genetic makeup with the Munda group and other Austro-Asiatic speaking population of South-East Asia (Vikrant Kumar et al. 2008). The linguistic and genetic data of the people from these hills adds to the importance of understanding the prehistoric archaeological evidences from these hills as the present community could be one of the remnants of the earliest wave of humanity into North East India. The Neolithic period probably marked the most visible phase in prehistoric period when early farmers' migration into the region was more rapid and widespread.

During the last three years, two Neolithic sites were tested through small scale excavations to ascertain a chronological and cultural contexts of the surface finds from Khasi and Jaintia hills (Mitri Marco, 2009). Different variety of stone tools, potsherds and other household objects of stone are recovered in large numbers from

the archeological context. Since both the sites have been dated, the archaeological evidences have greatly helped to shed some light into relationship between the archaeological data and the genetic-linguistic hypothesis associated with the ethnographic population of Khasi-Jaintia hills.

Neolithic Site of Lawnongthroh

The first excavation was conducted during the years 2013–2014 at the site of Lawnongthroh in Ri-Bhoi District of Khasi hills, Meghalaya (Mitri, Marco, 2004, 2005 and Mitri, Marco et al. 2015: 33–42). The site is located in the northern part of central Meghalaya plateau which lies in the transition zone between the northern undulating Khasi hills and the central Khasi upland zone of the central Meghalaya plateau (**Figure 1**). These northern undulating hills merge into the Brahamaputra valley through the submontane region known as the *Ri-Bhoi*. There are two cultural layers at the site and the four samples of charcoal sent for C₁₄ dates produces dates ranging from 2960 ± 30 BP at the lowest layer and 1640 ± 30 BP at the upper layer¹.

Excavation

Mapping of the section revealed that a mound has been formed at the site and slope along the North-South axis. 1 × 1 meter square grid lines are laid out 13 meters along North-South orientation and 8 meters East-West. Separate codes were assigned for each grid measured from the datum point at Trench-1 in the mid-point of the plotted surface. As the topography of the site slightly slopes towards the west, step-trench technique was adopted to achieve a clear stratigraphic sequence of the layers in reference to the natural gradient of the slope. Through this method, the actual layers of the site could be measured

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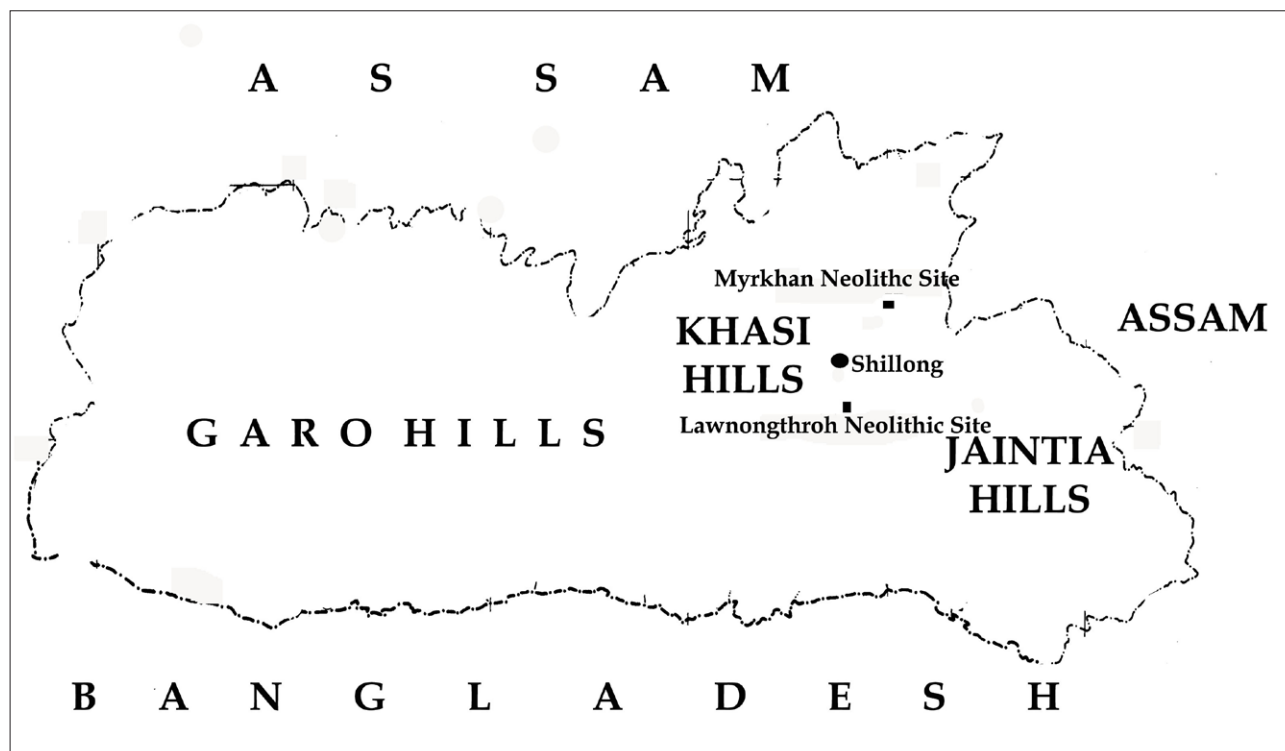


Figure 1: Map of Meghalaya showing location of the two sites.

uniformly along the slope and hence allow for a more precise cataloging of the archaeological materials recovered from respective depths (**Figure 2**).

Cultural materials of Lawnongthroh-1 are recovered uniformly from all trenches 25 cms below the surface top-soil which was heavily disturbed due to agricultural

activities. These cultural materials comprise different types of ground stone tools such as Axes of round/ pointed/ splayed cutting edge, Adze, Blade/Knives, Shouldered & Tanged types etc. (**Figure 3**), and a few fragments of flakes (**Table 1**). These flakes and fragments indicate that worn-out stone tools are being reworked at the site.

