Pottery Making Tradition among the Hira Potters of Mornoi, Goalpara in Assam

Shreya Sarmah¹ and Manjil Hazarika²

¹. Department of A. I. H. C. and Archaeology, Deccan College Postgraduate and Research Institute, Pune – 411 006, Maharashtra, India (Email: sharmashreya7055@gmail.com)
². Department of Archaeology, Cotton University, Panbazar, Guwahati – 781 001, Assam, India (Email: hazarikam@gmail.com)

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Abstract: The study of ethnographic pottery making tradition has proven to be extremely useful for understanding the ceramic technology in archaeological and historical context. Assam and other states of Northeast India have yielded handmade pottery from Neolithic period onwards. Presently, the art of pottery making is traditionally practiced by Kumar and Hira potters. The present paper is aimed at documenting the pottery making tradition among the Hiras of Mornoi in Goalpara district of Assam. It attempts to record the entire process from collecting and storing of clay till the final technical stage of firing. Simple utilitarian pottery without much designs and paintings manufactured without wheels by hands with the help of beaters, paddles and dabbers are clues for understanding early Neolithic handmade pottery of the region. The social background of the Hira potters in the locality is also highlighted.

Keywords: Hira Potters, Kumar Potters, Assam, Archaeological Pottery, Handmade Pottery, Coil Method, Mornoi

Introduction

In Assam, there are two groups of people who have been traditionally involved in the art of making pottery for generations. The ones using wheels for shaping the pot are known as the Kumars whereas the Hiras manufacture pots with hands by using some paddles or beaters and dabbers. Both the groups live in separate villages formed by their own communities. These groups have certain commonality in terms of their social customs, religion, occupation and economy, yet the positions they occupy in Hindu social organisation are different. Apart from the sharp technological variations between the Hira and Kumar potters, the functions of their pots are also different. While the pots made by the Kumars are basically ritualistic, those of the Hiras are solely utilitarian. Being original inhabitants and living for generations in the same villages, these professionals often have their ethnic settlements named after themselves such as Hirapara, Hirasuba, Kumarsuba, and Kumargaon for instance.
Studies on the Pottery Tradition in Assam

The art of making pottery was known from very early times in Assam. Pottery, particularly of cord-impressed variety, is widely recorded in prehistoric contexts of Assam and other parts of Northeast India (Dikshit and Hazarika 2012a, 2012b, Hazarika 2006, 2013, 2017, Jamir and Hazarika 2014). Sites like Daojali Hading (Sharma 1967), Sarutaru (Rao 1977), and Bambooti (Ashraf and Gogoi Duarah 2014) have provided evidence of handmade pottery in Neolithic context of Assam. In certain pockets of Northeast India, there are potters’ communities whose pottery resembles well with the cord-impressed ware found in archaeological contexts (Hazarika 2013).

Roy (2004) studied the ceramic traditions of Northeast India from Neolithic to Medieval period including pottery from the well-known site of Daojali Hading, sites of Garo Hills and the early medieval site of Ambari. The kaolin pottery from the site of Ambari is widely known as the ‘Ambari ware’ (Roy 1976, Sonowal 2006, Sharma 2014). The handmade and wheel made potteries reported all over Assam from different historical contexts provide insights about the development of pottery making tradition and its technology (Singh and Sharma 2016).


The Hira Potters of Mornoi Village in Goalpara

The present ethnographic study is based on the survey and documentation of pottery making tradition conducted at a locality called Hirapara in Mornoi village. Mornoi (26°06’05.2” N 90°45’01.6” E) is located in Matia tehsil (block) in Goalpara district of Assam. It is situated approximately 17 km east from district headquarter Goalpara and approximately 160 km away from the state capital Dispur. The village covers nearly an area of one and half km and is one of the biggest villages in the region. The area taken up for this study is also rich in terms of archaeological remains. The site of Sri Surya Pahar, protected by the Archaeological Survey of India is well known for the rock-cut stupas and sculptures (Chauley 2003). Barman (2017) has recently explored the area and documented the early medieval landscape and archaeological remains in and around the Sri Surya Pahar site.

Among the Hiras of Assam, pottery making is both a primary and secondary occupation. In the districts of Nalbari and Marigaon, many potters are actually cultivators. They would engage in pottery making only as a source of secondary income. Most of them have their own agricultural fields, whereas the landless ones work in other people’s fields as Adhiyar (sharecroppers). In some other places, the
potters do not possess land or keep livestock. They do not have any food security, nor do they have any fall-back mechanism in terms of homestead and livestock. All they have is their skill – the art of making pottery.

