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RESEARCH ARTICLE

PENETRANCE OF ACHEULIAN IN THE SOANIAN TERRITORY IN GHUMARWIN SIWALIK AREA OF HIMACHAL PRADESH: A FIRST REPORT

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ABSTRACT

For the first time reported here are the Lower Palaeolithic Acheulian cultural findings discovered recently from Ghumarwin area of district Bilaspur, Himachal Pradesh. The area is popular for the fossil remains of the earliest ape-men to which the author has contributed considerably, besides reporting for the first time the Soanian pebble industries of the Lower Stone Age from this area over three decades ago. Present findings of the Acheulian industry under reporting are the first of the kind discovered by him from the area since last a few years, which would have important implications in understanding the social, cultural and behavioural interactions between the two kinds of prehistoric people.

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INTRODUCTION

Since last 150 years ago the Middle Siwaliks of Ghumarwin area in District Bilaspur, Himachal Pradesh, have been a centre-stage of hominid origins owing to the discovery of fossil remains of our earliest 'ape-men' ancestors. The Siwaliks had attracted world-wide attention of the hard core palaeontologists, like Falconer and Cautley (1845-1849) even before Charles Darwin (1859) wrote his book, '*Origins of Species*'. The first discovery of *Sivapithecus* (Lydekker, 1878) led Haeckel (1883) to postulate that our ancestry stemmed from Asia in the Sub-Himalayas. This was confirmed by subsequent numerous fossils of *Sivapithecus* and other taxa by Pilgrim (1915, 1927) and Colbert (1935). From Colbert's collections from Haritalyangar Lewis (1937) and Gregory *et al.* (1938) named one as *Ramapithecus* regarded the direct on human lineage. During the post-independence period, two more genera were reported from Haritalyangar, viz., *Gigantopithecus* (*Indopithecus*) *bilaspurensis* (Simons & Chopra, 1969) and *Krishnapithecus* *krishnaii* (Chopra & Kaul, 1979; Sankhyan *et al.*, 2017).

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Scholars believe that *Sivapithecus* and *Ramapithecus* had become extinct at Haritalyangar around 7.5 million years ago, but a fossil discovery by the author from near Bharari (Sankhyan, 1985) extended *Ramapithecus* survival at least as late as 6 million years ago. Although, many scholar lump *Sivapithecus* and *Ramapithecus* in one genus (Greenfield, 1979) but distinguish four species. But this led to a great debate (see Ciochon & Corrucini, 1983). While Indian scholars embraced the hominid status of *Ramapithecus* (Vasishat, 1985; Chopra, 1987; Mohapatra, 1990) and even a 'tool-maker' on the basis of a solitary stone tool from Haritalyangar claimed *in situ* by Prasad (1983). However, the current view is that *Sivapithecus* (= *Ramapithecus*) represents the 'last common ancestor' of the 'Orangutan and humans' (Sankhyan (1985, 1988, 1990, 2007, 2017; Schwartz, 1984, 1987; Grehan & Schwartz, 2009).

RESULTS

Present study focuses on the archaeological material recovered from the area.

Soanian Pebble Industries in the Area

A thorough scanning of the Haritalyangar Ghumarwin area by the author during 1979 - 1982 led him to discover a large

number of stone tools of the Soanian pebble industry (Sankhyan, 1979, 1983). But, these were found ex-situ on the Middle Siwalik slopes including Haritalyangar area, and Cho terraces, and some on the Sir Khad terrace, but none in association with *Ramapithecus* (Sankhyan, 1985) such that the claims of Prasad (1983) are not supported. The Soanian pebble industry, therefore is the creation of the earliest Quaternary human occupants of the Siwalik terrain, earliest dated to ~2 Mya at Riwat (Dennell, 1988). These dates are comparable to African Oldowan industry of *Homo habilis* in antiquity and viewed as "pre-Acheulian" but which hominin made these is not yet clear. *Homo erectus* is established creator of the Acheulian in Africa. The Soan Pebble Culture is limited to the Siwaliks and ranged in time from 0.7 to 0.4 Mya at Potwar (Dennell, 2004). A date of 0.6 Mya is considered most likely for Indo-Pakistan Siwalik Soan Pebble culture in consideration of the last Siwalik sedimentation at Paramal-Uttarbeni (Jammu) and of the Patiali Rao, northeast of Chandigarh (Nanda, 2002).

