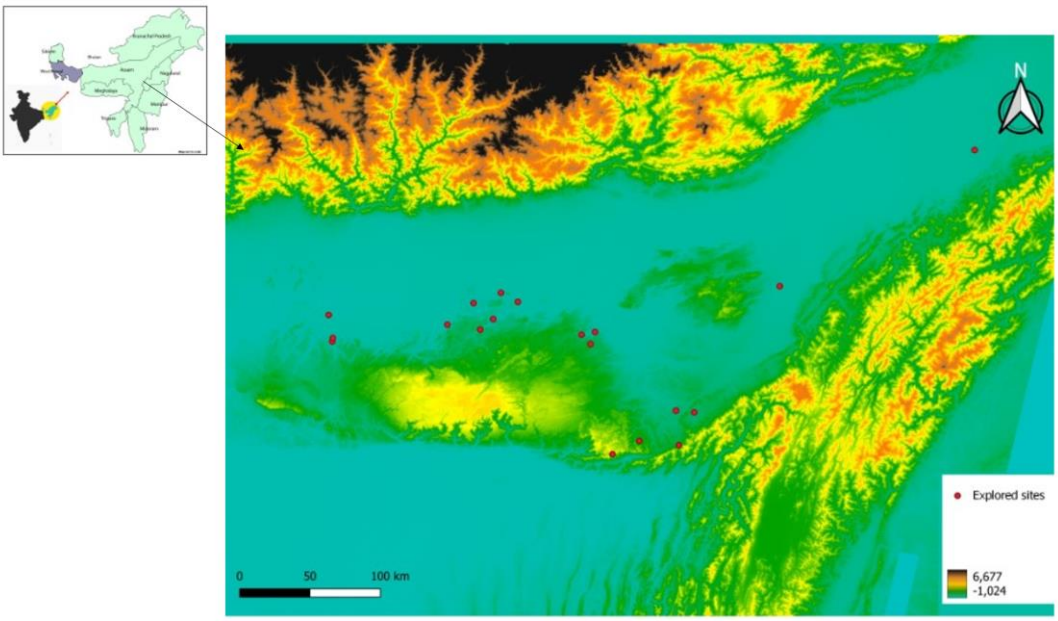
Chapter 4

EXPLORED SITES AND MATERIAL CULTURE

The Assam region or the present North-eastern states is a vast land with diverse geographical and ethnic identity. Cultural relations and interactions between the various ethnic communities within and the surrounding geographic areas were present since time immemorial. The region was later divided along ethnic lines, resulting in seven states with clearly defined geographical borders. The current research was carried out within Assam's current political boundaries, though the bordering hill regions were explored at times in response to the demand for material culture and cumulative study. The archaeology of present Assam region is defined from the Neolithic Period onwards which is primarily characterized by the presence of material remains, such as, Celts, Shouldered Celts, Axes in association of cord-impressed pottery, which is evident from a number of sites, albeit in a limited number. Very limited evidence of preceding prehistoric culture specifically the Palaeolithic and Mesolithic has been found from the entire region apart from Garo hills which is also contradictory as artifacts has been found without proper stratigraphic context.

A conceptual discussion of all the data gathered from the most recent field survey is presented in this chapter. In order to understand the region from a geographical perspective and to comprehend the earliest inhabitants of that land, sites with various past cultural identities have been investigated throughout the field survey, and will be discussed here. In the Brahmaputra Valley, where there is no evidence of the prehistoric period, the available cultural relics indicate that the area was occupied since the early, late, and mediaeval periods. The locations are discussed in accordance with the names of the current districts, and the geo-coordinates are noted to understand the geographical context.



Map 4.1: Explored Sites of Assam

4.1. KAMRUP

This district falls in zone 6 and 7 in the current zonal division for this research. It has a rich history that dates to the time of the two great Indian epics i.e., Mahabharata and Ramayana. The name Kamrup is said to be a puranic name based on the myth of Kamadeva, the god of love who was slain by Siva's fiery gaze and came back to life in Kamarupa, as was already mentioned in chapter 3. It was referred to as ka-mo-lu-po in the writings of Chinese pilgrims from the seventh century CE. Vincent Smith described that the kingdom of Kamarupa and Pragjyotishpur are the same as mentioned by Kalidasa in the 5th century CE. The rulers of ancient Kamrupa were typically described in puranic legends as Asuras or Danavas, which are broadly speaking non-Aryan people. After coming into contact with the Aryan origin people during the Mahabharata period, they were said to have become Arayanized. The city was important during the time of the great epics, but it appeared insignificant during the rise of the Mahajanapadas because it was not one among the 16. The name Kamrupa was later mentioned in the 7th century CE in the writings of Hiuen-Tsang, the copper plate inscription of Bhaskaravarman of the Varman dynasty of the post-Gupta period (Barua, 1933).

This is a historically significant area that has been the subject of extensive archaeological research. From stray finds of stone tools in the surrounding hilly terrain

to the excavation of Ambari and its nearby localities, this area offers proof of historical cultural interaction. The region was brought under investigation for the current research while keeping in mind the area's richness. Here, we discuss the locations surveyed.

4.1.1 Digaru-Kolong Valley

The areas near the river Digaru (literally, di meaning water and Garu meaning Garo tribe) is characterized by low hillocks with dense bamboo vegetation, areca nut and rubber plantations. The soil color is brown with the surface red (locally known as *morrum* soil). The temperature is comparatively different from other places of Kamrup district due to its higher elevation and the maximum temperature varies between 29º and 10º celcius. The annual rainfall in this area is between 200-250 cm. The river Kolong in its upper course receives water from the western watershed of the Mikir Hills and joins Digaru which originates from Khasi Hills and flows north-eastwards into Kamrup, emerging near the village of Sonapur and joins Brahmaputra River. In the Khasi Hills the Digaru is known as the Um-thru. Geologically the area is rich in Granite and Quartz. Small ponds and streams lie between the hills. Thus, the valley itself designated as Digaru-Kolong Valley is rich with archaeological and historical remains.

4.1.1.1 Bogibori: Bogibori is a village 20 kilometres to the east of Guwahati in the Dimoria subdivision of the Kamrup district. Dimoria is situated in the north of Meghalaya and in the west of Assam's Morigaon district, which served as the former seat of the Gobha dynasty. It is east of Guwahati and south of Chandrapur in the Kamrup district. The coordinates of this Bogibori site are $26^{0}11'31"N$ and $92^{0}3'47"E$. With an altitude range of 150 to 750 mm, it is classified as middle land topography on the topographical map. Low hillocks completely encircle Bogibori, with some plain land being used for cultivation. In the valleys between the hillocks, people formerly farmed. The main cultivations are Rice, Orange, and areca nut. Jhum cultivation was there earlier, but now it is abandoned. The local inhabitants are Karbis (dominant) followed by Tiwas, Bodos, Nepalis, Sonowal- kacharis, and Kalitas (Sharma and Sharma, 2008). The *kolong* is the main river which flows just 2 km from the area.

The tools (see figure 4.1) and potsherds (see figure 4.3) were found on the lower reaches of the hills or a slope area which merges with the plain land where seasonal cultivation is carried out by the local farmers. The cultural materials were initially discovered by local farmers during the cultivation. During the course the present study, the artefacts

found were done. The finding spot of the materials shows habitation must took place on the top of the hillock though there is no evidence of any material on the surface of it, which is heavily covered by bamboo vegetation. The tools appear to be Neolithic and some of the potsherds have cord impressions but with medium fabric, making it difficult to identify the cultural period because later periods also employed similar cord impressed potteries. The other decorative pattern includes criss-cross lines, mostly the paddle impressed ones. However, we assume that the site is Neolithic because of the connection between those potteries and Neolithic stone tools. The locals have access to numerous ponds and streams as well as a nearby water source. The ponds are natural formed in the depressions between the hillocks. The site is currently under cultivation and lands are ploughed every year and therefore the site has minimal disturbances. The part of a spouted vessel that has been found in the site is similar to that reported from Marakdola, which is designated as post Neolithic by Rao (1977).

Figure 4.1**:** - Tools from Bogibori

Table 4.1: Bogibori Stone tools Analysis

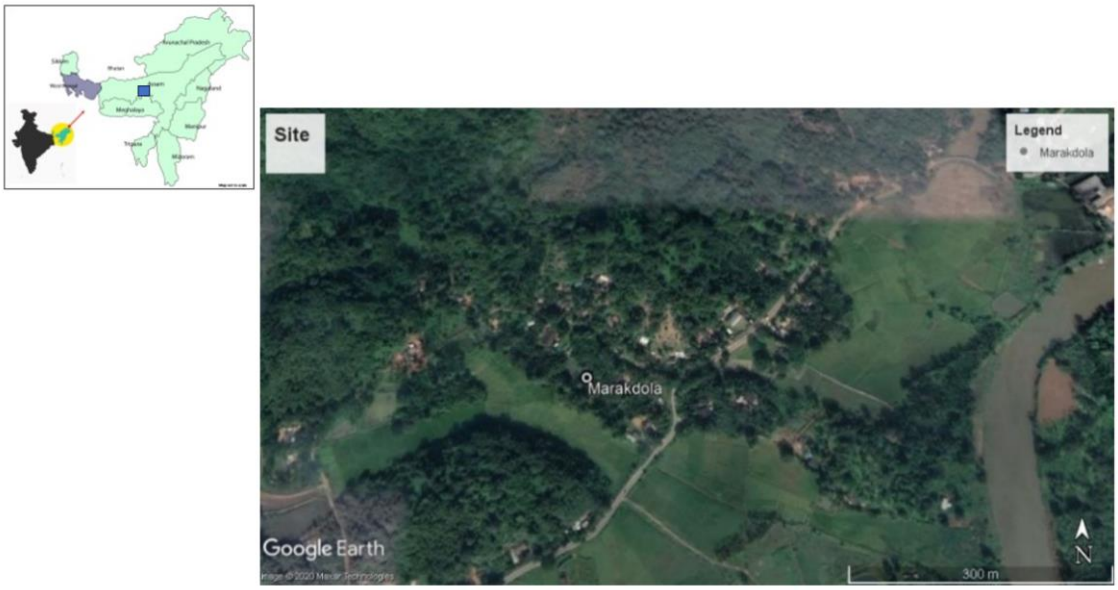
Artifact	Length (cm)	Breadth (Distal) cm	Breadth (medial) cm	Breadth (proximal) cm	Thickness
Shouldered Axe	10	3.9	3.9	2.3	2.1
Shouldered Celt	6.5	7.1	6.1	2.7	2
Shouldered celt	6.9	5.0	4.8	2.2	1.8
Axe	6.5	5.2	4	2.7	0.9
Axe	9.7	5.8	5.8	4	2
Celt	13.5	7.2	6.2	2.7	1.3

Figure 4.2: Rim sherds and decorated body sherds from Bogibori

4.1.1.2 Marakdola: (26° 4'3.65"N, 91°53'32.17"E) The site is just one kilometer away from Sarutaru, though the landscape of both the sites are different. Marakdola is a little elevatedarea from present cultivation ground of rice where sherds are collected both from the surface level and from the section exposed towards the rice field. The excavations at Marakdola by Rao (1977) revealed a single cultural period which is same as the case with Sarutaru (Rao 1977). Layers 2 and 3 at the site gave the evidence of potsherds unearthed in black soil and black loose silt respectively which occurs up to a depth of 60 cm. Below 60 cm the soil is virgin. In the present exploration a section of 1.20 m in height which contained pottery was located. To study the section towards the rice field, that yielded protruding potsherds (see figure 4.4), a measurement of 50 cm

in width and 1.20 m in length was cleared. It shows that the soil in the upper half was very compact, greyish/yellowish in color, in contrast to the lower half, which was blackish in color and has a high moisture content, possibly due to the current agricultural activity. According to the material collected from the section, there appear to be three layers: layer 1 is humus with a depth of 10 cm and no cultural remains; layer 2 is compact greyish/yellowish soil with Kaolin pottery and fragile parts of potsherds with a depth of 10-80.7 cm; and layer 3 is alluvial soil with red-colored potsherds exposed to the depth of 80.7 cm-1.20 m.

Marakdola has given the evidence of pottery (present exploration) and one shouldered celt (Earlier reported by Rao). Celt has not been found from any stratigraphic layer but from surface survey. The pottery at Marakdola is made of well levigated kaolin clay whose surface color varies from red, cream to buff. The decorations found on the exterior surface of Marakdola varies from cord to paddle impressions (see figure 4.8), which is a continuation of pattern from Neolithic period. The sherds are thin with very fine fabric. The pottery seems to be of Pots with slightly out-turned rim, inward with bulging body and large bowl with straight mouth. The excavations revealed full pot shown in figure 4.9 with spout which are very fine, and wheel turned without any external decorations.



Map 4.2: Google view of Site Marakdola (Courtesy: Google Earth)

At the site itself, there stand some megalithic burials (see figure 4.3) whose authorship and time period is debatable. It may be possible that the potsherds documented during the course of this study may also be associated with the Megalithic monuments found at the site.

Figure 4.3: Megalithic remains at site Marakdola

Figure 4.4: Section exposing pottery at site Marakdola

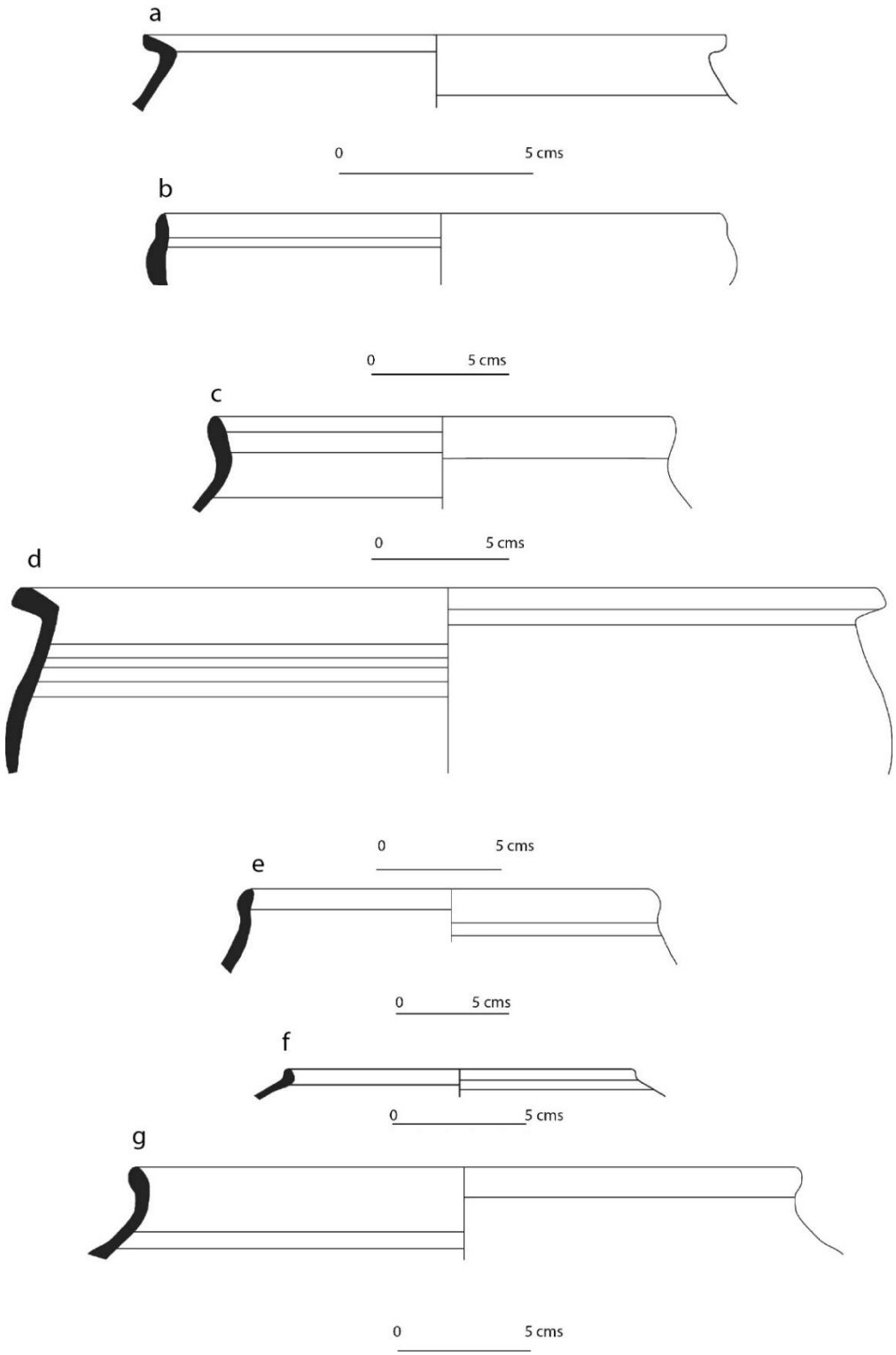


Figure 4.5: Marakdola (MKD) Pottery (1)

