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ARROWS OF POWER FROM BRITTANY TO DENMARK (2500–1700 BC)

By CLÉMENT NICOLAS¹

This article presents a comparative study of the arrowheads found in graves dating to between 2500 BC and 1700 BC in north-west France, southern Britain and Denmark. The aim is to characterize their modes of production and functions during a period which successively sees the introduction of copper then bronze metallurgy, the former accompanying the appearance of Bell Beaker pottery and associated practices in these areas. Several modes of production are proposed, from individual manufacture by Bell Beaker-using warriors to specialist production for elite use during the Early Bronze Age. Over and above their function as weapons - arguably associated more with interpersonal combat than with hunting -, arrowheads served to portray and emphasise the social status of the individuals. In the case of the Early Bronze Age Armorican arrowheads, they should be regarded as 'sacred' objects, made for display and enhancing the power of the chiefs. Lastly, arrows are placed in the broader perspective of major trends affecting Europe during the Bell Beaker period and then the Early Bronze Age, while the distribution of arrowheads with slanted barbs suggests the operation of an Atlantic cultural complex.

Keywords: arrowhead, flint, stone, Brittany, Armorican Massif, Great-Britain, Denmark, Atlantic Europe, typology, raw materials, technology, experimental archaeology, use-wear analysis.

In 1985, the exhibition '*Symbols of Power at the Time of Stonehenge*' (Clarke *et al.* 1985) gathered together, for the first time, artefacts from graves and hoards from both sides of the Channel and around the North Sea, the so-called 'Northern Mediterranean' (Briard 1987). This exhibition demonstrated that there had been a degree of community of symbols across these regions. Prominent among the featured artefacts were flint arrowheads. The time of Stonehenge corresponds to the Late Neolithic, the Chalcolithic and the Early Bronze Age in Britain. This sanctuary, first used as a burial ground (*inter alia*), was periodically rearranged between *c.* 2600 BC and 1700 BC until it reached the monumental form that we know today (Parker Pearson *et al.* 2007; 2009). The period shortly after the sarsen trilithons were erected saw the appearance, over a large part of Europe, of Bell Beaker pottery and associated practices and then, a few generations later, the introduction of bronze metalworking. The significance of archery equipment and, in particular, of arrowheads has long been recognised, with Childe highlighting its prominence in Bell Beaker contexts as long ago as 1929, and others remarking on Early Bronze Age examples in north-west France (Martin 1900) and southern Britain (Piggott 1938), and on Late Neolithic examples in Denmark (Sarauw 2007a). Each of these regions has a concentration of graves containing arrowheads, often finely shaped, and at first glance this suggests that certain individuals were accorded the same symbolic representation for the afterlife (Fig. 1). Some of these arrowheads – certain exquisite examples of which have only been found in graves – raise the question about their status:

¹ Post-doctoral fellowship, Fondation Fyssen, Archaeological Institute of Archaeology, Academy of Sciences, Letenská 4, 118 01 Praha 1, Czech Republic & UMR 8215 « Trajectoires », Maison de l'Archéologie et de l'Ethnologie, 21, allée de l'Université, 92023 Nanterre cedex, France. Email: clement.nicolas@wanadoo.fr

were they goods made for the funeral (Giot *et al.* 1995, 67), or everyday objects, or objects that had some other special significance over and above their use as grave goods? In order to explore this topic, we have tried to address three main questions: how were these arrowheads made? What were their functions? And what do these arrowheads tell us about Bell Beaker and post-Beaker Early Bronze Age societies? The approach used to answer these questions is an integrated study of arrowhead typology, raw material use, technology and use-wear. This contribution will conclude by reconsidering the place of the arrowheads in exchange networks in Atlantic Europe.

CONTEXTS AND CHRONOLOGY

Many arrowheads have been found from the 19th century onwards, with their rate of discovery varying according to the nature of the fieldwork undertaken: 19th century finds tend to come from antiquarian and other explorations of barrows and megaliths, while 20th and 21st century finds mostly come from rescue or research-orientated excavations, with many being found in graves that have no covering mound. For the current study, a *corpus* of 1375 arrowheads was collated (Appendix). These come from 231 graves (Table 1), but exclude 274 arrowheads from 92 graves in Denmark, since these are mainly from collective burials or single graves which cannot be dated closely within our period of interest (Nicolas 2016). In the following text, alphanumeric references to individual arrowheads relate to entries in the *corpus*.