In Mornoi, there have been considerable livelihood shifts over last twenty years. Many have given up this craft completely and some are practicing as secondary occupation. It is seen that great majority of the households do not have any occupational diversity. One third of the total population engage themselves in pottery making. The number of female workers is higher than the male workers. The term male workers means the men engaged not in pottery making but in collecting the raw material and transporting as well as marketing the finished products. Maximum number of male and female workers belongs to the age group of 30-45 years.

The ethnographic survey was conducted in Hirapara locality of Mornoi in the month of January 2018. A total of eighteen potters as well as their family members were interviewed which has resulted in many interesting facts. Information relating to their socio-economic life was gathered. There is no social hierarchy amongst them and all the Hira potters in their locality held equal footing in society. Their surnames do not vary and all of them have been using ‘Das’ as surname for generations. In Nalbari, many people use ‘Hira’ as surname, apart from ‘Das’ after their names, which is indicative of their traditional profession as well.

The Hiras of Mornoi observe Mahapurushiya Dharma, a sub-sect of Vaishnavism in Assam popularised by Assamese saint Srimanta Sankardev. However, unlike Sankari people, the Hiras worship different gods and goddesses in anthropomorphic forms. Thus, idol worship is not prohibited among them. They celebrate all the three Bihus like other Assamese people. While talking with the potters of Mornoi it came into light that they organise Paalnam, a form of congregational prayer where the intimates of Sattra or Namghar chant the name of God in group and in rotation, on every Buddha Purnima or full moon. A retired school teacher of Mornoi Higher Secondary School, Niful Chandra Das has detailed a historical background of Paalnam in the Bar-Kirtan Ghar of Mornoi. He mentioned that the tradition of Paalnam started in the first half of 19th century in Mornoi by the Hira potters, though the celebration was not regular then. People from nearby regions would come to take part in this celebration. However, it is only in 1944, that a date of Buddha Purnima was fixed for this celebration and this has been an annual festival since then (personal communications from Niful Chandra Das).

In the village of Mornoi, modern pottery appears to belong to a tradition that can be traced back many hundreds of years. While there may be no direct equivalence between modern conditions and those evident from the archaeological records, a careful study of modern technical behaviour can assist in refining interpretations of excavated archaeological materials (Rye and Evans 1976). Thus, a discussion of modern manufacturing techniques in this area will shed some light on the questions which arise in the archaeological context: how the vessels are made, location of potters'
workshops, nature of potters’ output and so on. This paper is an attempt to document the entire process of pottery making by the Hira potters in general and Mornoi village in particular, which would be beneficial for drawing analogies or parallels while studying archaeological pottery scattered in and around Sri Surya Pahar locality as well as another region.

Steps of Manufacturing

**Raw material:** Ceramics are composed of three basic raw materials. The first and most important is clay which is sticky fine-grained sediment that becomes plastic and mouldable when wet. Non-plastic inclusion is another important component which may include mineral or organic material found naturally in clays or deliberately added to make the prepared clay easily workable and also help to limit shrinkage. Finally, water, which is added to the clays and inclusions to make them plastic and this is lost during drying and firing of the vessel. Other raw materials are also involved in ceramic production, for example pigments are used in vessel decorations and fuel for firing them (Rice 1987).

No potter can work without ready access to clay and other raw materials such as temper, colour, fuel and water. The provenance and exploitation of these materials must be understood if the whole system of pottery manufacture and its social context is to be explained. Clay, here is the basic prerequisite. A potter cannot survive if he does not live near an economically viable source of clay and other raw materials.

**Acquisition of raw materials:** The first step of ceramic manufacture is acquiring the raw materials and preparing the clay. Potters typically obtain their raw materials from sources close to home, usually 1-6 km from the manufacturing site (Arnold 1985). Transportation technique used in bringing materials from their sources to manufacturing areas may vary considerably based on distance, available modes of transportation and financial capacity of the individual potter or the guild.

Collection of clay involves travel to the sources, the digging and transport of clay deposits. Tempering materials are often transported much longer distances than clays; though readily available materials such as chaff or small fragments of fired vessels may also be used. A number of factors affect raw material acquisition such as the spatial distribution of the materials, their cost and accessibility, the quantity of the materials needed, the cost of transport and the culturally perceived value of the goods – all these play a role in determining what sources potters will exploit.

The potters of Mornoi have two sources, from where they collect the clay. Most commonly, the potters bring their clays from the ‘finaree bil’ which is nearly 8 km away from Mornoi. A dead river namely ‘Bohati nodi’ is also there in the distance of 19 km from the Hirapara locality, which too is occasionally used by some of the households as a source of raw materials. What the potters collect is a sticky blackish type of clay, rich in organic contents, locally known as Hiramati. The clay is collected from the
marshes during winter and spring and is collected only after removing the upper clod of the soil with a spade known as ‘Khana’ (Fig. 1). Each Hira family owns a rectangular waist deep pit (gaat) in their own homestead where they store the clay (Fig. 2).

