KEYWORDS: **Upper Palaeolithic - Portable art - Engraving - Perforation - China**

PALAEOLITHIC ART FROM CHINA

Robert G. Bednarik and You Yuzhu

Abstract. The discovery of the first Palaeolithic art object from China is reported. An antler fragment, decorated with three elaborate, non-figurative engraved patterns, has been excavated at an Upper Palaeolithic site in Hebei Province, north-eastern China. It is about 13 000 years old. A second find is also introduced here, a perforated stone object of c. 28 000 years BP from the Shanxi Province. Relevant Chinese and other finds are discussed, and they are considered within the framework of what is currently known about the Palaeolithic art of Asia.

Introduction

The two principal theories on the earliest development of art are quite incompatible, yet there are some specific points on which they happen to agree. While one model has art emerging at the beginning of the Upper Palaeolithic in western Europe in the form of iconic depiction, and marking the beginning of 'reflective language' (Davidson and Noble 1989, 1990; Noble and Davidson 1991), self adornment (White 1989a, 1989b) and an assumed 'quantum jump' in social and cultural evolution, the other school of thought sees the 'discovery' of iconicity (Davis 1986) as having developed from earlier noniconic art forms and from a variety of non-utilitarian activities which promoted the gradual development of human models of reality (Bednarik 1986, 1988a; cf. Lindly and Clark 1990). One of the issues on which the two schools, or at least individual proponents of them, agree is that the first Australian settlers are likely to have possessed an art tradition. Of course the reasons for the postulate differ between the two models: while in the first case complex language is seen as a prerequisite for a seafaring capability, and was itself preceded by art developed from gestures, the hypothesis of noniconic art origins requires in any case that art production preceded the Upper Palaeolithic of Eurasia by a considerable time span. Based on the current knowledge about the first settlement of the Americas (Bednarik 1989), it is probable that similar conditions applied there: the first settlers to reach the New World can also be assumed to have possessed some form of art.

It is frequently suggested, and indeed highly probable, that both the Americas and Greater Australia (including New Guinea) were colonised from eastern Asia, the former via Bering Strait, the latter via the islands separating Australia from Southeast Asia. Most likely this occurred at the time of a stadial peak, i.e. at a time when the sea level was considerably lower than at present.

As a rule, dialectic about art origins is conducted purely in terms of developments within Europe, and it often considers nothing other than the Upper Palaeolithic art traditions of that continent. But in order to learn about early art evolution it is essential to consider also the early arts of other regions, most especially of Asia. The models of European and North American archaeologists maintaining the claims that western European art of the Upper Palaeolithic provides the earliest evidence of 'symbolic behaviour' should be categorically rejected (cf. Bednarik 1992a).

In particular, the significance of Asian evidence of the Pleistocene is so self-evident that there can be no excuse for its continued neglect. A recent review of Palaeolithic art in Asia (Bednarik 1990a) resulted in the refutation of numerous claims concerning both portable art and rock art. It was found that unequivocal evidence is restricted to just a few areas in this vast continent (in India, Japan, Siberia). Claims concerning finds in Israel (e.g. Goren-Inbar 1986), China and Korea have not found general acceptance. For instance, Sohn Pow-Key (1981, cited in Bahn and Vertut 1988) discerns animal figures on Middle Palaeolithic bones from Korea, and attributes pecked petroglyphs in a number of Korean sites to the Palaeolithic (Sohn Pow-Key 1974, in Bahn and Vertut 1988), but none of these claims have been substantiated.

The Siberian evidence of Palaeolithic art is by far the most impressive in all of Asia, although it seems restricted to portable art now that the few claims for Palaeolithic rock art on the upper Lena river have been rejected (Bednarik 1990a, 1992b). An extensive body of mobiliary art objects has been described from, at the latest count, 18 sites (Abramova 1990). These occur mainly on the upper Yenisei and the Angara river, and include the well-known sites Mal'ta and Buret'.

In Japan, evidence of Pleistocene art is restricted to the several engraved pebbles from the cave of Kamikuroiwa. They were found in Layer IX which has been dated to 12 165 years BP (Aikens and Higuchi 1982).

