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The Tie That Binds? An incised Mesolithic bevelled pebble from Camas Daraich, Skye

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INTRODUCTION

During recent excavations at Camas Daraich, Skye an incised bevelled pebble was discovered at the base of a midden layer dating to the Mesolithic (Hardy and Estevez 2011). Finds of incised or decorated stone and bone from this period are rare in Britain as a whole and this is the first of its kind from Scotland. For this reason the object is being published ahead of the completion of excavation and post excavation work on the site in order to invite comment from the wider community of European archaeologists.

The bevelled pebble is a classic Mesolithic tool form which is much discussed in the literature (Clarke 2009; Saville 2004) but the presence of incised lines on this or indeed any other tool is highly unusual in Britain at this time. The discussion below will explore the potential significance of the markings and just what they may imply for the use of these tools.

CONTEXT

The bevelled pebble was securely stratified within a dark greasy layer (bM) which contained abundant angular and rounded stones at its base (Hardy and Estevez 2011). This layer is the same as context 10, interpreted as a non-organic midden, excavated in 2000 with dates of 7545+/- 55BP and 7574+/-75BP indicating activity on the site in the mid 7th millennium BC (Wickham-Jones and Hardy 2004). The flaked lithic assemblage from this site is characterised by the manufacture and use of narrow blade microliths.

A few other coarse stone artefacts came from the site including one lightly worn bevelled pebble from the excavations of 2000 whilst the rest were simple plain hammerstones (Clarke 2004, 2011). One of the hammerstones found during the 2010 excavations bears a small grouping of incisions in the centre of one side of the tool (Clarke 2011) but these appear to be less deliberate in action and more randomly placed than the incisions on the bevelled pebble under discussion here; they may have formed incidentally during use as a knapping hammerstone, perhaps in platform edge preparation.

THE BEVELLED PEBBLE

(see figure 1, and for a 3D animation go to: http://www.youtube.com/watch?v=XLchY8Jz5sk&feature=g-upl)

The tool is made from a beach pebble of fine-grained micaceous schist local to the area’s geology; its condition is poor with some fine cracking which could be a product of heat damage or acid soils. The narrow end may originally have born some light bevelling use wear but it has been subject to some post-depositional damage because of the friable nature of the stone and this has obscured the detail. In dimension it measures 120mm long; 37mm wide and 18mm thick.

This is a classic elongated pebble form with a double bevel worn on the broader end and with some flaking from this end too. The bevels abut to form a ridge which runs at an angle to the faces. The pebble has a naturally shaped ‘handle’ which is a third of the total length of the tool. Three groups of paired parallel incisions have been worked on the pebble surface: two of these groups are made on the upper rounder face and they divide the tool into three sections that are almost equal in length and which measure respectively from the broad end 37mm; 39mm; and 32mm. The third pair of incisions is placed on the opposite face at 31mm from the narrow end. Each pair of incisions forms a narrow band and these vary only slightly in width (3.5mm to 4.3mm) and all of the bands have been placed to run obliquely across the width of the tool face.
The incised pattern is thus formed of pairs of narrow, parallel bands which divide the tool obliquely into thirds. These incisions appear to have been made with several strokes in the same direction and there are fine linear striations along the sides and ends of each main band possibly indicating where the manufacturing tool has missed the groove. A group of short parallel incisions occurs on the inside edge of the ‘handle’; they total 12 in number including one slightly deeper pair of parallel grooves. A lighter group of short parallel incisions occur on the right side of the groove set at the broader end of the tool.

It is likely that a sharp flake of siliceous material such as flint or quartz was used to make the marks and that this was drawn across the face of the tool several times in order to make the pairs of parallel grooves. The shorter grooves have also been made with a sharp-edged flake.

**DELIBERATE OR PASSIVE MARKING?**

The big question has to be how was the pattern of incisions on the bevelled pebble formed - was it produced passively through the use of the tool for example to retouch a flake edge or was the marking intentional: to provide purchase for hafting; to decorate the surface; or perhaps to represent something that was usually there in a different medium? These options are discussed below with reference to excavated finds from other sites.

**Marks from retouching lithics**

As a purely functional product it could be argued that the incisions on the bevelled pebble were produced passively through altering the edge of a blade or flake by pressing and dragging it down the surface of a stone. Examples for the deliberate use of stone to retouch a blade edge come from Mesolithic sites in southern Sweden where the grooved polishing stones are thought to have been used specifically to straighten and then polish the edge of blades prior to their role in the manufacturing of slotted bone points (Sjöström and Nilsson 2009, 791). These stones have a flat ground face which is important for producing a straight blade edge (ibid.) as well as groups of striations the most developed of which have a leaning V-shaped profile. The two illustrated examples reproduced here show typical patterning of striations: either regularly-
spaced, parallel grooves running obliquely across the flat polished face of the stone or else multi-directional grooves of varying depths made towards the edge of a larger stone (figure 2). This latter stone is from Agerod I: D with dates of 7680-7940BP (Mithen 1990, 157).

