

Mesolithic engraved bone pins: the art of fashion at Téviec (Morbihan, France)

Éva David

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Foraging Assemblages

Volume 2

Edited by Dušan Borić,
Dragana Antonović, and Bojana Mihailović



COLUMBIA UNIVERSITY
THE ITALIAN ACADEMY
FOR ADVANCED STUDIES IN AMERICA

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Serbian Archaeological Society
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Back Cover Illustration: Lepenski Vir during excavations (Photograph courtesy of of Alan McPherron)

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93. Mesolithic engraved bone pins: The art of fashion at Téviec (Morbihan, France)

Éva David

The revisiting of the Téviec bone material by means of technological analysis, including taphonomy and use-wear, enabled us to separate bone implements from the rest of the osseous material discovered in Mesolithic burials at this site. As a result, we find that pointed pieces made from animal bones were associated with the deceased regardless of their age or gender. Except for five such pieces recognized by the excavators, the points or awls were all engraved (up to 14 to date). Engravings in the form of a series of notches on the point are interpreted as decorative. It turns out that such objects were intended for a functional purpose: to act as a safety pin for holding garments together on the body. A pairing of such points has even been attested along with other objects that constituted personal ornaments of some children. This suggests that wearing bone pins was common across age groups and was an expression of fashion or could act as a group identity marker at the end of the sixth millennium cal BC. In this regard, the bone technology supports a socio-cultural regionalism present in Brittany at the end of the Mesolithic.

Keywords: grave, bone point, art, function, group identity

Interest in revisiting the Téviec material

A recurrent problem with some recently published studies on the archaeological material from Téviec is that the site has often been viewed as a single archaeological horizon (Marchand 2003, 2014). However, at Téviec, there are burials, shell middens, and other archaeological structures and features, which the Péquarts mentioned in their publication, suggesting that these features actually reflect a series of successive human occupations (Péquart and Péquart 1937, 18). This has had a large impact on most of the offered interpretations, and notably on the use of the Téviec material to emphasize an apparent growth in social complexity during the Early Holocene in Europe (Newell *et al.* 1990), or to suggest an initial Palaeolithic-Mesolithic substrate at the roots of the Neolithic megalithic tradition (*e.g.* Van Berg and Cauwe 1996), a complexity not yet reflected in the evolution of animal livestock and representations in such societies (Tresset 2005a). The presence of a few potsherds found close to the necropolis (the Carnac Museum staff, pers. obs.) suggests that diverse occupation phases, perhaps including the Neolithic, might have taken place on site soon or long after the Téviec island saw a cemetery built from its rocky substrate, even though burials yielded neither ceramics nor any remains of domesticated animals (Tresset 2005a) or polished stone axes (Péquart and Péquart 1929).

If the original absolute dating of some human remains from the Téviec cemetery (Schulting 1999) would theoretically fit either the Mesolithic or Neolithic (Meiklejohn *et al.* 2010), results obtained from collagen stable isotope (carbon) analysis of human bones attest to the fact that the population buried at Téviec was essentially oriented towards a Mesolithic kind of subsistence (Schulting 2005; Schulting and Richards 2001; Schulting *et al.* 2004). This result is in keeping with those from the rest of Europe where, compared to Neolithic communities, Mesolithic groups largely hunted and gathered animal resources, mainly from aquatic biotopes (*e.g.* Dupont and Gruet 2005; Richards *et al.* 2003). Hence, the whole of the Téviec archaeological material can be used to examine the development from a Mesolithic to a Neolithic society at the end of the sixth millennium cal BC. Taking only a part of this assemblage into account, we can see that it was used to define the Late Mesolithic *Teviecian* culture because of the use of indirect percussion for bladelet production (Guesquière and Marchand 2010). Téviec is similar to other contemporaneous archaeological sites in modes of land-use strategies, lithic-resource exploitation, stone artefact-types, and technology (Marchand 2005). Discussed in this way, Brittany, where the site of Téviec is located, can be viewed as a particular Mesolithic region used for at least ~400 years, from 5640 to 5220 cal BC (Meiklejohn *et al.* 2010).