The find contexts for the arrowheads vary between the three study areas. In north-west France, Bell Beaker funerary practice overwhelmingly featured the re-use of older megalithic monuments (Salanova 2003; Fig. 2). This practice also existed in the Channel Islands (Kinnes & Grant 1983) and occasional examples are also known from southern Britain (as at Sales Lot, Gloucestershire: Smith & Brickley 2009, 139), although none associated with arrowheads (Fig. 3). The re-use of older megalithic monuments is well-known in Denmark (Vandkilde 2007), but it can be hard to determine which arrowheads were deposited in them during the Late Neolithic, and which during the Early Bronze Age, except in case of some recently-excavated sites (see Fabech 1986). In Brittany, a few individual graves are known for the Bell Beaker period. Some of these, covered by round barrows, are clearly precursors of those seen in the Early Bronze Age Armorican Tumulus Culture: this culture is characterised by the spread of the practice of individual interment, either in flat graves or under round barrows (Briard 1984; Nicolas *et al.* 2013; Fig. 2). Some of these Early Bronze Age barrows are large (up to 6 m high and 60 m in diameter), especially those in which flint arrowheads have been found – the so-called ‘princely’ graves (Briard 1991). In southern Britain, the practice of individual interment is the predominant rite during both the Chalcolithic period and the Early Bronze Age, with flat graves (and graves with very small mounds) predominating in the former, and mounded graves in the latter (Case 2004a; Fig. 3). We should note, however, the collective Bell Beaker grave known as the ‘Boscombe Bowmen’ grave in Amesbury, Wiltshire (UK-38). In Denmark, individual graves with arrowheads, generally under barrows, form part of a range of Late Neolithic funerary practices (Sarauw 2007a; Vandkilde 2007; Fig. 4). Finally, we could mention the few double burials that have been found in southern Britain and in Denmark (Monkton Farleigh 2, UK-48; Bredon Hill, UK-53; Allestrup Vest, grave Eh, DK-29); this custom is also attested in Brittany (for example Le Goffic & Peuziat 1991). The mortuary practice in most of these graves had been inhumation, although in southern Britain cremation gained in popularity over the course of the Early Bronze Age. When bones are preserved – and the acid soils of north-west France and Denmark mean that this is a relatively rare occurrence – the body is generally crouched (ie contracted) in Britain and Brittany (Briard 1984; Case 2004a; Shepherd 2012) and placed in

an extended position on its back in Denmark (Vandkilde 2007). The skeletal remains are overwhelmingly those of adult males. The rare exceptions comprise three graves containing the remains of a child (Lord of the Manor 1, grave 6, UK-19; Barrow Hills, grave 5274, UK-31; Solbakkegård IV, grave GP, DK-31) and one containing an adult female skeleton (QEQM Hospital 2, UK-21). However, in the case of the woman it is clear that the arrowhead had not been a grave good, but rather the probable cause of her death, as it was found inside the skull.

Bell Beaker arrowheads are generally part of the Beaker 'set' of grave goods (including Beakers, weapons, ornaments and tools) but these objects are rarely found all together (Salanova 2007; Woodward & Hunter 2015). Arrowheads are a relatively frequent Beaker-associated grave good, being found in between 12% and 20% of graves (Clarke 1970; Nicolas 2016, forthcoming; Woodward & Hunter 2015; Fig. 5.1, 3 and 5). In Danish Late Neolithic contexts, arrowheads are generally associated with flint daggers and very occasionally with stone tools, pottery or amber or bronze ornaments (Sarauw 2007a; Fig. 5.6). In the county of Ribe – which is by no means the richest findspot area in Denmark – up to 13% of Late Neolithic graves have yielded arrowheads (Siemen 2009). In these Bell Beaker and Danish Late Neolithic contexts, the number of arrowheads per individual is generally between one and five, and only rarely more than that; the exceptional Amesbury Archer grave contained 17, plus a triangular point (UK-37; Fig. 6). By contrast, arrowheads are less frequently found in Early Bronze Age graves in north-west France and southern Britain, occurring in fewer than 5% of graves (Briard 1984; Longworth 1984; Nicolas 2016; Woodward & Hunter 2015). However, in Brittany the number of arrowheads found in graves is large – generally over 16, and up to 60 in a single grave (Fig. 6A). In this region, arrowheads are generally associated with abundant and precious grave goods: copper alloy daggers (up to 10 per grave) ornamented with tiny gold nails and housed in fine decorated sheaths, copper alloy axes, objects of gold and silver and some exotic finery and long whetstones (Martin 1900; Briard 1984; Needham 2000a; Nicolas *et al.* 2015a; Fig. 5.2). In southern Britain, Early Bronze Age arrowheads are found in similar numbers to those from Bell Beaker graves (Fig. 6B). They are mainly found together with pottery – Food Vessels, Collared Urns or accessory vessels ('cups') – and, to a lesser extent, with metalwork (namely daggers, an axehead, a chisel and awls), with stone and bone tools, and with a few ornaments (Gerloff 1975; Longworth 1984; Woodward & Hunter 2015; Fig. 5.4). Finally, arrowheads are frequently found scattered in graves but are sometimes grouped in different parts of the grave (perhaps as several sets) or else in a single bundle, suggesting perhaps the possible former presence of a quiver. In the Early Bronze Age graves in Brittany, arrowheads were apparently deposited in wooden boxes made of oak (Briard 1970) and in one case they seem to have been carefully wrapped in fabric and animal skin (Prigent 1881); in other cases, we cannot exclude the possibility that some arrowheads had indeed been deposited in a quiver.