Figure 1: Khana or the Spade for Digging the Marches for the Collection of Clay

Figure 2: The Gaat or Pit Where Potters Store Clay for about a Year after Collection
**Preparation of Raw Materials:** Few types of clay are ready to be formed into vessels in their natural state; most must be cleaned and prepared for use. Most naturally occurring clays contain a range of large and small impurities, including stones, pebbles and organic debris, which must be removed before the clays are suitable for ceramic manufacture. The extent to which clay must be cleaned varies with the manufacturing technique used in vessel forming. In wheel-built vessels, the presence of large impurities in the clay would tear the vessel wall while forming, whereas for many hand-built vessels much coarser clays are perfectly suitable (Sinopoli 1991).

Impurities may be removed from clays by placing them out by hand or by drying the damp clays and then pounding them and passing them through coarse screen (Sinopoli 1991). Alternatively, the clays may be combined with water to form a suspension, with the coarse particles eventually sinking to the bottom and the fine-grained clay particles remaining on the top. An elaboration of this technique known as lavigation, which is generally used in large-scale ceramic production industries.

Non-plastic inclusions or tempers often added to clays in order to improve their workability and to achieve desired effects in fired vessels, must be also acquired by potters and prepared for use. Temper included organic materials such as ash, seed husks, or ground straw as well as inorganic materials such as crushed rock or lime, grog and so on. These materials must be ground to appropriate size and then mixed in suitable proportion with the clay. The proportion of the tempering materials depends upon the nature of the clay, especially the ratio of non-plastics that occur naturally in the clay and the desired end product. The proportion of non-plastics in prepared clay typically ranges from 20-50% of the total volume (Rye 1981). In addition to adding tempering materials to clay, potters may combine more than one type of clay in order to produce a paste suited to particular vessel types.

What is interesting about Hira potters is that, whereas shaping the pots is a fully women dominated sphere; preparation of clay is done by both the sexes. The hard soil is pounded with wooden club, called *Mati-kunda gaain* (Fig. 3). If the soil is sticky, it is flattened on the wooden plank by kneading. Generally, the Hiras use fine sand as the only tempering material for the preparation of clay. This sand is collected from the river bed and is added after removing the coarse ones. The quantity of sand the potters of Mornoi use is minimal. The foreign particles are removed in the course of kneading by feet.

Once the raw materials are combined the clay-temper mixture must be made plastic by adding water and carefully blending the mixture. This blending serves to make the paste homogeneous as well as to eliminate the air pockets within the material. Once the clay is well-mixed, with desired plasticity and moisture content and becomes a paste of required consistency; the prepared clay is kept aside giving it a shape of a round ball (*Matir Loda*). The potter takes clay from this mass according to her requirement by wedging it, slicing through the prepared clay with a cord or a wire.
Hand Building Technology: Among the simplest of the hand-building techniques used in ceramic manufacturing is known as pinching method, where a ball of clay is held in one hand and shaped with the other hand by making a hole in the centre and then thinning the vessel walls by drawing the clay out from the base with thumb and forefingers. Pinching is well suited for forming smaller vessels. Slab building is the technique of forming vessels of two or more flat slabs of clay that are pressed together into the desired vessel shape. The slabs can be joined together by hand or with wooden paddle or another tool. This technique is well suited for forming irregularly shaped basically non-round shaped vessels or for building very large vessels. Among the most common hand building technique is coiling. The potters shape the prepared clay into long, narrow coils, by rolling it against a hard surface or between both the hands. The coils can be used to form a base or can be added on to a base formed by another technique. The walls of the vessel are gradually built up by successively adding on more coils. The potters may moisten the outer part of the coils to help them adhere to each other more strongly (Sinopoli 1991). Another important technique is the use of moulds, where prepared slabs are pressed into or over a prepared mould, which is generally of plaster, stone, fired clay or may be simply a base of a broken vessel.

The most unique feature of Hira potters is that they do not use potters’ wheel for manufacturing pottery. Among the Hiras, the craft is exclusively reserved for the women. The potter sits on a bamboo mat and keeps in front of her one boulder which is placed on a roll of straw. She uses at least two wooden sticks (Pitani) for beating the pot. Another boulder of smaller size is used as dabber. The sizes of these boulders vary and depend on the size of the pot to be manufactured. Basically the potters of Mornoi use the coiling and pinching methods. However, the formation of a complete pot involves different stages.