Indeed, the concept of territorial mobility is supported by the distribution of raw materials and lithic production where internal moves between various exploitation zones became gradually restricted to the main region (Gouletquer *et al.* 1996; Yven 2004). Whereas the cluster related to the Breton group, initially defined using the Téviec craniometric data, could have resulted from an earlier shift in human morphological features, as a result of adaptation and stochastic long-term processes (Brewster *et al.* 2014), relevant data based on isotopic ratios support a regional (mobility) pattern. This is true even though that locally the pattern might have been more complex due to potential interactions between coastal and inland groups in the process of hypergyny (Schulting 2003). This being said, regionalism has not yet been supported by the whole set of faunal remains available for study. It has indeed been stressed that comparable patterns of behaviour are seen in animal procurement and consumption, notably towards large bird species (puffin, woodcock, mallard, etc.) along with most of the usual terrestrial mammals (large ungulates mainly), between Téviec and other Mesolithic coastal sites situated in more northern regions of Europe (Tresset 2005b). But, from a tiny part of the Téviec assemblage alone, the quasi-consistent behavioural patterns would actually fit with the marine transgressions of Brittany, equivalent to a regional or long-term use of the local Atlantic littoral. It seems that results vary the most depending on whether the studied assemblage derives from the whole of the Téviec archaeological material or from only one of its stratigraphic units. In addition, certain artefact-types, such as pendants, are relevant enough to enable a large-scale study, which allows for the drawing of independent inferences based on that type of material alone (*e.g.* Rigaud *et al.* 2015).

As the Téviec material thus provides potentially contradictory insights, perhaps also due to a relatively wide dispersal of the collection (Vigier 2007), there is a need to restore associations between artefacts and their original provenance at Téviec. Here, this is done by means of articulating various fields within the technological approach, including taphonomy, refitting, and objects' biographies (*e.g.* David and Kjällqvist 2018). Regarding the Téviec burial ground, which would represent the most informative material (Binford 1971) for reconstructing the sixth-millennium cal BC funerary practices and group identities in Brittany, we have tried to distinguish what might have been deposited by the group versus what belonged to the buried person during their lifetime versus what are accidental inclusions in the (re)filling of a vault. Therefore, a double aspect is discussed: artefact-burial associations and functions of the commonly associated artefacts.

Artefact-burial associations: The burial/ bone taphonomic group III

As assumption can be made that if human bodies and (un) worked animal parts were deposited at the same time, the remaining osseous component of these materials should have altered in the same way (*e.g.* Meiklejohn *et al.* 2005). Regardless of the anatomical origin of finds or their precise location in burials, the anthropogenic-originated actions are seen as being part of the biostratinomic and biodiagenetic (taphonomic) processes affecting deposits (Auguste 1994, 18). As identified by the Péquarts (1937), and recently confirmed by Boulestin (2016), 23 individuals can be recognized from 10 vaults. Once in their primary position, the deceased might have been wrapped in a burial cloth fixed at the level of the chest with a manufactured bone point. The dead were then 'encased' in a nest of both shed and unshed stag red deer antlers before being covered by stone cairns, thus leaving the grave visible.

Grouping specimens of hard organic origin was possible by principally considering their external aspects, since biochemical components of the burial environment generally affect osseous material by means of osmosis or direct contact (Efremov 1940). Thus, observations about the colour and surface quality of each piece (porosity, 'patina', and patterns of cortical alteration) enable one to group the osseous material in five general taphonomic categories, even though specific material (teeth, for instance) may show its own modification traits in relation to its peculiar structural properties (Espinoza *et al.* 1990). From a total of 71 osseous pieces recorded by the excavators (except for the antlers constituting each nest), the Carnac and Saint-Germain museum collections contain 61 manufactured items (weapons, tools, objects, and waste products) in addition to some faunal remains (David 2016). Based on the original data from publications and archives, apart from six additional pieces (David 2016) (Fig. 93.1:30–35) from layers not identified by the Péquarts, all pieces from taphonomic group III were found in graves only. Their taphonomic characteristics are comparable to those of Mesolithic human bones (Fig. 93.1). Moreover, considering the fact that these aspects relate to different skeletons and/or anatomical parts, all human bones are also assigned to group III (the Carnac Museum, pers. obs.). This implies that the process by which bodies became bones unfolded in a similar way for each burial (group III). Even though it is assumed that bodies must have been buried at distinct moments in time, the post-depositional factors did progress under similar conditions, independet of the burial context and type of osseous remains left there, be they skeletal remains or tools.