Finally, Palaeolithic art is known to exist in India, although the claims by Wakankar (1983) and others, concerning the dynamic-style, often green rock paintings of central India (especially near Bhopal), remain unsubstantiated (Bednarik 1990a). However, India has provided some of the most tantalising clues for the earliest art. For instance, at least one of the haematite lumps from the Acheulian of Hunsgi bears a facet covered by striations that suggest its use as a crayon (Bednarik 1990b). The apparent petroglyphs at Bhimbetka (Bednarik 1990a; Bednarik et al. 1991) were covered by Palaeolithic occu-

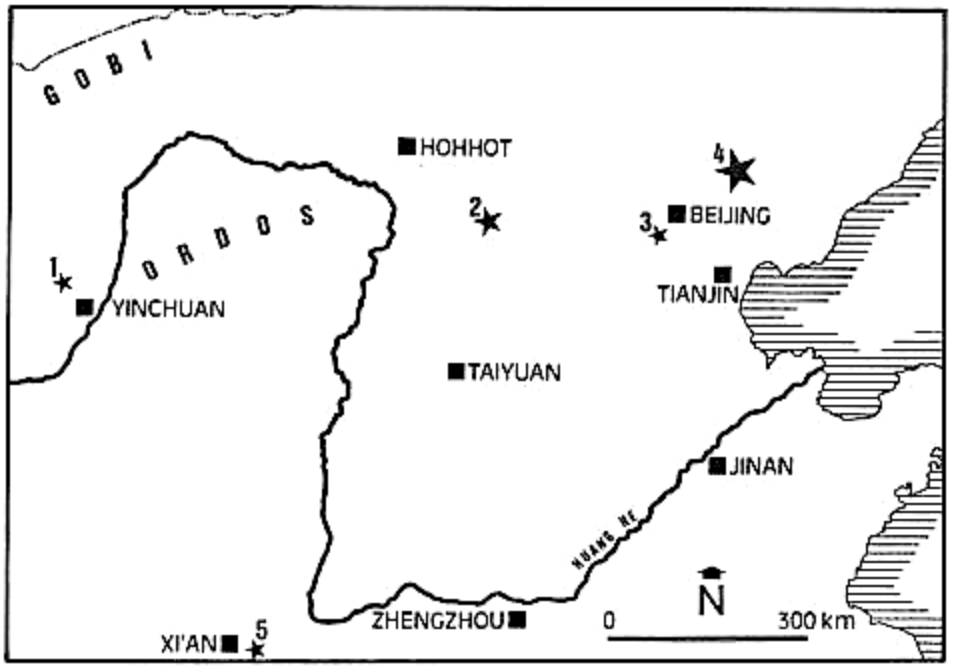

Figure 1.
Map showing Chinese sites mentioned in the text:
1 - Helan Mountains
2 - Shiyu
3 - Zhoukoudian
4 - Longgu Cave
5 - Lantian

pation deposits and may be among the oldest rock art in the world. Considerably more recent are the engraved ostrich eggshell fragment and the two perforated disc beads from Patne, and the similar ostrich eggshell beads from Bhimbetka, all of which are from the Upper Palaeolithic. The Patne engraved fragment bears part of a non-iconic decoration that was engraved with stone tools (as shown by replication experiments conducted by RGB), and it is partly covered by calcium carbonate encrustation. It has been dated to 25 000 ± 200 years BP (Sali 1978). Numerous other marked ostrich eggshell remains of the Late Pleistocene in India have been found to bear natural rather than anthropic markings (i.e. 45 of the 46 specimens examined; Bednarik 1991). The Indian rock paintings currently regarded as the earliest are the totally noniconic patterns Tyagi (1988) has described as 'intricate designs', which occur in central India and precede the dynamic human figures (cf. also Bednarik 1990a).

Palaeolithic art in China

It is clear from the above that Palaeolithic art does exist in Asia, but that the number of authentic finds remains very small indeed. We suggest that this pronounced paucity of evidence is a reflection of neglect rather than of true distribution, and that it would be resolved by a more determined approach and by the introduction of a methodology of direct dating for petroglyphs (Bednarik 1992c). This applies to most parts of Asia, and particularly in China.