First stage: In the first stage, the required portion of clay is taken from the prepared lump and some small disks of clay are modelled on the palm of the hands and placed
on the bamboo mat or in the floor directly. They call these earthen disks as ‘Dan’. They make generally 20-50 such dans at a time. In order to make these disks slightly stiff, they are kept in shade for about 24 hours. Next day, these are further moistened with water and placed on the bigger boulder (Dan-ghancha sil) on which it is rotated and beaten smoothly with the beater (pitani) (Fig. 4). Before this, the pitani and the boulder surface are moistened with wet cloth. Concavity is obtained by following this process which is continued until the required shape is obtained (Roy 2004).

![Image](image_url)

**Figure 4: Dans are Kept in the Shade for a Day and Beaten with Pitani in Next Day**

**Second stage:** When the dans are ready after 24 hours, a desired quantity of clay is detached from the lump and a role is made between both the palms of the potter. This earthen roll, known locally as ‘Nari’ or ‘Bari’ is coiled at the edge or brim of the curved disc and affixed by pressing it with the help of fingers. This method of coiling is called ‘Nari diya’. Now it takes the shape of a somewhat rounded bowl and again kept for drying up to 24 hours. Next day, the small rounded boulder (Soru Pita Sil) is held inside the bowl and beaten with the beater (Soru Pitani). Among the Hiras of Nalbari this technique slightly varies as, beside the Soru Pita Sil, they also use a bigger boulder where the bowl is held. The boulders as well as the beaters are moistened from time to time. The pot rests vertically at the bigger boulder as strokes are applied on the walls (Figs. 5 and 6).

**Third stage:** At this stage, it looks like a complete bowl and is followed by addition of coils according to the intended size of the pot (Fig. 7). The pots, after affixing the rolls are left for a day. For big Jongas, the maker moves around the pots for attaching thick earthen coils and beating the walls. The neck (Kanda kora) of the pot is made next. It is nothing, but more coils added up successively one after another. It depends upon the dexterity of the potter. If the intended pot is small, then it is placed on the left palm in a slightly inclined position and the soft roll with the wet cloth is grasped by the right hand. It is rotated in clockwise direction and the neck is made. In case of the bigger pots, the process slightly varies. Here the base of the pot is placed on the left palm and supported by the two great toes and slowing turned by moving the hands and the great toes in the right side as in case of the smaller pots. Application of mud slip is limited only to the neck portion. Slip is applied as soon as the pottery is made (Roy 2004).
Figure 5: The Potter is Making Coils and Affixing them around the Edge of the Curved Discs

Figure 6: After Completion of Nari Diya, the Disc is Beaten over the Soru Pita Sil to Give a Bowl-like Shape

Figure 7: Pot is Either Finished this Way or More Coils are Incorporated to It to Make a Bigger Pot
**Finishing: Tools and Techniques:** Between the various stages of construction (Fig. 8), or after steps are completed, the vessels may be partially dried, partially rewet and subjected to a variety of finishing procedures. Some of these are considered secondary forming techniques; they may alter the dimensions of vessel as well as the surface characteristics. The most important of these finishing techniques are beating, scraping and trimming, which not only complete the forming process and smoothing and texturing, but also finish the surfaces.

**Figure 8: Hira Potters at Different Stages of Shaping Pottery at Mornoi Village**

Beating, the primary technique of pottery manufacturing among the Hira potters of Mornoi, should not be considered as a primary constructional process (Solheim 1954). Rather, repeatedly striking the clay with the opposing pressure of a small rounded boulder, known as ‘Soru Pita Sil’ is a secondary formation technique. This technique is employed on a roughly preformed vessel in the wet or nearly leather-hard stage to modify its shape, size and surface characteristics. This technique is also known as the paddle and anvil technique, in which a flat or concave stick or beater is used on one surface and a convex stone or clay anvil is opposed on the interior surface, leaving a series of rounded impressions on the vessel.

Paddling has many significant effects on the final character of the vessel. It may improve the bonding of the segments, obliterate coil marks or irregularities, thin the walls, compact the paste, smooth the surface and alter or enlarge the contours of the vessel (Rice 1987). Potters often employ several sizes, weights or shapes of paddles in
finishing a single vessel to vary the pressure or conform to it curvature. The potters of Mornoi also keep two beaters instead of a single one, which vary in size. They are called ‘Xoru pitani’ and ‘Dangor pitani’. The Hira potters use scrapers, locally known as Rukani to scrape off the unwanted clay from the surface of the pot. Generally, the scraper is made out of thin bamboo wands (Medhi 1992), but the potters of Mornoi are seen using concave fragments of earlier pots for scraping the leather hard pot or to smoothen certain types of earthen wares.