As for the differences in colour/shading within the group III assemblage, the presence of ochre in some graves and that of an older grave isolated inside a single burial vault ('K' skeleton no. 6) provide explanations for the fact that some pieces are more reddish (Fig. 93.1:36, 51) while others are more greyish (Fig. 93.1:54–55). However, six items initially attributed to graves 'D' (Fig. 93.1:23, 60–61) and 'K' (Fig. 93.1:6, 12, and 21) show another taphonomic aspect.



Fig. 93.1. **Grouping of the Téviec bone industry according to their taphonomic characteristics except for three pieces illustrated in Péquart and Péquart (1937, Pl. X:19, 21, Pl. IX:5) but not found in the collections; five bone awls (1937, Pl. XII:9–10, 15, 17–18) and a seal tooth illustrated and/or mentioned in the publication but not found in other museums (Graves A, B, E, and M; Grave L has no bone material) as well as all smaller shell beads and the large shed/unshed antler pieces were not available for this study. All anatomical identifications and photographs by Éva David.**
***Group I – Light coloured (light yellow brown), porous, rough-like cortex, vermiculated (12 pieces made from teeth and bones)*: 1: thin double bone point (no. R81.1.16); 2: tip end of a bone needle (no. R81.1.22); 3–4: tip ends of bone awls (nos. R81.1.18 & 390); 5: basal part of a bone awl (no. R81.1.385); 6: bone waste product (no. R81.1.224); 7: broken tooth**

burin (no. R81.1.382); 8–9: pointed end of tooth tools (nos. R81.1.396 & 392); 10: stem of a tooth tool (no. R81.1.398); 11: tooth burin (no. R81.1.15); 12: bone awl (no. R81.1.225);
***Group II – Dark coloured (dark yellow brown), not porous, glaze-like and/or desquamated cortex, vermiculated (seven specimens made from bones and antler tines)*: 13: robust burnt bone awl (no. R81.1.11); 14: burnt red deer phalanx (no. R81.1.6); 15: burnt bone fragment (no. R81.1.407); 16–17: tip ends of bone awls, burnt (nos. R81.1.406 & -388); 18: burnt cervid tine antler fragment (no. R81.1.75); 19: burnt bone fragment (no. R81.1.400);**
***Group III – Light coloured (light rose greyish), not porous, desquamated cortex, not vermiculated (27 pieces made from teeth and bones; the two pecten are not illustrated here)*: 28: small antler hammer (burr) showing a rhombic perforation as a handled part (no. 77579-138); 29: bone pointed tip or tang (no. R81.1.391); 30–33: tip ends of engraved bone awls (nos. R81.1.229, 19, 21, & 386); 34: mammal rib fragment (no. R81.1.226); 35–36: pig or human (?) rib diaphysis and a fish bone, both showing modern engravings (nos. R81.1.2 & 77579-139); 37–40: tooth beads (nos. R81.1.142, 139, 141, & 140); 41: engraved broken bone awl with a pointed tang (no. R81.1.143); 42–43: engraved bone awls that refit together from a red deer metatarsus (nos. R81.1.103 & 102); 44: engraved and perforated bone awl (no. R81.1.104); 45: engraved bone awl shortened at its base (no. R81.1.146); 46–48, 53: broken engraved bone awls (nos. R81.1.144, 145, 147 & 4); 49–52: engraved bone awls (nos. R81.1.14, 13, 77579-133 & R81.1.3); 54: hafted antler bevelled end tool (no. R81.1.7); 55: antler punch (no. R81.1.9);**
***Group IV – Dark coloured (dark yellow brown), porous, rough-like cortex, vermiculated (nine pieces made from bones and tine antlers)*: 20: antler punch (no. R81.1.10); 21: straight antler handle (nos. R81.1.403 & 401); 22: antler crusher (no. R81.1.384); 23: basal part of a bone awl (no. 77579-134); 24: entire thin double bone point (nos. R81.1.17 & 394); 25–26: tip end of bone awls (nos. R81.1.315 & 389); 27: mesial part of a robust bone awl (no. R81.1.383);**
***Group V – Light coloured (dark orange brown), not porous, rough-like cortex, vermiculated (six pieces made from bones)*: 56: split roe deer metatarsus (no. R81.1.8); 57: broken bone diaphysis (no. R81.1.12); 58–59: broken bone awls (nos. R81.1.20 & 387); 60–61: entire thin points with pointed tangs (nos. 77579-136 & -137).**