The known evidence of non-utilitarian activities from the Palaeolithic of China is very meagre indeed, and has so far not included any true art productions. It seems limited to the finds from Zhoukoudian (near Beijing), particularly from the Upper Cave, and to the markings one of us has reported from bone fragments of a site in Shanxi Province (You Yuzhu 1984). Disc beads made from ostrich eggshell, similar to those found in India and Africa, occur in the Gobi as surface finds, and are attributed to the final Palaeolithic industry exemplified at Shabarak-usu.

The Upper Cave in the hillside above the town of Zhoukoudian (Figure 1) contains two occupation horizons, dated to about 13 000 and 18 000 years ago. They are separated by a layer of loess and rocks, and the upper stratum is overlain by a talus slope of cryoclasts. The occupation layers yielded human burials, haematite lumps and over 120 small perforated objects. These beads consist of perforated teeth (of deer and fox, and very similar to Palaeolithic specimens in Europe and Siberia) and shells, pierced fish vertebrae, perforated pebbles, and apparently polished, tubular sections cut from the long bones of a fairly large bird species. The latter bear distinctive cut marks along their sides, which YY suggests number from one to five on the original five specimens found. He also thinks that these objects were worn on bracelets rather than necklaces, as the remainder of this material probably was.

All the perforations we have examined on these objects are conical in section, similar to those on perforated Palaeolithic objects the world over. In the Upper Cave, 'ochre' has been found around interred skeletal remains. We have examined lumps of haematite from the site which measure about 25-45 mm. They are irregularly shaped, bear no wear facets or striations but must have been carried into the cave intentionally. Petrologically, these lumps are homogeneous and very hard, resembling the haematite from the Lindner site in Australia (Jones 1985). Minor traces of iron oxide have been detected on some of the perforated specimens from the Upper Cave.

Zhoukoudian Site 1 (the *Homo erectus* site) has yielded some 20 quartz crystals, including a crystal prism with all facets intact (Pei 1931: 120). It is relevant to recall that quartz crystals have been reported from three Acheulian occupation sites, including two in Asia (Bednarik 1992a). Also, stone spheres have been frequently found at Zhoukoudian, as well as at other Lower Palaeolithic sites, but while they tend to be grapefruit-sized elsewhere (at Lantian, for instance), they appear to be somewhat smaller at Zhoukoudian, of around 6-8 cm diameter.

Here we introduce a new find, an art object recently excavated by YY from the Upper Palaeolithic occupation site Longgu Cave, Northwest Mountain, near the town of Xinglong, Hebei Province (110 km north-east of Beijing). The occupation layer, in sandy clay, had earlier been dated to about 13 000 BP via charcoal, and an AMS date obtained directly from the newly found object has just confirmed that age.