**Firing:** The final stage of ceramic-forming process is firing of the formed and dried vessels. The application of heat to the vessels, results in chemical transformation of the clay body, producing a hard and durable product that has lost the plasticity essential for its original forming. Firing may take place in a number of contexts: in open air, in small pits or bonfires, or in permanent facilities, such as ovens or kilns. The appearance and the structure of a vessel at the end of the firing process is determined by three main factors: the maximum temperature attained, the duration of firing and the firing atmosphere (Rice 1987). In general, fired ceramics are distinguishable on the basis of temperature attained during firing. Vessels fired at high temperatures are more porous and coarser than those fired at low temperatures, below 900° Celsius (Sinopoli 1991). Again, when abundant oxygen is available, carbon present in the vessel body and fuel is fully consumed, and the vessel will be light in colour. Black or dark-brown vessels are typically produced in a reducing atmosphere, where little oxygen is present. In these oxygen-poor atmospheres, the carbon in the vessel body is not lost and carbon from the fuel may be deposited on the vessel surface, producing a pot dark in colour.

The pots are carefully dried in the sun and then under a shade. Each potter household in Mornoi has a levelled piece of ground meant for firing the pots (Figs. 9-12). Usually they set 400-500 pots for firing at one time and 30-50 pots break in the procedure. Decoration is generally done before firing. The pots are arranged in circular rows and placed on circular bed made by dried straws. The pots are again encircled by dried cow dung. In some places like Nalbari, the Hira potters do not use cow dung for firing. The heap takes a conical shape, when all the pots are placed one above another. What is interesting is that the bigger pots are placed in the middle of the heap and surrounded by the smaller ones from all the sides and the top. The heap is then covered with straw and firewood. Sometimes broken pieces of earlier batches are also put in the heap. This is further followed by a coating of ashes all over the heap. Generally, the resultant ashes from the previous firing are used for this purpose. The firing process is simple, and it corresponds to the method followed by the Kumar distributed around them. They set fire on the top of the pile. It takes a few hours to fire the pots. Sometimes the pots are re-fired to eliminate darkish core which is a result of an imperfect firing and to obtain red colour of the pots so treated (Roy 2004).

Among the Hiras of Mornoi, two popular methods of firing are there. One of them is called ‘Pari pura’ which takes nearly 8 hours for the firing and another one is known as ‘Juri-pura’ that takes no more than 3 hours for one batch of pottery to be fired wholly.
Figure 9: Circular Bed Made with Dried Straw and Rice Husks

Figure 10: Potter and Male Members of the Family Together Start Laying Down the Dried Pots One Above Other both Horizontally and Vertically