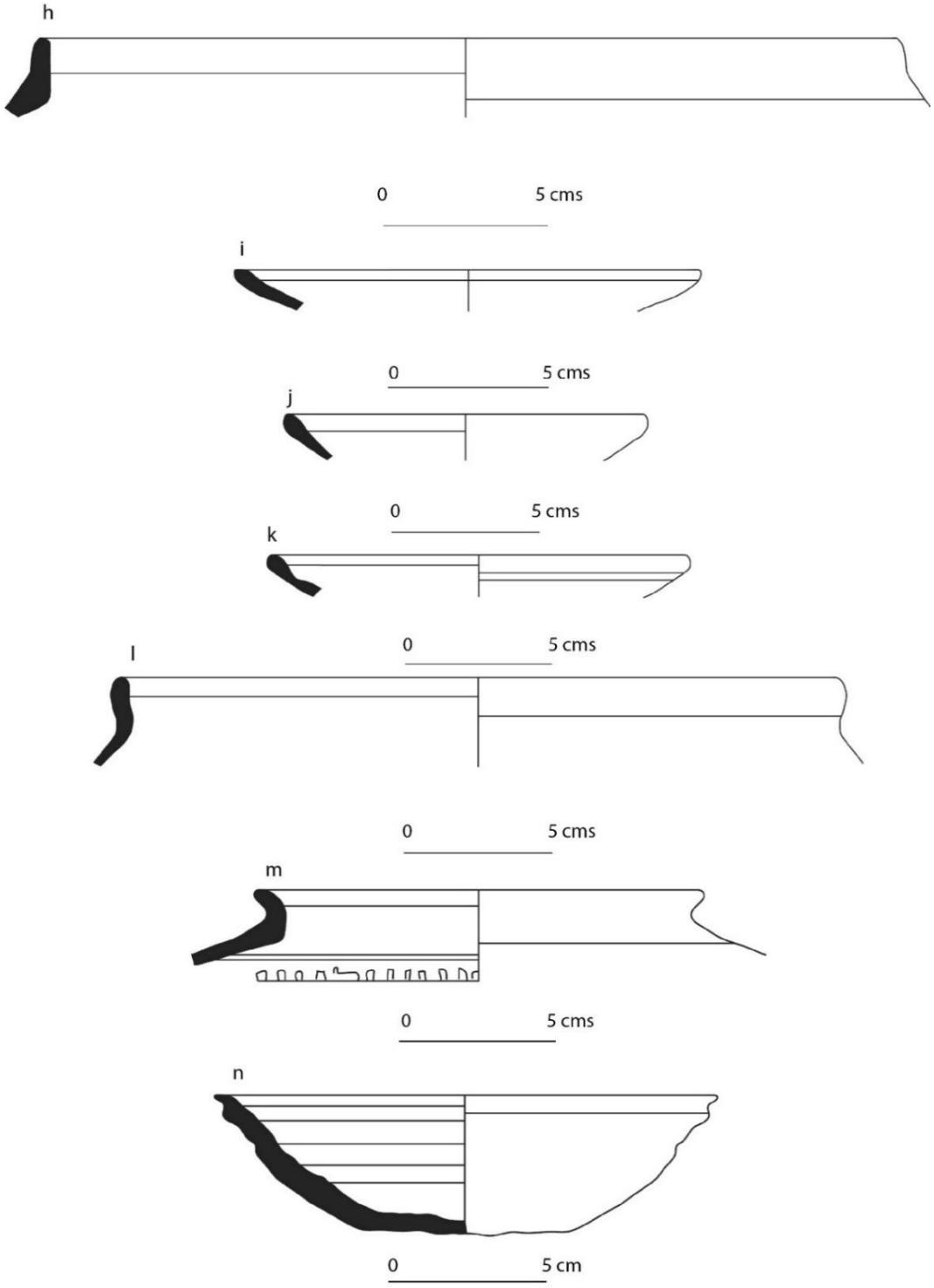


Figure 4.6: Marakdola (MKD) Pottery (2)

Figure4.7: Marakdola (MKD) pottery

Table 4.2: Description of Rim sherds from Marakdola (MKD) (See figure 4.5, 4.6 and 4.7)

Site and Sherd No	Fabric	Color	Form	Remarks
MKD Figure 4.5a, Figure 4.7a	Coarse fabric	5YR 8/3	Beaded out-turned rim. Fragment of a pot/vase (Sisupalgarh report. Fig. 13; pg 81)	Buff ware, occurred in all periods of Sisupalgarh. Well fired with the presence of mica content
MKD Figure 4.5b, Figure 4.7b	Coarse fabric	5YR 8/3	Fragment of a pot, slight out-turned rounded rim	Buff ware, medium fired with the presence of mica content
MKD Figure 4.5c, Figure 4.7c	Medium fabric	5YR 7/3	Fragment of a basin/bowl, pointed straight rim with external bulging	Buff ware, medium fired, presence of mica content
MKD Figure 4.5d, Figure 4.7d	Fine fabric	5YR 7/8	Fragment of a basin, open-mouthed short necked out-turned quadrangular rim	Red ware, medium fired, fine section, presence of mica content
MKD Figure 4.5e, Figure 4.7e	Coarse fabric	5YR 8/3	Fragment of a pot, in-curved rounded rim	Buff ware, medium fired with the presence of mica content
MKD Figure 4.5f, Figure 4.7f	Medium fabric	5YR 8/3	Fragment of a vase/pot, short necked rounded rim	Buff ware, well fired
MKD Figure 4.5g, Figure 4.7g	Fine fabric	5YR 7/1	Fragment of a pot, out-turned rounded rim	Buff ware, interior of the sherd is buff in color, presence of mica, grey core. Well fired
MKD Figure 4.6h, Figure 4.7h	Fine fabric	5YR 8/3	Fragment of a pot, short-necked straight rounded rim	Buff ware, grey core with medium firing

MKD Figure 4.6i, Figure 4.7i	Fine fabric	7.5YR 8/3	Fragment of a plate, incurved rounded rim	Buff ware, medium fired, thin section
MKD Figure 4.6j, Figure 4.7j	Fine fabric	5YR 8/1	Fragment of a plate, incurved pointed rim with little external bulging	Interior buff, buff/white core, medium fired
MKD Figure 4.6k, Figure 4.7k	Fine fabric	7.5YR 8/6	Fragment of a plate/lid with incurved pointed rim	Red ware, Well fired
MKD Figure 4.6l, Figure 4.7l	Medium fabric	7.5YR 8/4	Fragment of a pot with incurved rounded rim	Red ware, well fired
MKD Figure 4.6m, Figure 4.7m	Medium fabric	5YR 7/1	Fragment of a basin/bowl, flat triangular rim with externally corrugated sides	Grey ware, medium fired
MKD Figure 4.6n, Figure4.7n	Medium fabric	5YR 7/1	Flared rim with multi grooved shoulder, out-turned, fragment of a pot. Sisupalgarh period IIA-III (Sisupalgarh report; fig-14; pg. 81)	Grey Ware, medium fired

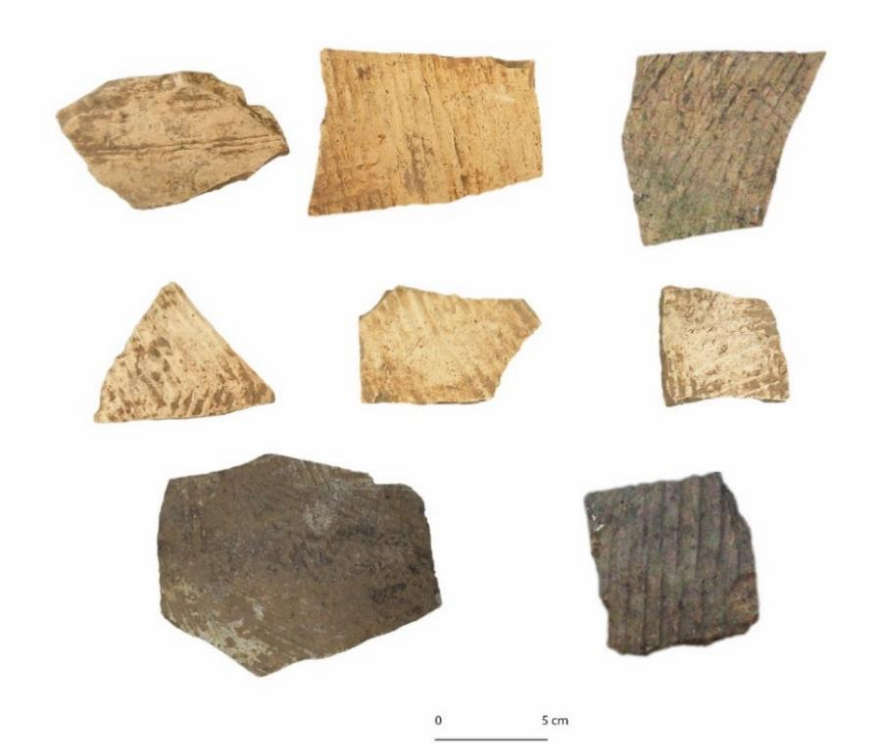


Figure 4.8: Cord and paddle impressed pottery from Marakdola (MKD)

Figure 4.9: Complete Pot and Spouts from Marakdola (Collection from Dibrugarh University Anthropology department)

4.1.1.3 Sarutaru: (26ºN,91.8ºE): Situated on the bordering region of Khasi hills of Meghalaya and Brahmaputra Valley on the other side, on a low hillock of about 125 m high. Geologically the area is a part of Shillong plateau and merges with the plains of Brahmaputra. Digaru is the nearby river. The surface soil is brown with *morrum* and due to the heavy rainfall, there is decomposition of rock. The annual rainfall is almost 200 cm. (Rao:1977.125).

The site stratigraphic section as given by Rao, comprises of three layers. According to the excavation report, Layer 1, 20 cm in thickness is Humus, whereas Layer 2 is cultural layer with brown silt with *murram* and is 53 cm in thickness. The cultural antiquity from these levels includes 9 stone celts, made on slate and sandstone. From this cultural layer, Rao recovered some burnt wood material which he relates with Jhum cultivation. According to the excavator the shouldered celt and cord impressed ware, can be compared with the Lungshanoid farming culture of China, Non-Nok Tha of Thailand and some other cultures of Philippines and Burma (Rao, 1977). Moreover, similar evidence has come from an undisputed stratigraphic context at Spirit cave in North-west Thailand which gives a much earlier date. (Rao,1977:39-42). Layer 3 which was 10 cm in thickness was a virgin layer. No diagnostic sherds of pottery have been found from the excavation and only a good quantity of cord marked body sherds were recovered.

4.1.2 Guwahati (GHY): The area near river Brahmaputra was explored in order to see the extension of Ambari archaeological site, the signature Early Historic site of Assam and Vishnu Janardhan, an early mediaeval temple site near Brahmaputra; where earlier potsherds has been reported by a team of the Department of Archaeology, Cotton University, , led by Hazarika; while digging the area to construct new ropeway over the river. Archaeological deposits belonging to different cultural periods have frequently been observed across the length and breadth of the city (Hazarika et al., 2022). In the current exploration, some potsherds were collected from an exposed section (N 25°15.371´ E 092°56.667´) nearby the bank of the Brahmaputra river. The site is heavily disturbed due to various anthropogenic acitivities as well due to the flooding of the river. The recovered ceramics are very thin and and some bear resemblances with pottery from Sisupalgarh period IIA (200 BCE-100 CE), IIB (100-200 CE), III (200-350 CE).

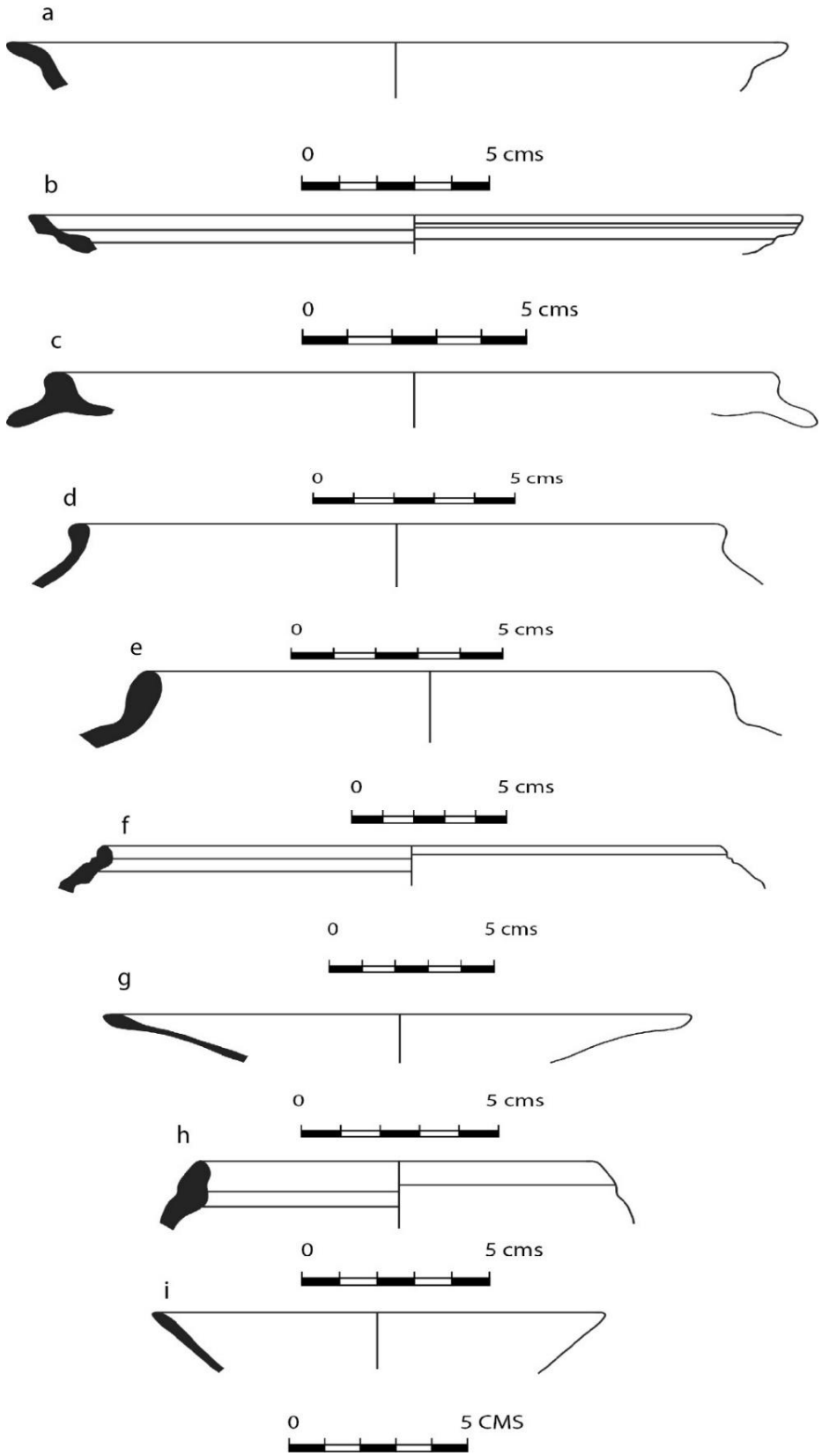


Figure 4.10: Guwahati pottery (GHY)