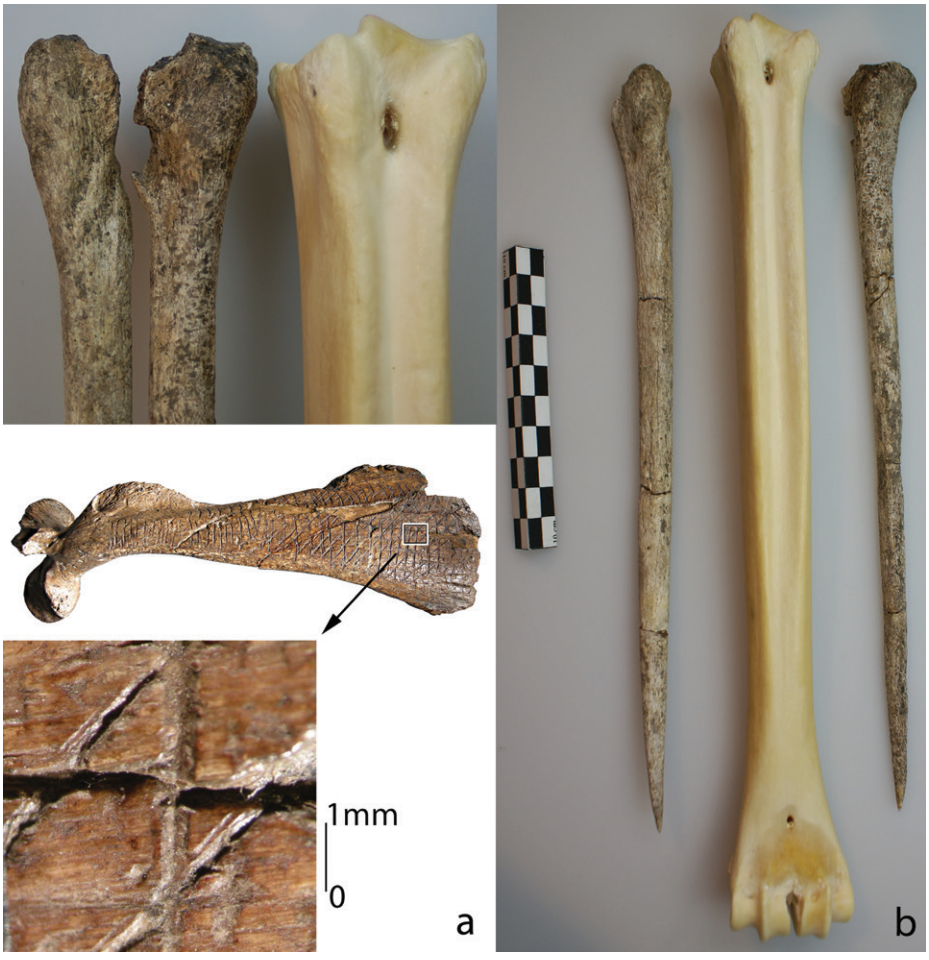


Fig. 93.2. Mesolithic worked bones from Téviec. a: Modern engraving made on a Mesolithic fish bone found in burial 'K' (see the text). b: Anatomical pairing between twin bone points made from a single large cervid (red deer-like) metatarsus bone (caudal face) and found in association with the 'king children' skeletons (grave 'C'). The bone was split lengthwise (*cassure-éclat*) probably after the distal end of the bone (in the anatomical sense) was detached. Each bone-blank represents one-fourth of the metatarsus in cross-section. To become an awl, the only broken-tip-end was made pointed by (convergent) scraping. The fracture planes from the splitting of the bone are still visible on the tang of each point and enable a straightforward conjoining, allowing for a perfect refit of the two manufactured points at their basal ends. Anatomical identifications and photographs by Éva David.

They could either be linked to a possible mixing of sediments of different origins or periods in the same grave or relate to the presence of remains connected to Mesolithic funerary practices but physically dissociated from the deceased and under the influence of other depositional processes, thus delivering different modification patterns (artefacts from another layer that was incidentally removed in order to fill the grave, or animal offerings placed close to the deceased or into a vault). Along with other specimens, the provenance of which the Péquarts linked to the midden, they mainly consist of split faunal remains (Fig. 93.1:6, 57), very thin, complete pieces (Fig. 93.1:60–61), and burnt artefacts (Fig. 93.1:14–16). By means of a taphonomic analysis, it is not possible to restore the exact provenance of every single piece, but, at least, it is possible to define the most probable initial osseous assemblage linked to Mesolithic burials, *i.e.