The chronological framework used in this study is based on the main syntheses established for the period 2500–1700 BC (using both absolute and relative chronology) by Laure Salanova in France (2011), by Stuart Needham in Britain (2005; 2012) and by Helle Vandkilde in Denmark (1996; Fig. 7). In Denmark, the Bell Beaker period corresponds mainly to the Late Neolithic I, but a few finds (such as Maritime Beakers) could date to an earlier phase contemporaneous with the late Single Grave Culture (ie the Corded Ware; Sarauw 2007b). For Brittany, the chronology of the Early Bronze Age graves – the so-called Armorican Tumulus graves – has been established by means of seriation of specific artefacts, coupled with the few reliable radiocarbon dates that exist (Needham 2000a; Nicolas 2016). In southern Britain, the currency of Beaker use extended from the Chalcolithic into the beginning of the Early Bronze Age (Needham 2005).

ARROWHEAD DISTRIBUTION, RAW MATERIALS AND SHAPE, FROM BRITTANY TO DENMARK

The arrowheads in this *corpus* are all of the piercing variety except for a single transverse arrowhead (Barrow Hills, Radley, grave 5274, UK-31). All have a concave base or a tang, the latter almost invariably associated with barbs of various lengths. A specific typology has been developed, based on the general morphology of the base (concave vs. tanged, tang shape as pointed, rounded or squared), and of the barbs (pointed, rounded, squared, bevelled or slanted). This typology has been established to account the diversity of arrowheads in the areas of study, with correspondence to previous typologies (Briard & Giot 1956; Kühn 1979; Green 1980; Fig. 8).

North-west France

For north-west France, funerary arrowheads are mainly found in Brittany and follow very specific patterns. On the one hand, most of Bell Beaker arrowheads have been found in the area of Carnac (ie the coastal Morbihan department). This trend reflects both the flourishing of the Bell Beaker culture in this area (Salanova 2000) and the intensity of investigations carried out during the 19th century and the first half of the 20th century. On the other hand, for the Early Bronze Age, the distribution of the ‘Armorican Tumulus’ culture is limited to Lower Brittany (ie the western part of the region, corresponding to the extent of Breton speaking in the 19th century; Fig. 2). Only a few arrowheads have been found in peripheral areas (ie Normandy and the mouth of the Loire). At this time, the Carnac area seems to have been less intensively occupied and no Early Bronze Age arrowheads have been found in any grave there (Nicolas, forthcoming).

North-west France corresponds in large part to the Armorican massif, which lacks primary deposits of flint. There, arrowheads are mostly made of imported raw materials, contrary to the rest of the lithic industries which are made principally of local raw materials (Nicolas *et al.* 2015b). Bell Beaker arrowheads are mainly made from Upper Turonian flint from the Grand-Pressigny area, from probably Lower Turonian flint from the Cher valley, from possibly Santonian flint from Poitou-Charentes and from other exogenous flint of unknown origin. Local raw materials have also been used (namely Eocene sandstone, microquartzite and sea pebble flint). Early Bronze Age ‘Armorican arrowheads’ seem to be overwhelmingly made from Lower Turonian flint from the Cher valley, especially its high quality honey-coloured and translucent variety (Fig. 9.1–2). The few exceptions have been made from Upper Turonian flint from the Grand-Pressigny area, probably Bajocian/Bathonian flint from the Anglin valley, a few other imported raw material of unknown origin, and rock crystal (Nicolas 2016; Nicolas & Guéret 2014).