Table 4.3: Description of Rim sherds from Guwahati (GHY) (See figure 4.10)

Site and Sherd No	Fabric	Color	Form	Remarks
GHY Figure 4.10a	Fine fabric	10R 6/4	Fragment of a plate/dish with out-turned short necked rounded rim	Fine fabric, well fired with the presence of soot marks
GHY 2 Figure 4.10b	Medium fabric	10R 6/3	Fragment of a dish, out-turned poined rim with externally-internally corrugated sides (Sisupalgarh report fig 26, pg no-82)- (period III- c. CE 200-350)	Medium fired, soot mark is present, presence of mica content
GHY 3 Figure 4.10c	Coarse fabric	5YR 8/1	Unidentified form with short vertical lip having external ledge (Sisupalgarh report fig 50, pg no 83)- (period III- c CE 200-350)	Medium fired, gritty surface
GHY 4 Figure 4.10d	Medium fabric	5YR 7/4	Blunty carrinated dish with quadrangular rim (Sisupalgarh report fig 22, pg no. 81) occurs in period IIA (200 BCE-100 CE), IIB (CE 100-200), III (CE 200-350).	Medium fired, presence of mica content and soot marks on the external surface
GHY 5 Figure 4.10e	Medium fabric	5YR 8/3	Fragment of a pot, slight out-turned rounded rim	Medium fired
GHY 6 Figure 4.10f	Fine fabric	2.5YR 6/4	Fragment of a pot, straight rounded rim	Well fired, mica content is present
GHY 7 Figure 4.10g	Medium fabric	5YR 7/3	Fragment of a vase, outwardly tilted featureless rim	Well fired
GHY 8 Figure 4.10h	Medium fabric	2.5YR 6/4	Fragment of a pot, traingular rim with external and internal bulging	Medium fired, presence of mica content, soot marks on the esternal surface
GHY 9 Figure 4.10i	Coarse fabric	5YR 7/3	Fragment of a basin, incurved rounded rim with corrugated sides	Well fired, gritty surface with the presence of mica content

4.1.3 Ambari: Ambari is situated in the middle of present Guwahati city, on the left bank of river Brahmaputra. The geo-cordinate of the site is 26°11.089´N and 91°45.207´E. It is regarded as the signature Early Historic site of entire Northeast, and is currently under the protection of Directorate of Archaeology, Government of Assam. The different stages of excavtions at the site has been discussed in chapter 3. The chronology of the site has been established to 2nd c CE in the recent eacavtion in 2008-09 (IAR), based on a Sunga style terracotta plague that has been recovered.. However, the c-14 date from the depth of 1.2 m layer gives a very late date to 1030±150 CE (IAR 1970-71). Among the material evidences, the collection of ceramics is huge, which are currently housed in the Directorate. The study on the decorated sherds by Sharma (2012), reveals five types of ware comprising; Impressed or incised, Stamped, Incised

and Stamped, Moulded and Applique and observed that the ceramics has translation symmetry. Translation is something that has a serial repetition of an element or part along a striaght line with no change in its orientation and in case of Ambari we can commonly see such design for all potteries (Sharma, 2012) . Most of the decorated and non-decorated potteries from the site is made of Kaolin clay, which is prominent in most of areas of Assam. On the basis of the decoration and use of kaolin clay, Sharma (2018) made an observation related to the shifting of capital from Tezpur to Guwhati where the first one was a prominent city during the Salastambhas and the latter during Pala period. The Pala period sculptures are also noticeable in many parts of Assam (Asher, 1980). According to Asher (1980) except for the Brahmaputra Valley, Assam simply stood so far from the rest of Eastern India which is largely hilly and inaccessible. According to Phukan (2020), the sculptures of Ambari has Brahmanical entity and establishes an independent and local traits in carving which is not found from of the sites of entire region. But during the time of Bhaskara Varman of Varman dynasty, the area was actively linked with the west both politically and culturally, which is known from inscriptions, copper plate grants and the writings of Hiuen Tsang. So, the post Gupta to the rise of Palas, the region seemed politically important. It supports the hypothesis that the ceramics and sculpture found from Ambari belonged to late early historic period. The description of pottery is given in the discussion part of this chapter along with all the description of pottery found from different sites of north-east India.

Figure: 4.11: Dish-on-stand from Ambari excavation (period not mentioned)
(Courtesy: IAR 2008-09)

Figure 4.12: Terracotta plaque with Sunga-Kushana features and Stamped/Impressed pottery, Ambari (IAR 2008-09)

4.1.4 Ganapati (Rani): The geo-cordinate of the site is N 26°11.367′ 091 E°44.558. The site has been inhabited by Garo people at present, which falls in the border region of Assam and Ri-Bhoi district of Meghalaya. The current population was relocated to this area as part of IGNOU's project.. The site has previously been explored by the Department of Anthropology,Gauhati University, revealing a large number of potsherds.. In the present exploration done by the researcher, potsherds were collected from the courtyards and backyards of the houses, as well as from some small mounds that appear to be big ant houses and from road cutting sections but all the areas are located in the slopes, adjacent to Meghalayan hill.. Previous reports (Devi, 2015) confirm the presence of scattered stone tools throughout the Rani area, indicating the presence of an earlier culture.The potteries gathered are extremly thin in section. They are plain and devoid of any decoration which suggest its use as a daily ware.

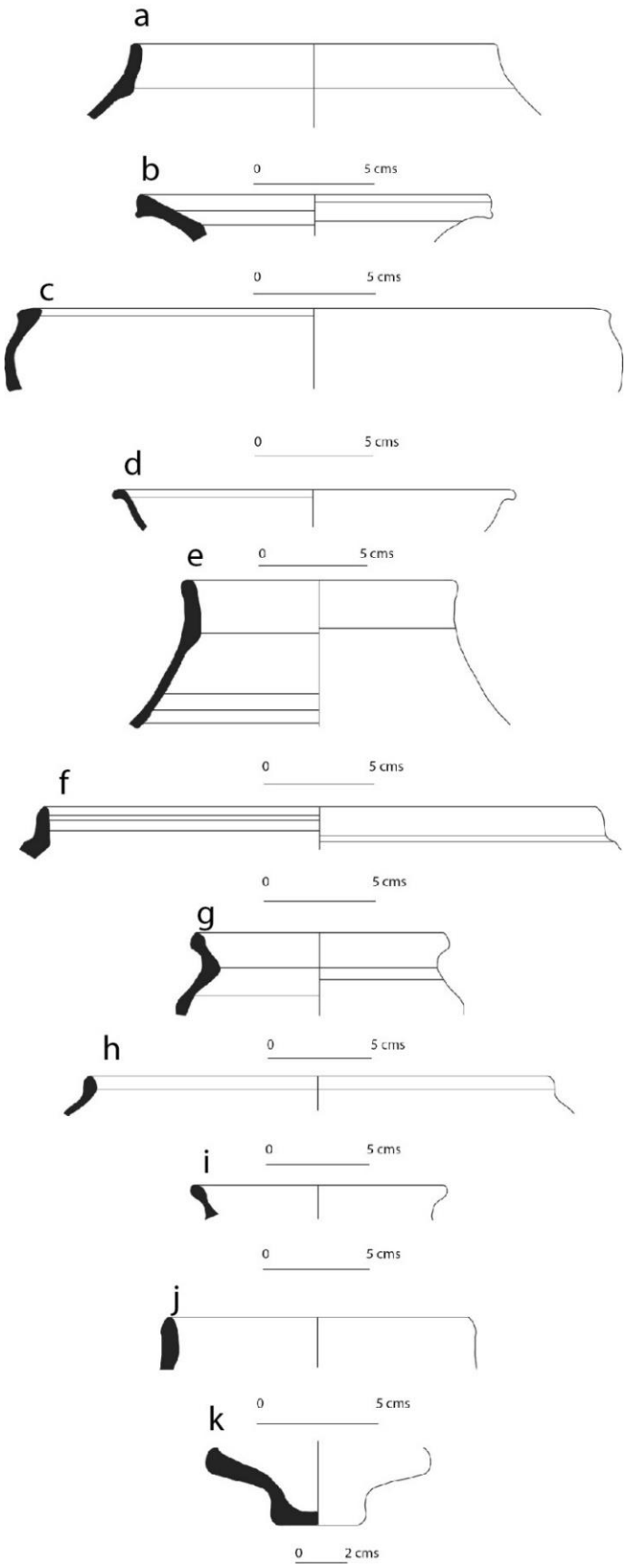


Figure 4.13: Ganapati pottery (GNP)

Figure 4.14: Ganapati Pottery (GNP)

Table 4.4: Description of Rim sherds from Ganapati (GNP) (See figure 4.13 and 4.14)

Site and Sherd No	Fabric	Color	Form	Remarks
GNP Figure 4.13a, Figure 4.14a	Medium fabric	5YR 8/4	Fragment of a pot, log necked with little out-turned rounded rim with internal ledge	Red ware, medium fired, wheel made, gritty surface with some red particles and mica content is present
GNP Figure 4.13b, Figure 4.14b	Medium fabric	7.5YR 8/6	Fragment of a pot, out-turned nail headed rim with external grooves	Red ware, medium fired and gritty surface, wheel made, mica particles are present.
GNP Figure 4.13c, Figure 4.14c	Fine fabric	7.5YR 8/4	Short incurved beaked rim with bulging body, fragment of a bowl/basin	Red ware, well fired wheel turned sherd with fine surface, red particles are present
GNP Figure 4.13d, Figure 4.14d	Fine fabric	7.5YR 8/4	Slight splayed out rounded rim of a fragment of a bowl	Red Ware, well fired wheel turned sherd with very thin section
GNP Figure 4.13e, figure 4.14e	Medium fabric	5YR 7/6	Fragment of a pot, long necked out-turned rounded rim, narrow mouth	Red ware, well fired, coarse surface, thin section
GNP Figure 4.13f, Figure 4.14f	Medium fabric	5YR 8/4	Straight round rim, unidentified form	Red ware, well fired, mica particles are present
GNP Figure 4.13g, Figure 4.14g	Medium fabric	5YR 8/4	Fragment of a pot with out-turned quadrangular rim with carination	Red ware, medium fired, granules are present in the external surface. Little abraded sherd
GNP Figure 4.13h, Figure 4.14h	Medium fabric	5YR 8/3	Fragment of a pot, slight out-turned rounded rim	Red ware, well fired, mica particles are present
GNP Figure 4.13i, Figure 4.14i	Medium fabric	5YR 7/6	Slight out-turned rounded rim, fragment of a pot	Red ware, medium fired
GNP Figure 4.13j, Figure 4.14j	Medium fabric	5YR 8/3	Straight rim, unidentified form	Red ware, well fired
GNP Figure 4.13k, Figure 4.14k	Medium fabric	7.5 8/4	Fragment of a base/lid, rounded rim	Red Ware, medium fired, heavily abraded

4.2 Goalpara

Goalpara is located on the lower course of the Brahmaputra River in the western part of the state of Assam and falls in zone 6 of current zonal division. While dividing Assam's cultural zones, Boruah (2002) identified Goalpara as a distinct zone culturally connected to the west Garo hills. Even though there are no specific literary evidences for Goalpara, nor are there any inscriptional or copper plate evidences, archaeological sources are used to study the area. This zone, like Vadagokugiri or Bhaitbari, dates back to the second century BCE (Sarma1993). The area is rich in archaeological evidences,

as discussed in the previous chapter Exploration was conducted in the region by the researcher and recorded the material remains. The stone tools housed in the Museum of the Department of Anthropology Gauhati University, were also documented.

4.2.1 Bambooti: Bambooti is located on the Assam-Meghalaya border, close to Dudhnoi river, near village Damra of Kuchdhowa *tehsil* of Goalpara district. Bambooti is located on the slope of Bambooti (hill) on the right bank of Bambooti Chiring stream. The entire area is less populated which is the reason for the preservation of the site. The survey of Bambooti revealed that though the site is located in a slope, it has the undisturbed cultural layer as it was thought to be culturally serving as the "Kitchen *maidan*" of the stone age inhabitants. Till date the zone was less inhabited. The site was brought under excavation in 2013-14 (IAR) at the initiative of Department of Anthropology, Gauhati University. According to the excavator the geomorphology of the site along with the material collection indicates Neolithic habitation either depending on intensive food collection or entering food production stage. The paleo-environs of the locality offers a favorable situation for adopting both subsistence strategies. According to Ashraf (IAR, 2013-14) the inhabitants must practice production economy along with gathering as an "Economic Equilibrium" and they were enjoying a settled way of life. One probable date has been given to the site through the OSL dating on excavated pottery i.e 3225±0.06 BP (Duarah, 2014). So, the cultural distribution of the people is destined by the uses of available sources of both plains and hills as well the living tradition is also marked by them (IAR 2013-14). Bambooti is a site inhabited by the tribal community of Garo and Rabhas of Western Assam. The ceramics of Bambooti is dull red to drab brown in color variant with coarse fabric and texture. Medium grained sand particles are present on the surface. They are ill fired with devoid of any kind of surface treatment. The forms include storage jars, shallow bowl, deep bowl, platter, pot, and lid (Duarah, 2014).

The goal of the current field study is to return to the site location, comprehend the geomorphic setting, connect it to other prehistoric sites in the study area, and explore the connections between them. Additionally, the site's formation and environmental zoning are documented. The already housed materials from the Departmental Museum of Gauhati University have been studied for this research because no tangible evidence was found during this survey.

The stone tools recovered from the excavation are dominated by ground celts which is typo-technologically assigned to late neolithic stage. The celt types of Bambooti has been divided into various sub-types as Adze, Axe, Shouldered celt, Chisel, Scrapers (Side and round) (see figure 4.15) and abradars (see figure 4.16). Neolithic tools are polished with the help of the stones known as abradar, which are regarded as cultural materials. If they are found in a stray collection, they forfeit all cultural affinity. The raw materials used to make the artifacts was Sandstone and the working platform slopes to one side. The site produces an abnormally high number of abradars, which reveals the mode of operation for the earliest stone tools. The fact that these abradars are used to sharpen the tools, according to Duarah (2014), indicates that the artefacts have been used for a long time and may have shrunk from their original size during manufacture.

Presence of highest frequency of abradars indicates frequent and prolonged use of the celts as household implements (Duarah, 2014). The raw materials consist of Sandstone, Rhyolite, Slate and rarely Dolerite in which Sandstone is dominative. In this current documentation of the tools, it is observed that most them seems hafted and working end has much damages. The below table shows morphometric analysis of some of the stone tools collected from Bambooti along with the physical description during the time of its documentation.