Figure 11: A Pile Created with the Pottery of Different Sizes and Shapes

Figure 12: Pile isCovered with Pot Sherds, Rice Husks and Ashes from Previous Firing and Fire is Set on the Pile and Let the Pottery Burn for Nearly Eight Hours
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Local Names</th>
<th>English Names</th>
<th>Description</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lurki of two type: Dangor (large) Lurki and Xoru (smaller) Lurki</td>
<td>Cooking vessel</td>
<td>It is a wide mouthed and round bottomed pot, having short neck and slightly outgoing lip with beaded rim. The vessel shows a concavo-convex profile. The colour is dull red and generally devoid of designs.</td>
<td>The Dangor Lurki is used for cooking rice, whereas the Xoru Lurki has a more generic use.</td>
</tr>
<tr>
<td>2</td>
<td>Jonga of three types: Bor Jonga, Tekeli Jonga, and Majira Jonga</td>
<td>Pitcher</td>
<td>This is medium mouthed, short-necked pot. It has slightly flaring cut lip and bulging out body. The junction between neck and body remains a band of clay which is wavy in nature and give an aesthetic look to the pot. This is famous among the Garo community.</td>
<td>The Jonga is used for brewing liquor, specifically rice beer.</td>
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<td>3</td>
<td>Tekeli</td>
<td>Pitcher</td>
<td>Small vessel with a short neck and bulging body</td>
<td>Tekeli is used for boiling milk.</td>
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<td>4</td>
<td>Soru Hari</td>
<td>Cooking vessel</td>
<td>This has a bulbous body, short neck and flaring lip, which is externally and internally thickened.</td>
<td>To fry puffed rice (Muri)</td>
</tr>
<tr>
<td>5</td>
<td>Hariya</td>
<td>Pitcher</td>
<td>This is a wide-mouthed, deep vessel with a bulging body</td>
<td>Hariya is used for brewing or storing rice beer.</td>
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<td>6</td>
<td>Garo Hari</td>
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<td>–</td>
<td>Garo Hari is used for boiling water.</td>
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<td>7</td>
<td>Mahajani</td>
<td>Large vessel</td>
<td>This is a large storage vessel with a straight neck and a slightly flaring lip.</td>
<td>Mahajani is used as a wardrobe where cloths are stored.</td>
</tr>
<tr>
<td>8</td>
<td>Thali of three types: Dangar Thali, Majira Thali and Xoru Thali</td>
<td>Dish</td>
<td>This is a flat vessel. The shape is that of a platter-like vessel with a depressed region in the middle and slightly raised rim.</td>
<td>The Dangar Thali is used for boiling rice in the husk to attain parboiled</td>
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<tr>
<td>No.</td>
<td>Type</td>
<td>Description</td>
<td>Notes</td>
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<tr>
<td>9</td>
<td><em>Soru</em> of two types:</td>
<td><em>Dangar</em> basin and <em>Xoru</em> Soru</td>
<td>The <em>Dangar Soru</em> is used for cooking rice whereas the <em>Xoru Soru</em> for baking traditional snacks like <em>pitha</em> (cake made of rice flour).</td>
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<td></td>
<td>Earthen</td>
<td>It is a wide-mouthed vessel with round bottom. The rim is externally grooved.</td>
<td>The <em>Majira Thali</em> is used for feeding the cows and pigs.</td>
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<td></td>
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<td>The lower body bulges out and the upper body is sometimes painted with impure form of haematite. The vessel gives a convex profile.</td>
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<td>10</td>
<td><em>Tele</em></td>
<td>Cooking vessel</td>
<td><em>Tele</em> is used for cooking rice and curry.</td>
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<tr>
<td>11</td>
<td><em>Sorupitha</em></td>
<td>Cooking vessel</td>
<td>This is used for baking a special traditional snack that needs water vapour coming from beneath.</td>
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<td></td>
<td>It is a combination of wide mouthed basin and cooking vessel. The base of the basin is provided with holes.</td>
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<tr>
<td>12</td>
<td><em>Bhurka</em> of two types:</td>
<td><em>Dangar</em> vessel and <em>Xoru</em> Bhurka</td>
<td><em>Bhurka</em> is used for containing liquids. While the larger one is for keeping curd, people store water in the smaller ones.</td>
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<td></td>
<td>Storing</td>
<td>The body of the pot is round and the rim starts from the joint of the upper body without forming any neck. Its lip ends forming a beaked edge.</td>
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<td>13</td>
<td><em>Ghori</em></td>
<td>Earthen bottle</td>
<td><em>Ghori</em> is used by the Rabha people for drinking rice beer. Some households even keep this vessel as a flower vase.</td>
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<td></td>
<td></td>
<td>This vessel has a rounded lower body and slightly elongated neck that facilitate people to drink from this directly.</td>
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<td>14</td>
<td><em>Koloh</em></td>
<td>Pitcher</td>
<td><em>Koloh</em> is a medium and</td>
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constricted necked vessel with a round base. The rim is internally grooved. The lower body bulges out.

| 15 | **Kan Kerahi** | Indian pan | This is a round bowl-shaped utensil with two loop-like handles made with clay attached in the edges of two opposing directions. The handles are called the ‘kan’ of the pan. |
|    |                |            | *Kan Kerahi* is used for frying snacks which need more oil. The smaller size and the depressed middle portion allows the *Kera* to hold oil. |

| 16 | **Beriya** of two types: *Dangar Beriya* and *Saru Beriya* | Pitcher | _ |
|    |                |            | *Beriya* is used for making and storing curd. |

| 17 | **Telpitha Khowa** | Small frying pan | This looks like a *Choru* with two handles on opposing directions and similar to the *Kan Kerahi*, but even smaller in size. |
|    |                |            | *Telpitha Khowa*, as the name itself suggest is a special frying pan to cook this specific snack called ‘Telpitha’. |

| 18 | **Bhokapitha Khowa** | Cooking vessel | This vessel is similar to the *Sorupitha* where a wide-mouthed perforated basin is attached on the top of a pot. The provision is suitable for boiling water at the bottom and cooking *pitha* on the upper part with the water vapour coming from below. |
|    |                |            | *Bhokapitha Khowa* is specifically shaped for preparing *Bhoka* or *Bhapapitha*. |

| 19 | **Ghot** | Religious vessel | This vessel is similar to a *Koloh*. But has a smaller body. It has a short neck and rounded body. |
|    |                |            | *Ghot* is used in any auspicious work like marriage rituals, adoration etc. |