During the Bell Beaker period, arrowheads with squared barbs and tangs (type 43) predominate (Table 2). Their shape is mainly triangular or subtriangular (with slightly convex edges) and, rarely, triangular with concave edges (ie Eiffel tower shaped) or ogival. Types with a squared tang or squared barbs (types 23, 33, 42 and 45) are rarer and seem to be variations of this main type. One arrowhead combines elements of types 43 and 45 (ie squared tang, one barb squared and the other barb slanted; Fig. 10, 2). Several barbed-and-tanged arrowheads found in collective or individual burials have slanted barbs (Fig. 10. 5–9). These are associated with differently-shaped arrowheads, of ogival or ace-of-spades shape with a pointed tang (Fig. 10.6–8). Their presence in individual graves dated to the Late Bell Beaker

period (FR-37) suggests that this kind of arrowhead is an evolution of the classical Bell Beaker arrowhead with squared barbs and tang (type 43).

Arrowheads with a pointed tang and squared barbs (type 23) are transitional between Bell Beaker and Early Bronze Age arrowheads (Fig. 10.10). They are found in Bell Beaker individual and collective graves. The Lothéa barrow (FR-37), which has yielded grave goods related to both the Bell Beaker period and the Early Bronze Age, contained three arrowheads of type 23. The ten type 23 arrowheads that have been found in north-west France borrow the squared barbs and mostly triangular shape from their Bell Beaker predecessors and prefigure the pointed tang of Early Bronze Age arrowheads (Table 2). Three arrowheads of various types have a pointed tang, one squared barb and one slanted barb (type 23/25). These have been found in one Late Beaker mound in Kermenhir (FR-34; Fig. 10.8) and in the earlier barrows of the Early Bronze Age in Fao-Youen and Kerhué-Bras (FR-20 and FR-21; Fig. 10.12).

During the Early Bronze Age, the so-called ‘Armorican arrowheads’ are the rule (Briard & Giot 1956). These comprise three main types, all with slanted barbs associated with a pointed tang (type 25), or more exceptionally a rounded tang (type 35) or a hollow base (type 15). A further nine subtypes have been defined according to the shape of the arrowhead (triangular, subtriangular, ogival or pointed-horseshoe shape), the length/width ratio and the length of the barbs (Nicolas 2016; Nicolas & Guéret 2014; Table 3). During chronological stage 1, the short and subtriangular arrowheads (Cazin subtype) tend to develop towards short (Kerguévarec and Rumédon subtypes) or medium-length ogival forms (Kernonen subtype). During stage 2, the previous arrowheads evolve towards ogival and elongated points with short barbs (Kervini subtype) or more spectacular long barbs (up to 23 mm; Limbabu & Graeoc subtypes; Fig. 9.1–2). Arrowheads with longer barbs (the Limbabu & Graeoc subtypes) are mainly found in north-western Brittany – the old county of Léon – suggesting the existence here of a local workshop of the finest arrowheads; other local workshops could have supplied the rest of Brittany. During stage 3, the arrowheads are triangular in shape with a tang (Cruguel subtype) or alternatively a concave base (Keruzoret subtype). The subtype Keruzoret could be interpreted as the result of the loss of the tang while knapping, rather than as an intentionally hollow-based form; indeed some examples have a tiny ‘stump’ instead of a true tang (Fig. 10. 23). Two triangular specimens made from sheet copper alloy may be interpreted as being imitations of flint arrowheads (Fig. 10). This loss of know-how that is expressed by the inability to knap a long tang and by making metal copies seems to mark the end of the production of Armorican arrowheads.

Southern Britain

Graves with arrowheads tend to concentrate in southern England, being more scattered in other parts of southern Britain (ie the South-West Peninsula, Kent and East Anglia and Wales). The greater intensity of research in the area around Stonehenge partly accounts for this pattern.

In southern Britain, arrowheads are made of Cretaceous flint, generally brown and translucent, and available locally in most cases (Barber *et al.* 1999; Fig. 9.4–5). When preserved, the cortex is thin and granular, suggesting procurement in chalk-decalcification clays. In Wales, where primary deposits of flint are lacking, a selection of high quality flints seems to have been used, such those used for the fine arrowheads of Breach Farm (UK-60; Fig. 9.3).