Table 4.5: Analysis of Stone Tools from Bambooti (Gauhati University Anthropology Department Museum Collection)

Type	Length (cm)	Distal End (cm)	Medial (cm)	Proximal End (cm)	Thickness (cm)	Condition	Remarks
Shouldered Celt	6.8	5.8	5.7	2.7	0.9	Intact	Neolithic celt, brown color stone with various scars on the working end. The shouldered and side portions are also abraded with natural flaking's.
Celt	5.3	3.6	2.75	1.8	1.1	Broken	neolithic celt broken one half part and reconstruction was done of another half.
Shouldered Celt	4.6	4.7	4.45	2.7	1.1	Intact	a small neolithic celt with little abraded surface. The tool seems to be hafted and the

							working end has damages. The bulb of percussion and the striking platform is quite prominent though the tool is polished.
Unidentified	7.8	4.3	4.1	3.4	1.6	-	This polished tool is totally damaged with half part broken. From the surface polishing the tool can be identified as Neolithic. Moreover, the working end is noticeable
Celt	5.3	4.6	4.2	2.6	1.2	Intact	Small heavily weathered celt. All signs of polishing are gone. A yellowish layer is been seen on the surface of the tool. The tool seems to be hafted. Made of sandstone
Celt	6.2	5	4.5	2.6	1.5	Intact	A heavily weathered tool with little breakages. The working end is abraded seems to be used. Made of sandstone.
Celt	6.2	4.1	5.9	3.2	1.4	Intact	A shouldered celt with round working end with a projecting mid-point and straight grabbing part. The tool is little abraded and so its polishing surface is gone. Moreover, the tool is like hafted.
Celt	6.4	4.65	4.3	2.5	1.7	Intact	A polished tool with number of flaking's and abraded
Shouldered celt	6.4	5.8	6.2	3.4	1.2	Intact	A polished shouldered celt made of slate.
Celt	5.3	5.5	4.9	3.5	1.5	Intact	Celt with little damages, made of

							slate. Tiny tool may be used by hafting.
Axe	-	-	-	-	1.8	Broken	Broken part of a possible axe made of brown slate.
Abrader	4.6	-	2.0	-	2.1	Broken	Abradar are the stone pieces used for polishing the neolithic tools. Made of sandstone and it is rough, has a working platform in one side.
Abrader	3.8	-	1.5	-	1.5	Broken	Made of sandstone, broken and rough surface.
Abrader	7.8	-	2.8	-	2.1	Broken	Made of sandstone, two broken parts are reconstructed. Have a working platform where surface is slanting. Some deep marks are also seen on one side.
Unidentified	7.1	-	4.5	-	3.9	Broken	Unidentified object made of sandstone, possibly a hammer stone or may be a grinder.
Shouldered celt	-	-	6.4	3.5	1.0	Broken	Broken celt made of slate. Broken in the middle and opposite of working end.
Unidentified	8.1	-	7.9	-	1.8	Intact	May be a flake but bulb of percussion is not visible.
Unidentified	-	-	5.7	-	3.1	Intact	Prepared flake, with scars visible in both surfaces.
Abrader	6.6	-	2.8	-	2.0	Broken	Having a working platform with slanting surface. Made of sandstone
Abrader	5.6	-	2.4	-	1.8	Broken	Made of sandstone. Have a working platform where surface is slanting. One deep mark is also seen on one side.
Celt	-	-	-	-	0.8	Broken	Part of celt, made of slate.

Celt	5.9	4.0	4.1	2.4	1.1	Intact	Celt in weathered condition, made of slate
Shouldered celt	-	-	-	3.2	1.0	Broken	Made of slate, most of the part is broken.
Abrader	7.3	-	3.1	-	2.1	Broken	Made of sandstone. Have a working platform where surface is slanting. Deep marks are also seen on one side.
Abrader	3.3	-	1.9	-	1.3	Broken	Made of standstone and it is rough, has a working platform in one side.
Abrader	2.5	-	2.5	-	0.9	Broken	Made of sandstone
Unidentified	-	-	-	-	1.0	Broken	Tool typology is unidentified

Figure 4.15: Stone tools from Bambooti (Gauhati University Anthropology Department Museum collection)

Figure 4.16: Abradars from Bambooti (Gauhati University Anthropology Department Museum Collection)

Figure 4.17: The abrasion marks on the surface of Abradars

4.2.2 Damra: Stray collection of stone tools (see figure 4.18 and 4.19) is found from various localities of Damra, which has a hilly terrain. The tools from Damra are haphazardly collected from all the areas without any context. Damra is just few kilometers from the Dhudhnoi market, which is a locality inhabited by Rabha and Garo population. Finding of stone tools as stray collection is common in the entire area, which is devoid of any context. The tools are made of typical ground and polished method. The entire collection from Damra and Bambooti is described as locality 1 by Duarah (2014) and all the analysis was done in group.

Figure 418: Stone tools from Damra (Gauhati University Anthropology Department Museum Collection)

Figure 4.19: Stone tools and Abradars from Damra (Gauhati University Anthropology Department Museum Collection)

4.2.3 Mornoi

The Mornoi is a settlement on the banks of Dudhnoi-krishnai river, currently inhabited by the Hira potter. The present community prepare hand-made earthen vessels mostly for utilitarian purposes. It is thought to be the habitational site of the famous Hindu/Buddhist/Jain site Surya pahar of the lower Brahmaputra Valley, as it is only a few kilometres away. The site geo-cordinates are N 26°01.326´, E 091°36.078´. Choudhury (2013) on artistic grounds dates the associated Surya pahar site from the first century BCE to the first century CE. Barman (2017) observes that several antiquities such as terracotta rings and pottery furnaces were seen by the village elders which did not exist anymore. In her surveys she found scattered bricks and pottery. During the course of the current research, a large number of potsherds was found in a rain gully. There are potteries found in flood-damaged agricultural land. Along with the pottery, the Mornoi village has provided evidence of brick specimens, stone sculptures collected from various locations during the construction of roads, ponds, and houses. Some of the sculptural collections are housed by the village locals and some are housed in religious houses.

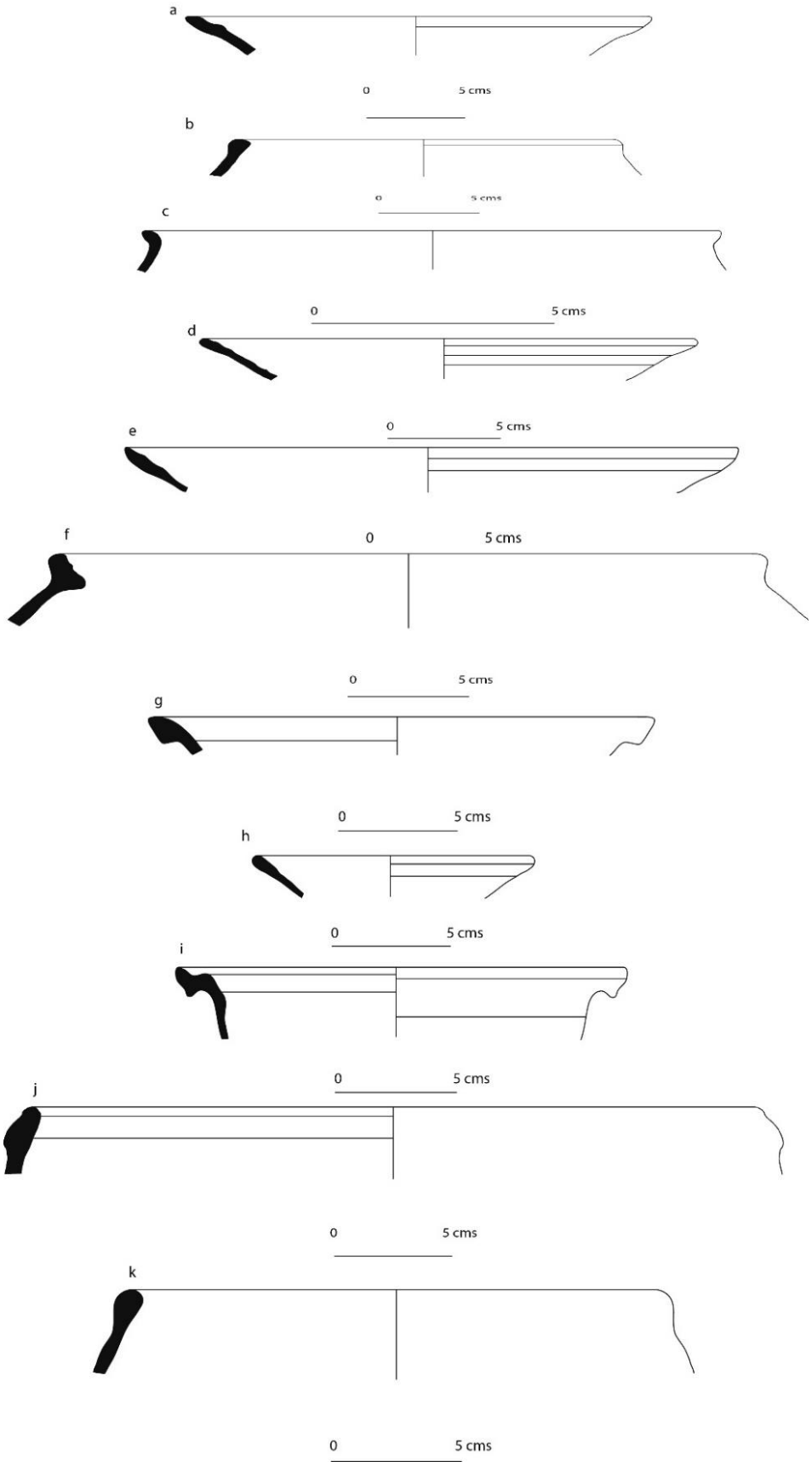


Figure 4.20: Mornoi (MRN) Pottery

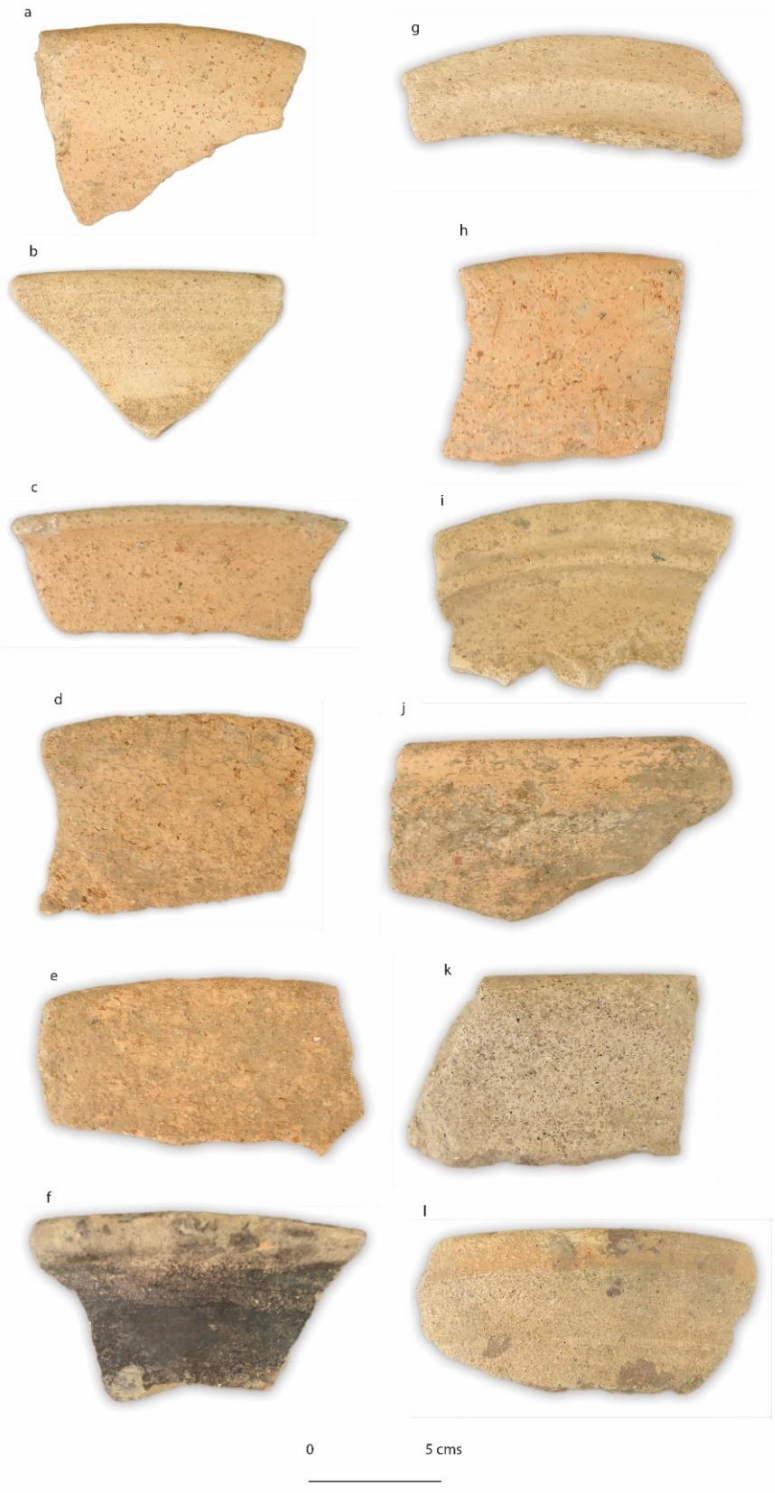


Figure 4.21: Mornoi pottery (MRN)

Table 4.6: Description of Rim sherds from Mornoi (MRN) (see figure 4.20 and 4.21)

Site and Sherd No	Fabric	Color	Form	Remarks
MRN Figure 4.20a, Figure 4.21a	Medium fabric	5YR 7/6	Fragment of a plate/dish, rounded rim with internal ledge	Red ware, well fired, good number of mica particles are present in both internal and external surfaces
MRN Figure 4.20b, Figure 4.21b	Fine fabric	5YR 8/4	Fragment of a pot, slight in-turned rounded rim	Red ware, well fired, coarse section and mica particles are present.
MRN Figure 4.20c, Figure 4.21c	Medium fabric	5YR 7/4	Fragment of a pot, slight out-turned rounded neck	Red ware, well fired, mica particles are present
MRN Figure 4.20d, Figure 4.21d	Coarse fabric	5YR 7/6	Fragment of a plate/lid, rounded rim with zig-zag profile on the inner side	Red ware, handmade medium fired potsherd, little presence of mica. Very thin sherd
MRN Figure 4.20e, Figure 4.21e	Coarse fabric	5YR 7/6	Fragment of a plate/lid, pointed rim with internal zig-zag	Red ware, medium fired, little presence of mica. Very thin sherd
MRN Figure 4.20f, Figure 4.21f	Fine fabric	5YR 6/2	Fragment of a pot, out-turned rounded rim with internal ledge	Red ware, medium fired, mica content is present. Soot marks on the external surface
MRN Figure 4.20g, Figure 4.21g	Fine fabric	5YR 8/4	Fragment of a pot with out-turned quadrangular rim	Red ware, well fired, mica contents are present
MRN Figure 4.20h, Figure 4.21h	Medium fabric	5YR 7/6	Fragment of a plate/lid, rounded rim	Red ware, well fired, very thin sherd with the presence of mica
MRN Figure 4.20i, Figure 4.21i	Fine fabric	5YR 8/4	Fragment of a pot, out-turned pointed rim with internal channel and external ledge. Have a carination	Red ware, well fired, little mica contents are present
MRN Figure 4.20j, Figure 4.21j	Fine fabric	5YR 7/6	Fragment of a bowl, slight in-turned rounded rim with an external bulging	Red ware, medium fired, coarse section. Mica contents are present. Little bit abraded sherd
MRN Figure 4.20k, Figure 4.21k	Fine fabric	5YR 7/3	Slight in-turned rounded rim of a fragment of bowl	Buff ware, medium fired, presence of mica contents and soot marks

4.3 Golaghat

This district is in the upper course of Brahmaputra River and falls in zone 1 in the current zonal division of Assam as present in Chapter 2 of this thesis. The earliest evidence of human habitation dates back to 4^{th}-5^{th} c CE. Literature said the Kacharis

reigned for almost a decade towards the upper course of Brahmaputra from the Dikhu River to the Kolong River which included the valley of the Dhansiri River, a tract now forms the Dima Hasao subdivision (Gait, 1926). They had a flourishing dynasty before they were breaking up into pieces with the coming of the Ahoms and before they were made to fled up to the hilly areas during the early half of 16th century after a series of conflicts began to start between them from 1490 CE. They were said to have huge ramparts, watch towers and other warlike equipment. They are also credited with the development of a school of art referred to as "Deopani School of Art". The Ahoms are said to have ruled the area up to 16th c CE.

Boruah (2002) while dividing the Brahmaputra Valley into distinct cultural zones, described Duboroni-Borpothar area of Doyang-Dhansiri Valley in the said district, as a distinct zone, with an established civilization similar to Kamarupa-Pragjyotishpura, but as a separate cultural entity. For the purpose of this research, the valley has been revisited.