The occurrences of Soan Pebble industry in Himachal Pradesh Siwaliks well known from district Kangra (Lal, 1956; Joshi, 1979 in Ohri, 1979) and from the Cirsa terraces of Nalagarh dun (Sen, 1955; Karir, 1985). Sporadic occurrences are also seen at Nadha Sahab (Haryana) and Patiali Rao (near Chandigarh in Punjab). At Masol village an Indo-French team found the earliest controversial evidence of intentional "cut-marks" (Dambricourt Mallasse *et al.*, 2016) on a fossilized bovid bone claimed to be associated with the pebble artifacts (Gaillard, 2016). As these are found on the outcrop of the Tatrot Formation (Upper Siwaliks), so attributed to 2.65 Mya, a date for the Tatrot by (Nanda (2002).

If this evidence is unequivocally established through excavations and in situ fossils and stone tools, it would either indicate hitherto unknown Plio-Pleistocene immigration of African hominids to Indian sub-continent or indigenous hominid origins in Indian sub-continent- a view that emerged from the late survival of *Ramapithecus* (Sankhyan, 1985, 2011). Kangra District in Himachal Pradesh has been well explored by Lal (1956) and Joshi (1979) (see Ohri, 1979). Many Soan Pebble industry sites have been found in the Beas valley and its tributary- Banganga at viz., Guler, Haripur, Kupar Lehr, Dehra Gopipur, Nakehr Khad, Dhawla, Thor Khad, Chunar Nala and Sukhar-di-Khad. In the year 2012-13 while hunting for fossils, the author collected two choppers from Haripur terrace, and one from the Bankhandi Siwaliks near Ranital (Fig.1.x-xii). The rchaeology of Bilaspur region, however, remained yet unexplored. It was over three decades ago that the author made his maiden stone tool discovery of an excellent bifacial chopper with sharp, wavy edge and a smooth round-butt made on a black quartzite pebble (Fig.1.ix), found ex-situ on the Siwalik fossil bed, north of Badon village (Sankhyan, 1979). He then looked for more stone tools and found many pebble choppers, core scrapers and flake tools (Fig.1.i-ix) from the Siwalik Cho (streamlets) terraces at Lehri Sarail and a few at Tarontara Cho and near Kasohal Sir Khad terrace (Sankhyan, 1983). All belonged to the Soan pebble industry, except a cleaver notched from two sides to serve as hafting necks for use like an axe (*kulhadi*). It is now identified as an Acheulian element in this report (Fig. 2.v). Most of the Siwalik sites yield Soanian assemblages, comprised of handy choppers and a few cores on cobbles as well as flakes resulting from their shaping or exploitation. They lack handaxes, cleavers and large flakes which characterize the Acheulian industry.



