

Prehistoric Sites in Mandla, Madhya Pradesh (India), with Evidence of Using Modern Materials

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Abstract

A total of 17 open-air sites of microlithic assemblage have been discovered in the district of Mandla in Madhya Pradesh during 2001-2002. Significantly, evidences are found suggesting the continuation of Stone Age tradition in this region until the modern time. Archaeologists and anthropologists have recorded the use of lithic technology by modern communities in Africa, Australia, New Guinea Highlands, and elsewhere. Moreover, in many places where the aboriginals are no longer using stone tools, the recent continuance of Stone Age technology has been established on the basis of modern materials. The use of bottle glass has been reported from many parts, throughout the world. The Mandla example virtually confirms a date not earlier than 20th century. Here, for the first time, the use of porcelain material (“electrical porcelain insulators”) has been found in the manufacturing of micros. Doubt, however, cannot be ignored that this could be a case of reinvention. In this article, an attempt has been made to analyze this problem, initiating a further archaeological discussion.

Introduction

“Mesolithic,” spanning a period from 12,000 to 7000 years before present, represents a brief cultural phase in between Paleolithic/Epi-Paleolithic and Neolithic, and importantly, a specific subsistence pattern.

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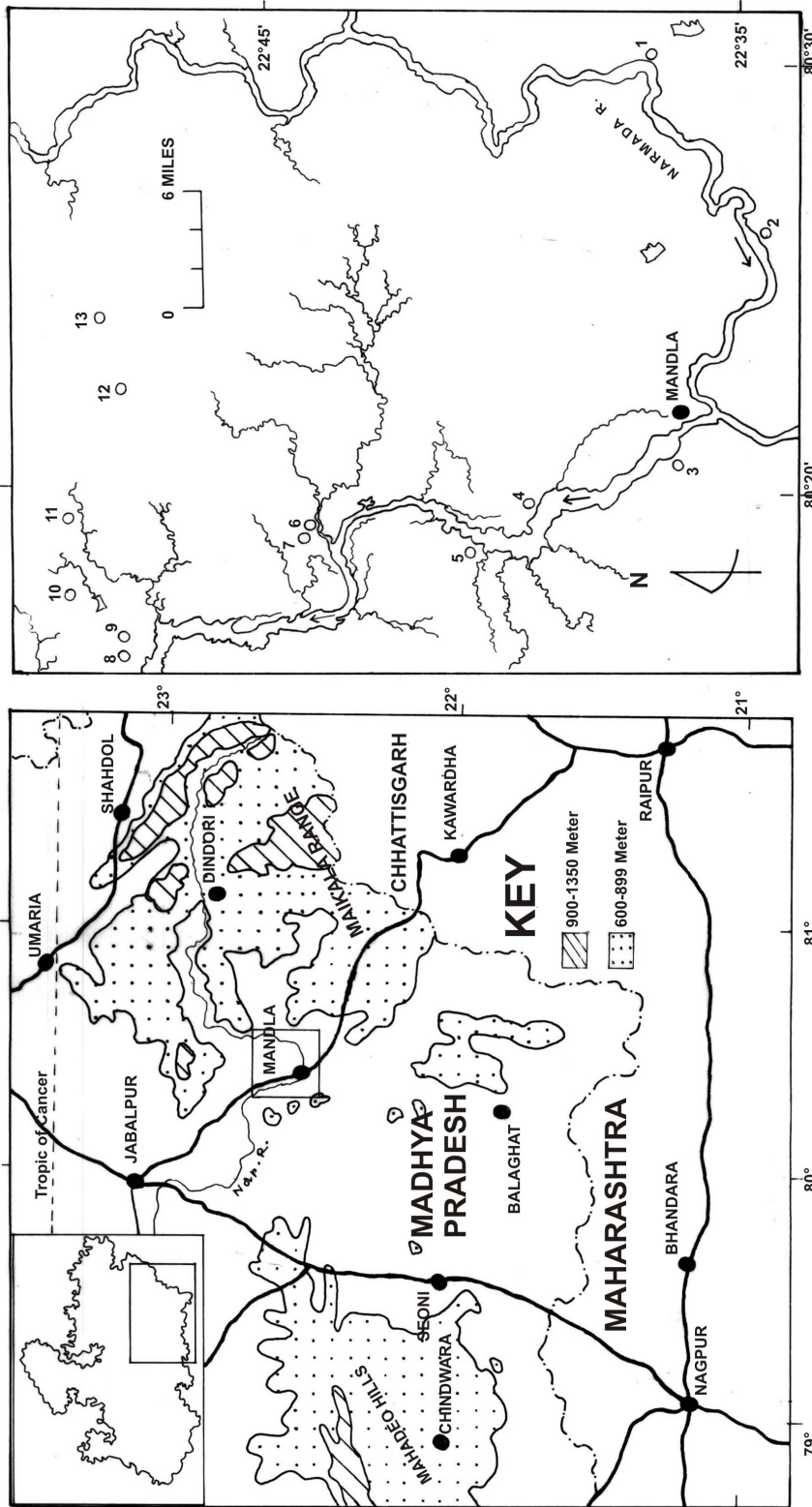
With the arrival of the warm climate, the big game animals of Pleistocene were depleted requiring humans to shift their subsistence pattern to small game hunting, primarily to fishing and fowling. The warm climate of Holocene no longer required humans to live in caves, and in contrast to this, open-air dwelling becomes a habit. During this period, a completely different set of tools was made by using several tiny blades called "microliths." The microliths are considered as Mesolithic "type tools."