Based on Needham's periodization of the British Chalcolithic and Early Bronze Age (2005; 2012), the typochronology of arrowheads in southern Britain shows two general trends (Table 2; Fig. 11). The first involves barbed-and-tanged arrowheads with a squared tang (types 43, 44 and 45), which occur in most of the periods. Within this group, there are chronological patterns: more than half of the examples with squared barbs (type 43) belong to Needham's period 1, whereas those with slanted barbs (type 45) are more common during period 2, and those with bevelled barbs (type 44) are more frequent during period 3. Furthermore, arrowheads of period 1 are generally shorter (up to 30 mm length), with short barbs (up to 7 mm length). The second trend encompasses a wider variety of types, some of which are well dated. Examples with a pointed tang (types 21, 22, 23 and 25) and the rare bifacial triangular points mainly relate to periods 1 and 2. Those with a rounded tang (types 30, 31, 33 and 35) or with slanted barbs (types 25 and 35) are generally found in period 2. Hollow-based (types 11 and 12) and transverse arrowheads are known in periods 3 and 4; but we should bear in mind that transverse arrowheads are also known during the Neolithic (Green 1980, 111–114). Hollow-based arrowheads are scarce in Britain but they are relatively abundant in Ireland, where they are clearly of Beaker introduction and continue to be used during the Early Bronze Age (Woodman *et al.* 2006, 134).

Period 1 arrowheads vary but the differences between types are minor, since the barbs and tang do not always have a highly distinctive shape. However, later arrowheads are more finely shaped. During period 2, arrowheads show the greatest variability among grave goods; this increasing diversity could be related to the 'Fission horizon' defined by Stuart Needham (2005), which is characterised by enhanced diversity in pottery types and in funerary assemblages in general. Compared with arrowheads of the previous period, the examples of periods 3 and 4 are less heterogeneous but are also rarer. Only the appearance of hollow-based arrowheads during periods 2 and 3 enriches this picture somewhat, which is largely dominated by barbed-and-tanged arrowheads (Fig. 11).

Denmark

In Denmark, Late Neolithic graves with arrowheads are mainly located in northern Jutland, especially around the Limfjord and on the Djursland peninsula. This distribution corresponds closely with the regional distribution of the Bell Beaker culture and so these graves could be related to this culture, even if Beakers are only rarely found in graves (Sarauw 2007a; 2007b).

In Denmark, high quality flint is found in abundance in the Cretaceous chalk and Danian limestone in the northern and eastern parts of the country and in the glacial deposits that cover the whole of this area (Högberg & Olausson 2007). The main varieties used for arrowheads are translucent and brown or honey-coloured (Fig. 9. 6–7). Almost no vestige of cortex could be observed, which would have helped to locate the source of these flints. Arrowheads are frequently associated with flint daggers, which are made of similar flint (Apel 2001; Sarauw 2007a) although the flint had been used in a different way. The production of daggers was principally constrained by the size of the available flint nodules, and so one finds the use of variable quality flint, containing coarse inclusions of various sizes. Arrowhead production, by contrast, required only a small amount of flint and arrowheads are mostly made using the best quality nodular flint, knapped so as to avoid the main inclusions.

Only a few typical Bell Beaker arrowheads with squared barbs and a squared tang (type 43) have been found in Denmark. Four come from one grave containing the cremated remains of

a child in Solbakkegård IV (DK-31), where they were associated with a flint dagger, four V-perforated amber buttons and some flints (namely one strike-a-light, one retouched flake, three other flakes and a pebble). The dagger corresponds to the 'Madkniv' type B, one of the oldest types of Danish flint dagger (Nielsen 1974; Sarauw 2007a), possibly a local imitation of the Grand-Pressigny dagger with a squared end (Spahn type; Delcourt-Vlaeminck 2012; Nicolas 2016). This grave, along with some Maritime Bell Beakers, could belong to an early stage of Bell Beaker presence in Denmark, contemporaneous with the late Single Grave Culture (Figs. 7 and 12). A fifth type 43 arrowhead was found in a cist at Juelsberg (DK-59).

