

Antiquity Podcast transcript – September 2009

[noise of stones hitting each other] !!!!! ouch

This is - or could be - the sound of ancient prehistoric persons of the Acheulian period one million years ago, fashioning an axe from a large block of stone. It could also be the sound of modern experimental researchers CBK Shipton, MD Petraglia and K Paddaya trying to make one of their own – because that is exactly what they did in a quarry at Isampur in India.

And what better way to understand how to make ancient stone tools than doing it yourself? The researchers' experiments found that the *handaxes* were best produced by reducing a block to shape, while *cleavers* were best made by splitting flakes. Their home-made tools compared very well to the ancient implements, and the authors deduced that Acheulean hominins were learning and transmitting some kind of standardised best practice to each other.

Here at *Antiquity* we follow the tracks of history back into deep time. Our subject is the whole human family, our period of study the last million years or so and our theatre is everywhere that humans have gone – including the moon.

The Isampur experiment is just one of the new matters carried in the September issue. Now let's follow the ancient axe-makers further into the bush – and since you are not going to bring down a large animal with an axe, we need to experiment with something else. Thrusting and hand-thrown spears are preferred by modern traditional hunters to dispatch large game at short-range. So spears are the thing and after that the arrow – but were the prehistoric ones just of sharpened wood – and so hard to find – or always tipped in stone?

Although they hardly ever survive, spears and arrows made only of wood – perhaps hardened in a fire - should have provided the common hunting weapon. But were they

effective? Amazingly – yes. In a series of well-controlled experiments researchers from Australia and the US show that arrow-heads made of stone achieve barely 10% extra penetration over plain sharpened wood. So stone tips, when they come, must provide some other advantages that outweigh their added cost. No doubt their rarity and symmetry carried other special social or symbolic messages. But perhaps also they delivered more lethal wounds by enhancing the rate of blood loss, for example, and so increase the likelihood of successfully felling large game.

What sort of game? Among the most suggestive quarries of the latest hunter-gatherer period are the aurochs which roamed the high plains of Anatolia – modern Turkey. Benjamin Arbuckle & Cheryl Makarewicz show that by the early Neolithic in the 8th millennium BC, Sheep and goats were domesticated, but aurochs, wild cattle, were kept wild and long continued to be hunted for sport and prestige. The earliest domesticated cattle are not noted until a thousand years after the sheep, and come from imported stock domesticated elsewhere. These new cattle probably originated from the Levant through the trade or exchange systems of the mid 7th millennium BC. Meanwhile the mighty aurochs remained at large, encouraged to cross-breed with the domestic stock, and providing a charismatic quarry for the hunters.

Much of the evidence for this unusual harnessing of the domestic with the wild came from the animal bone assemblages at the Neolithic super-site of Çatal Hüyük. Catal features again, and so does the aurochs, in a paper by Amy Bogaard and colleagues. Families in this grand tell settlement lived side by side in joined-up rooms, like an Arizona pueblo. It can be assumed that people were always in and out of each others' houses – in this case via the roof. Social mechanisms were needed to make all this run smoothly, and in a tour-de-force of botanical, faunal and spatial analysis the research team shows how it worked. Families stored their own produce of grain, fruit, nuts and condiments in the interior of their houses in special bins, but displayed the heads of aurochs at the entrance. The horned skulls greeted the visitor, signals of the status of these monarchs of the plains, and of pride in the prowess of householders in hunting and killing them and reminding visitors of feasts and hospitality that provide the social glue for citizens then as now.

But life in the Stone Age was not all chasing and feasting. People came together together to celebrate spiritual matters too. Assemblies there certainly were, but what did people do at them? As often, we are thrown onto analogy, and particularly analogies draw from traditional peoples. A particularly vivid account is provided by Riaan Rifkind of Wits university S Africa, who has studied a hill-top site in the Korranaberg. Here at Klipbak 1 is a water source and a sandy arena embraced by a rocky ridge with strong acoustic properties. Klipbak I offers a valuable glimpse into the nature of prehistoric ritual. The author calls the site 'an engraved soundscape', and shows how it offers salient insights into the curing and healing of music and performance. We find ourselves at a lively prehistoric ritual centre, with rock gongs, reverberating echoes, dancing and trance. There the spiritual specialists are at work. In the author's words: "The singing of medicine songs, the women's rhythmic clapping and the stamping of the men's feet, and the sound of swishing dancing rattles and resonating rocks assist shamans to cross the threshold between mental states during trance performances."

Phew – an exciting picture; one of many in the current issue that brings life back to the long ago. Now read on.