It is, however, increasingly being known that the production of microliths in India, as in elsewhere, had continued in many local contexts down into early historical time (see Cammiade 1924; Fairservis 1971 as cited in Cooper 1997; Gordon 1950; Todd 1950). Modern materials (such as bottle glass) were used in the practice of flaking as found in Andaman and Nicobar Islands, in Bombay, and in Satara district of Maharashtra (see Cooper and Bowdler 1998; Malik 1959, 1966; Todd 1932 as cited in Krishnaswami 1947:37). Contemporary use of lithic technology has been recorded among the aboriginals in Africa, Australia, Central America, New Guinea Highlands (see Seitsonen 2004; Sillitoe and Hardy 2003), and near India among the Veddas in Sri Lanka (see Blundell 2006; Deraniyagala 1988, 1992). Conte and Romero (2008) has presented a review of ethno-historic and ethno-graphic sources concerning the use of glass side scrapers, end scrapers, and arrowheads by aboriginal groups throughout the world.

In the district of Mandla, in Madhya Pradesh, a series of open-air primary archaeological sites has been discovered during 2001–2002 (see Roy 2003, 2008) along the course of the Narmada river (Map 1, Table 1). Evidences of modern manufacturing of microliths, using porcelain material, are found for the first time. These are not just the small size flakes but convincingly true microlith types, suggesting a pertinent archaeological question that whether these are the continuance of Mesolithic tradition (or at least the technology) or an independent case of reinvention. The relevant archaeological question on continuity or reinvention has been discussed here while contextualizing Mandla findings with present day ethno-logical situations.

Mandla Sites

Mandla, which is located at 22° 12' and 23° 22' North and 79° 57' and 81° 45' East, is one of the tribal districts of Madhya Pradesh. The original Mandla district is now divided into two separate districts, viz.,



Map 1. Location of archaeological sites (1-13) alongside Narmada (1 = Ramnagar, 2 = Ghughra, 3 = Manadei, 4 = Gonjhi Ryt., 5 = Bhaissadah, 6 = Babaiha, 7 = Gadhar, 8 = Kumba, 9 = Chiri, 10 = Partala, 11 = Amdra, 12 = Salhepani, and 13 = Tarbani Dobhi)