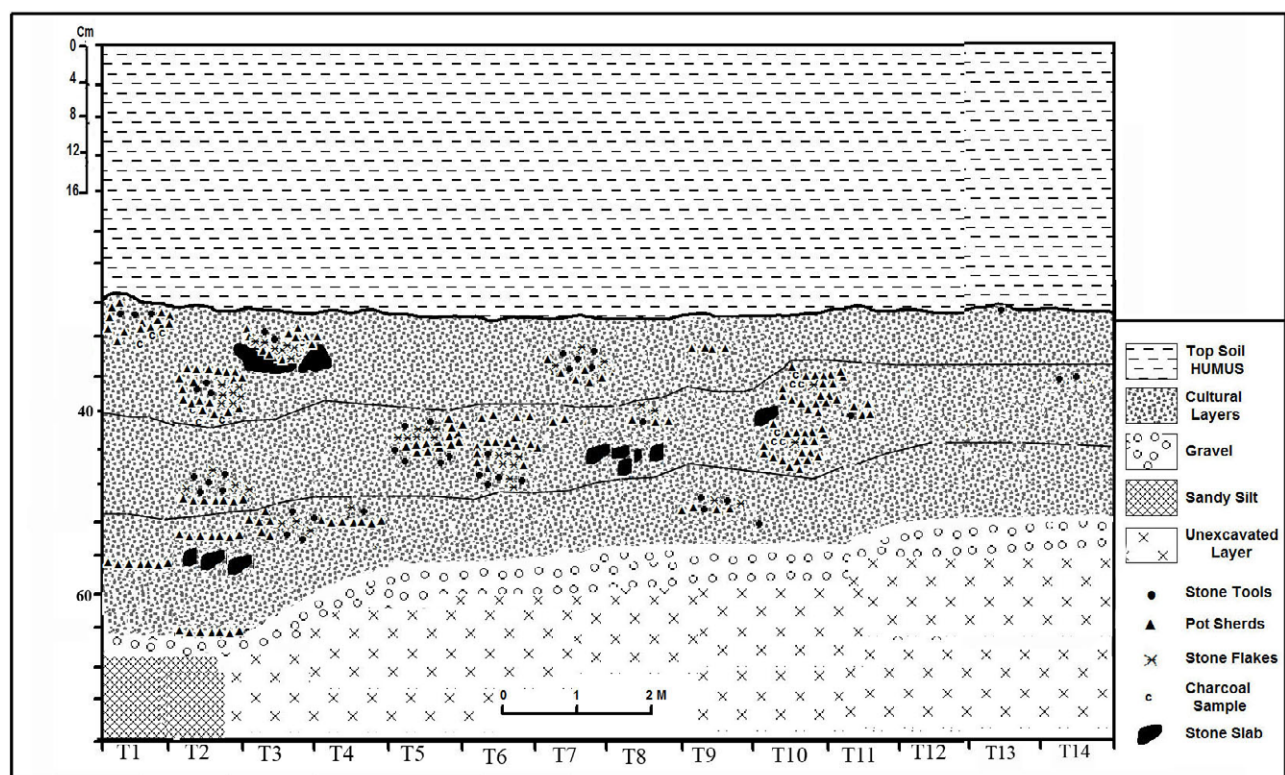


Figure 2: Section of the Excavated Layer of Lawnongthroh Neolithic Site.



Figure 3: Facetted and tanged stone tool from Lawnongthroh Neolithic Site.

Types of Stone Artifacts	Surface	Excavated layers	Numbers
Small Flakes	–	228	228
Fragments and Broken Tools	–	64	64
Axe Types Tools (Round, Pointed, Splayed)	3	16	10
Chisel & Adze Types Tools	4	9	13
Quadrangular and faceted	0	2	2
Shouldered & Tanged Types Tools	4	19	23
Blade/Knife Tools	–	2	2
Total	11	122	342

Table 1: Stone Artifacts from Surface and Excavated Layers of Lawnongthroh-1 site.

Other miscellaneous objects of stones recovered include; water pebble, Quartzite fire lighter, spindle whorl, fine hand-knife, ring-stones, grinding stone/polishers, also recorded from the different layers of the site (**Figure 4**).

Highly corroded iron implements which include a borer, a harpoon head, part of bracelet, a small buckle are recorded at different layers of the excavation; between 22–57 cms (**Figure 5**).

A total of 2104 (**Table 2**) hand-made potsherds were recorded from the excavation and the potsherds are mainly of two types; cord marked & carved paddle. Of these, 97% of entire collections are carved paddle types (**Figure 6**) and the remaining 3% are cord impressed (**Figure 7**). The carved paddle types have distinctive groove patterns on the exterior surface such as Criss-Cross bands, Zig-Zag bands, Vertical/Horizontal bands. These distinctive patterns are not

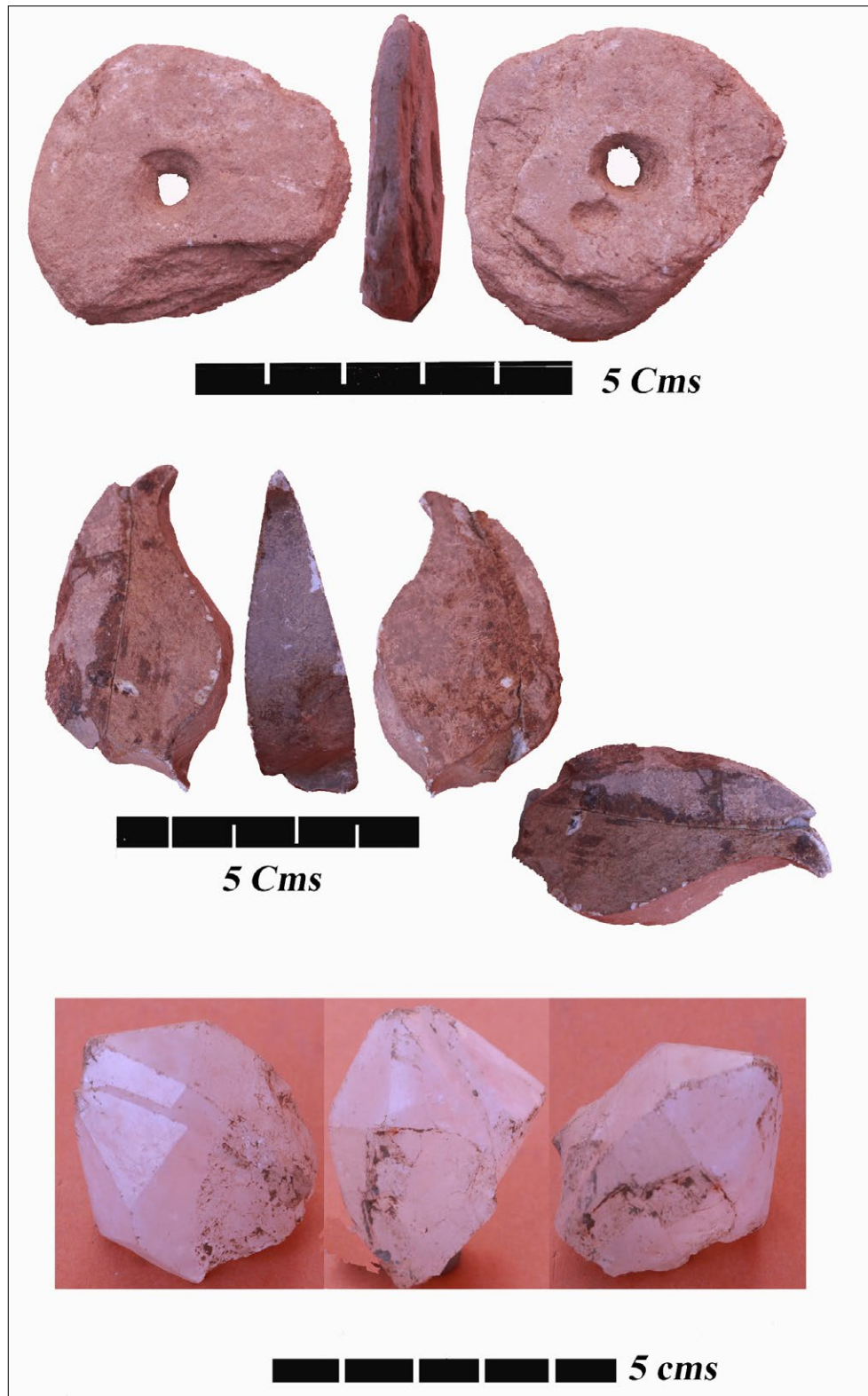


Figure 4: Pic (1) Stone Spindle whorl (2) Polished hand knife (3) Fire lighting quartz from Lawnongthroh Neolithic Site.