Fig. 1. ix-Soanian tools



Fig. 2. i-xi-SKD



Fig 3. vi-SKD



Fig. 4. i-ii-SKD



Fig. 5. xii-SKD-Bela



Fig. 6. vii-SKD



Fig. 7. i-vi-Kallar

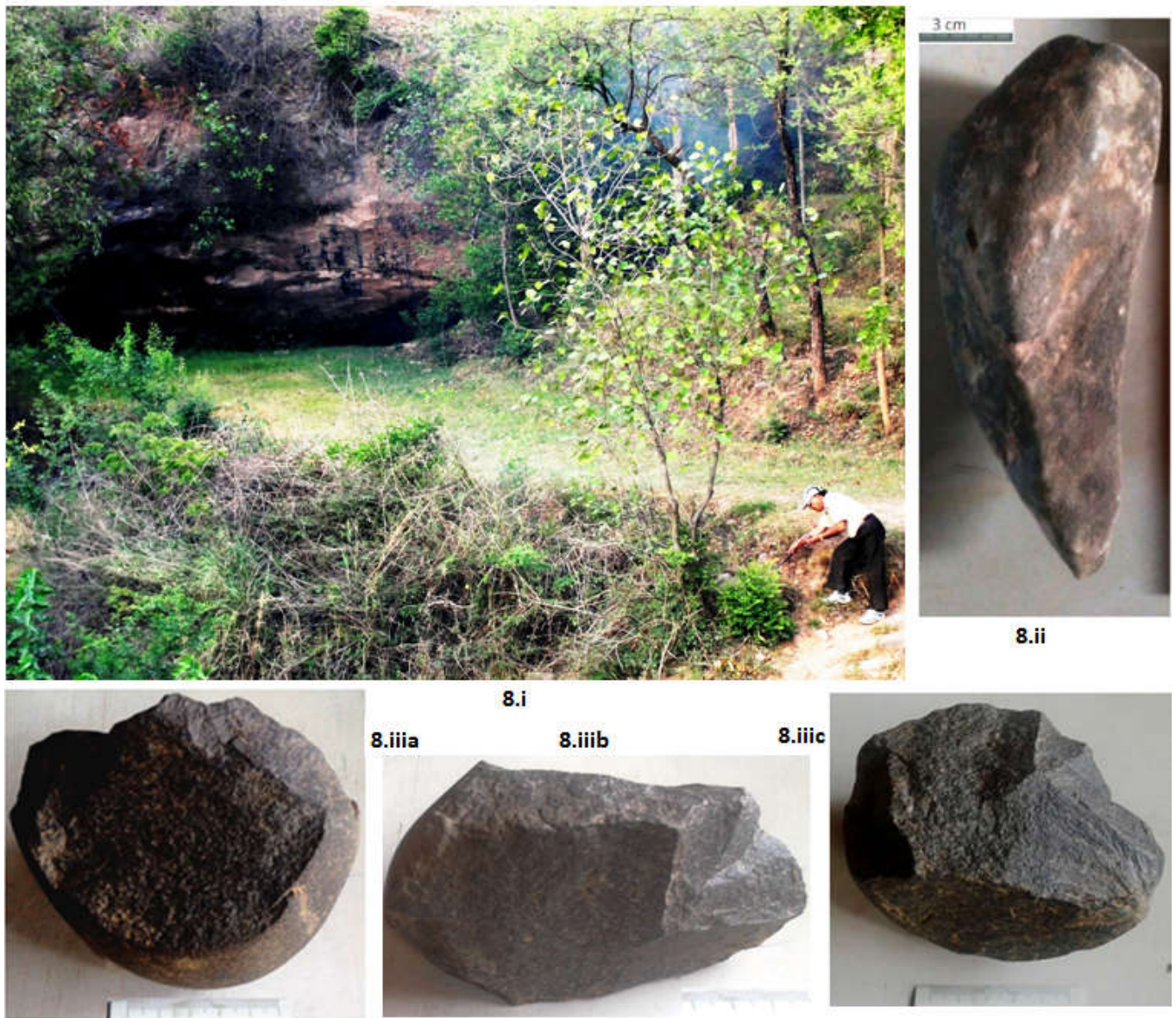


Fig. 8. i-iii

The Acheulian Handaxe - Cleaver Industries in the Area

Since the year 2012 the author has made repeated personal expeditions to some tributaries of the river Satluj, namely the Sir, Sukkar and Sirhali khads (streams) and discovered sensational findings of the large flake quartzite Acheulian tools are found in abundance at different sites in Sir Khad terraces close to the Sir Khad bridges at Sunhani Bridge, Ghumarwin and Kasohal, besides other sites, such as Bhadrog-Baddhu, Padohri, and Bela-Ladher along the legendary Churel Gufa. These sites appear extending northward in the entire course of the Sir Khad via Bamm-Kot-Jahu-Mundkhar, etc, but the author made only limited collections, which include one large flake handaxe (Fig. 2.i), some cleavers (Fig.2.ii-ix), two large trihedral picks (Fig. 2.x-xi) made on large flakes. There is one elongated chopping tool with a handle- like tang (Fig. 3.i), tortoise cores, discoids and hammers (Fig. 3.ii-v). The Sir Khad terrace near Ghumarwin yielded two gigantic/massive bifacial choppers (Fig.4), and many scrapers and a few backed flake knives (Fig. 5 & 6). One large flake cleaver derived from boulder-splits (Fig.7.i) and another on small flake (Fig.7.ii) and four scrapers (Fig.7.iii-vi) were discovered from the confluence of the three khads near Balghad in the vicinity of the Karli bridge. One exceptional well-shaped sandstone pick (*kudali*)

(Fig. 8.ii) was collected from the top of a rock-shelter east of Ghumarwin Courts (Fig. 8.i), which appears to have been utilized for digging work on soft clay/soil. A small dark coloured well-formed bifacial cobble chopper was also recovered from the vicinity of the rock-shelter which is Soanian in character, shown in three views (Fig. 8.iii a,b,c). The Acheulian assemblage is, in general, made on large flakes displaying parallel reduction sequences and trimming into cleavers, besides the discoids, tortoise cores on pebbles/cobbles, and large choppers on boulders, about 20cm in width. The findings reported here are displayed in *Palaeo Museum* at Ghumarwin set up by the author in May 2017. Very recently and for the first time, he discovered two rare portable archaeological art objects- a 'painted chopper' and an 'embryo-shaped pendant' from the Sir Khad terrace at Ghumarwin (Sankhyan, 2017c) which would have important consequences in the history and evolution of prehistoric art in India.