Table 1. Mandla Sites

Name of the Place (Village/ Block/ 1981 Census Location Code*)	Geographical Location	Distance/ Approach Road	Tool Assemblage/ A Brief Description
Amdara/ Narayanganj/203	80° (19' 24.19") E and 22° (49' 37.37") N	About 10 km from Partala (forest road)	This appears to be predominantly a microlithic site (not fully explored).
Babaiha (Rat)/ Mandla/274	80° (19' 11.94" to 31.50") E and 22° (44' 13.19" to 13.21") N	About 18 km from Mandla on the Mandla- Jabalpur road.	Microliths were found in several clusters. Wheel turned pottery pieces of red and black wares are found.
Bhaisadah/ Mandla/824	80° (18' 48.82" to 53.58") E and 22° (40' 26.81" to 45.51") N	About 16 km from Maharajpur/ Mandla.	This is predominantly a microlithic site extending over a kilometer area (not fully explored).
Chiri/ Narayanganj/184	80° (16' 35.11" to 44.77") E and 22° (48' 13.29" to 22.71") N	About 35 km from Mandla on the Mandla- Jabalpur road.	This is predominantly a microlithic site. A green bottle glass core bearing possible pressure flaking mark was found. The site was recently disturbed by agricultural activities.
Dongar Mandla/ Ghugri/548	80° (36' 35" to 37') E and 22° (38' to 38' 20") N	About 44 km from Mandla on the Mandla- Ghugri (block headquarters) road.	This is predominantly a microlithic site (not fully explored).
Salhepani (Dobhi)/ Narayanganj/200	80° (22' 54.43") E and 22° (48' 24.02") N	About 35 km from Mandla via Phulsagar on the Mandla- Niwash road.	This appears to be predominantly a microlithic site (not fully explored).

Table 1. Mandla Sites (cont.)

Tarbani Dobhi/ Narayanganj/202	80° (24' 18.19" to 18.21") E and 22° (48' 48.01' to 51.07") N	About 35 km from Mandla via Phulsagar on the Mandla- Niwash road.	This appears to be predominantly a microlithic site (not fully explored).
Gadhar / Narayanganj/192.	80° (19' 07.44" to 19' 12.40") E and 22° (44' 19.74" to 20.77") N.	About 20 km from Mandla on the Mandla- Jabalpur road. This site is almost adjacent to the Babaiha forest site on the other side of the road.	This is predominantly a microlithic site. Microliths on EPI found along with microliths on stone. Because of the slope gradient of the site, archaeological materials were found thinly scattered over a wide area.
Ghughra/ Mandla/360	80° (26' 28.50" to 43.31") E and 22° (34' 09.62" to 14.39") N	About 18 km from Mandla on the Mandla- Ghugri (block headquarters) road. Madhpuri is an important village adjacent to the Ghugra village.	Microliths were found as casual finds. This site seems to be heavily disturbed by human activities for long.
Gullu-Khoh/ Ghugri/549	80° (36' 43.66") E and 22° (38' 22.15") N	About 43 km from Mandla on the Mandla- Ghugri (block headquarters) road.	Microliths as well as large tools (point and scrapers of different types) were found.
Kachnari/ Ghugri/495	80° (49' 47.99") E and 22° (46' 49") N	About 15 km from Chabri (on the Mandla- Dindori road).	This is predominantly a microlithic site (not fully explored).
Kunmha/ Narayanganj/177	80° (17' 08.70") E and 22° (47' 53.48") N	About 37 km from Mandla on the Mandla- Jabalpur road.	This is predominantly a microlithic site (not fully explored).

Table 1. Mandla Sites (cont.)

Kui Mal/ Narayanganj/206	80° (20' 40.34") E and 22° (48' 40.42") N	About 15 km from Partala.	This is predominantly a microlithic site (not fully explored).
Gonjhi Ryt./ Mandla/337	80° (21' 25.62") E and 22° (36' 45.89") N	The district headquarters town of Mandla is about 95 km from Jabalpur.	Microliths were recovered from a number of spots as casual finds on the bank of the Narmada river.
Manadei/ Mandla/237	80° (19' 19.29" to 54.61") E and 22° (39' 12.02" to 44.67") N	About 6 km from Maharajpur/ Mandla.	Microliths as well as large tools such as points, different types of scrapers, blades, cores, etc., were found.
Partala/ Narayanganj/197	80° (17' 41.54" to 19' 07.94") E and 22° (49' 22.54" to 49' 28.50") N	About 36 km (of which 5 km is Kacha road) from Mandla on the Mandla- Jabalpur road.	Microliths and large tools were found scattered here and there as well as in a couple of concentrated in clusters.
Ramnagar/ Bichia/312	80° (30' 48.86") E and 22° (36' 28.46") N	About 30 km from Mandla on the Mandla- Ghugri (block headquarters) road.	Riverbed (secondary) deposits of large tools.