Other funerary arrowheads are exclusively hollow-based, and mostly associated with pointed or rounded barbs although the variation in barb shape can be so slight as to make the differentiation seem quite tenuous, even arbitrary (Table 2; Fig. 12). These arrowheads are both heterogeneous and monotonous: indeed, their morphology is highly variable without specific trends being apparent. Torben Sarauw (2007a) has proposed a category of asymmetrical arrowheads, with one barb longer than the other. However, rather than being the product of a specific tradition, such pieces could have been the result of knapping accidents, like those of the Keruzoret subtype in north-west France. The hollow-based arrowheads are mainly subtriangular; rarer forms are triangular with or without curved barbs, ogival, and Eiffel tower-shaped. Some are particularly elongated (with a length/width ratio exceeding 2:5). Barbs are generally quite short (between *c.* 5 and 11 mm), rarely longer (but up to 37.4 mm! Fig. 9.6).

These arrowheads are mainly associated with type I daggers (and most frequently with the exquisite parallel-flaked type IC) and occasionally with type II daggers, so they can be dated to the Late Neolithic I (Lomborg 1973; Apel, 2001; Sarauw 2007a). A few examples, associated with daggers of types IV or V, could belong to the Late Neolithic II. During this period, daggers were less frequently deposited in graves (Fabech 1986) and so it is harder to recognise Late Neolithic II arrowheads, since associated daggers constitute their main dating evidence. No chronological patterns could be observed between Late Neolithic I and II and Bronze Age hollow-based arrowheads (Ebbesen 2004, 126).

TECHNOLOGY

All of the arrowheads in this study had been knapped by bifacial reduction from various flakes, namely flakes of *plein débitage*, cortical flakes and occasionally Kombewa flakes or older patinated flakes. Arrowhead blanks were worked in several ways (according to the orientation of the axis of *débitage*) and give the appearance of having been a selection of flakes of the appropriate size, constituting non-standardized *débitage*. A similar phenomenon has been noted by R. Furestier (2007) in his study of Bell Beaker lithic industries in south-eastern France. For Denmark, Jan Apel (2001, 221) has suggested that flakes resulting from the production of large bifacial artefacts such as daggers could have formed regular blanks fit for knapping arrowheads.

Several graves with arrowheads from southern Britain (Wellington Quarry, UK-15; Aldwinckle, barrow 1, UK-22; Raunds, barrow 1, F 30426, UK-24; Amesbury Archer, UK-37; Breach Farm, UK-60) and southern Jutland (Vorbasse 20a, DK-34; Slavgård, barrow 13, DK-35; Ål, DK-36) have yielded some bifacial pieces, or just roughed out flakes, which could correspond to preforms of arrowheads. Around ten have been found in one grave (Fig. 13). These reflect several stages in the manufacture process, according to the progress of knapping:

- slightly roughed-out blank with short and semi-abrupt retouch, often abraded (only observed in Denmark). This kind of ‘beveling’ of the edge could have been done to reinforce the edges before flaking (Fig. 13.6–10);
- preform flaked by direct percussion or pressure-flaking; such preforms are generally ogival in order to leave sufficient margins for pressure-flaking (Fig. 13.2–5);
- pressure-flaked preform, which has the final form before the barbs and tang or concave base have been knapped (Fig. 13.1).

The fact that preforms in various stages of production have been deposited in graves suggests that they were knapped in different times and/or places. This segmentation of the *chaîne-opératoire* is attested elsewhere, in south-east France, for making Bell Beaker arrowheads (Furestier 2007) and in Denmark for dagger production (Apel 2001).

The extent and combination of retouch, the number of series of retouch (successions of several removals) and the ‘microretouch’ of edges (ie retouch under 2 mm in length, to finish the shape), vary chronologically and geographically and show a continual evolution towards a refinement of the knapping process, with increasingly extensive retouch across the surfaces. Furthermore, several methods are used for knapping the barbs and tang or the hollow base: notching, retouch, or a combination of the two techniques. Finishing is achieved by means of a microretouch (< 2 mm length), which shapes the edges partially (< 50 %), discontinuously (50–80 %) or totally (> 80 %). Factorial correspondence analysis allows us to see certain trends, revealing different technical customs (Fig. 14). Regionally-distinctive styles of arrowhead could be observed for each region during the Early Bronze Age (in southern Britain and north-west France) and the Late Neolithic (in Denmark), but Bell Beaker arrowheads show more cross-regional similarity. Some technical characteristics are ubiquitous, such as the use of covering, transverse parallel-flaked retouch, of multidirectional or herringbone retouch, of one, two or three series of retouch and of discontinuous microretouch of the edges. Other technical characteristics are more specific (without being exclusive or dominant):

- Bell Beaker arrowheads: short or invasive retouch, barbs and tang knapped by notching, partial ‘microretouch’;
- Danish Late Neolithic arrowheads: barbs knapped by retouch (linked with the knapping of a concave base), diagonal parallel-flaked retouch (which occurs occasionally but may be linked with similar retouch on daggers);
- southern British Early Bronze Age arrowheads: herringbone retouch;
- north-west French Early Bronze Age: total ‘microretouch’ (demonstrating great care in the finishing of arrowheads).