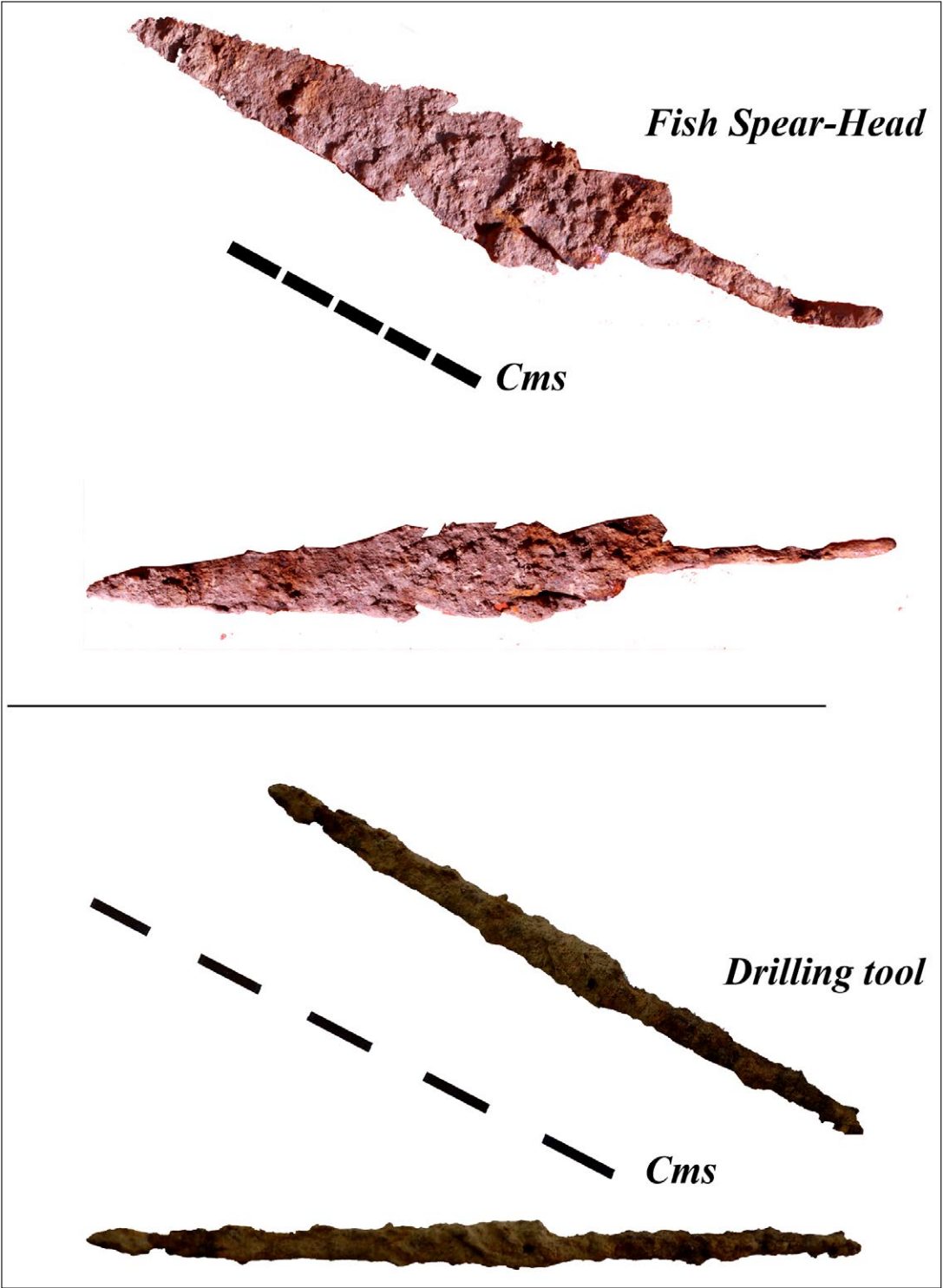


Figure 5: Pic (1) Iron Fish Spear Head (2) Iron driller/borer from Lawnongthroh Neolithic Site.

Trench depth (cms)	Total count
30–40	365
40–50	723
50–60	724
60–70	292
Total	2104

Table 2: Total Potsherds and their provenance from Lawnongthroh-1.

clear with the cord-impressed types. There is clear indication that the carved paddles are purely designs impression after the pot has been molded to shape while the cord-mark types with haphazard impression are made during the molding of the pot to shape from paddle coiled with cord(s).

Neolithic Site of Myrkhan

The second excavation is being conducted at the site of Myrkhan-1, East-Khasi Hills of Meghalaya. Although excavation of the site is still in its first season, a complete



Figure 6: Carved paddle potsherds from excavation from Lawnongthroh Neolithic Site.

picture is already emerging on the cultural composition of the site. The site Myrkhan-1 lies between $25^{\circ}32'40.01''\text{N}$ and $91^{\circ}48'34.06''\text{E}$, at 5094 feet AMSL is located 45 Kms south of Lawnongthroh site in the East Khasi hills district of Meghalaya (**Figure 1**). Owing to the altitude of the entire Khasi hills upland area and the vegetation of the

site and its surrounding areas falls under the temperate type. The site lies right above the eastern gorge of the Umiām stream which flows toward the entire northern undulating Khasi hills till it joins the Brahmaputra River in the Assam. The source of this stream lies 5 Kms west of the site.

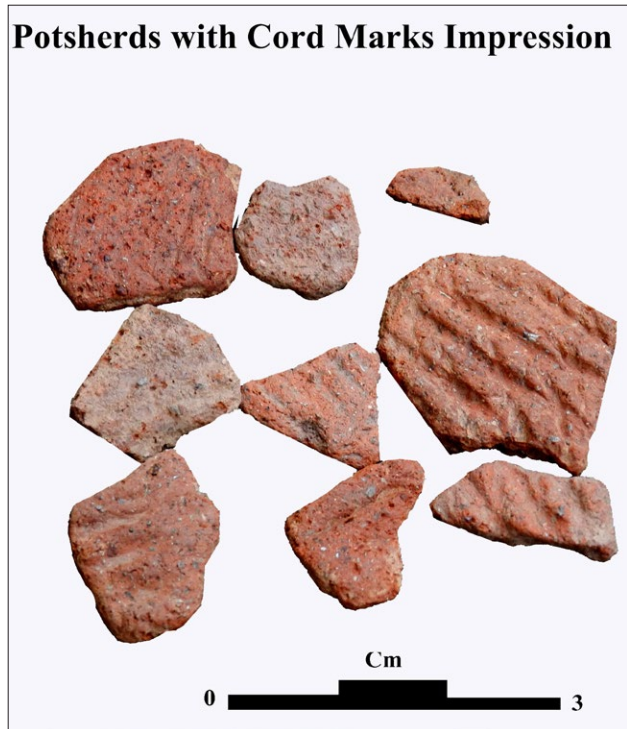


Figure 7: Cord-impressed potsherds from excavation from Lawngthroh Neolithic Site.