* see Census Location Code and relevant Maps in Dube (1982).

Mandla itself and Dindori. These two districts are not only geographically contiguous but also ecologically, socially, and historically common. Archaeological investigations are mainly carried out in the present day district of Mandla. The district headquarter town, also named Mandla, is about 95 kilometres on the Southeast of Jabalpur. Physiographically, the whole district is itself a plateau intermittent with small hills and mounds here and there situated between the Mahadeo and Maikhal hills of Satpura ranges. Narmada, the principal river flowing in Central India, breaks open into the district from the northeastern corner. It runs toward the south, takes a U-turn around Mandla town and then moves

northward for about 20 kilometres. From there, it heads westward toward the city of Jabalpur. About half of the territory of the district is rugged and forested. The black cotton soil originated from the decomposed Deccan Trap constitutes the fertile cotton, paddy, and wheat growing alluvium mostly constituting the flat southwestern parts of the district, while the uplands and plateaus are of red lateritic soil in the north and southeast pockets. The red lateritic soil mixed with stone chips locally called *barrah* is only suitable for maize and millet growing. There are, however, many intermediate soil types, thus giving a wide variety of ecology and landscape types in the district (Figures 1 and 2). Gond and Baiga are the two major aboriginal tribes inhabiting the region. Their concentrations are found in the scarcely cultivable red *barrah* lands, where most of the microlithic sites, so far, have been located. Until recently, perhaps still in remote areas, the Baigas had been living on axe cultivation called *bewar* in uplands supplemented by hunting and gatherings. The Gonds on the other hand, although had taken to plow quite a long way back, traditionally practiced, as I see, a combination of axe and plow cultivation called *dahiya/dhya* in comparatively flat lands. In *dhya* cultivation, tree boughs cut from nearby forests are transported to the place of cultivation. There, they are left to be dried; fire is then set on the dried branches. Finally, the land is plowed, mixing the ash into soil on



Figure 1. Lush green meadow in front of *segun* timber line, a potential pasture for microlithic hunters



Figure 2. Maize and millet growing land adjacent to a tribal settlement (Often, microliths are found in such a settlement area.)

which seeds are finally sown by simple broadcasting method [see Elwin 2002(1937); McEldowney 1980]. The district has a long history of Rajput-Gond ruling, at least from 16th century onward (see Rudman 1912). Such minority ruling class, however, had very little or no influence upon the commoners at large (see Cooper 1997).

In Central Indian tract bounded by Satpura ranges on the south and Vindhyan on the north, what now mostly constitutes the state of Madhya Pradesh, Mesolithic/microlithic remains are quite common. Numerous sites have been discovered throughout this region, viz., Baghor in Shidi district, Barasimla in Jabalpur, Bhimbetka in Sehore, Chitrakot in Chattrishgarh (now a separate state), Sayamla Hills in Bhopal (see Allchin 1966; Chakravarty 1984; Cooper 1983a, 1983b, 1983c, 1997; Joshi 1978; Krishnaswami 1953; Kumar 1970; Misra *et al.* 1977; Sinha 1989). Now, Mandla is added to the list.

Mandla discovery could be archaeologically significant as evidences are found for the apparent continuance of the microlithic tradition in this region until the modern time. In one of the sites, Gadhar forest, modern porcelain material [electrical porcelain insulator (EPI)] was used to substitute for stone in the production of micros. Some 200 odd pieces, mostly debitage, have been recovered under open-air condition

along with stone tools (see Roy 2008). A question is quite imminent whether the broken pieces of porcelain are confirmed microliths. Several features are the prepared platform (in all cases, the outer glaze coat was removed to prepare the striking platform), typical dorsal and ventral features (dorsal ridge, flake scars from previous removal on the dorsal side, and the surface of detachment on the ventral side), point of (primary) force application traits (Negative/Positive -bulb of percussion, distinct pressure flaking traits, force direction, etc.), and secondary retouch or trimming undisputedly confirm microlithic technology (Figures 3–6). In addition, at least five to six different types of EPIs were used suggesting no casual attempt. The use of porcelain naturally invites question on other possible modern material use. The bottle glass in the production of micros has been recorded from throughout the world and, certainly, is a more convenient material. In Mandla, the evidence of using bottle glass is not confirmed, as yet; In one of the sites, in Chiri, a piece of green bottle has been found bearing some parallel ridges. Such a casual piece of glass cannot be taken seriously, particularly in view of the fact that this material can easily left accidental flaking scars to be mistaken as