* pieces that by all criteria correspond to both group III *and* artefacts recorded archaeologically as or in relation to particular individuals during excavations. In total, there are 22 pieces of bone industry (Fig. 93.1:28–29, 36–55) belonging to this ensemble of worked bones that clearly belong to certain burials. The remaining pieces belong to (four) other recorded taphonomic groups that are supposed to represent other events, perhaps connected to activities linked to burials (group II could refer to the 'ritual' fireplaces), or even other periods. This material shall be revisited together with the other 'faunal' remains described by Boule and Valois (Péquart and Péquart 1937), and which have not yet been studied. The vermiculation aspect, which all of these pieces exhibit, developed mainly in an open-air environment, and was caused by the roots of shrubs growing nearby.

Among the pieces originating from burials, we also aimed to recognize those artefacts that exhibit recent modifications in order to define the assemblage that can best represent Mesolithic material from the Téviec burials. Manufacturing techniques leave specific patterns on bones (David 2004). Two main factors – the time during which the manufactured pieces were used and the period during which the objects were buried – leave specific patterns on the tools' surface, not to mention the obvious fresh excavation breakage. Along with the patterns described above, the aspects related to the manufacturing techniques as well as the presence of use-wear provide relevant diagnostic criteria.

The case of an engraved fish bone is of special significance (Fig. 93.2:a). The bone belongs to taphonomic group III as described above. The engraved groove-like marks on both surfaces are extremely straight. The colour of the bone inside these marks is slightly darker than the rest of the bone's surface. The very large size of these marks along with the absence of internal *striae* and the absence of sediment deposited inside them – a commonly expected mark of the antiquity of an object – make us finally reject the engraving as an old one, even though the bone itself is most probably ancient. In the absence of direct dating, it is the location of this piece, found down in the oldest grave (6) of vault 'K', which gives us its relative chronology.