Knapping the barbs and tang is certainly the most crucial stage in making arrowheads. It involves effecting two simultaneous breaks in the flint so as to avoid weakening the piece. Each removal requires the use of controlled pressure, sufficient for flaking but directed to avoid plunging. The longer the barbs and tang, the greater is the risk of breaking them in an unfortunate movement. Moreover, the knapping of long barbs and tang requires skilful shaping, using preforms that are both elongated and thin. In north-west France and, to a lesser extent, in southern Britain, the longer the barbs, the thinner the arrowheads (Fig. 15). The advantage of using a thin preform is obvious: the knapper has less thickness to remove with less pressure, and therefore the preform is more manageable and less likely to break. Incidentally, it is no coincidence that all of the knapping accidents (n= 21) that we have observed are plunging removals located on the barbs and tang (excluding more ubiquitous breaks). One can also argue that other knapping accidents (plunging or hinged removals while

shaping, the ‘Siret’ accidental break) were either minor and easily fixed or else too extensive, resulting in the abandonment of the preform. In contrast to the north-west French and southern British arrowheads, Danish arrowheads do not display any similar pattern: here, the longer the barbs, thicker the arrowhead (Fig. 15). Indeed, for making hollow-based arrowheads, the knapper was less constrained and had more free space to retouch the barbs.

Regarding knapping tools, the scale-retouch seen on preforms and on some finished arrowheads will probably have involved the use of soft hammers for the first stage of manufacture. For pressure flaking, both animal bone or antler tools and copper awls could have been used. In Britain, several antler tools known as ‘spatulae’ that have been found associated with arrowheads could have been used as pressure-flakers, especially for knapping the barbs and tang (Olsen, 1989) even if other, more debatable uses have also been proposed (Barclay & Halpin 1999, 236). These ‘spatulae’ are found elsewhere in Europe in Bell Beaker contexts, mostly associated with arrowheads (Matthias 1964; Kamińska & Kulczycka-Leciejewiczowa 1970; Turek 2004). The shorter ‘spatulae’, like the one from the Amesbury Archer grave (UK-37; Fig. 16.3), are closely similar to the pressure-flaker tool, its function demonstrated by use-wear analysis, that is known from Late Neolithic contexts around the Alps (Maigrot 2003, 200). However, the utility of larger ‘spatulae’ (c. 22 cm to 34 cm in length) is more questionable and experimentation is needed to explore their feasibility as knapping tools (Fig. 16.1–2). It is clear that copper awls had been used, as well as those of bone or antler. On north-west French and southern British Early Bronze Age and Danish Late Neolithic arrowheads, the presence of tiny pressure points less than 1 mm in size points towards the very probable use of copper awls (Jacques Pelegrin, pers. comm.). On a few Armorican arrowheads, greyish-green traces attest to their use (Nicolas & Guéret 2014). Furthermore, a few copper awls have been found in graves containing Bell Beaker arrowheads in north-west France (Fig. 16.4–7) and also in Scotland (Henshall & McInnes 1968). One hafted example of a copper awl has been found in Savoy in a grave dated to the late 4th millennium BC associated with, among other items, 34 flint arrowheads and two flint daggers (Rey *et al.* 2010). However, the bronze awls that have been found in British Early Bronze Age burials can hardly be related to the manufacture of arrowheads. They are generally quite long and very thin, and in the few cases where their delicate handle made of bone or wood has survived, this appears to be too fine to be suitable for knapping (see Hoare 1812, pl. XV; Annable & Simpson 1964; Barclay & Halpin 1999, 138). Rarely found with arrowheads (Longworth 1984, 59–60), and usually associated with females (Woodward & Hunter 2015), these bronze awls seem more likely to have been used as piercers (Needham 1999, 192). However, a thicker copper alloy awl has been found together with eight barbed-and-tanged arrowheads, a sandstone tool (hand abrader or whetstone?), flint tools and flakes in pit 1770 of Kingsmead Quarry, Horton, Berkshire (not listed in the Appendix, as not demonstrably a funerary site; Wessex Archaeology 2009, 16). These artefacts, datable to the Early Bronze Age, could correspond to a tool kit of an arrow maker. Experiments carried out by Frédéric Leconte, an amateur knapper, are in agreement with these observations and suggest the use of harder bronze awls for knapping the longer barbs of the Armorican arrowheads (Nicolas 2016). It is quite certain that the long barbs and tang could not have been knapped without the use of metal tools. More generally, the development of barbed-and-tanged arrowheads in Western Europe seems to be linked with the use of copper, which facilitated their production (Nicolas & Vaquer 2015).