Figure 3. A micro blade (*EPI*)



Figure 4. A micro point (*EPI*)



Figure 5. Microliths on *EPI*



Figure 6. A scraper (*EPI*)

intentional knapping. On the basis of microscopic analysis, Conte and Romero (2008) demonstrated that the retouched glass fragments recovered from Fortlet Miñana were not actually used as tools. Other than these exceptions, the tools found in Mandla sites are usually on stone, which are occasionally made of fossil wood and obsidian material.

Literally, the whole of the district bears testimony of the Stone Age culture, as evident from so many sites found within such a small area. The soil type of red lateritic barrah is often found altered possibly by stone using activities, either raw material quarrying or tool manufacturing. In some cases, an unbelievable quantity of debitage was found scattered all throughout the huge area. Natural rock nodules were found strewn over large plot. The type of rock is the same as those were used in tool making; it could be assumed that this was resulted from stone quarrying activities. At least for some sites, on the basis of occasional findings of worked stone, such a conclusion could be quite safe (Figures 7 and 8). The dimension (up to a kilometre stretch) and the number of Stone Age sites discovered in Mandla suggest that once, it was flourishing.

The finds from Mandla sites are basically microlithic remains; although some sites have yielded mixed bag of large tools and microliths. The point and scraper (both as core tools, blade, and flake tools), and occasionally, the chopper or chopping and cleaver are the common large tools types (Figures 9 and 10). In the absence of stratigraphic findings, any hypothesis for continuous occupation of a site from Paleolithic (large tool using) to Mesolithic (using of micros) is difficult to establish. A general trend is found that the large tools are older, heavily patinated, compared to the relatively fresh microliths. Most importantly, however, the remains were evident of different cultural periods, as some of the tools were evidently re-used by latter groups. Differences in patination suggest relative time gaps between successive users. In some cases, fresh flaking



Figure 7. Author inspecting the Chiri site



Figure 8. Close view of the Chiri site



Figure 9. A cleaver (stone)



Figure 10. A chopper (stone)



Figure 11. A re-used stone tool bearing fresh working edge

marks are noticed on highly patinated tools of an earlier phase. Several specimens of stone tools have been recovered from a number of Mandla sites bearing clear signs of re-use (Figure 11). In addition, it is significant to note that in some specimens, successive flakings, as many as four to five times, have been noticed. The re-use or re-sharpening of stone tools has been well documented in many archaeological contexts (see Holdaway *et al.* 1996; Manka *et al.* 2004); however, repeated reuse for so many times over a long period of time could be a rare example. The exhaustive use of re-cycled stone tools as raw materials for fresh production is again a significant observation made in Mandla. Large tools discarded by earlier users were re-used as raw materials for the production of microliths. Such an occurrence perhaps had evaded the archaeologist's attention so far. Usually, it is difficult to determine whether the old patinated surface is an earlier flake surface or is a natural rock face. Moreover, contamination in the case of open-air deposits can



Figure 12. An exhausted stone core on recycled tool (The surface lately used as sticking platform bears patinated flake scars from previous use and fresh flaking ridges and miss-hit and step flaking all around from the current use.)

also make the situation confusing (see Brumm 2006:170; Glover and Ellen 1975). In Mandla, a core made on a recycled artefact is a confirmed case. The striking platform of the specimen undoubtedly bears old (i.e., relatively old patination) flake scars that are remains from an earlier artefact (Figure 12). Once it has been so confirmed, several artefacts of Mandla findings that were possibly made on recycled ones have been rather easily segregated. Methodologically, it is significant that giving a serious look at any surface collection keeping this point in mind may prove worthy to establish possible successive re-use of stone tools and may eventually contribute in understanding the relative chronology, which is otherwise difficult in any unstratified site.