An unworked rib with similar fresh engraving marks was never published by the Péquarts (Fig. 93.1:35). Direct comparisons of all engraved pieces from the site provided a referential technical understanding of patterns in ancient engraving (*e.g.* David 2010). As a result, the preliminary macro- and micro-observations of every single osseous tissue gave us ten supplementary engraved pointed pieces (compared to those mentioned in Schulting 1996), increasing the original number of the Téviec Mesolithic 'art' pieces up to 14 (the Péquarts recognized five including the recently engraved fish bone). Except for the two that represent modern engravings on likely original Mesolithic pieces, the worked bone and antler material from specific Mesolithic burials (group III) at Téviec is composed of 21 pieces (Fig. 93.1:28–29, 37–55). These are mainly long bone points or awls, and tooth beads. Antler tools – one of them a hammer-like tool with a burr that shows percussion impact traces (Fig. 93.1:28) – and numerous perforated shells (mainly *Nassa*, *Trivia*, and *Littorina* species), and pebbles are other goods found in graves. They come from graves 'C' (three children), 'D' (woman and infant), 'H' (two women and child), 'K-5' (woman no. 2), and 'K-6' (man with embedded flint arrowhead).

Function of a common artefact: The long awl made from animal bone used as a safety pin

In addition to hundreds of shells that covered certain areas of the body, the presence of very long points made on thin limb bones (wild boar, dog fibula, splintered red deer metapodial) seems to have been a characteristic associated with each of the deceased. Most of these points display a motif in the form of one to several series of transverse notches replicated axially on the shaft, with no obvious meaning in their grouping or rhythm (Fig. 93.3). When considering the best preserved one from the Saint-Germain museum (grave 'D'), a regular reshaping of the point shows that the notches do not correspond with the tip's active-end; these were not reshaped as accurate notches after the tip-end was rejuvenated (Fig. 93.3:5, red shading). Moreover, axial planes show heavy use-wear patterns that are specifically distributed in zones, most of them placed in opposition, anatomically speaking (93.3:1, middle). This suggests that these damaged parts of the point were 'outside', when the rest of the point was probably turned 'inside' towards the body or garment; this would explain the alternate reverse zonations observed (yellow). Considering their recorded location on the human skeletons when found during excavations – with the tip-end of the awl pointing towards the hips of the body – the use patterns correspond indeed to a use of the point as a pin



Fig. 93.3. A Mesolithic engraved bone point from grave 'D' at Téviec with its anatomical provenance (no. 4). The depth, size, and morphology of the visible notches that compose the motif along with their overlap offer a reconstruction of the stages of engraving in the form of a series (nos. 1–3). It was freshly engraved by two axial series made anatomically opposite on the stem, firstly bilateral (no. 1) and secondly facial (no. 2) or bifacial (no. 3). The tip was reshaped on all sides and used again until it was broken, and was reshaped again, making the notches on the tip almost invisible (no. 5: middle picture at the bottom). The basal-end shows no use-wear at all, only two cutmarks (on the lateral anatomical face) probably linked to the initial extraction of the used blank from a tibia (no. 4). The rough end (shaded grey) clearly indicates a demarcation line in relation to the rest of the point and smoothed stem. On the stem, three zones, two of which are opposing, show clear use marks in the form of scratched areas (no. 5, upper picture). Parts of the stem were probably visible when the other remaining parts of the point were covered by a cloth, and thus protected from any further alteration due to use. The point was probably used as a kind of safety pin in conjunction with perishable organic matter that probably encompassed the basal-end of the point (sinew or hide?) that may have extended towards the tip and onto which it was somehow fixed in an efficient manner (no. 6). Photographs by Éva David.