4.3.1 Doyang-Dhansiri Valley: The Doyang Dhansiri Valley of Golaghat district towards the upper course of the main river reveal the evidence of human civilization during the period of 4th c CE through an inscription found from Sarupathar area (Nagajari Khanikargaon inscription). This fragmentary stone inscription was assigned to the fifth century CE on palaeographical grounds by D.C. Sircar. This inscription is a royal land grant charter and records the name of name of Mahattara Brahmadatta and a locality called Dibumukkhada (Baruah, 2001). Later on, a number of brick structures ramparts and brick postholes were found across the whole Doyang Dhansiri Valley. The number of potsherds recovered are however limited, with most collected via surface clearance operations in protected sites. This hampers our understanding on establishing chronologies for the archaeological remains. The area is however rich in sculptural art, which are stylistically dated to 8th-9th c CE.

Explorations in this area started under the initiative of Directorate of Archaeology, Government of Assam under the guidance of H.N. Dutta who discovered a number of sites, a few which were subjected to excavation from time to time. Dutta embarked upon an idea of existence of an independent state in that region parallel with Pragjyotisha-Kamarupa in ancient Assam. (Baruah, 2001). Further work on this particular valley was undertaken by Pranab Sharma as a part of his doctoral thesis

essentially on the early settlements of Dhansiri-Doyang Valley. Through a regional perspective, he highlighted several aspects related to socio-economic and religious developments of the area. His exploratory review was that most of the settlements were located near the main river or ancient channels of main river or their tributary. Though no scientific dates are present from sites and materials related, Sharma (2007) developed the cultural chronology of the valley both from inscriptional and sculptural evidence in corroboration with literary texts.

Explorations as a part of the current research was undertaken to re-document the material evidence with a view to ascertain the cultural chronologies of the region. The areas near Rajapukhuri or the King's Pond; Ahom Gaon Namghar, Alichingia Tengani and Rangmai stream of Dhansiri River were revisited. As already mentioned, the area is devoid of ceramics but sculptures found here belong to late Early Historic to Early Medieval period. Most of them are accidental discoveries, recovered during the construction of houses and ponds. In such cases, the locals have preserved them in their own houses owing to their religious beliefs. In a few cases, religious houses have been built to preserve them as a community initiative.

Table 4.7: Sculptures from Doyang-Dhansiri Valley

Sculptures	Description
	A Surya sculpture made of sandstone, with seven horses and two of his consorts; Usha and Pratusha. It has been recovered near the site Alichinga tengani of Doyang Dhansiri Valley and is kept in a Namghar or religious house by the villagers.

A Surya Sculpture with his two consorts, standing on a pedestal. Same type of sculptures has been recovered from Mundesvari hill, Shahbad districts (West doorway of Siva temple). The sculpture may be tentatively dated to late 7th century CE

Stone sculpture of Visnu, holding a Lotus, a Wheel, Mace, and conch. Similar sculpture has been found in the wall of Matangavapi temple, Bakraur, Gaya. The sculpture may be tentatively dated to the Pala period

Stone sculpture of Visnu, holding a Lotus, a Wheel, Mace, and conch. Similar sculpture has been found in the wall of Matangavapi temple, Bakraur, Gaya. The sculpture may be tentatively dated to the Pala period

Stone sculpture of Visnu, holding a Lotus, a Wheel, Mace, and conch. Similar sculpture has been found in the wall of Matangavapi temple, Bakraur, Gaya. The sculpture may be tentatively dated to the Pala period

A female sculpture, possibly of Parvati. An almost similar one has been recovered from Mundesvari hill, Shahbad district

A female sculpture, elongated, nude and little bit ornamented

Stone sculpture of Visnu, holding a Lotus, a Wheel, Mace, and conch. Similar sculpture has been found in the wall of Matangavapi temple, Bakraur, Gaya. The sculpture may be tentatively dated to the Pala period

4.4. Dibru Valley: The Dibru Valley in the present Dibrugarh district of Assamis in zone 1 (Chapter 2), and is drained by the Dibru River, which is a tributary of Brahmaputra in the upper course of the river. Geomorphologically, the entire valley is composed of both older and more recent alluvial deposits from the quaternary. It is very challenging to determine the river's former course because of the high frequency of flood and erosional activity of the river. However, the first neolith from the Mishimi hills, presently in Arunachal Pradesh, the source of the tributaries of Dibru Valley was reported by Anderson in 1871. In 1896, Peal reported the sighting of a celt in a tea garden in the upper Brahmaputra Valley. Since then, no research has been conducted to understand the antiquity of the region from a border perspective. It was in 1988, Saikia collected a few ground and polished tools (see figure 4.22) and potsherds from different localities in Dibru Valley (Saikia, 1988). In 2006, a team from Dibrugarh and Gauhati university, explored some of the erosional banks of the river and reported Celts and Axes from the site of Kanaigaon. They documented it along with some already collected tools by the locals (Bezbaruah, 2006). The raw materials used is sandstone and the tools were all found in good condition, which are now housed at the Museum of Department of Anthropology, Dibrugarh university.t. The group of stone tools in the upper course of Brahmaputra Valley indicates the eastern limit of Neolithic assemblages from the present Assam boundary. The site of Kanaigaon has been dated through c-14 dating which gives a date of 2210±140 BCE, whereas Chakrabarti (1999) mentioned the Neolithic Culture of Kanaigaon reserve yielded a date in the 6th century

CE. Another site Kachuani, which gives evidence of red and buff-colored pottery with thick profile and some have incision marks on the outer surface.

Some of the stone tools and potsherds (body part) have been recorded for this study at the museum of Dibrugarh university.

Figure 4.22: Stone Tools from Dibru Valley (A collection from Dibrugarh University Anthropology Department)

4.5 KARBI ANGLONG

Karbi Anglong district is in south of Assam and the area brought under exploration is in the western part of Karbi-Anglong that includes Hamren sub-division and Baithalangshu. West Karbi Anglong is bounded by Jaintia hills in the west, North Cachar hills in the south, East Karbi Anglong (Mikir Hill) in the east and Nagaon district of Assam in the north. It falls in zone 8 and 9 of the proposed zonal division. Mikir hill is an extension of the Meghalayan plateau. This area has been drained by two main rivers i.e Karbi Langpi (figure 4.23) or Borapani and Kopili River. Karbi Langpi has been originated from Jaintia hills and enters Karbi Anglong just below its confluence with the Umlew. In its upper reaches, it is known as Umkhen and as the

source of the river lies in a region of heavy precipitation, it brings down a large discharge and while passing through the low-lying areas it spills copiously right from the foothills. When it floods, it also holds up the Kopili flood on the upstream and tremendously affects the Baithalangshu area (Dutta, 1979). The elevation of the entire area ranges from 10 m to 1000 m AMSL.

Figure 4.23: Karbi Langpi River: view from Moring morong hill

4.5.1 Bichikkri: The coordinates of the site are N25º57'52.6" and E092º30'25.3" and the elevation is 449m. The site is located in village Bichikkri which is surrounded by Baithalangshu in north, Harmen in south, Jaintia hills in west, river Karbi Langpi in east. The nearest water source is Karbi Langpi. Sandstone and Granite are the main raw material found nearby. The site has good vegetation cover which comprises of Wlid berrys, Gomari, Rohimola, Leteku, Silikha and Bamboo. People mainly depend on Jhum and Step cultivation and the important crops are rice, brum, zinger, turmeric, sesame, chilly. The entire land is hilly and plateaus and slopes are mainly used for cultivation. The soil is red loamy with some patches of brown soil. Landslides are minimal here. As a part of doctoral research Senar Robinson of Gauhati University explored Bichikkri along with some other sites; Dikisir and Moring Morong and collected material remains such as pottery (see table 4.11) and stone tools. A trial trench at Bichikkri yielded potsherds and stone artifacts. A comparative study of Bichikkri and Dikisir material with the materials from Daojali Hading, Selbalgiri, Sarutaru Marakdola and Ambari was also attempted (Senar 2016). Senar after comparing the pottery with

all the previously mentioned sites, put forward an observation that “Bichikkri site embodies a cultural phase that stand out as a continuum of Neolithic tradition through prehistoric ages to the historic times”. A good number of stone tools have been collected by the local inhabitants during cultivation. They are commonly thought to be “thunderstone” fallen during the time of rain. As the cultivation process is mainly Jhum and Step, normally slopes are used and as rain comes, the soil washes out from slope and tools coming out from ground. Because of this they are related to thunderstone and because of that most of the earlier reported tools are devoid of primary context. The potteries found from Bichikkri were considered as Early historic though they have some similarities with Neolithic potteries of Daojali Hading and Selbalgiri in its fabric and baking temperature. But they are devoid of any cord like impression. And the shapes and carination are similiar to the potteries of Marakdola and Ambari.

If we go through the ethnographic evidence, still Bichhikri people choose to live-in high-altitude area, 2 to 3 km away from the main river valley. Most of the collections by the local inhabitants are in slope jhum land which is favorable for living, agriculture, natural resources, and security etc.

Figure 4.24: Slopes of hill at Bichikkri where Jhum is cultivated

4.5.2 Kekang Adong: The site is in village Ranhabaigaon of Baithalangshu sub division. The coordinates are N25º58'57.4" and E092º36'05.3" with the elevation 66m MSL. Site size is almost 200 hectares in radius is surrounded by Punja hill in north, Hamren in south and river Karbi Langpi flows in eastern direction just two km from the site. One stream called Narlokadong flows in close vicinity of the site. The archaeological site is currently an agricultural land where locals grow mustard, rice and sesame etc. The soil is brown in color.

A good number of potsherds have been found from surface which includes Early Historical pottery along with a few cord-like impressed potsherds. 12 among them have cord impressed designs which appear to be Neolithic. These appear to be handmade and are ill fired. The designs varied from simple cord line to zigzag patterns along with a number of other decorations which is described in table number 4.9. Similar potteries have been reported from Marakdola (1977) and Ambari (1994). The problem here is Marakdola has been designated as post Neolithic by the excavator (1977) whereas Ambari is an early historic site of 1^{st}-2^{nd} century A.D. So, it becomes difficult to assign these potsherds to a specific cultural period. Most likely this was a settlement area. Earlier the local inhabitants collected stone tools from nearest hills. This is a flat plain land and flood plain of Karbi Langpi. From the dry bar of the present river course, the researcher found a good number of potteries with impressions and designs. The visibility at the site was limited due to thick vegetation growth.

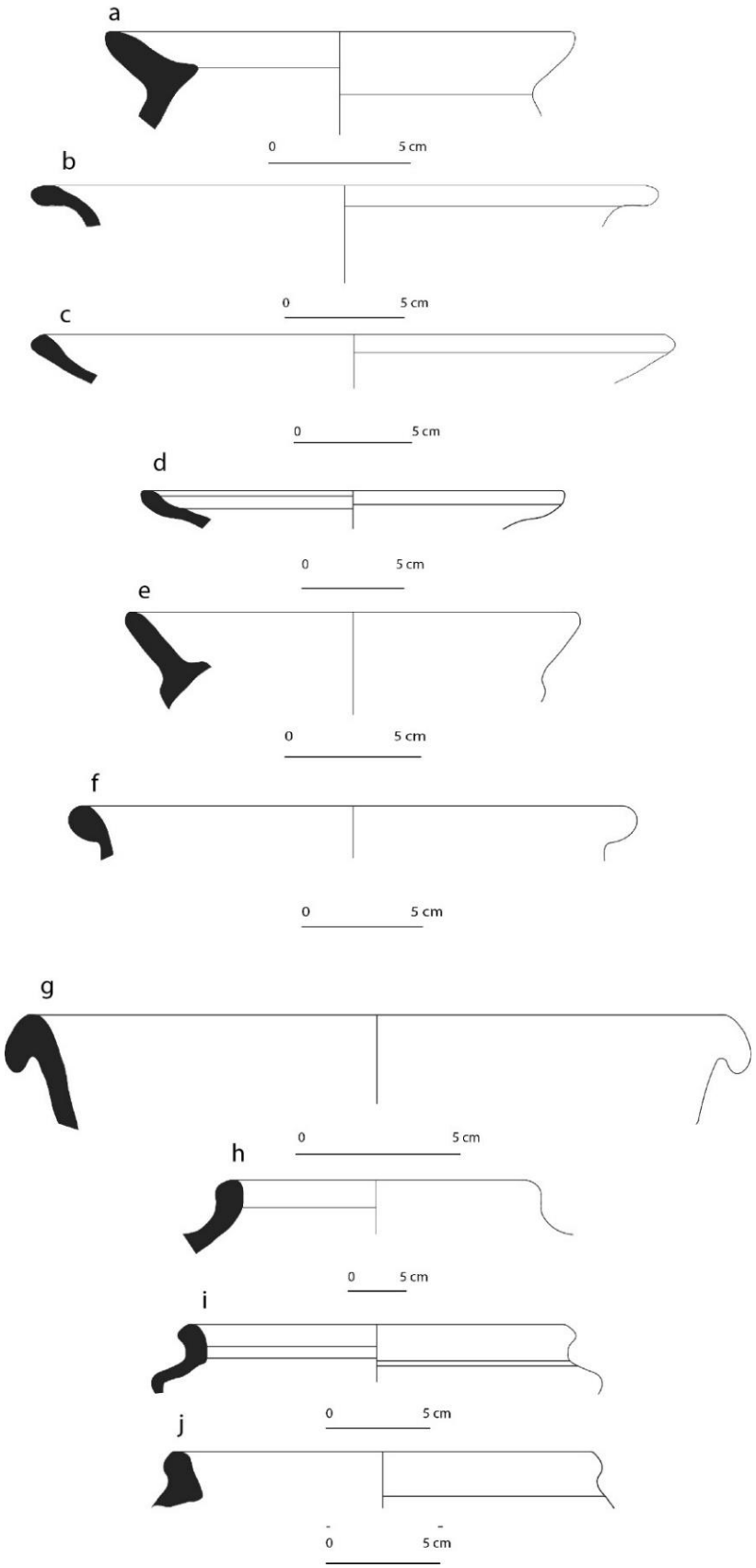


Figure 4.25: Kekang Adong (KKA) pottery

Figure 4.26: Kekang Adong (KKA) pottery (1)

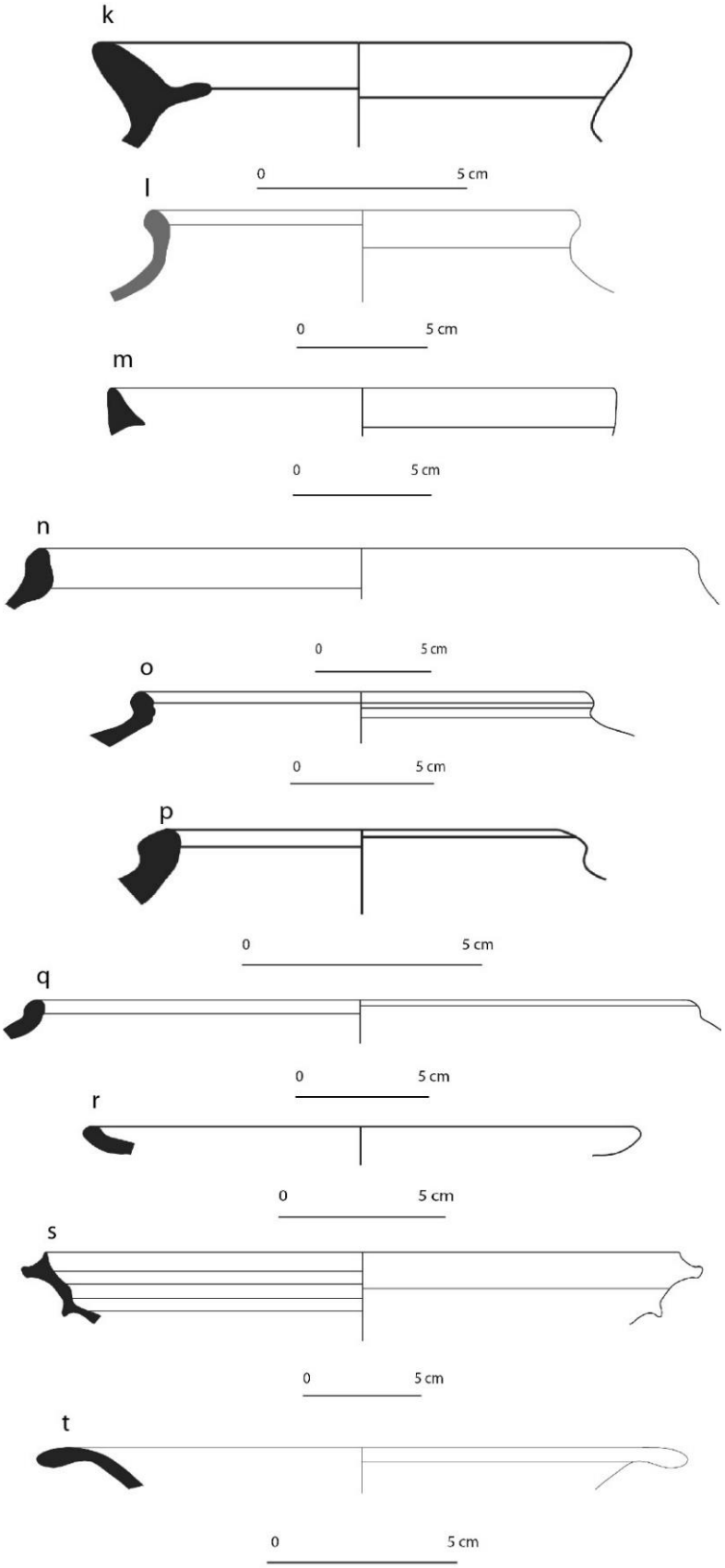


Figure 4.27: Kekang-Adong (KKA) pottery

Figure4.28: Kekang-Adong (KKA) pottery (2)