Antiquity

Mesolithic virtually came to an end with the arrival of Neolithic sometime around 7000 BP. However, at many regional levels, microliths did not evolve into Neolithic and occasionally did not even pass through the Metal Age. In India, the microlithic tradition in some places continued well into early Iron Age times (Misra 1989:26) and even further down the history (see Cammiade 1924; Gordon 1936 as cited in Krishnaswami 1947; Todd 1950). The antiquity of the rockshelters in Adamgar hills and in Bhimbetka has been established through C-14 dating. Bhimbetka rockshelters, near Bhopal, were continuously occupied by microlithic

people for several thousands of years. On the basis of nearly a dozen of C-14 dates, the antiquity of stratified occupations of Bhimbetka has been recorded starting from 8000 BP down up to 2000 BP (Wakankar 1984). The date could be taken further down into historical period. Bhimbetka rock paintings, as I see, are evidently a continuation from very ancient (e.g., the scene of hunting, Figure 13) to historical recent date (e.g., the scene of horseback warfare) (Figure 14).



Figure 13. Animals and hunting scene from Bhimbetka rock paintings



Figure 14. Horseback warfare from Bhimbetka rock paintings

The contemporary use of Stone Age technology has been documented in anthropological and archaeological studies from Africa, Australia, and New Guinea highlands. On the other hand, in many places, the continuance of Stone Age technology has been established on the basis of the evidence of modern material use. As glass being a convenient material to flake, many aboriginals still living on Stone Age technology quickly found it to be useful, as the expanding colonial frontier had brought it within their contact. The use of bottle glass in the production of micros has been occasionally reported from Indian sites (see Cooper and Bowdler 1998; Malik 1959, 1966; Todd 1932 as cited in Krishnaswami 1947:37), as found in many places throughout the world (see Seitsonen 2004; Sillitoe and Hardy 2003; Conte and Romero 2008). S. C. Malik (1959, 1966), on the basis of his discovery of a bottle glass core from Satara district in Maharashtra, had suggested for the continuance of Late Stone Age microlithic industries very much later into the Christian era. The bottle glass, however, does not give any precise date. The glass is believed to be discovered in Egypt, way back as 12000 BC (see Doremus 1990:305), a date almost contemporary to the Mesolithic beginning. Even though, the use of glass in bottle manufacturing is not so old, the manufacturing of glass bottle turned into an industry in Rome as early as first century BC (see Grossmann 2002; Harden 1933; Henderson 1988). In Mandla, electrical porcelain sockets were used in the production of micros (blades and flakes), suggesting more precisely for a fairly recent date. If it is not a case of reinvention, then the microlithic technology in this region certainly had continued until as recent as the arrival of electricity.

Ethno-archaeological Significance

In Sri Lanka, the Veddas, a Proto-australoid, who have some close similarities with many wild tribes of South India (e.g., Kadar, Chenchu) have been documented for having lineal connection with Mesolithic cultures of that region (see Blundell 2006; Deraniyagala 1988, 1992; Kennedy 1984). Obviously, if the microlithic tradition is considered to have survived in the district until such a recent time, then it would not be wild to suggest that the aboriginal tribes inhabiting the district are the direct descendents of stone users.

Considering the lineal connection of the aboriginal tribes currently inhabiting Mandla with that of the Stone Age culture of the region, we may have the following discussion. Wider distribution of Gond, a Dravidian speaking tribe, throughout Central India and equally