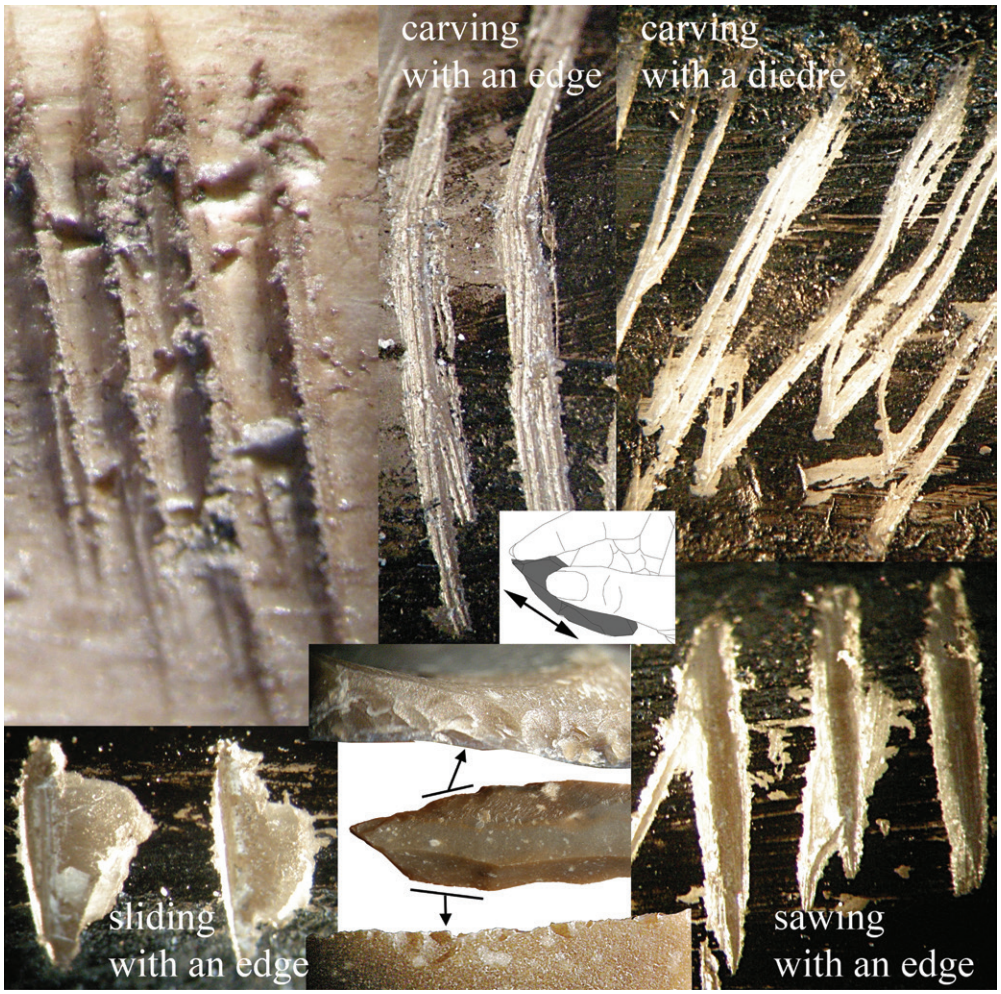


Fig. 93.4. A reconstruction of the engraving technique used in the Téviec Mesolithic bone industry on the basis of experimental tests conducted by the author – the sawing technique with the rough and mostly straight (untruncated) edge of a truncated blade in grey. Top left: an archaeological example. Drawing and photographs by Éva David.

that was fixed onto a cloth with an articular end (grey) that was somehow protected (wrapped with sinew?) from damage when the awl was in use. The rejuvenation of the broken tip suggests a long-term use, but not like when the object was kept apart for many years for the dead, unless the point itself had been retrieved from an older burial and reused in new burial contexts over generations. This is unlikely since the notches were made on a relatively fresh bone each time. The presence of additional use-wear patterns on the rejuvenated tip and on the notches themselves, the series of which shows various stages of curating the shaft over time, can be used as evidence of prolonged use as an everyday object for a Mesolithic person to wear until it finally became a component of the burial.

Thus, the engraved points from Téviec are no classic 'art' pieces; they appear instead as functional items, which were notched so that the garment (a cape?) would not easily fall when worn. They were maintained by the notches that helped the pin stay attached (see a reconstructed cloth on a human body in Fig. 93.3). It is assumed here that the dead were strictly linked to only one bone point, as each point was found generally associated *in situ* to one of the deceased. Nevertheless, without a precise reconstruction of the mode of burial, it is not possible to determine whether a bone point might have been offered by someone as a personal gift to secure the burial cloth of the dead, or if the dead person was buried with his own bone point still fixed on his own garment. However, the second possibility is more likely since points were not freshly reshaped despite the very poor broken-off state of use visible on some of them, not caused by post-depositional alterations. In the first case, one would expect to find a point to have been repaired for its proper last adjustment onto the dead in the preparation for their funeral; this is never the case.

