Indian Pleistocene rock art in a global context

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Abstract: The incredibly early petroglyphs reported from central Indian quartzite caves immediately raise the issue of the compatibility of this information with our knowledge from the rest of the world. It is demonstrated that, with the exception of the presumably greater antiquity of the Indian finds, they are fully consistent with what five continents have yielded. The Indian sites offer numerous cupules and a very few linear grooves; the oldest forms of rock art from Africa, Europe, Australia and the Americas comprise precisely the same forms of petroglyphs, and even the subsequent traditions are almost identical. This is demonstrated with the earliest known examples of rock art from those continents, and is partly attributed to the taphonomy of rock art. Rock paintings, similarly, are limited to regions where deep limestone caves were used by Pleistocene hominins, evidence for which is so far only available from two continents. Even the earliest known indications of portable palaeoart from India are entirely consistent with other continents.

Very early rock art

The first rock art ascribed to the Lower Palaeolithic were the eleven petroglyphs in Auditorium Cave, Bhimbetka complex, Madhya Pradesh, India (Bednarik 1993, 1994). Nine cupules (cup marks) occur on a large vertical boulder face above ground level, while a tenth cupule and a meandering groove clearly associated with it were found in an excavation, covered by the uppermost part of substantial Late Acheulian occupation deposits (Fig. 1). The latter were overlain by a horizon of heavily calcite-cemented Middle Palaeolithic sediment that virtually excluded the possibility of post-depositional disturbance. Below two substantial Acheulian strata, an occupation layer of a Lower Palaeolithic chopping tool industry was also excavated (Wakankar 1975; Bednarik 1993, 1996; Bednarik et al. 2005) and it is now thought that the two stratified petroglyphs relate to this rather than the Acheulian deposits, particularly in view of the evidence from Daraki-Chattan. The co-occurrence of the two buried petroglyphs and the nine cupules above ground at the site suggests that the latter were created at the same time, and this was confirmed by microerosion analysis (Bednarik 1996). The cave is formed in heavily-metamorphosed quartzite, a rock of such hardness that it was extensively quarried by Acheulian hominins at several Bhimbetka sites. This, together with their sheltered location inside a cave, is thought to have facilitated the survival of the Auditorium Cave petroglyphs since the Lower Palaeolithic.
At the time of the proposal of the Lower Palaeolithic antiquity of the Bhimbetka petroglyphs was controversial, but within a few years it found unexpected validation in a newly discovered site. In 1996, another Indian occurrence of very early petroglyphs was reported, the quartzite cave Daraki-Chattan (Kumar 1996). Because apparently Middle Palaeolithic and Acheulian lithics occur on the surface of the cave’s floor deposit, it was suggested that the cupules on its walls might also be of great age (Fig. 2). Similarly, two further cupule sites in Rajasthan, of exposed granite boulders as well as in a further quartzite shelter, were also considered to be of great antiquity, although here the evidence remains circumstantial (Kumar and Sharma 1995). In response to these discoveries, I established the Early Indian Petroglyphs (EIP) Project with Giriraj Kumar, with the intention of testing these claims by an international panel of specialists (Bednarik 2000a, 2001a). As part of the EIP Project, major excavations were commenced at Bhimbetka and Daraki-Chattan in 2002. This
led to Kumar's excavation at the latter site of numerous exfoliated wall fragments found within the Lower Palaeolithic occupation deposit. These rock slabs bear a total of 28 cupules, identical to those on the walls above. Also, two engraved grooves were found on a boulder excavated in the Lower Palaeolithic deposit, and one cupule was encountered in situ in the excavation (Bednarik et al. 2005). Stone tools exhibiting Lower Palaeolithic characteristics occurred both above and together with these slabs, in deposits that are considered undisturbed. Most importantly, numerous hammerstones used in the production of the cupules were recovered from the excavation, mostly from the layer below the exfoliated wall fragments, which contained only chopping tools and was free of bifaces (Fig. 3). There can be no reasonable doubts that the cupules, or at least some of them, were made by people of a Lower Palaeolithic tool typology dominated by choppers resembling those of the African Oldowan, and predating the Acheulian. This is the earliest stone tool tradition occurring in India. Unfortunately, the chronology and typology of the early human occupation of India remain largely unexplored.

Fig. 3. Schematic section of the entrance of Daraki-Chattan.