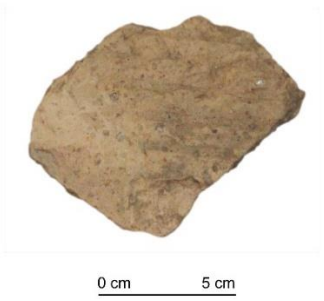
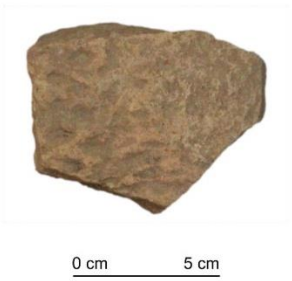
Table 4.8: Description of pottery from Kekang-Adong (KKA) (See figure 4.25, 4.26 and 4.27, 4.28)

Site and Sherd No	Fabric	Color	Form	Remarks
KKA Figure 4.25a, Figure 4.26a	Coarse fabric	5YR 8/2	Fragment of a pot with out-turned rounded rim with internal ledge,	Red ware, ill fired, mica content is present in large quantity, gritty surface
KKA Figure 4.25b, Figure 4.26b	Medium fabric	5YR 7/3	Fragment of a pot with out-turned everted and rounded rim	Buff ware, gritty surface on internal side, medium fired, presence of mica content
KKA Figure 4.25c, Figure 4.26c	Medium fabric	5YR 7/3	A part of plate with out-turned rounded rim	Red ware, red slip, medium fired, presence of mica content
KKA Figure 4.25d, Figure 4.26d	Medium fabric	10R 6/2	Fragment of a plate with in-turned rounded rim	Red ware, ill fired
KKA Figure 4.25e, Figure 4.26e	Medium fabric	2.5YR 6/2	Fragment of an open-mouthed pot with out-turned rounded rim with internal ledge	Red ware, ill fired, internal surface is gritty
KKA Figure 4.25f, Figure 4.26f	Coarse fabric	5YR 7/4	Fragment of a pot, out-turned rounded rim	Red ware, well fired, slight gritty surface, leaves color when rubbing
KKA Figure 4.25g, Figure 4.26g	Medium fabric	10R 6/4	Fragment of a pot, out-turned rounded rim with a carination	Red ware, medium fired, internal gritty surface, presence of mica content
KKA Figure 4.25h, Figure 4.26h	Medium fabric	5YR 8/3	Fragment of a pot with out-turned perpendicular rounded rim	Red ware, red wash, medium fired, small quantity of mica content is present
KKA Figure 4.25i, Figure 4.26i	Coarse fabric	2.5R 6/4	Short beaked rim, little carination externally, Globular bowl with a wide orifice, carinated neck (found in paglatek site of Goalpara region)	Red ware, handmade medium fired pottery with gritty surface. From similar with South-east Asian pottery type
KKA Figure 4.25j, Figure 4.26j	Coarse fabric	5YR 7/2	Fragment of a pot with rounded, slight externally projecting rim	Red ware, ill fired, gritty surface and black patches on the surface like soot marks, mica content is present
KKA Figure 4.27k, Figure 4.28k	Medium fabric	2.5YR 6/2	Fragment of a pot with rounded straight rim with internal ledge	Buff ware, red slip, ill fired, gritty surface with the presence of mica content
KKA Figure 4.27l, Figure 4.28l	Coarse fabric	10R 6/3	Fragment of a pot with out-turned small beaked rim	Red ware, medium fired, gritty surface with the presence of mica content
KKA Figure 4.27m, Figure 4.28m	Coarse fabric	5YR 7/3	Unidentified form fragment, featureless in-turned rim	Red ware, medium fired, gritty surface with the presence of mica content
KKA Figure 4.27n, Figure 4.28n	Medium fabric	5YR 7/3	Fragment of a pot, quadrangular rim	Red ware, medium fired, presence of mica content
KKA Figure 4.27o, Figure 4.28o	Medium fabric	10R 6/6	Fragment of a pot with out-turned rounded rim	Red ware, handmade medium fired

KKA Figure 4.27p, Figure 4.28p	Fine fabric	10R 6/3	Fragment of a pot with out-turned short beaked rim	Red ware, medium fired, presence of mica content
KKA Figure 4.27q, Figure 4.28q	Medium fabric	5YR 7/3	Fragment of a pot with rounded rim	Red ware, medium fired, presence of mica content
KKA Figure 4.27r, Figure 4.28r	Coarse fabric	5YR 5/3	Fragment of a basin with quadrangular rim with external ledge	Red ware, metallic body with very gritty surface, presence of mica content
KKA Figure 4.27s, Figure 4.28s	Medium fabric	10R 6/3	Fragment of a plate or lid with in-turned rounded rim	Red ware, medium fired, presence of mica content
KKA Figure 4.27t, Figure 4.28t	Medium fabric	5YR 7/3	Fragment of a dish or plate, Out-turned rim	Red ware, medium fired, presence of mica content

Table 4.9: Description of decorated sherds from Kekang Adong (KKA)

Sherd (Photo)	Fabric	Color (Munsell color Chart)	Remarks
	Medium fabric	5YR 6/4	A medium fired decorated body sherd with three horizontal grooves on the exterior surface. Below these there are some incised patterns seems like nail impressions. Mica particles are present. Wheel made. grey patches at the core.
	Medium fabric	5YR 8/3	Red slip with mica particles in good quantity. Grey patches in the core. Groove horizontal marks. Shallow square depression marks made both vertically and horizontally. Wheel made.

	Medium fabric	5YR 7/3	Mat/cord impressed crisscross designs, medium fired, grey cross section. Interior is black, Handmade. Mica particles are present.
	Medium fabric	5YR 7/3	Paddle impressed designs with depression at the interval of each. Surface treatment is very coarse having some granule. Handmade, medium fired.
	Medium fabric	5YR 7/2	Mat/cord impressed crisscross design on the outer surface, ill fired, black cross section, handmade. Mica particles are visible.
	Medium fabric	10R 6/3	Criss-cross mat/ cord impressed design. Mica particles are visible. Ill fired wheel made pottery, black cross-section.

	Medium fabric	5YR 8/3	Straight lines with grooving in each interval
	Medium fabric	10R 6/3	Thin sherd with criss-cross lines. Inner side is black.

4.5.3 Langmet:- The current field survey was conducted in Langmet, an area near the Hamren subdivision of Assam's Karbi angling district. The area's geo coordinates are N25°53.935' and E092°34.222', and the elevation is 471 m. This is primarily a hilly area with dense vegetation. The soil is red loamy This area was chosen for surveys as the local residents discovered a few stone tools in Jhum cultivated land and nearby fields. The previously collected tools by the local people have been documented. The residents use the tools as natural remedy to get relief from stomach ache and body ache. They believe that if this particular stone is kept in cold water for some time being and then apply the stone over the part of affected area, it gives partial or complete relieve from the pain. Towards the residential area where present Karbi tribes residea fewpotsherds were collected from the road cutting area where the soil was yellowish red. The pottery is similar to those found at Bichikkri. The pottery is in a very fragile and abraded state. Shapes of potsherds point to its later origin. Most sherds are of Red Ware with a very coarse fabric variety. No decorations were observed on any of the potsherds from the site.

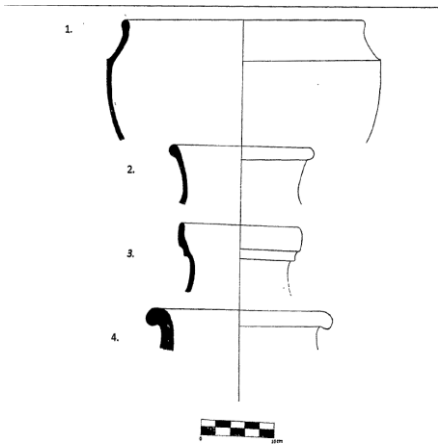
Figure 4.29: Langmet pottery

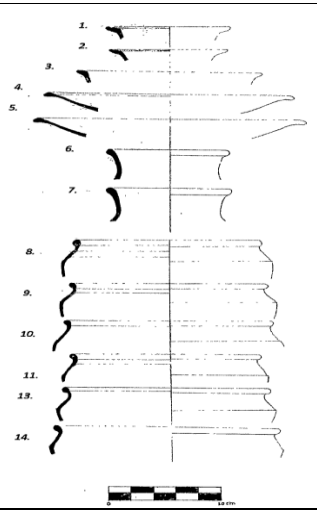
Table 4.10: Description of Rim sherds from Langmet (LGT) (See Figure 4.29)

Site and Sherd No	Fabric	Color	Form	Remarks
LGT Figure 4.29a	Coarse fabric	5YR 7/3	Fragment of a bowl with out-turned rounded rim with a carrination	Red ware, well fired, very gritty surface, soil content is laterite with presence of mica
LGT Figure 4.29b	Coarse fabric	5YR 7/3	Fragment of a pot, little out-turned rounded rim	Red ware, medium fired, soil content is laterite with the presence of mica
LGT Figure 4.29c	Coarse fabric	5YR 7/3	Fragment of a pot, out-turned rounded rim.	Red ware, medium fired, mice content is present

Figure4.30: Stone tools from Langmet

Table 4.11: Analysis of pottery from sites of Karbi-Anglong (overall)

Illustration	Drawing	Form	Fabric	Firing	Remarks
Dikisir Pottery Assemblages (After Senar, 2016) 		Bowl, Carrinated Bowl, Storage vessel	Coarse fabric	Ill fired and unoxidized core	Everted beaded rim, inverted rim, drooping lip without rim. Soot marks on surface of pottery. Handmade, free hand forming Red slipped, without slipped. Quartz gritz pronounced on the exterior.
Bichikkri Pottery Assemblages (After Senar, 2016) 		Bowl, storage vessal, carrinated vessal, dish, round bottomed dish, platter	coarse fabric, sandy texture	Medium fired, unoxidized core	Everted rim, beaded rim. Handmade Soot impression Red slipped, non-slipped Fingers indentation in interior, palm and finger ridges imprints are particularly well mark on the neck

					and shoulder region.
Kekang Adong Pottery Assemblages (See figure 4.26 and 4.28)	See Figure 4.25 and 4.27	Pot, Platter	Fine fabric	Medium to low firing, not fully oxidized	Out-turned rim Flaring rim Thickened interior The designs include cord or basket impressions, strokes are vertical and horizontal, criss-cross lines, parallel bands, incisions and nail impressions.
Langmet Pottery Assemblages (See Figure 4.29)		Pot	Coarse fabric		Short neck

4.6 Dima Hasao

North Cachar hill presently known as Dima Hasao district, an autonomous council under the Government of Assam, inhabited by Austro-Asiatic and Austro-Mongoloid tribe i.e., Dimasa, Hmar, Zemi Naga, Maitei, Hrangkhols, Khasi and a few minor tribes who speak different dialects (Gopalakrishnan 2000). The hill district is surrounded by Mikir hills in the North, Jaintia hills of Meghalaya in the west, Nagaland towards the east and Barak River plain in the south. The entire area of North Cachar forms a hilly country with its continuation up to Meghalaya plateau constituting the Barail range towards the North which is the source for most of the rivers and streams in the area. The Barail range of hills in North Cachar, Eastern Bengal and Assam, runs east and west between 25°5′ and 25°20' N and 92°32′ and 93°29′ E and connectsthe Naga and Jaintia hills. The entire district falls in Zone 11 and 12 of the proposed zonal division, described in chapter 2.

This region was once formed a part of ancient Kamarupa and later in the mediaeval period, formed the northern part of the Kachari kingdom. The kingdom ruled the Dhansiri Valley before being driven back to the Mahur Valley, Maibong and then up to the Barak plains of Cachar with Khaspur as their capital (Barpujari, 1997). According to Gait (1926), the Kacharis are the aborigins or earliest inhabitants of the Brahmaputra Valley; who call themselves as 'Bodo' or 'Bodo-fisa'. During the explorations, five sites were visited and revisited as they were less disturbed and well preserved in nature.

4.6.1 Daojali Hading: In comparison to other studies conducted in the Garo hills, there has been less research on the Daojali hading Neolithic site, even though it was the first of its kind to be identified as a prehistoric site in the Northeast. The site is near the Langting River and the Mupa Reserve Forest, and the entire river valley contains Neolithic artefacts. For the first time, this site documents the stratigraphical history of North-eastern sites dating back to the Neolithic period. The excavation in the 1960s revealed three layers in 1.5 m stratigraphy with layer 2 being archaeologically rich with many stone tools and potsherds, and layers 1 and 3 being sterile and compact earth with no material remains (IAR 1963-64). According to Sharma (1966), the stone assemblages of Daojali hading are divided into three categories: (i) Flake tools (ii) Edge ground tools and (iii) Fully ground tools (Celts and Shouldered Celts) which were again sub-divided into sub groups according

to their appearance and utility. A team from Gauhati University visited the site in the early 1990s with the goal of re-examining and reconstructing it for further understanding the cultural significance of the site. They also collected a large number of stone tools, including a double-shouldered axe and a broken celt. Further, A.A. Ashraf and his team surveyed the Quaternary formations in and around the river valley to better understand the quaternary geology of the Stone Age site at Daojali hading (IAR 1990-91: 10-11).

Figure 4.31: Neoliths from Daojali Hading (Guwahati University anthropology Deptt. Museum collection)

4.6.1.1: The Ceramics

The cord-marked pottery sherds shown in figure 4.32 are documented in the Department of Anthropology at Gauhati University, but no pottery has been found during the current exploration. There were not any diagnostic sherds in the collection, which was primarily made up of body fragments and that prevented any kind of reconstruction. The tiny sherds had cord marks, crisscross patterns, line drawings and incised designs. The length and breadth of the body sherds varied between 1.8×2.4 cm to 2.6×3.7 cm, having almost identical thickness ranging from 0.4 to 0.7 cm. These ceramics are made in a somewhat

unique method (Personal discussion with B.K.Borah). It was first creating a bamboo mould, adding prepared soil, and then being beaten with a cord or bat. Bamboo was consumed by fire as it is a perishable material and the prepared pot was then thrown onto the flames. Therefore, the impressions made by the bamboo were also noticed inside the pot. The majority of the pottery is red ware, but there is also some grey and buff ware. Poor firing results in occasionally making it difficult to distinguish between red and black ware. In present context, among the ethnic communities of Dima Hasao, neither Hmars nor the Dimasas had a strong pottery tradition. However, among the Kukis and Zemi Nagas, there must be a long-gone village of artisans.