Surface exploration reveals the extent of the site which can be measured by the amount waste flake debris and unfinished stone tools recorded at different spots within 3 Sq. kilometers radius of the site. The largest concentration of these archaeological remains is found at the extreme south-west end of the modern village (Myrkhan) where heaps of waste flakes and stone artifacts are piled up by cultivators in recent past. The piled-up artifacts are found

on a flat terrace or ledge part of the hill slope measuring 60 meters east-west and 20 Meters north-south. This particular spot also recorded the largest artifact piles and concentrated waste flakes, cores, unfinished stone tools etc. on the surface.

The flat area of the site was mapped for excavation and the topographic setting presents a very minimal erosional flow for artifacts. However along the sides of this flat area and except the north-east direction where the slope runs uphill, the area is identified with steep slopes (**Figure 8**). Survey along these slopes reveals waste flakes and artifacts being rolled down hill and these were removed from the context due to human activities when they clear the area for agriculture. The surface evidence from the flat area clearly suggests that it was used for mainly for manufacturing of stone tools since it is found close to an amphibolite and slate rock outcrop. The rock outcrop was definitely a source for stone tools at the site and it is located close to a small stream which flows westward to join the Umiang stream at the gorge.

Excavation

The site was mapped and 20 × 20 meters layout was plotted on the site map for excavation. A slight mound could be observed from both the East-West and North-South section of the plotted surface (**Figure 9**). Two trial trenches dug to a depth of 80 cms below the surface provide clear stratigraphic profile of the site and the extent of cultural deposit of the site. Cultural materials are found exposed right at the surface of the mound. However from the surface to about 20–25 cms below, there is a strong trace of burning of the soil resulted from slash and burnt cultivation in recent past. Owing to this factor, archaeological materials recovered from this layer are group as separate category and no effort was made to date carbon samples from this level.

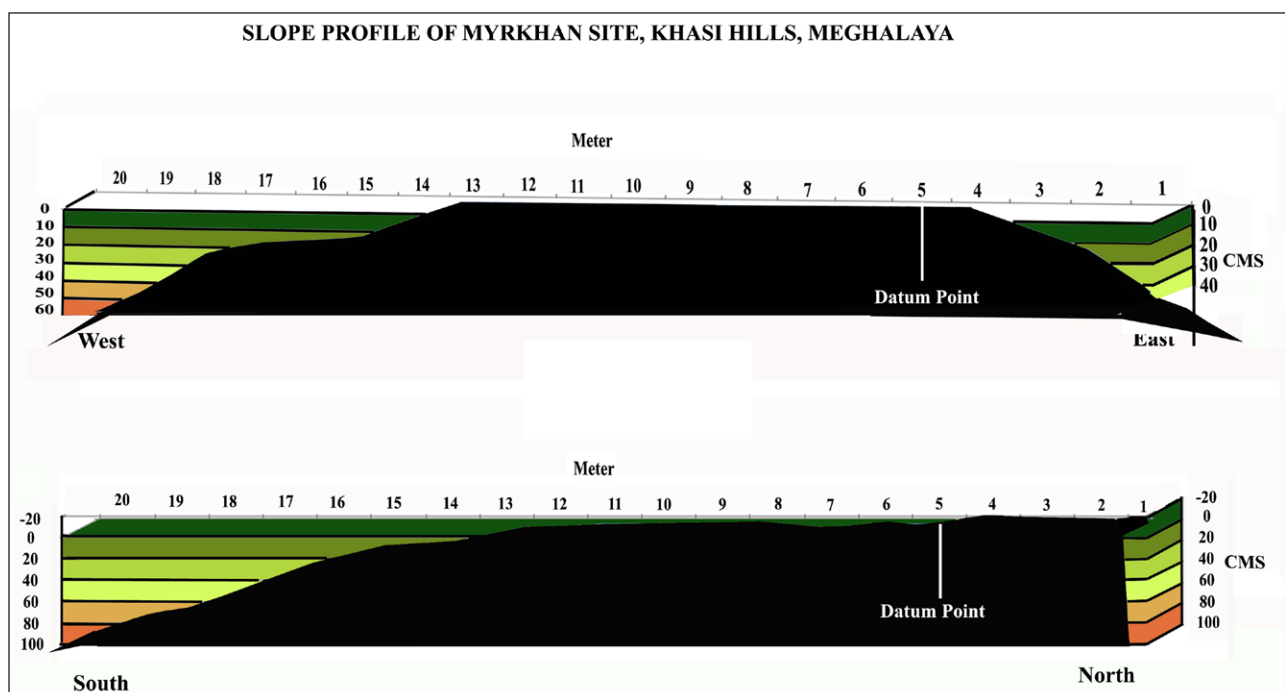


Figure 8: Slope Profile of Myrkhan Neolithic site.

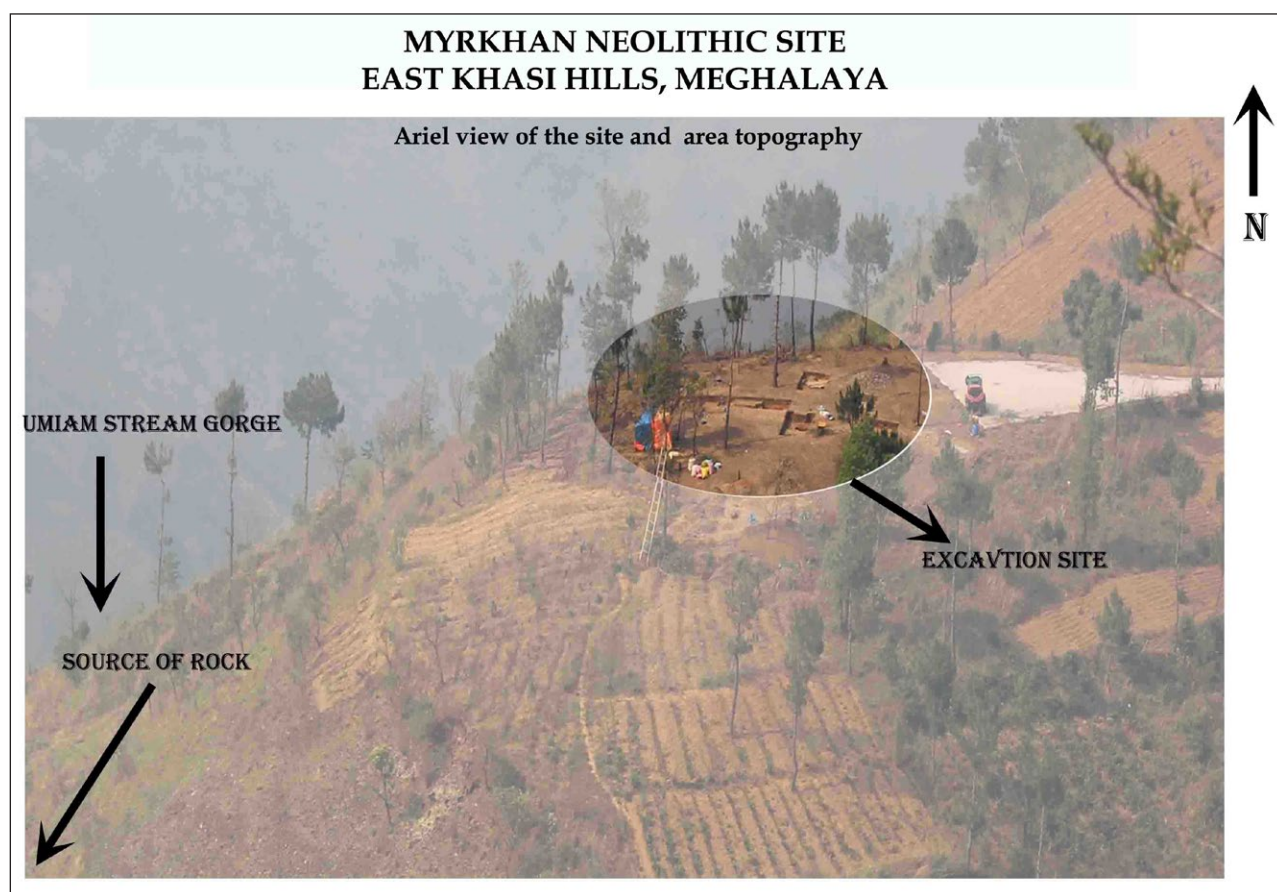


Figure 9: Top view of Myrkhan Neolithic site.