The object is fashioned from antler of *Cervus elaphus*

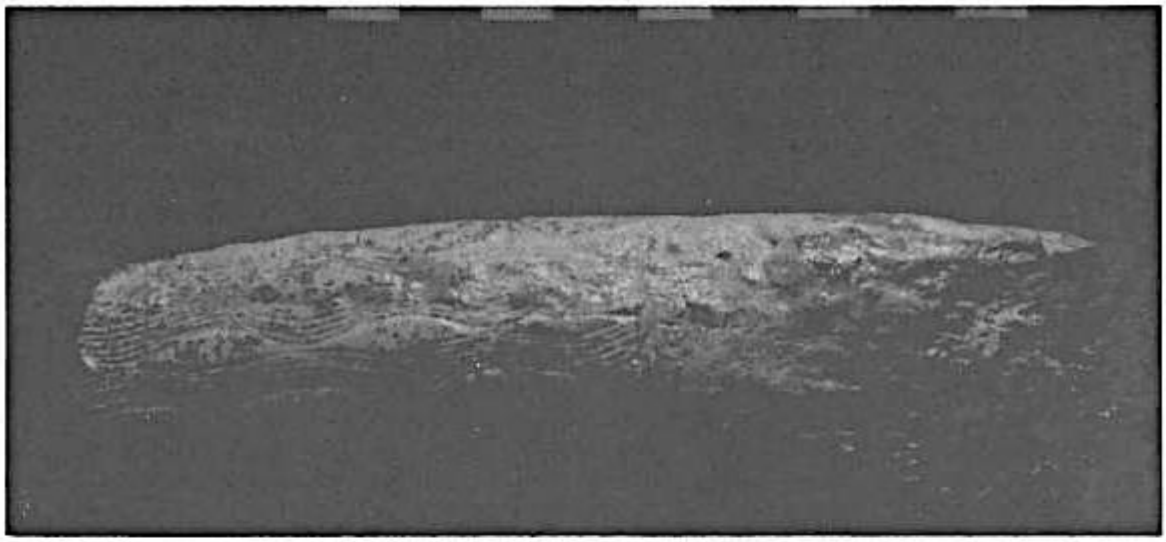

Figure 2. *Longgu Cave antler object, design 1: sets of multiple parallel wave lines.*

Figure 3. *Design 2: figure eight motif.*

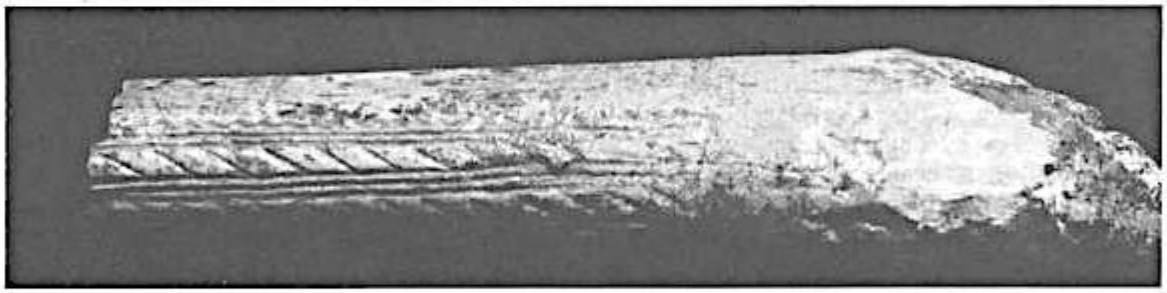

Figure 4. *Design 3: composition of parallel, zigzag and oblique lines.*

canadensis, consisting of a 134 mm-long section of the main stem, with the natural antler surface still partly intact. The specimen is oval in section, bearing three distinctive engraved patterns on its longitudinal surfaces: one each on the two flattened faces, and a third along one of the two sides (Figures 2-4). There is no perforation, and neither the object's shape nor the arrangement of the markings provides any clues about its former use. The specimen has experienced surface corrosion and has faded to a bleached, off-white colour, but it remains mechanically sound and weighs 104 g. The high-pH loess matrix and partial carbonatisation have no doubt contributed to its comparatively good state of preservation.

Part of the surface appears to have been coated with a brilliant-red, cinnabar-coloured deposit, presumably of haematite. Most of this seems to have peeled off, but traces remain over much of the surface. The pigment even occurs in the pores of the spongy interior where it is exposed at one end of the object. This end was obviously broken before the object's use, whereas the other end truncates all three engraved designs, and thus postdates its primary use period.

The original encrustation of calcium carbonate still covers various parts of the antler fragment. The precipitate conceals red colouring material, and in one location has facilitated the retention of the ochre completely: here it can be seen that the red paint entirely fills the engraved groove, which raises the possibility that all of the engravings were originally filled in this fashion.

The engraved lines were superbly crafted with stone tools, their groove patterning matches that on European and Siberian portable art objects. Line widths and depths, as well as the spacings between the lines, have been carefully maintained throughout. The layout of the three patterns is bold and confident, suggesting the hand of a highly experienced artisan with a repertoire of very distinctive and sophisticated designs. One pattern consists of four sets of six or seven parallel wave lines, competently arranged to form a consistent design; the second is an elaborate figure eight motif; while the third is an arrangement of parallel and zigzag lines enclosing two elongate panels of oblique cross hatching. The artist

demonstrates an admirable control not only of even spacings and groove depths, but also of the technical aspects of constructing complex curved arrangements and integrating them seemingly effortlessly into a rectangular layout. The definition evident in all three patterns and the distinctness of the designs suggest that well-defined meanings were attached to them.

A small quantity of the inner spongy material has been removed from the more recently broken end of the antler fragment (the end that bears no ochre traces) for direct dating by the AMS method. The result, just received, confirms the previously assumed age of the find: 13 065 ± 270 years BP.