The incisions on the bevelled pebble from Camas Daraich do not conform to the above criteria: they are not made on a flat ground face, instead they are worked over a natural curved pebble surface; and, being made across the width of a narrow pebble they are much shorter than the working grooves on the Swedish examples. The paired groupings of the incisions on the bevelled pebble are also placed quite differently to the spaced out or diagonal pattern of the grooves on the Swedish stones. It is unlikely then that the incisions on the bevelled pebble were the result of tool production or maintenance.

**Decoration**

Decoration on Mesolithic stone tools is extremely rare in Britain: the only published examples are a group of decorated pebbles from Rhuddlan, Wales. Just one of these pebbles was found in a Mesolithic context; the other five decorated pebbles were found in later contexts at the site but the similarities in the execution of the patterns on all the pieces would suggest that the latter were redeposited Mesolithic types (Berridge et al. 1994). The incisions were made from single strokes of a flint or chert bladelet (Roberts in Berridge and Roberts 1994) some of which formed branching lines or net-like patterns (Figure 3).

A decorated rib bone from Gough’s Cave, Somerset dating to the Upper Palaeolithic bears an incised lattice pattern on one face (Hawkes et al. 1970) as well as a series of groups of short incisions down both sides of the opposite face not dissimilar to those made on the edge of the incised bevelled pebble from Camas Daraich though those made on the bone form discrete groups.

The use of decoration or pictorial imagery during the Mesolithic is more commonly found on objects found at Continental sites most probably because there are more sites at which bone and antler, which are common hosts of decoration, survive. The various images include representations of human and animal figures and geometric or lattice-type patterns (see Clark 1975; Bailey and Spikins 2008; Kozlowski 2009).

To our 21st century viewpoint the incisions on the bevelled pebble from Camas Daraich do not immediately appear to be decorative in the sense that they convey an image of a worldly object: in contrast to our interpretations of other decorated pieces the incisions seem neither anthropomorphic nor zoomorphic and nor do they form a net-like coverage on the surface or be interpretable as images from the natural world e.g. rivers or trees.

Figure 2: Grooved polishing stones from southern Sweden. Reproduced from Sjöström and Nilsson 2009, Figures 117.4 and 117.5.
Figure 3 (left): Incised decorated pebbles from Rhuddlan, Wales (reproduced from David and Walker 2004, Figure 17.10).
Figure 4 (right): Examples of incised markings on barbed points from Star Carr, England. The point on the left has grouped oblique markings (reproduced from Clark 1954, Figure 56).

**Hafting**

Marks can appear on the surface of a tool if it has been hafted and these include both natural rubbing wear marks on the tool as it moves within the haft as well as the deliberate roughening or notching of a tool’s surface in order to provide more security for the tool within the haft (see Clarke 2006, 25-32 for examples of later prehistoric hafted tools). The incised marks on the bevelled pebble were clearly not made incidentally by friction in a haft – even the short incisions down the side were produced by a sequence of individual actions. Perhaps the short incisions could be interpreted as surface roughage but they do not appear to be extensive enough to create purchase within a haft.

Ben Elliot has kindly drawn our attention to the scoring on the tangs of barbed points from Star Carr pointing out that the markings on the tangs of these points has always been interpreted as giving roughage for hafting but that many of them have quite a striking geometrical form to them. About one fifth of the surviving tangs on the barbed points from Star Carr had incised scoring frequently as oblique markings either unilinear, criss-cross or chevrons (Clark 1954, 124) but on only three tangs were the lines grouped leaving gaps between these groups (ibid.) (figure 4). Scored tangs most commonly occurred on the more finely-shaped barbed points from the site (Clark 1954, 126) and as these were found in the lower stratigraphic levels there appears to be some relationship between tool form, the presence of scoring and the phase of use or deposition. Just precisely why these marks were made on the tangs is not fully understood: the majority of the tangs did not actually have score marks – so this implies that roughening the surface of the tang for hafting was not strictly necessary to the efficiency of the point. The range of scoring patterns some of which appear more organised or ‘decorative’ than others makes it tempting to interpret them as some form of personal mark or identification. However, these marks would have been covered up in the process of hafting the barbed point so ownership (or at least individual identification) of the point on retrieval would not be immediately apparent if they were just to rely on the scoring of the tangs. Perhaps the patterns of scoring actually represent the pattern of binding that were used to wrap the barbed point to the haft: the different wrapping patterns making a personal or individual visible mark on the exterior of the point.
A representation of binding?