DISCUSSION

Earlier, the penetrance of Acheulian culture in the Siwalik Soanian terrain was suspected at Kotla and Painsara in Kangra (H.P.) based on a few cleavers and an almond-shaped pebble handaxe at Nandrul (Joshi, 1979). But, the unequivocal

Acheulian industry has been discovered at Atbarpur near Hoshirpur in Punjab (Mohapatra, 1975, 1981, Mohapatra and Singh, 1979; Kumar and Rishi, 1986; Rishi, 1989; Gaillard *et al.*, 2008). It is characterized by amygdaloid or oval typical large flake Acheulian handaxes (~14cm). Here, as in Ghumarwin area the cleavers are more plentiful than the handaxes; they are with U-shaped butt. The choppers are made on both flakes and cobbles. In addition, the collection included two large backed knives, one scraper and one denticulate (Gaillard *et al.*, 2008). The Atbarpur Acheulian is viewed as about 0.5 Mya old, and thought to have come from the Jhelum valley where the sites of Dina and Jalalpur are older (Rendell & Dennell 1985, Chauhan, 2003). Acheulian is also extended to Nepal (Corvinus, 1991). In India the oldest dated Acheulian sites are those of Attirampakkam in Tamil Nadu dated to 1.5 Mya (Pappu *et al.*, 2011) and Isampur in Maharashtra dated to 1.27 Mya (Paddaya, 2003), besides Morgaon, Hunsgi-Bachal valley, Bori and Singi Talav, dated >0.65 Mya. But, strangely, none of these early Acheulian sites have yielded any human fossil, which come only from the Central Narmada valley. Among these, the earliest one is a partial skull regarded of the "evolved" *Homo erectus* or "archaic" *Homo sapiens* (Sonakia, 1984) and a femur distal part (Sankhyan *et al.*, 2012a,b), datable from 0.25 to 0.60 Mya (Patnaik *et al.*, 2009). The author reported fossils of two clavicles and a partial 9th rib of an "archaic pygmy" (*baman*) non-Acheulian hominin, similar to Andaman pygmy in stature and upper chest width (Sankhyan, 1997a,b, 2005), suggesting Indian origins of the 'short-bodied' ancient populations of mainland India and the Andaman Islands (Sankhyan, 2013, Sankhyan and Sahani, 2015; 2017a,b). Recently, he discovered nine more fossil bones from various sites in Narmada valley which reveals a diversity of prehistoric men (Sankhyan, 2017b). The frequent occurrence of Acheulian in the Siwaliks of Bilaspur in Himachal Pradesh is very significant since the Siwaliks are dominated by the Soanian industry. Present evidences from Ghumarwin indicate that the river Satluj and its tributaries have been a prehistoric corridor for the Peninsular Acheulian man into the Siwalik region. In general, the Siwalik range and its small streams (chos) including the Nalagarh dun, were occupied by the Soanian, whereas the main river course remained essentially occupied by the Acheulian man. Large Siwalik sandstone rock blocks exposed on both sides of the bridge on Sir Khad at Ghumarwin, were the abode of the prehistoric men as there are perennial water natural reservoirs (*aal*) full of fish, amidst forested Siwaliks supporting rich animals of pray. This makes it the most favourable abode for the prehistoric hunters and a special meeting ground of the Soanian and the Acheulian Stone Age people, who probably co-existed. But, further explorations for seeking more evidences and dating are contemplated to reveal new secrets of interesting prehistoric confluence of two cultures with implications for early social and cultural interactions.

Conclusion

It is interesting to find the penetrance of the Acheulian culture in Ghumarwin area dominated by the Soanian Pebble culture. The findings reveal that the river Satluj and its tributary Sir Khad was the prehistoric corridor of the Acheulian man who pushed the Soanian domain to the Siwalik ranges only. This remarkable observation holds significance in Acheulian/Soanian debate and for understanding the prehistoric social and cultural interactions between the two kinds of people.

Conflict of interest: None.

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