The engraved patterns on the antler object are of a structural complexity which exceeds by far that found in comparable European art of the Upper Palaeolithic. It is always risky to draw far-reaching conclusions from a single and 'unique' find such as this one, but since corresponding finds from early Asian and Russian art exhibit similarly complex noniconic designs one may be justified in speculating about the emerging pattern. That pattern suggests a predominance in the Pleistocene graphic art east of Germany of highly elaborate designs that appear to hold considerably greater research potential than the simplistic animal figures that are so prominent in western European 'cave art'. Marshack has long recognised that the 'geometric signs' in the far west are the most significant component of that art, but in the east (Russia, India, Siberia, and now China), this noniconic art is conceptually much more complex, and has been developed to an extraordinary sophistication that has certainly defied any interpretation attempts so far. Nor is it likely to yield its metaphysical contents or its symbolism to the simplistic empiricism of Western scientists. So far, this rich art tradition has been best exemplified at Eliseevichi, Mezin, Kirillovskaya and Mezherich, but it also occurs, less pronounced or in smaller numbers, at Patne, Mal'ta, Afontova, Kavkaz, Balinkosh, Klinets, Timonovka, Suponevo, Novgorod-Severskaya, Avdeevo and Gagarino.

Another object recently excavated by YY is part of a perforated stone disc from Shiyu, near Huairen, Shanxi Province, c. 300 km west of Beijing. The presumed pendant, measuring 80.5 mm diameter, has broken in half through the central hole, which in section is very wide and flat-bottomed, drilled only from one side. The surface of the flat natural pebble is rough and unmodified, and the object is reminiscent of two of the three drilled stone pendants from Kostenki XVII, which are similarly flat and fractured through the hole.

The specimen is from the uppermost of two Palaeolithic layers, both of which occur in a single sedimentary unit of 0.8-1.5 m thickness which consists of greyish-black clay with sand. It is overlain by, from the top, a substantial loess deposit and a sand stratum, and in turn rests on a layer of gravel, below which is a palaeosol floor. The upper occupation deposit has yielded about 30 000 stone artefacts, the lower level contained some 40 000 lithics. The two occupation levels seem to be typologically similar, appearing to combine Middle Palaeolithic and Upper Palaeolithic elements. Radiocarbon dates have just been provided for them, of 28 135 ± 370 BP (upper occupation horizon) and 32 220 ± 625 BP (lower occupation horizon).

It follows that the presumed stone pendant from Shiyu is one of the earliest drilled stone objects known in the world (Bednarik 1992a), and is therefore an important find in the context of non-utilitarian evidence from the Palaeolithic of Asia.

The Shiyu site has also provided some 600 bone fragments with various types of markings. We distinguish four basic categories among these marks of which only one type, the linear incisions, could conceivably include anthropic marks. While in some cases these do resemble incised marks that have been described as 'intentional' or 'symbolic' from European Palaeolithic sites, we do not regard any of the Chinese specimens examined by us as bearing intentional engravings, even where series of similar marks occur together on a surface, or where their spatial arrangement is suggestive of a syntactic sequence. In fact our findings question the interpretation of various early markings reported from European sites, for instance those on one of the objects from Cueva Morín (Freeman and Gonzalez Echegaray 1983: Fig. 1a). The observations on some of the Shiyu specimens, together with their implications for identifying bone markings elsewhere, will be discussed in a separate paper.

The extensive rock art of China remains undated, except for two instances in Yunnan Province in the far south (Qin Shengmin et al. 1987: 230-2; Woo Sheh Ming 1991). In particular, the chronological sequences mooted for the major petroglyph regions of northern China are based largely on speculation, 'stylistic identification' and iconographically derived but often unconvincing models. In regions with Palaeolithic occupation evidence it is quite possible that a component of these petroglyph corpora could be of the Pleistocene. So far this possibility has not received any serious consideration in Chinese rock art studies, and it is also noted that the most likely candidates among the motifs are sometimes ignored by students of Chinese rock art, due to their simplicity or deep patination.