Figure 4.32: Cord and Mat impressed sherds from Daojali-hading (A collection from Gauhati University Anthropology Department)

4.6.2 Asalu: Asalu islocated along the banks of Mahur River,a tributary of the Doyang River. The river bed is rocky and full of boulders (Dutta 1979). Geologically it comes under tertiary period or upper tertiary sequence. Lithology consists of massive bedded sandstone, shale, sandy shale and carbonaceous shales with interbedded hard sandstone and well bedded compact flaggy sandstone. Topographically it comes under highland topography and altitude ranges from 600-1200 mm. The maximum and minimum temperature is 25.8º c and 5.3º c respectively. The area is rich in natural vegetation and rich in fauna wealth with different kind of animals, reptiles, and birds.

Previously the site has given the evidence of stone tools (celt) and potsherds but in recent explorations only a minimal quantity of iron pieces have been found, near the exposed section. Moreover, broken iron pieces are also distributed in some areas nearby the section which was dug for drainage purposes. The digging areas are not more than 50 cm in depth. Earlier, Thakuria (2015) remarked that potsherds and iron pieces are protruding from this section which might belong to the upper layer capping the celt and the potsherds yielding layer might have been encountered during earlier explorations. This implies startigraphically iron fragments containing layer succeded the layer which yeilded celt and potsherds.

4.6.3 Mailu: The collection of stone tools (see figure 4.34) from the jhum land and during hunting from Mailu provides evidence of prehistoric occupation in the area. The area from where the tools were recovered is located between two hills i.e Daojali hading or Daojali pahar and Sarki hading on the bank of Langting River. The entire area here has been exploited by the local population for their agricultural operation and hunting activities. The river Langting has a number of small channels which flow between dark rocky grounds with deep vegetation cover and as per the local inhabitants those areas are favourable hunting grounds due to animals drawn to water Most of the stone tools have been recovered by the people from these areas only. The inhabitants believe that the stone tools such as axes and shouldered axes are moon stones or thunder stones. They also have another theory that relates with half stone and intact one and this is very common when finding tools scattered in areas they move and cultivate. But due to the changing of cultivation land each year it is difficult to locate the sites. This seems to be quite confirmatory that there must be

some localities of tools nearby the river which are little disturbed due to anthropogenic activity like jhum cultivation and stones collected for road construction. In this present exploration, tools were not found from any primary context for which there is no possibility to contexualize them. But the geomorphology and lithology of the entire area is similar to Daojali hading site which is why Mailu could be co-related with the later (Das and Krishnan, 2022).

Figure 4.33: Langting River

Other than the stone tools of Neolithic period, no artefact from any primary context has been found in this field survey. The tools that have been collected include a variety axes (See table 4.12).

Table 4.12: Analysis of stone tools from Mailu

Artifact	Length	Breadth (Distal)	Breadth (Medial)	Breadth (proximal end)	Thickness	Remarks and finding spot
Unidentified	-	-	-		1.3 cm	Buff, collected from area near stream Ambroidisa, Side Scraper? Burn marks on surface
Axe	7 cm	5.5 cm	5 cm	2.2 cm	1.3 cm	Buff, made of Slate Collected from Thailiphang stream
Axe	Cannot determine	4.4 cm	3.7 cm	Cannot determine	0.7 cm	Black, broken, Jhum field near Langting river bed
Shouldered Axe	5.8 cm	5.6 cm	4.4 cm	3.8 cm	0.9 cm	Buff, Jhum field near Langting river bed
Axe	6.2 cm	4.4 cm	4.1 cm	2.7 cm	1.1 cm	Buff, Sarke-hading hill slope near Langting river bed
Axe	4.1 cm	3.9 cm	2.9 cm	0.9 cm	0.8 cm	Buff, Longplangdisa stream

Figure 4.34: Stone tools from Mailu

4.6.4 Chaikam: ((N25°11.189′ E093°10.746′) Chaikam, is located on the slope of jhum field towards the western part of Dima Hasao district. The site is 19 km from Haflong, the town and headquarter of Dima Hasao district. More than 25 stone jars are located at the site (Figure 4.35), facing towards north-south direction. The jars are made of sandstone and some are in exfoliating condition due to the erosion of stone and the firing of the jhum field. The belly part of the jars is bulky and the base is a little pointed and are similar to the type II and type IV stone jars found at Bolosan. The jars are aligned in east-west direction, with its base oriented towards the North and consequently its mouth facing south. The body dimension of the jars is almost 115 to 125 cm. There is no any other material evidence in the form of pottery and skeletal remains found from the surrounding area. There are deep circular depressions almost on the middle of each jar whose diameter varies from 25 to 28 cm with 10 to 12 cm in depth. These jars resemble the stone jars of Phon Savanh known as Plain of jars (Higham, 2002). There are some flat slabs of sandstone fallen on the ground whose purpose seems to be of lid though its total thickness could not be measured because

a small portion of it is beneath the ground (see figure 4.35.4). The diameter of the slabs varies between 90 to 110 cm. The inference of their use as lids is made as similar circular stone discs lying near the stone jars of Loas are believed to be the lids of the jars. In case of Laos. Most of the disc diameter does not match with the stone jars and they are outnumbered by the jars. But among them some of the jars have rebated rims which suggests the uses of lids (Sayavongkhamdy et al. 2000). But the jars of Chaikam does not support the concept of lid as the mouth of each jar are little bit pointed and no flat slab could be placed on top of it.

Figure 4.35: Stone jars from Chaikam

4.6.5 Bolosan: The area with stone jars in Bolasan (See figure 4.36) is a protected area by the Zemi Naga community and their primary location for jhum cultivation. The stone jars are thought to be connected with burial practices though the Zemi Naga community do not have any ancestral relation with them nor they still practiced any ritualistic rites related to

the jars at present. The area of the stone jars is currently thickly covered by vegetation and the location of jars are particularly used for jhuming and therefore there are burning marks on the outer surface of the jars but most of them are intact without much damages. Thakuria (2016) during his explorations noticed four types of Stone jars there which he divided into 4 types. Type I is represented by a group of jars which are elongated and bi-cone in shape; Type II is characterized by bi-cone shaped jars where the edge is almost at the centre; Type III is represented by cylindrical shaped jars and Type IV is represented by convex bi-cone shaped ones. Such type of Jars has been reported from Laos and Phillipines and are said to be used as bone repositories (Thakuria, 2016).

Figure 4.36: Monolithic stone jars from Bolosan

4.7: Observation

The Northeast is known as a land of diverse tribes with diverse cultures and ethnographically as one of the richest regions. Past cultural adaptations can still be seen in their living styles, current settlements, agricultural practices, materials used in daily life, and materials used for ritualistic purposes, among other things. By looking at the present-day site context and its inhabitants, it is easier to understand the variability and similarity of materials, as well as the landscape that people are still using. After the material study of each site, re-examining the stone tools and ceramics is necessary. Only documentation and physical analysis are possible as there is a smaller number of stone tools recovered during this field survey.

Starting with the foothills of modern-day Assam, that provide ample evidence of human habitation from the dawn of time to the present. These foothills are the extension of Garo-khasi hills, which is also noticed in their material culture. Archaeologically, Garo hill is the richest among the prehistoric localities of Northeast India, so the sites near foothills much had a stronger cultural connection with Garo hills population than the Brahmaputra Valley in the past. Though, a haphazard collection of stone tools discovered in Damra suggests flimsy habitation where no proper site has been found, whereas the excavation at Bambooti reveals a stratigraphy unique to the site, as well as many stone objects and pottery. The site has a date 3225±0.06 (OSL dating) based on pottery sample.

There are no proper contexts for stone tools discovered in the village of Mailu, but typological analysis show that they can be compared with Daojali hading assemblages. In both of these occurrences, tools are made using the traditional ground and polished method. Furthermore, both sites are near the Langting Valley and hill Daojali appears to be where the previous inhabitants conducted their agricultural activity and hunting. Till today, the slopes of hill Daojali have been exploited by the Mailu population (Dimasa) for living purposes as previously stated most of the area provides evidence of tools. On the other hand, site Daojali hading is located on the other side of Mailu village having similar geographical and geomorphological characteristics. The site has been named after the hill Daojali. Based on these facts Mailu can be placed in the same time period as Daojali hading. Asalu, on the other hand has given the evidence of a habitational deposit if we go

through the earlier report. A single celt was found from the surface of an exposing deposit which contains cord-marked pottery. According to Thakuria (2015), the materials support the Neolithic nature of the deposit. But this is not much convincing about the connection of material evidences (potsherd and a celt) as stray collection of stone artefacts are very common in that region and only based on a single piece of tool, neither can be said about the nature of the site. The iron fragments discovered lying near the mentioned deposit by Thakuria, as well as a surface collection from the immediate region, during the current search; appear to be broken parts of iron artefacts.

The locations of newly explored stone jars are oriented in the same direction, facing north-south and standing east-west. There are more than 25 jars at Chaikam and more than 50 jars at Bolosan, and these jars were most likely used as a marker of secondary burial practice, and the number of jars indicates that the slopes were used for community burial. Currently, the slopes where the jar stands are used for jhum cultivation, making it less likely that burial material will be found inside the jars' holes, or if the jars were only used as symbolic, they must be devoid of burial goods. Furthermore, the holes must have another use in terms of functional utility; they could be used to store edibles for the deceased in addition to the central hole's use as a bone repository, as mentioned by earlier studies. Even though only stone blocks or menhirs are suitable for a symbolic burial, an effort was made to give the stone block a proper jar shape with a central hole which indicates the functionality of the jars. The jars of Bolosan, Chaikam and the others were made of sandstone blocks using tools made of metal and almost all jars have chisel marks on the external surface.

A sizeable portion of ceramics have been found that are comparable to other sites reported from north-east India as well as northern and eastern Indian archaeological sites, that have a closer relationship to the potteries discovered in the recent field survey. The charts below in table no 4.12 was created to help explain the shapes and other related analysis of the ceramics from sites with early historical and prehistoric affinity. If we compare the thickness of the sherds, color, and most significantly the decorative patterns, we can see a striking similarity between the pottery from Assam archaeological sites and those from Eastern India. However, even though the decorations are similar, the collection from the

recently discovered sites does not demonstrate a very earlier occurrence periodically. The neolithic phase in the areas of Assam that have been discovered so far has a very late origin, according to earlier scholars. It may have absorbed the newly invented pottery making traditions like later cultural phases. Neolithic sites in the Vindhyan region as well as Ganga valley contain well-defined pottery assemblages, the majority of which are cord-impressed and have a variety of designated forms, as discussed in the below chart.

However, in case of present exploration, the Bogibori pottery shows a collection made of well lavigated clay with fine fabric, like the sherds, which details has been provided by Rao for the site Sarutaru, morphologically not similar to Neolithic sherds of entire eastern and north-eastern India. A portion of a spouted vessel has been discovered at the site, which is similar to those found at Marakdola, a post-Neolithic site (Rao 1976). To determine the distinguishing characteristics of each site in the Digaru-Kolong Valley, which was previously classified as Neolithic to Post Neolithic, the basic assumption can be made by looking at the material evidence of three sites, each of which has a different perspective. Excavation at Sarutaru uncovered a single cultural layer containing both stone tools and pottery, with the ceramic appearing to be very fine with thin sections, which differs from the Neolithic pottery found throughout the region. Irrespective of other sites, the formation of site Marakdola is distinct, and the material collection is also distinct from them. Though erection of Megalithic monuments is a continuous phenomenon in case of Northeast India, the megaliths in Marakdola is not related to the present population living nearby. So, there must be some cultural relation between the community who used the kaolin pottery and the megaliths. Whereas some of the sherds from Marakdola has resemblance with some forms found from Sisupalgarh, described in table no 4.2. Marakdola is described by Rao and other authors, such as Medhi (1990), as a culture that exists between the Neolithic and Modern periods, spanning what appears to be a long period of time. On the other hand, Marak (2019) designated Marakdola as a megalithic site and the date of the menhirs and dolmens are dated to 15th c CE (OSL dating) though she has not mentioned about the potsherds collected from the immediate vicinity belonged to the same period or not. Based on ceramics that appear to be of high quality, Marakdola can be assigned to the late Early Historic or Early Medieval periods.

Das (2019) has divided the ceramics explored from the sites of Karbi-anglong, into two groups i.e., Group A (Bichikkri and Langmet) and Group B (Kekeng-adong) in terms of its fabric, surface treatment (devoid of any decoration) and shapes. Distinction between the two groups is that all the pottery found from group A is red ware. Group B pottery has both Red and Buff ware (Kaolin clay) as its constituent where the percentage of Buff being higher. The use of Kaolin clay is prominent in Group B. Group A sites are located in the hilly areas near Karbi Langpi River Valley where the soil content is red loamy, while group B site is in alluvium plain of the same river valley and soil content varies from greyish to brownish. It probably signifies the use of available raw materials for the manufacture of pottery from the immediate vicinity. After comparative analysis of both the groups with some of the significant sites of Northeast India, placed them in the frame of early historic period.

The overall ceramics from this current exploration is also divided into six groups by using the similar methodology used for Karbi-anglong sites, by adding the related material evidences and the dominative forms of the pottery.

- Group A: Daojali hading
- Group B: Sarutaru, Bogibori
- Group C: Kekang Adong (KKA), Marakdola (MKD), Ganapati (GNP)
- Group D: Ambari, Guwahati (GHY)
- Group E: Bichikkri and Langmet
- Group F: Mornoi (MRN)

Among the two sites in group A, Daojali hading is already established site for Neolithic habitation, with their coarse fabric, thick section, handmade, and cord-impressions on the exterior surface. Grey color sherds are dominant.

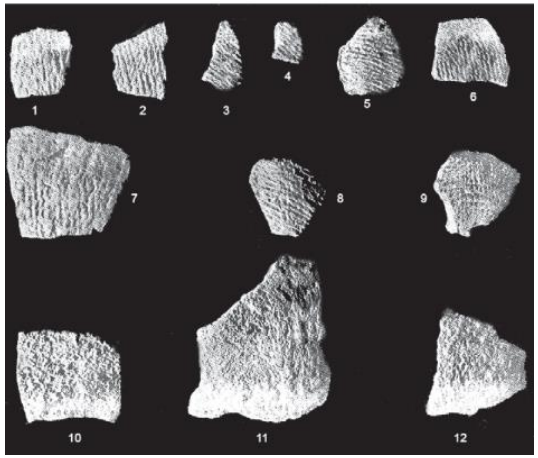
Group B potteries are from same region with similar geomorphological features, is situated on low hills that are separated from Meghalayan plateau, and is intriguingly discovered with stone tools (Celts and Axes). The colors ranged from brown and buff with a medium to fine fabric. The making process uses both hand and a wheel. The exterior surface has cord or basket impressions along with criss-cross and zig-zag lines. When we compare the

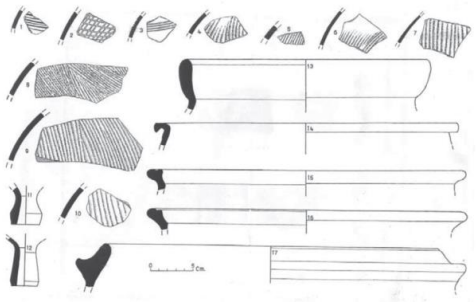
pottery to group A, we find that while there are differences in terms of fabric, but have similarity in designs and related material culture. They both can be placed under similar cultural period with different phases.