<p>| 20 | <strong>Saki</strong> | Traditional | This is made with pinching |
|    |                |            | <em>Saki</em> is used for |</p>
<table>
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<tbody>
<tr>
<td>21</td>
<td>Jora-saki</td>
<td>Thok-saki</td>
<td>Clay disc</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>This is a slightly concave clay disc with a hole in middle to which facilitate the entry of a thread through the centre.</td>
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<td></td>
<td>Jora-saki or Thok-saki is used in rituals or marriage ceremonies which are tied together in thread, which is hung in the front of the ceremonial space.</td>
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<tr>
<td>22</td>
<td>Gosa</td>
<td>Lampstand</td>
<td>It is an elongated body provided with a short flat or concave platform for the placement of Saki or Sahashra Bati/Sikha. The stem exhibits a sharp keel, the base is truncated and concave.</td>
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<td></td>
<td>Gosa is used for ritual purposes and specifically in the Namghar (Assamese prayer hall) or temple.</td>
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<tr>
<td>23</td>
<td>Dhupdani</td>
<td>Incensory</td>
<td>This is a small stand with a rounded covered top. The top is perforated to hol, the joss-sticks.</td>
</tr>
<tr>
<td></td>
<td>Dhupdani is an apparatus used for burning incense. It holds joss-stick.</td>
<td></td>
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<tr>
<td>24</td>
<td>Dhunadani</td>
<td>Incensory</td>
<td>This is a decorated vase on a stand. The whole body in perforated in triangular shapes. The shape of the holes and designs are done with a sharp knife.</td>
</tr>
<tr>
<td></td>
<td>It holds the resin or hydrocarbon secretion of a tree called Canarium resiniferum.</td>
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<tr>
<td>25</td>
<td>Fuldani</td>
<td>Flower vase</td>
<td>This is a container with elongated neck and comparatively oval-shaped thin body.</td>
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<tr>
<td></td>
<td>Fuldani holds fresh, dried or artificial flowers.</td>
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Different Shapes: Ceramic vessels have served a variety of non-culinary purposes for ten thousand years or so, but it is in domestic and culinary roles that their functions as containers can be addressed most broadly and comparatively, both through time and over a wide geographical area. In these activities the full spectrum of cultural and technological factors underlying the choices involved in manufacturing a vessel is brought into play (Rice 1987).

Figure 13: a) Lurki, b) Dangar Jonga and Tekeli Jonga, c) A Pile of Dried Soru-hari, d) Pre-fired Stage of a Soru, e) Ghori for Drinking Rice Beer, f) Koloh
Ceramic vessels have three essential components – body, or face and base – which characterize their form. The relative proportions determine the overall shape of the vessel and they are significant in terms of its construction, function and decoration (Choksi 1995). Pottery containers may be used for carrying liquids, storing dry substances or heating contents over fire. Each use places demand on different shapes of vessels and its suitability for a particular task wholly depends on its designs, in engineering as well as an artistic sense. Generally, the Hira potters make utilitarian pottery whereas the Kumar make pottery for ritualistic purposes, on which their social status also depends. The Hiras also give certain religious form to their pottery to meet the market demand. After all in the present scenario, very few people use earthenware for cooking or storing, as they have been replaced by aluminium and steel utensils long back.

For collecting further details, Kamaleswar Das, President of All Assam Hira Committee, was interviewed. He claimed that being an elder personality in the Hirapara of Mornoi, he has seen the evolution of the shapes of pottery in his locality over a period of 70 years. Remembering his childhood, he stated that many popular forms of olden days have no longer been made as the newer generations do not know their uses. Yet few other forms are lost owing to their lack of market demand. However, a couple of new shapes have been included in recent times. Das said that there are as many as 35 shapes of pottery the potters make at present in Mornoi, but he could barely remember only 18 of them. The potters use different vessels for different purposes and very few are used for other purpose than what they were made for (Table 1).

Some of the pottery forms were photographed (Fig. 13 - 15) during the field survey in Mornoi village. Some other forms could not be recorded either because they are no more in use or due to lack of expertise of the potters, those are not made now-a-days. A few shapes could be seen, which are unique to this village and are absent in Hirapara of Nalbari district. For instance, the Jonga is a vessel form typical to the potters of Mornoi as it is famous among the Garos in nearby region as thus has a higher market demand.