Using the traditional Grid method of horizontal excavation, altogether 9 Trenches of 2×2 meters square are opened up during the first phase of excavation (**Table 3**). The trenches are labeled as T-1, T2. . . along West-East and T1+1, T+2. . . and T-1, T-2 etc. along North-South respectively. Trench-5 which is located at the site's highest point is marked as the datum point of the plotted surface. The stratigraphic composition of the site starts right from the disturbed surface to a depth of about 50–60 cms below (**Figure 10**). One sample of charcoal from Trench-5-1 recovered in association with cultural materials from a depth of 50 cms has been given a C_{14} date of Cal BP 3500 ± 30 BP².

Potsherds

From the 9 numbers of trenches, and from different depths, a total of 1339 potsherds (**Table 4**) are recovered from the season's excavation and two varieties of sherds

are observed; the carved paddle types and cord-impressed types (**Figure 11**), similar to sherds recovered from the site of Lawngthroh-1. The site however produces more cord impressed types than the carved paddle ones (**Figure 12**).

Stone Tools

A huge cache of unfinished tools (**Figure 13**) in their secondary stage of reduction sequence are recovered during the first season's excavation. Till this stage of research, 162 stone tools from trench-1 and trench-4 have been studied.

Till this stage of excavation a total of six finished and ground stone tools, (**Figure 14**) with intact or slightly broken condition were also recovered from the upper layers of trench-4 between 10–30 cms depth (**Table 5**).

The types of tool which dominate the assemblage on the basis of the butt-end comprises of; Round Butt, Pointed Butt, with Broad or Splayed working edge and the quadrangular types (**Figure 15a**). Short Axes of the

Sl.	Trench Name	Depth dug	Sl.	Trench Name	Depth dug
1	1	40 cms	5	5-1	90 cms
2	2	40 cms	6	5+2	50 cms
3	3	50 cms	7	5+3	40 cms
4	4	70 cms	9	7+1	40 cms
			9	8-1	40 cms

Table 3: Showing the Extent of Excavation conducted at the site.

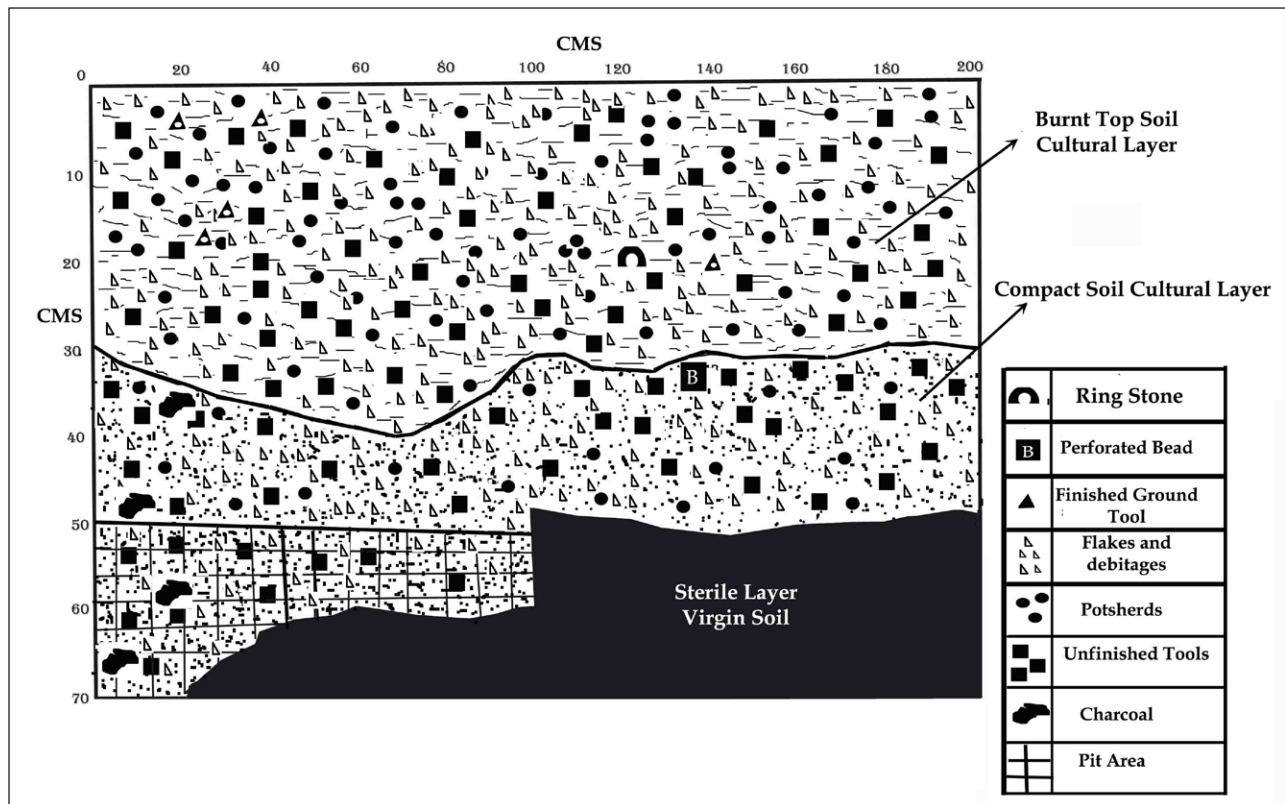


Figure 10: Section of the excavated layer from Trench-4 of Myrkhan Neolithic site.

typical Hobinhian tradition are also recorded in good numbers from the site (**Figure 15b**). These are classified as Axes and Adzes, depending on the section of the working edge. There are also the chisels types, curved-tip knife blade types, and unfinished spindle whorls (**Figure 16 and 17**).

Comparative analysis of cultural materials from the two sites

From the site Myrkhan-1, most of the finished tools were recovered from the top layers up to a depth of 25 cms depth. However the lower layer of Myrkhan-1 between 30–50 cms depth, not a single shouldered implement (even in the manufacturing stages) has been recovered from any of the trenches. The lower layers of Myrkhan-1 provide indication that it was used as a seasonal camp by stone workers for manufacturing stone tools and not a permanent habitation level since the potsherds recovered from these depths accounted to only 25% of the total collection. Given the absence of finished implements from

the lower layers, the presence of these potsherds suggest that, the stone workers used the site only for some seasons to exploit the stone below the site as raw material. The upper layer of 25–30 cms thick deposits offered all the complete evidences of a habitation layer. Apart the high percentage of potsherds recorded along with finished implements, the presence of the secondary burial (**Figure 18**)³ which was recorded at the depth of 20–30 cms also added to the habitation context to the upper layer of the site.