For instance, in the Helan Mountains, Ningxia Province, the earliest petroglyphs at Helankou or Suyukou (as identified by microerosion criteria; Bednarik 1992c) appear to be deeply patinated, noniconic motifs. They occur alongside much more recent and elaborate figures, and they are regularly ignored by rock art recorders in favour of the more picturesque and prominent, but also much younger, motifs, such as human faces ('masks'), anthropomorphs and animal figures. A preliminary examination suggests that the early motifs are at least several times as old as those figures which are attributed to the Bronze Age (Shong and Xi Zhou States). At Shui-tungkou, near Yinchuan, an occupation site under 15 m of loess has provided very early Palaeolithic remains, and both the Ordos and Gobi regions have provided ample evidence of Palaeolithic occupation. Considerably more work and a considerably more rigorous approach will be required to establish a rough chronology for the pre-dynastic and preceramic rock art of China, but preliminary considerations suggest that the possibility of Palaeolithic beginnings should not be excluded for this sequence of rock art traditions (Bednarik in prep.). The finds introduced in this paper serve to underline the need for examining the possibility that Palaeolithic rock art may exist in China.

Conclusions

Intensive Palaeolithic research has been conducted in China for many decades. The search for Palaeolithic art, too, has been on since the discovery of non-utilitarian objects at Zhoukoudian, but so far it has remained fruitless. The first indisputable Chinese art object of Palaeolithic age is introduced here, and it is clearly noniconic. It consists of an engraved section of antler, covered by three

beautifully crafted, most elaborate geometric designs. The object was probably coated with red paint, which has survived especially where it became covered by an accretionary deposit of calcium carbonate. It is possible that the engraved lines were originally filled in with colouring matter for contrast.

The decorated antler fragment seems to be safely dated to about 13 065 years BP. Its complex decoration confirms what has been observed in the Palaeolithic art of Siberia, India and Russia: the early graphic art of these regions seems to consist almost entirely of intricate noniconic patterns. As observed previously (Bednarik 1990a), there are only two or three examples of two-dimensional iconic art from the Palaeolithic of Russia (apart from the paintings in Kapova Cave), and there are none available from anywhere else in Asia at the present time. Moreover, the earliest rock arts of Australia and the Americas, which presumably derive from eastern Asian Middle Palaeolithic art, are exclusively noniconic and strikingly uniform (Bednarik 1987, 1988b, 1989).

A second object introduced here is a perforated stone disc, about 28 000 years old and therefore one of the earliest evidences of its kind. This find confirms that the drilling of hard materials, which was already practised in the Middle Palaeolithic of eastern and central Europe, is likely to have been part of a well-established technology across the entire breadth of Eurasia by the end of the Middle Palaeolithic (Bednarik 1992a).

Robert G. Bednarik, *RAR* Editor

Professor You Yuzhu
Institute of Vertebrate Paleontology and Paleoanthropology
Academia Sinica
P.O. Box 643
Beijing 100044
People's Republic of China

Résumé. *On documente la découverte du premier objet d'art paléolithique de Chine. Un fragment de ramure, orné de trois motifs gravés, compliqués et non-figuratifs, a été découvert au site paléolithique supérieur de caverne de Longgu, situé dans la province de Hebei, au nord-est de la Chine. Il date d'environ 13 000 ans. On introduit aussi un deuxième objet de la province de Shanxi qui est perforé, de pierre et datant d'environ 28 000 ans. Des trouvailles pertinentes chinoises et d'ailleurs sont discutées, et considérées vis-à-vis du cadre des connaissances contemporaines de l'art paléolithique d'Asie.*

Zusammenfassung. *Die Entdeckung des ersten paläolithischen Kunstobjektes von China wird berichtet. Ein Geweihfragment das mit drei komplizierten, nicht-figürlichen gravierten Mustern verziert ist, wurde in dem oberpaläolithischen Fundort Longgu Höhle in der Hebei Provinz, Nordost-China, ausgegraben. Es ist etwa 13.000 Jahre alt. Ein zweites Objekt wird hier ebenso vorgestellt, ein durchbohrter Steingegenstand von etwa 28.000 Jahren BP aus der Shanxi Provinz. Sachdienliche chinesische und andere Funde werden besprochen, und im Rahmen dessen, was derzeit über paläolithische Kunst in Asien bekannt ist, erörtert.*

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