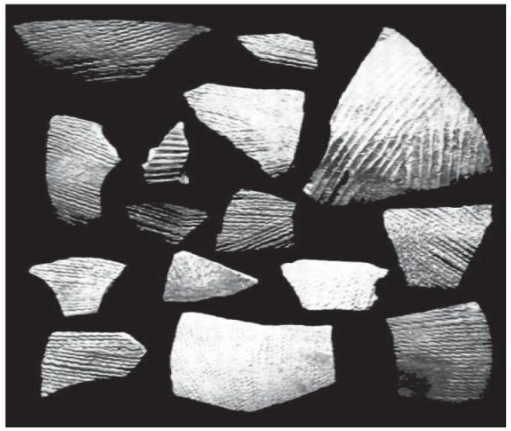
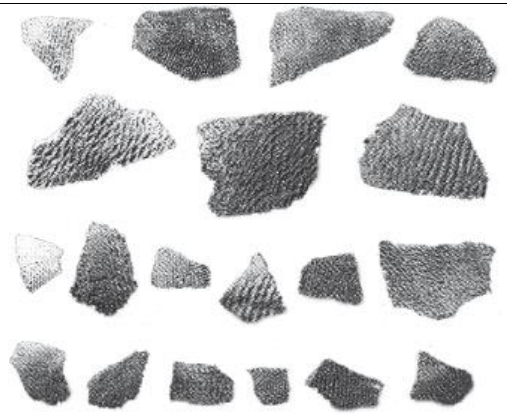
Group C involves the ceramics found from Kekang Adong (KKA), Marakdola (MKD) and Ganapati (GNP). In each cases pot is the dominative forms along with dish/plate and bowl. From site Marakdola, a single piece of stone tool has been reported from the surface level whereas, the locals of Kekang Adong site have confirmed the finding of stone tools in recent past during cultivation though the current exploration does not give any evidences. Similarly, the areas from Rani where site Ganapati is located has given the evidence of stone tools collected haphazardly in different times. The fabric of ceramic in each occurrence varied from fine to coarse with medium fabric dominated in most cases. In terms of KKA and MKD, the color varied from red to buff, where the raw materials for making is kaolin clay, the source is the immediate vicinity from both Karbi langpi and Digaru river. In the Mikir hiils, Karbi langpi flows with its downshed towards Brahmaputra River, joins Kolong which joins Digaru and flows towards Brahmaputra.

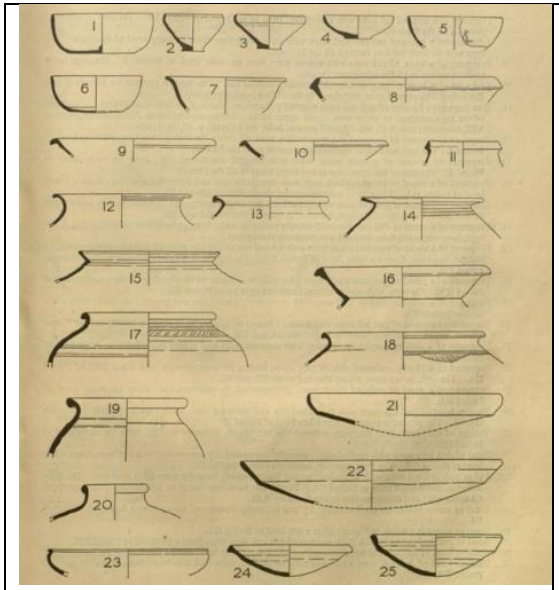
The potteries from Ambari and the newly explored site Guwahati towards the Brahmaputra River bank, are placed in Group D among the assemblages. The site Ambari is thought to cover a huge area of Guwahati, which is unable to uncover due to the growing of the various anthropogenic activity and modern habitation unless a small-scale excavation was taken place at the area of Cotton college campus, which is an extension of Ambari itself. The ceramics, sculptures confirm their associations. Similarly, the sherds collected from the vicinity of the Brahmaputra River in Guwahati city, has some resemblance with the red ware found from Ambari during the first season excavation. The forms include pot, dish (dominative), bowl, and basin with extremely fine to few having coarse fabric. The newly explored pottery from Guwahati have resemblance with some forms found from Sisupalgarh excavation. The raw materials for making pottery involves kaolin clay too. Among the decorative patterns, there are incision marks, basket designs, quadruple designs, rows of parallel dashes, criss-cross designs and in later periods decorations like lozenges and mangos. There is striking similarity among Group C and D in the uses of raw materials for pottery making and too some extent decoration wise.

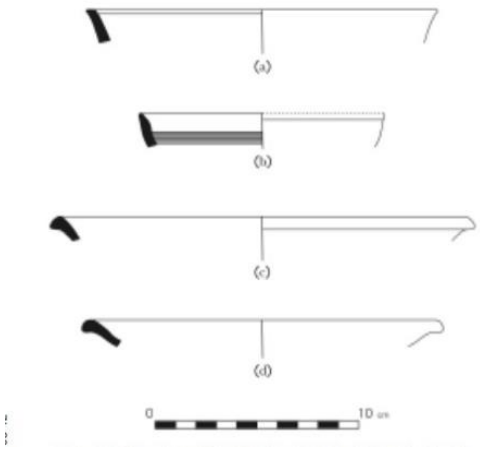
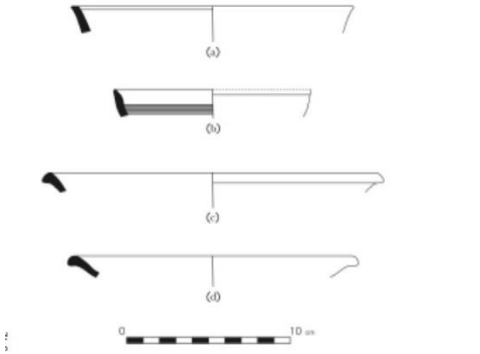
The Group E is the same as described by Das (2019) as Group A. Whereas Group F potteries are mostly red ware with gritty sandy surface and presence of mics is prominent. No surface treatment and all potteries are plain, form varies from plate/dish, pot, and bowl. The fabric is very fine.

Table 4.13: Potteries of Eastern and North East India in different cultural period			
	Description	Form	Remarks
	Neolihic pottery from Mahagarha (North Vindhyan) (IAR 1975-76)	Bowls, Basins, Jar, Handis, pot with impressions on Neck portion	• Cord impressed ware along with Rusticated ware, burnished red and black ware • Impressions vary from thick/thin through medium and deep to dull and indistinct and cording strokes are vertical, horizontal, oblique or slanting and occasionally multi directional • Convex, straight or tempering sided shallow and deep bowls, flat bowls and platters, tubuler spouted bowls, concave/carrinated necked jars and handis • Similar from Daojali Hading and Sarutaru but differ in color and decorative patterns. • Pot is blacish, smoky grey or dull matured and the surface is matted, dull yellow and smoky blackish

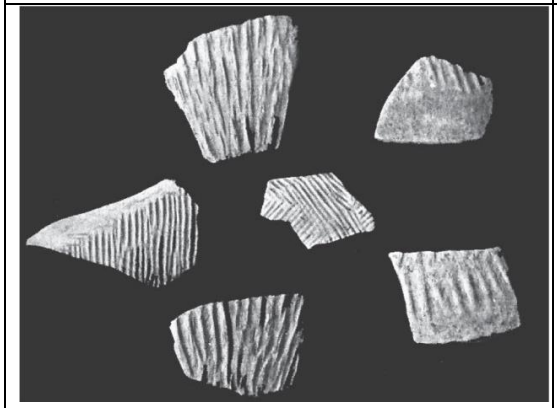
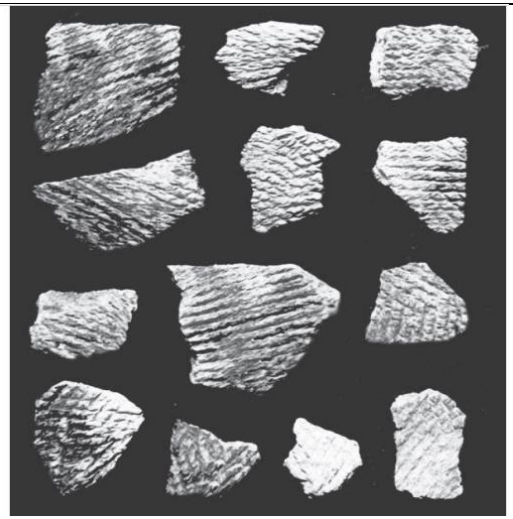
	Imlidih Khurd (Left bank of Kuwana river, a tributary of Ghaghra (IAR 1992-93)	Pedastal bowl with incurved rim Vase with a flaring rim, constricted neck and expanding sides	• Period I:- crude Red ware, occasionally bearing cord impressions • Slipped and heavily burnished interior • Post firing scratching, paintings with dots and dashes. • Rope pattern, criss-cross design and excised notches (Singh) • Cord impressed below neck and all over the exterior • Sharp carrination at the waist
	Pakka kot (ancient bed of choti sarayu river of Ballia dist, UP.	Bowls, vases and basins	• Cord impressed red ware along with red ware • Comparable to Imlidih Khurd, Lahuradeva and Bhunadih

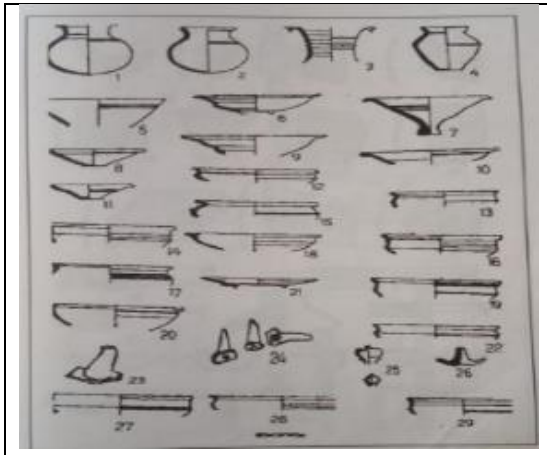
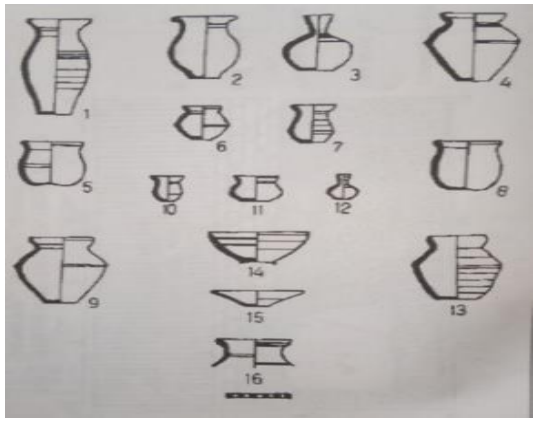
	Narhan (middle Ganga plain)	Deep bowl of black/red ware	• Cord-impressions on exterior of the pot like Mahagara • Red slipped ware • Cord impressed ware from early historic level too • Same pottery from Taradih (period I), Chirand (Verma 1970) • Potsherds shows mat impression (Chirand). • Coarse fabric
	Senuwar pottery assemblages (Bihar) (Narayan, 1996)	Red ware Bowl and small sized pots, Vases	• Patterns of bold relief • Red ware Bowl and small sized pots • Strokes are vertical, slanting and horizontal • Upper portion of pot with thick red slip • Dull red to red.

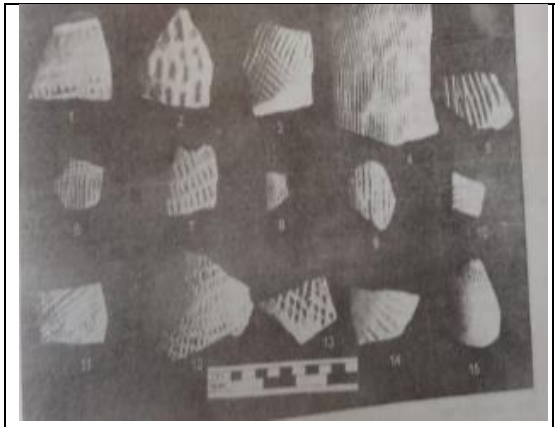
	Sisupalgarh (Orissa) (Lal, 1948)	Typical Sisupalgarh ware is 'knobbed vessel' possibly a bowl-cum-lid, basins, dish	• The site was occupied from the beginning of the 3rd century BCE to the middle of 4th century CE. Three periods are identified during excavation • Period I (c. 300-200 BCE): Plain pottery, devoid of any decoration. Dull red and terracotta red in color. • Period IIA (200 BCE-100 CE): Same pottery as period I with the initiation of applied and incised decorative patterns. Bright polished red ware, BRW and Rouletted ware is found. • Period IIB (100- 200 CE): Red polished ware decreasing, three sherds of NBPW. • Period III (200-350 CE): Ill fired red or yellowish red ochre wash pottery, a few rouletted ware.

 Chalcolithic Pottery  Early Historic Pottery	Mangalkot (West Bengal) (Roychoudhury et al. 2012)	Vases, Bowls, Jars (Chalcolithic phase) Bowls, Basins, Jars (Early historic phase)	• A multi-cultural site with three cultural period; Chalcolithic, Early Historic and Mediaeval. • The Chalcolithic assemblages comprised BRW, BSW, Red ware and grey ware. • The Early historic assemblages comprised BRW (continuing), Red ware and NBPW. The shapes are basins with horizontal splayed-out clubbed rim or externally thickened, jars with externally thickened and beaded rim. • Mediaeval ceramics included BRW, red ware, grey ware, and black ware.

	Daojali Hading- Dated 2.7±0.3 Ka (IAR 1962-63)	No designated sherds	• Excavation revealed 45 cm deep single cultural stratum with Neolithic implements • Coarse fabric • Ill fired • Greyish in surface color • Ware made of coarse and unevenly mixed clay, heavily tempered with large quartz particles. • Basket and cord impressions on the exterior • Majority of pottery was kiln baked and a few with pale cream cores seemed sun baked.
	Sarutaru pottery assemblages (Rao, 1976)	No designated sherds	• Handmade pottery mixed with quartz particles. • Medium to coarse fabric • Color of pottery brown, buff and grey. • Cord impressions or basket impressions with parallel or criss cross lines • Two groups of pottery on the basis of surface color- Brown and Grey. • Brown ware predominants the Grey ware. • Patterns like- simple cord impressions, twisted cord

			impressions, hearing bone patterns, zig zag patterns
	Kamakhya hill pottery	No designated sherds	• Cord and basket impressed on exterior • Pottery could be of later period (Hazarika) Similar pottery from Navagraha and arania hills.
	Napchik (Manipur) pottery		• Pieces of cord impressed ware along with plain ware, ring footed ware, tripod legs ware • Fine fabric and texture • Fired under low temperature • Handmade • temp with sand, vegetables or powered charcoal • Reddish brown is dominant color along with grey, dark grey and white. • Decoration is done by beating with cord wrapped paddle

 	Ambari :-First excavation in 1970 by M.C.Goswami and T.C.Sharma	Globular jar with flaring mouth and short neck, a goblet with flat base. Common shapes are Dish, lota, bowl etc.	• Two cultural period of which period I was from 7th to 12th c AD and period II from 13th to 17th c AD. • Well fired, extremely fine fabric, baked on high temperature • Chronology has been set on the basis of pottery. • Period I is characterized by the presence of Kaolin pottery and one among was ink pot which is a typical kushana pottery of North India. • Red ware has coarse fabric • Incision marks on potsherds • Five divisions on the basis of color and pattern: • Ribbed, free from slip mostly red in color. • Basket design. White in color • Quadruple design, raws of parallel dashes. Red color • Crossed design, parallel intersecting lines. Wide distribution in south east Asian countries like Sarawak • Criss cross design like knitting pattern of the basket where a number of grooves intersecting each other. Similar sherds are

			reported from Ban Nong of Thailand. Color varied from white to light red. • The potteries of period I is characterized by a buff-colored ware made of kaolin with some varieties treated with a red wash has been designated as Ambari ware has been reported from Tezpur, Nagaon, kamakhya and from various localities of Brahmaputra Valley. • Decorations like lozenges, mango etc. • Thumb and other impressions indicate handmade potteries. • Iron contents on the clay • These potsherds in general bear a closer resemblance to the potsherds collected from the prehistoric horizons at Tanjong, Kubar, santubong (Solheim 1965) and also from early historic sites of S.E.asia. Ambari excavation (Second season) • Soot marks on pottery. Both utilitarian and religious • Both wheel and hand made

			• Slip or glaze applied on outer surface • Designs varied from rib or busketary, stamp, comb, criss-cross, lozenge, diamond, floral, incised or applique designs and mostly on exterior surface