From the researcher’s observation there are only two basic forms of vessels used for domestic purposes. Those are globular vessels and vessels with carnations. Secondary form variations are found as elaboration of these basic forms. For instance, the globular pots are the most common form and are varied in several ways. Each variation brings about a change in the point of maximum diameter and often also in the rim and base of the vessel. Each variant has different name and function. For example, a simple round pot Lurki can be designed into a wide-mouthed round pot Tele by altering the rim and diameter, into a Soru Hari by elongating the neck and into a Kan Kerahi by attaching two round loop-shaped handles into the opposite edges. Other ritualistic vessels like Saki, Gosa, Dhupdani, Dhubdani also follow a pattern – the use of pinching method for manufacturing and a platform on a stand to hold the pot.
Surface Treatment and Decorations: Pottery styles have long been important in reconstructing the histories and cultural relation of people who occupied archaeological sites. This is partly because of its ubiquity at archaeological sites, and also because pottery making is an additive technology and thus the steps of making and decorating pottery creates a cumulative record of the choices and procedures, the potter selects throughout the process of manufacture. The more the evidence of choices, the greater the potential for unrevealing the complexities of stylistic behaviour (Rice 1987).
As regard to surface treatment, Matson (as referred by Medhi 1992) has pointed out that there are various techniques which are used to make the surface less porous, as porous vessels would not contain liquids for very long. Shaving, slip treatment, polishing, painting, smoothening, burnishing, wash, slip etc are means to achieve this.

Among the Hira potters of Assam, as far as Mormoi is concerned, the surface treatment on the pot is very simple and oftentimes absent. The little surface treatment the potters do can be called as smoothening, light engravings and staining or painting. Staining is most popular of all and known locally as Rengani kora or Bolowa. To do away with the roughness of the surface in certain type of vessels, some sort of surface treatment has been done perfunctorily. This can not be however equated with the carefully applied polishing or burnishing in other parts of India. The potters argue that it has not been done traditionally and so, they abstain from practicing it. It can be understandable as the Hira potters prepare their pottery with well levigated and prepared clay which reduced the chances of porosity. Moreover any sort of porosity, if present on the walls of the vessel would be automatically sealed off as they utilise the beating technique. Thus the use of slip or wash is not much needed.
The present day potter community inhabiting the site of Mornoi make simple vessels with least decorations. They coloured or stained their pots with ochre reddish brown clay rich in haematite content, which they call Geru mati or Ronga mati. The requirement of the material is very low as it is used for decorations of specific parts and not the whole body of the vessels. So they collect required quantity for the whole year and preserve it for future use. For the preparation of the solution, first they break the larger blocks of haematite into small pieces and sometimes make powder out of it. They they dissolve it in water to the required consistency. Preferably they make a thin solution which can be used easily (Fig. 16).

![Figure 16: Haematite Rich Clay and Its Solution](image)

They do not use any brush or other painting appliances. Again they do not use any other variety of colour than Geru mati. Chemical colours are totally absent. So the term staining is more appropriate instead of painting. The Hira potters use no specific tools for it. Sometimes they use a piece of cloth tied closely to a bamboo stick and use as brush (Medhi 1992). What could be observed among the Hiras of Mornoi is they dip their fingers into the prepared haematite solution and draw curved or straight lines on the body as well as on the neck of the vessel. Sometimes, particularly in the bigger pitchers, they stain the neck upto the middle of the body of the vessel. It has also been observed that from the base to the middle of the body, the vessel is also sometimes stained outwardly (Medhi 1992). The Hira potters do not engrave all their pots. Engraving is occasional and is done when the pot is in leatherhard condition. They do not have proper instrument specifically for engraving purpose. Thus, most commonly slender and pointed bamboo needle is used as engraver which do not have any local name. Sometimes potter’s thumb nails are also used for it. They engrave parallel bands, weavy lines, linear lines and dotted lines.

**Conclusion**

The main motive of the present study was an ethnographic documentation of pottery making tradition among the Hira people of Mornoi in Goalpara. The aim was to document their technological as well as socio-economic aspects of life and see whether any differences exist among the Hira potters of other parts of Assam with those of
Mornoi through a comparative study. This could be smoothly accomplished because of earlier village surveys on Hira potters of Nalbari. Little variation could be made out in terms of socio-economic and religious life of people. Technology is also the same among the Hira potters of Assam. However, a few vessel forms differ from region to region according to the local need. For example, the most common tall pitcher for brewing rice beer in Mornoi is largely absent in the Hirapara at Nalbari. The potters of Mornoi specifically make this pitcher for the Garo people, among whom this pottery form is highly demanded. Moreover, the thin line of social status between the Hira and the Kumar potters has also been blurred equally all over Assam and Hira potters are also gradually manufacturing pottery for rituals and auspicious purposes.

The village of Mornoi is quite rich in terms of archaeological materials. Potsherds belonging to early historical period are scattered all over the landscape, thus providing scope for future archaeological researches. Detailed documentation of archaeological materials and features of the area would help in dating the cultural layers of the site and beyond. Ethnographic documentation of this important handmade pottery making tradition can also serve as clues to understanding the early Neolithic pottery making technology in Northeast India. Future researches can be made on scientific analysis of thin sections of ethnographic handmade and wheel turned pottery with archaeological potsherds from the Neolithic and historical contexts.

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References