The audacious claims concerning the Bhimbetka petroglyphs have therefore been soundly validated by the comprehensive archaeological evidence from Daraki-Chattan, demanding an age of the rock art of several hundred millennia. While this may seem incredible to conservative archaeologists, it must be remembered that the earliest known petroglyphs in every continent (except Antarctica) are completely dominated by cupules. Moreover, the earliest approximately dated cupules of Africa, the eight found on a sandstone slab excavated at Sai Island, Sudan, are thought to be in the order of 200,000 years old (Van Peer et al. 2003). Moreover, the Middle Stone Age and possibly Fauresmith sites Peter Beaumont has recently discovered are of identical inventories and occur on identical rock. Here, the surviving rock art begins also with cupules, linear marks, later followed by circle petroglyphs (Fig. 4). A discovery of apparent palaeoart of such great age was previously made by P. W. Laidler in South Africa many decades ago (Laidler 1933). He excavated at the Blind
River mouth in East London a decorated grindstone of the Fauresmith industry on which was a clear pecked grid pattern. The deposit is thought to be in the order of 400,000 years old (P. Beaumont, pers. comm.). This find, too, vies for the title of “earliest known rock art”, but unfortunately the rock itself has disappeared. It may therefore well be the case that further research places southern Africa on par with India in the antiquity of symbolic production. Therefore the evidence from India is quite consistent with what we know from other continents — except that it may well be older.

![Image](image_url)

**Fig. 4.** Middle Stone Age or Fauresmith petroglyphs, southern Kalahari.

Australia, as far as we know, was colonised by hominins only around 60,000 years ago, by Asian seafarers with a Middle Palaeolithic technology who apparently brought with them a tradition of creating rock art, especially cupules and circular designs (Fig. 5). But they developed the production of circular patterns to great complexity and variety in Australia, which continued in Tasmania into the late Holocene, together with a Mode 3 technocomplex. In contrast to Europe, where examples of Pleistocene rock art have so far remained limited to limestone caves, in Australia they can be found both in deep caves and at open sites (Bednarik 1990, 2010a, 2010b). In the latter case, it is limited to petroglyphs on the most weathering-resistant rock types (especially dense quartzites and granites) in arid or semi-arid regions.
In North America it has long been observed that the apparently earliest rock art tradition consists of the ‘pit-and-groove’ (Heizer and Baumhoff 1962; Grant 1967) or ‘pitted boulder’ genres (Parkman 1992). Parkman proposed that this tradition dates from ‘pre-Hokan’ or Palaeo-Indian times, i.e. from between 12,000 and 9000 years BP. However, as in all other continents, cupules occur in North America also in clearly very much more recent contexts. In South America, cupules have been most thoroughly studied in Bolivia (Querejazu Lewis 1991, 2001; Querejazu and Bednarik 2010). Although credible dating of any one South American cupule remains elusive, reliable indirect age estimates of petroglyph features are available from Toro Muerto, Lakatambo and Inca Huasi (Fig. 6) (Bednarik 2000b, 2001b). Epullán Grande Cave, northern Patagonia, contains cupules and linear grooves, and the latter were excavated below a hearth of about 10,000 years age, thus presumably indicating a Pleistocene antiquity for the rock art (Crivelli Montero and Fernández 1996).

Although these American occurrences of early petroglyphs are entirely consistent with the rest of the world, the magnitude of age seems to be quite different. This suggests that the type of surviving early rock art is perhaps determined by taphonomy: where early forms of cave art seem to be lacking, the most deterioration-
resistant petroglyphs form the oldest surviving traditions. However, in the four continents occupied by Mode 3 (Middle Palaeolithic or Middle Stone Age) technocomplexes, their rock art as well as portable art are both amazingly uniform.