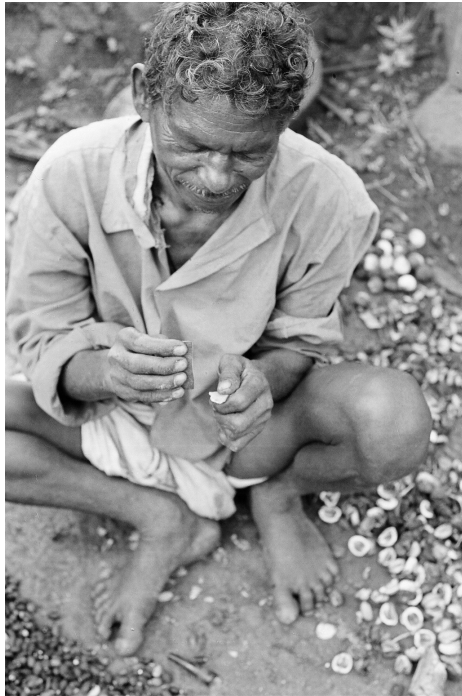


Figure 15. A Baiga using strike-a-light set



Figure 16. A Baiga using stone pebble as hammer

numerous microlithic sites in the region at first instance would suggest that the Gonds are the descendents of the stone users. However, in view of the historically recent Dravidian migration via the southern route, the Dravidian speaking Gonds perhaps had entered the region comparatively recently, barring the fact that the Gonds only adopted Dravidian dialect but originally belong to an earlier ethno-linguistic stock. On the other hand, the Austro-asiatic speaking Baigas who are comparatively more archaic in several aspects of their culture (The Government of India has scheduled the Baigas to be a primitive tribe in Madhya Pradesh and Chhattisgarh) could be more strongly argued in favor of substantiating the widely accepted view that the Proto-australoid constitutes one of the earliest substrata of Indian population (see Cordaux *et al.* 2003; Edwin *et al.* 2002; Gadgil *et al.* 1997; Hutton 1931:357–365, Kumar and Reddy 2003; Majumder 2001; Venkatachar 1931:61–62).

In India, the primitive technique of fire making, strike-a-light, is reported to be continued among many isolated tribes until 20th century [Sankara Menon 1931; Elwin 2002(1937)]. The practice is still continuing in remote Baiga land in Mandla and Dindori districts (Figure 15). The stone type, locally called “chai-pathar,” now used in fire making is the same as

that was once used in the manufacturing of micros. The requisite stone is scavenged from many of the archaeological sites of the area. The strike-a-light has been reported from Indonesia, Borneo, and New Guinea, and in most places, recycled stone tools were used (see Brumm 2006:169). Whether the contemporary people simply discovered the archaeological materials for recycling or their knowledge about such stones has actually been handed down straight from their stone tool using ancestors is a question that might engage ethno-archaeological interest. However, apart from fire making, the Mandla tribes virtually do not have much other uses of quartz or flint (chert) pieces profusely found in the district. The sharp edge of a freshly stroked flint is only rarely used to remove spike or in similar folk surgery. Large pebbles, however, are often used for cracking nuts and for variety of purposes (Figure 16).

Concluding Remarks

On the question of continuity of Mesolithic tradition, even simply as a technology, one may raise some obvious disagreements. The porcelain microliths might have been an independent invention of the extant group as a form of adaptation to an environment totally different from that of the Mesolithic period. They might not even be directly related to the Mesolithic period microliths. The question whether the porcelain microliths in Mandla are a continuation or a reinvention would remain an archaeological debate until dateable stratigraphic deposits showing a continuous use of microliths from the Mesolithic to the present and showing the changing raw material are found. Simple chipping of modern materials such as the bottle glass to be used as tools by contemporary tribes could often be an act of spontaneous invention. However, the porcelain microliths found in Mandla are not the simple chips; the blades having typical dorsal features and prepared striking platform do not betray to be true microliths. Although reinvention of microlithic technique may not be absolutely an absurd idea, I personally, however, would subscribe far less to such a possibility, particularly for this being an elaborate multi-step reduction technique. Apparently, however, successive re-use of recycled stone tools, relative fresh microliths compared to heavily patinated large tools, and the use of modern materials in the production of micros are suggestive enough for the continuance of Stone Age tradition inviting further archaeological research on this question.

It would always remain surprising that why none of the tribes in the district could recall anything about the Stone Age technology. Mandla findings certainly would raise more questions than answers. The district was not a cutoff area even in medieval historical period, and the site yielding porcelain pieces is not far away from the main commercial road connecting Jabalpur. This is applicable even to the earlier road passing about a kilometre away from the present one. How the people of such a well-connected place could remain isolated and continue using microlithic technology till such a recent date? Could it be possible that very much similar to the way the Baigas of Mandla so quickly lost their age old practice of bevar cutting and hunting, the microlithic technology lost with no time to spend once it become obsolete? These could be some of the potential questions to engage archaeological interests in the coming years contributing to our knowledge on complex cultural history in India *per se* in greater South East Asian context. However, one can still imagine for the continuity of Stone Age technology without drawing any curious attention from other advanced groups very much, as the tribal people in the district are still using primitive fire making technique without attracting anybody's interest.

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