The site of Lawngthroh –1 produce only finished implements and the dominant types are the shouldered and the faceted tools. This site clearly indicative of its habitation character from 25–60 cms depth. The finished tools are the same types that are recorded from the upper layers of Myrkhan-1 indicating that at these depths both the sites belong to a same cultural assemblage and industry. The dates derived from the lower layers of Lawngthroh-1 which are Cal BC 770 and BC 1220 may correspond with the date of upper layer of Myrkhan-1⁴

Depth	Carved Paddle	Cord Impressed	Plain/Faded
0–20	183	370	Not accounted
20–30	39	177	
30–40	73	168	
40–50	9	2	
Total	304	717	318

Table 4: Potsherds Types Recovered from Excavation Site.



Figure 11: Carved paddle potsherds from excavation from Myrkhan Neolithic Site.



Figure 12: Cord Impressed potsherds from excavation from Myrkhan Neolithic Site.

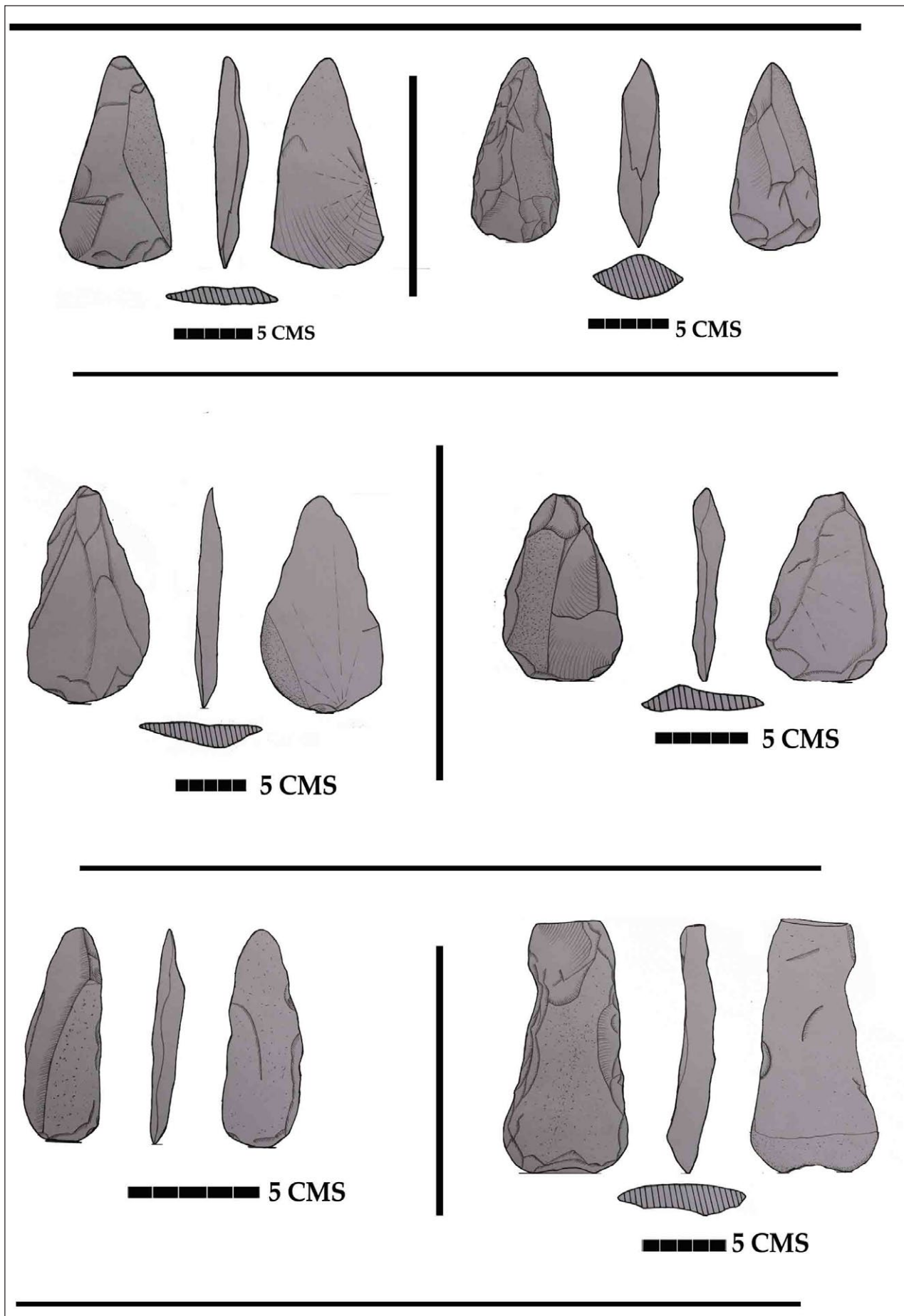


Figure 13: Sketches of Unfinished Stone tools recovered from excavation of Myrkhan Neolithic Site.