If the score marks on the Star Carr barbed points could be interpreted as representations of actual and visible patterns of binding once the tool was hafted then is it possible to carry this analogy to the markings on the incised bevelled pebble? Given the regularity of widths of the pairs of grooves on the bevelled pebble and the organised placing of the bands which divide the pebble into three almost equal lengths it is likely that the pattern did indeed have some form of meaning, whether decorative or coded rather than having a strictly functional explanation. The incised bands could be representative of a type of binding which was wrapped around the tool. Taking this thought one step further would immediately suggest that some bevelled pebbles were originally bound to a haft or at least wrapped in some form of binding for use. There are examples from the German site at Friesack for bone points that were hafted onto wood using narrow strips of bast, a type of plant fibre, but without pitch (Gramsch and Kloss 1990) (figure 5). At the Russian site of Nizhneye Veretye large flint blades were found with a protective covering of birch bark still wrapped around the handles (Oshibkina 1990) (figure 6). If some soft material was indeed used to wrap around bevelled pebbles this would suggest that the surface of the tool and/or the hand was being protected from the material being processed – perhaps it was greasy or sticky and the wrapping of plant fibre or leather could help stop slippage and be easily swapped for fresh material when necessary.

As well as being bound, there is also the possibility that bevelled pebbles were actually hafted in some form of shaft for use: some bevelled pebbles do appear to be rather short to hold comfortably in the hand and hafting may have provided extra length, extra traction or even extra distance from the job. At Howick, Northumberland a specialised stone tool assemblage comprising 19 bevelled pebbles and 15 pebble blanks was found on the floor of a circular structure (Clarke 2009; Waddington 2007). Though the tools and tool blanks ranged from 60mm to 150mm in length there was a distinct cluster between 95mm and 122mm and despite the variation in lengths the proportion of width to length was almost constant with length being roughly three times the width of the pebble (figure 7). Interestingly, at 120mm long and 37mm wide the incised bevelled pebble falls comfortably within the shape and size range of the Howick tools. The used bevelled pebbles also shared similar types of wear pattern: all had been used on the broader end of the pebble and had a larger bevel on one face – just four pebbles had been turned and re-used on the opposite face (Clarke 2007). The uniformity of size, shape and wear pattern inherent in this group of bevelled pebbles and the preferred use of just one face are strong indications that these tools had indeed been hafted for use; perhaps just two or three wooden or bone hafts were in use at any one time with new pebbles slotted in upon breakage of the old stone tool. A review of the shape, size and wear patterns on the bevelled pebbles found across Britain and with reference to their context would confirm whether all bevelled pebbles were used in a similar way.

Figure 5: Bone points from Friesack, Germany. The upper point is hafted on a wooden shaft with pitch. The lower point is bound with strips of bast. Reproduced from Gramsch and Kloss 1990, Figure 6.
CONCLUSIONS
There are without doubt many possible interpretations for the presence of the incised lines on this stone tool. It is clear that the incisions are deliberate and composed but it cannot be determined yet whether they are, for example, purely functional; a deliberate abstract representation; a record or message. However, whilst attempting to interpret the pattern we have touched on issues of individuality and ownership, design and representation, and had cause to re-evaluate how bevelled pebbles may have been used; it is not often in the Mesolithic of Britain that one artefact can open up so many fields of enquiry. Our aim in publishing this short piece was to draw attention to the artefact and we invite comments.

The 2010 excavations at Camas Daraich form part of a project based in the Departament de Prehistòria, Facultat de Filosofia i Lletres, Universitat Autònoma de Barcelona 08193 Bellaterra, Spain and led by Karen Hardy. This project was conceived as means to apply some of the constructs resulting from a long lasting series of Ethnoarchaeological projects led by Assumpcio Vila and Jordi Estevez. For the last 20 years, the Catalan team (AGREST) has been conducting ethnoarchaeological research into coastal hunter-gatherers in Tierra del Fuego, most notably studying the archaeology and ethnography of the Yamana and the Selknam to develop new conceptual methods and a theoretical and methodological basis to explore social organisation of prehistoric hunter gatherer groups. Their work has comprised experimental ethnoarchaeology and excavation methods conducted on the ethnoarchaeological shell middens of Tierra del Fuego (Estévez, 2009; Estévez, Vila, et al. 2007). The west coast of Scotland has many geographical and archaeological parallels with Tierra del Fuego and a history of Mesolithic work to build on.
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