Associated animal symbolism

These long awls were made from long bones of hunted game (wild boar, roe deer, red deer) and some carnivores (dog, pinniped species), the latter rarely providing a few blanks (David 2016). The utilization of a single red deer metatarsus for making two equally long points, the length of these points corresponding to that of the original bone. Their almost

unworn state of use in the case of a children's burial vault suggests the same idea: a long-lasting tradition of wearing engraved points from childhood onwards (Fig. 93.2:b). This amazing pairing of points, for one child or perhaps twins, could also be further linked to worn canine teeth from the same animal species also found paired in this context, with all of the socio-symbolic meaning that this may suggest, notably in evidencing certain social representations (David 2016, 627).

Associated flint material

Various aspects of engraving on these points show the use of a specific technique applied with a flint tool. Although the application of a technique may deliver a variety of markings, depending on the type of flint tool used, the motion itself during the action provides specific and reliable patterns that can aid in distinguishing the engraving technique used. As a result, the use of an unretouched edge of a blade as a saw created similar notch-like marks as those figured on the bone point (Fig. 93.4). Among the flint material yielded by the Téviec graves, excellent candidates would be any used flint edges from truncated blades. Eleven people were buried together with one or several blades found in their hands or on their chest (see the list in David 2016). Depending on whether the flint edges found in the graves were actually used, one could conclude, like in the case of the unused flint objects deposited in grave no. 5 at Tågerup (Karsten and Knarrström 2003), that the blades deposited in Téviec graves might have represented an offering from the community to their dead. In contrast, the manufactured bone points with some of the truncated blades might have represented the deceased individuals themselves, as an expression of a daily socio-cultural coding – the way people wore their garment during their lifetimes. More data are expected, from a lithic use-wear analysis.

Conclusion

Understanding interactions between flint and bone by means of a similar technological approach appears to be a reliable way to reconstruct regional funerary practices in their entirety through the identification of differentiated values of grave goods: those representing the person and/or a common tradition shared by a part of or the whole group (ornaments/bone pins) versus those expressing common beliefs of the group (unused lithic artefacts as gifts). The studied bone points are otherwise unknown in Europe. At Téviec, they were recurrently used as safety pins regardless of gender and age of the deceased and were made from animal bones otherwise well-represented as common remains of consumption. The deceased was also possibly associated with some of the lithic tools found in the Téviec burial grounds. All these elements support the Breton regionalism at the end of the sixth millennium cal BC. However, more technological investigations on contemporaneous materials are needed to further characterize Mesolithic groups through the reconstruction of funeral gestures and associated symbolism in tool making and using.

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Foraging Assemblages is the publication of the proceedings of the Ninth International Conference on the Mesolithic in Europe, held in Belgrade in September 2015. The two volumes of these proceedings gather 121 contributions on Mesolithic research in Europe, covering almost every corner of the continent. The book presents a cross-section of recent Mesolithic research, with geographic foci ranging from the Mediterranean to Scandinavia, and from Ireland to Russia and Georgia. The papers in the volumes cover diverse topics and are grouped into 11 thematic sections, each with an introduction written by prominent Mesolithic experts. The reader will learn about changes in forager lifeways and the colonization of new territories at the end of the Ice Age and the beginning of the Holocene warming; the use of diverse landscapes and resources; climatic instabilities that influenced patterns of settlement and subsistence; the organization of settlements and dwelling spaces; the formation of regional identities expressed through various aspects of material culture and technologies of artefact production, use, and discard; aspects of social relations and mobility; symbolic, ritual, and mortuary practices; diverse ways in which Mesolithic communities of Europe were transformed into or superseded by Neolithic ways of being; and how we have researched, represented, and discussed the Mesolithic.



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Regional Identities

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