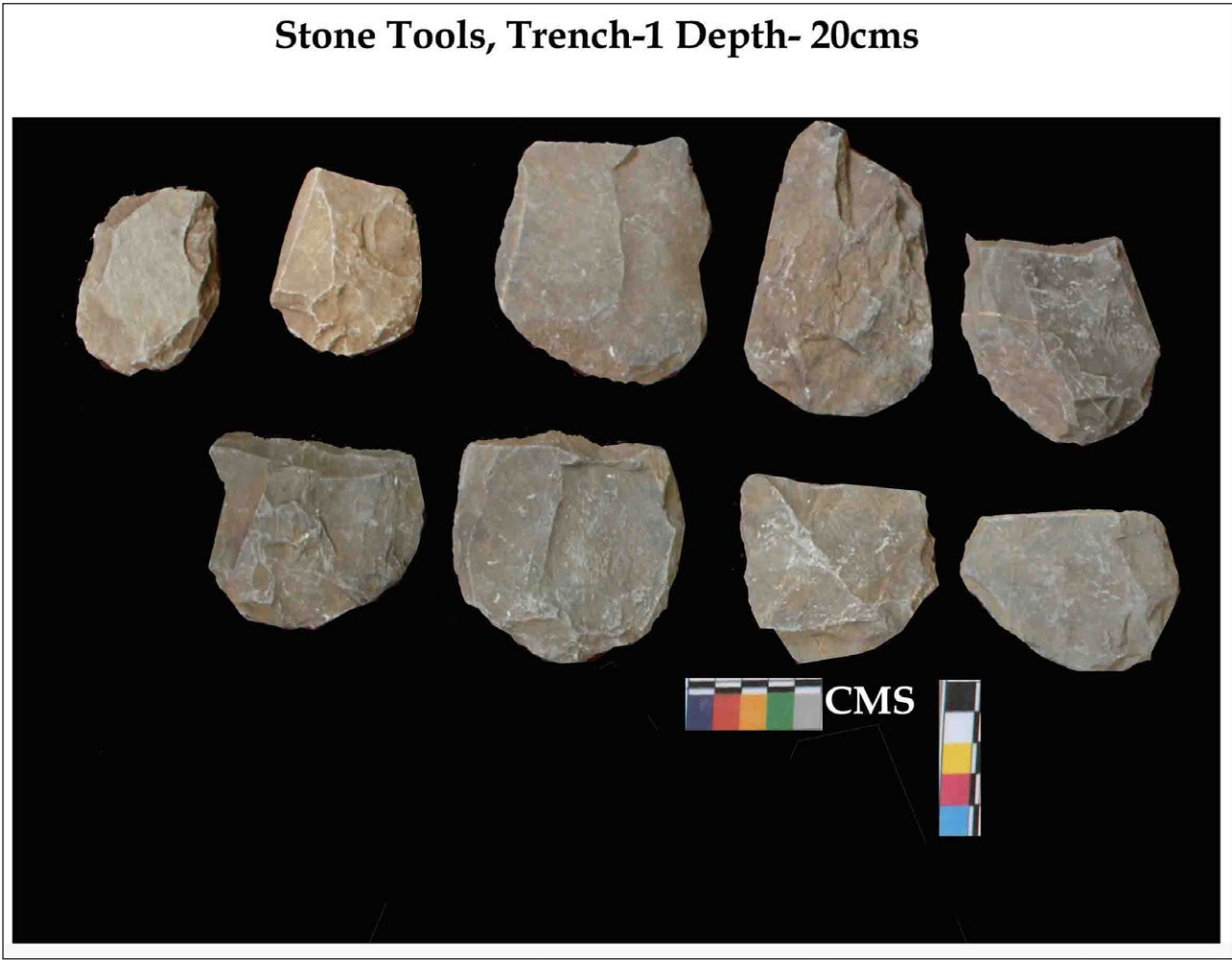


Figure 14: Short Axes from excavation layers of Myrkhan Neolithic Site.

Types	Number recovered	Depth
Axe Types Tools (Round, Pointed, Splayed)	1	30 cm
Chisel	1	20 cm
Small Rectangular Facetted Axe	1	20 cm
Shouldered & Tanged Types Tools	2	20 cm
Ring Stone	1	30 cm
Total	6	

Table 5: Finished and Ground stone artifacts recovered from Trench-4, Myrkhan-1.

and the presence of similar secondary burial evidences recorded from both sites certainly added to the cultural similarities. The lower layer Myrkhan-1⁵ has been dated to Cal BC 1885 to 1765 which clearly shows that these layers pre-date Lawnongthroh-1 by almost 600 years. The cultural materials from the lower layers of Myrkhan-1 especially the absence of shouldered and tanged implements offer interesting insight regarding tool types which dominate the early period of the Neolithic in Khasi-Jaintia hills. Although it is too early to come out with outright conclusion at present, the evidences are suggesting that probably the shouldered and tanged types appeared in these hills at a later period during the Neolithic.

The majority of potsherds at Lawnognthroh-1 are the Carved Paddle type 97% from the total shared studied whereas the dominant types of Myrkhan-1 are the cord impressed types 70% from the entire collection. These evidences reveal yet another interesting similarity and differences between the two sites. It is worth to acquire more data which can come only after the completion of the excavation of Myrkhan-1 to understand the cultural continuity of Myrkhan-1 to Lawnongthroh-1.

Iron objects were also recovered from the site Lawnognthroh-1, and some of these are also recorded from the lower layers of the site 35–60 cms. The site of Myrkhan-1 on the other hand did not produce any iron

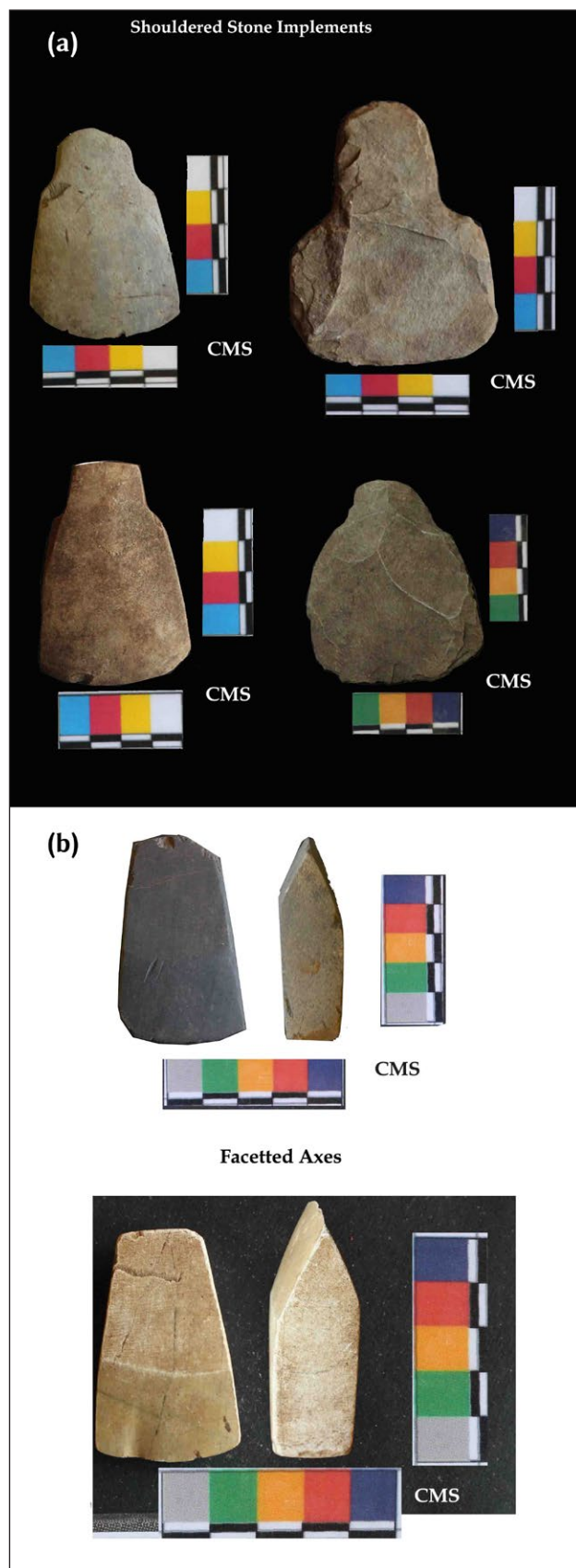


Figure 15: (a) Shouldered and Tanged Axes from excavation of Myrkhan Neolithic Site. (b) Facetted Axes from excavation of Myrkhan Neolithic Site.