**Very early portable palaeoart**

While this uniformity is already notable in the surviving rock art, this is even more obvious in the mobiliary art so far credibly attributed to the Pleistocene. Moreover, the very limited Indian component is again consistent with the rest of the Old World. The most detailed portable palaeoart of the Indian Palaeolithic is the engraved ostrich eggshell from Patne, which is about 25,000 years old (Sali 1989). Its crosshatched design enclosed in bands (Fig. 7) occurs also on other early palaeoart, such as the engraved antler fragment from Longgu Cave in China (Bednarik 1992a) or the Chandravati core (Sonavane 1991). The latter is provisionally attributed to the Indian Mesolithic (Fig. 8), and with it the stylistically similar ‘intricate patterns’ rock paintings found in central India (Tyagi 1988). The marking strategy of enclosing a simple geometric design, so prominent in all the three designs on the Longgu object, is frequently encountered in Upper Palaeolithic engravings of Eurasia, and can perhaps even be traced back to Mode 3 marking traditions, at least in Africa. Its earliest examples are the engraved stone plaques from the Middle Stone Age of Wonderwerk and Blombos Caves in South Africa, roughly 75,000 years old, with their various criss-crossing or bundled convergent lines motifs (Fig. 9). A similar marking strategy is evident in the Urkan e-Rub II stone plaque and an Upper Besor 6 ostrich eggshell fragment from the Levant, but the traditions of geometric or reticulate engravings on portable plaques of the Upper Palaeolithic is particularly widespread in Russia (Marshack 1976), Ukraine and Siberia. They are perhaps best exemplified at Eliseevichi, Mezin, Kirillovskaya and Mezherich (but also occurring, less pronounced or in smaller numbers, at Mal’ta, Afontova, Kavkaz, Balinkosh, Klinets, Timonovka, Suponevo, Novgorod-Severskaya, Avdeev and Gagarino), and eventually, in the very final part of the Pleistocene, even in North America. Here they are perhaps evident in the 134 engraved plaques from the Clovis tradition of the Gault site, Texas (Collins 2002; Collins et al. 1991, 1992). Very early representatives of this behaviour evidence from Europe are the Mousterian nummulite from Tata, Hungary, and the Micoquian engravings from Bacho Kiro, Bulgaria (Bednarik 1992b).
These many examples can be summarised as featuring one or more of the following characteristics: they are responses to the outline or pre-existing markings of the available surface, the designs are delineated or enclosed, and they are often repetitive or reticulate in their arrangement. They begin with basic components in Mode 3 tool traditions and become very complex and structurally sophisticated towards the end of the Pleistocene, culminating in India’s intricate pictogram tradition and the mysterious Russian ivory and bone plaques, which have been suggested to resemble maps or mnemonic devices. However, there is a possibility that these purely noniconic graphic traditions have survived to the present in such isolated cultures as those of the Jarawas on the Andaman Islands (Sreenathan et al. 2008). A second trend in Pleistocene portable art that seems to extend even further into the distant past is documented by the portable engravings of the Lower Palaeolithic. None have so far been reported in India, but their consistent characteristics in Africa
and Europe imply again the existence of a long-lived and widespread tradition. These engravings consist of sub-parallel incisions or notches, sometimes with traces indicating that they were very deliberately made or spaced. Examples are the finds from the Fauresmith of Wonderwerk Cave in South Africa (Bednarik and Beaumont, this conference), the series of deliberate engraved sets of markings on several Bilzingsleben objects, the Whylen and Sainte Anne I engraved bones, and the three engraved bones from the Micoquian of Oldisleben (Bednarik 2003, 2006) (Fig. 10). Similarly engraved portable objects from the Middle Palaeolithic have been found at numerous sites in Europe.

![Fig. 10. One of the Oldisleben engravings, Micoquian, Germany.](image)

**Summary**

The claims concerning the Lower Palaeolithic petroglyphs at two central Indian sites may surprise many researchers, and yet there little that should surprise us if we consider their global context. Portable engravings of the earliest period we perceive in human culture have been found in both Europe and Africa; two proto‐figurines of the Acheulian are known, one from Israel, one from Morocco; beads or pendants of that traditions are known from five countries; and evidence of Lower Palaeolithic use of pigments, especially of ochre or haematite, has been reported from dozens of site in many parts of the Old World. A pigment crayon of the Acheulian is also known from India, as are presumed quartz crystal manuports. Since we know that Lower Palaeolithic hominins were capable of crossing the sea to colonise islands (Fig. 11) for about one million years—which certainly demands the use of one form of symbolism, language—it would be prudent to allow for the possibility that these people used other forms of exograms as well. Forms or evidence of symbolism use in the Lower Palaeolithic have been found in many places in Africa, Europe and Asia. Moreover, the use of cupules and linear petroglyphs may extend as far back as the Fauresmith in southern Africa; there is then nothing extraordinary about finding cupules and linear petroglyphs in the Middle Pleistocene of India. Cupules have been dated to 200,000 years BP in Sudan; perhaps in India they are somewhat older. Whatever the case, it would be premature to reject any of these finds out of hand, because they do not suit the Replacement Theory that has dominated global archaeology for the past three decades. I have always opposed this false model, and the most recent genetic evidence clearly renders the ‘African Eve’ notion untenable (Green et al. 2010).

But that is another story.
Fig. 11. Pleistocene seafaring began about one million years ago in southern Asia.

REFERENCES