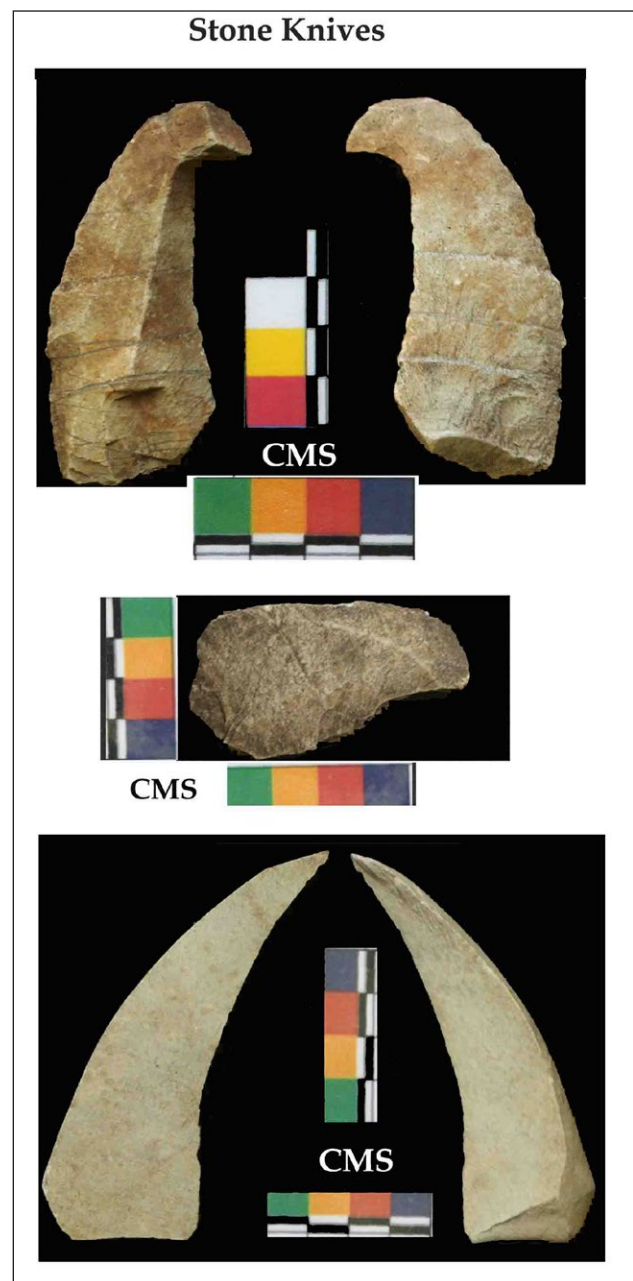


Figure 16: Unfinished stone knives from excavation of Myrkhan Neolithic Site.

object till the present stage of excavation. This therefore place the site of Lawnongthroh-1 to a more advance stage of the Neolithic period in these hills while the site of Myrkhan-1 could be one of the precursor to other Neolithic sites of Northern and central Meghalaya plateau. Further excavation and more dates from the yet unexplored parts of west Khasi hills and eastern parts of Jaintia hills will help to provide a complete picture on the pattern of movement of the Neolithic farmers along these hills and also help to solve the crucial problem of understanding the entrance of the Austro-Asiatic Monkhmer Khasi population into the North Eastern part of the country.

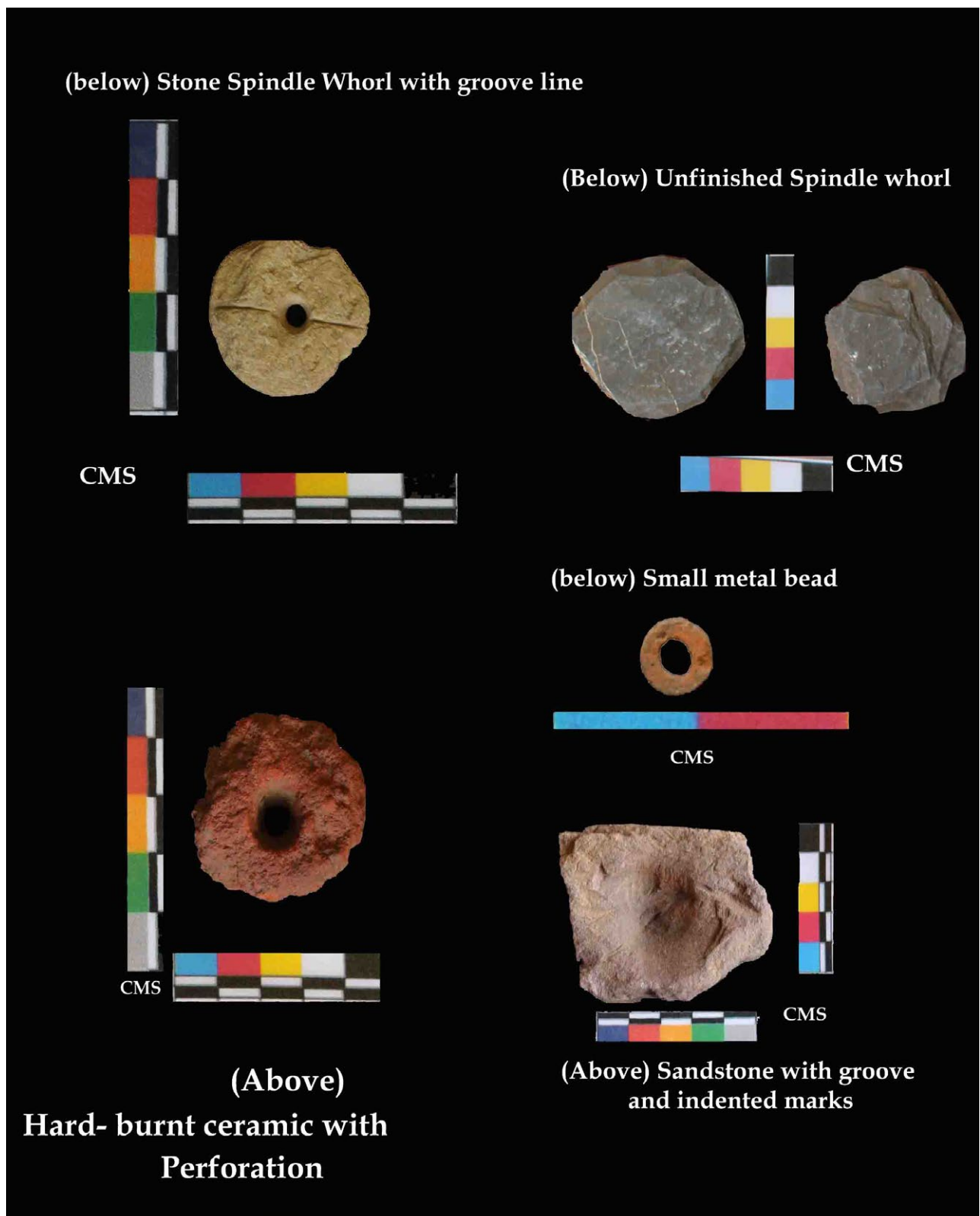


Figure 17: (Clock wise) stone spindle whorl, unfinished stone spindle whorl, metal bead, stone sharpener and perforated clay object from Myrkhan Neolithic site.



Lawongthroh-1 Exposed secondary burial



Myrkhan-1 Buried secondary burial

Figure 18: Secondary Cist Burials from (Above pic) Lawnongthroh Neolithic site (Below Pic) Myrkhan Neolithic site.

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Competing Interests

The authors declare that they have no competing interests.

Notes

¹ Beta analytic Lab Miami Florida.

² Beta Analytic Lab. Miami Florida date 2016.

³ Similar burial was also recorded from Lawnongthroh-1 close to the excavation site and exposed on the surface.

⁴ No dates are available for Myrkhan-1 upper layers.

⁵ 50–55 cms depth.

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