HAFTED AND SOMETIMES DEADLY ARROWHEADS

Most arrowheads found in graves were once hafted, as attested by the presence of apparent adhesive residue when preservation conditions are optimal. Black-brown remains have been observed quite frequently where the soil is acid. In Brittany, Early Bronze Age cists that are well sealed and covered by a large cairn or barrow have undoubtedly favoured the preservation of adhesives and of organic material in general (eg wood from the grave chamber and from grave goods and animal skin from dagger sheaths). In these contexts, some 45% of arrowheads show the supposed remains of adhesive. (In contrast, no such case has been documented for Bell Beaker arrowheads). In Denmark, 13% of arrowheads have traces of what had probably been adhesive. In the chalky soils of southern England, no arrowhead has produced such traces, except at Lambourn, barrow 31 (UK-01), but a few possible examples have been noted in two graves in Wales (Breach Farm, UK-60; Gray Hill, UK-63).

The best-preserved traces of adhesive are those of the Armorican arrowheads. During some ancient and more recent excavations, several archaeologists observed the survival of shafts, glue and binding threads (for example Le Pontois 1890). The remains of the shaft bindings have disappeared since the arrows were excavated but the traces of glue have been better preserved. These are visible to the naked eye in the form of brown-black deposits, sometimes associated with a brown film, and can be identified as traces of glue, according to their appearance and distribution (Fig. 17). The surface appearance of these brown-black deposits is generally matte and sometimes greasy (Fig. 17.3). In most cases, this brown-black matter can be observed only sporadically on the surface of the arrowheads. Often, it is well-preserved in small cavities such as those left by hinge fractures (Fig. 17.3). Preliminary analyses using infrared spectroscopy carried out by Maxime Rageot (University of Nizza Sophia Antipolis) has confirmed that the brown-black matter attached to the three arrowheads found in the burial of Prat-ar-Simon-Pella (FR-15) is indeed the remains of glue. The chemical signature matches that of plant tar or resin, perhaps of birch tar (Martine Regert, pers. comm).

In some cases, the brown-black matter covers not only the barbs (Fig. 17.2) but also the entire surface of the arrowhead: the remnants of glue are present close to or on the edges of the arrowheads (Fig. 17.1–2) and sometimes even close to the tip (Fig. 17. 4–5). Traces of glue are occasionally located in the centre of the arrowhead (Fig. 17.4–5) or on a break (Fig. 17.4), the latter suggesting that the break existed prior to the hafting of the arrowhead. A few arrowheads from Denmark and Wales show a similar pattern of extensive adhesive coverage (Fig. 17.6–8). Several examples can also be cited of hollow-based arrowheads of Bell Beaker or Early/Middle Bronze Age date in Central Europe, Denmark and Netherland that have glue covering the entire surface except for a strip 2–3 mm wide at the cutting edge (for example Pernička 1961; Butler 1990). With this kind of hafting, the long barbs of the Armorican arrowheads would have become totally invisible. Under the microscope remnants of glue can be recognised on these arrowheads as thin crackled deposits or as small pellets on the surface. On one such deposit it was possible to observe linear and parallel marks possibly left by a non-braided binding thread (Nicolas 2016; Nicolas & Guéret 2014).

In Brittany and Denmark, parts of the arrowheads have blunt edges. This is rarely visible with a naked eye but can be felt with one's fingertip. These blunt edges are mainly located on the barbs, but sometimes extend up to half way along the sides and are exceptionally found on the tip. This blunt-edged characteristic was observed in the present study on many of the of French Bell Beaker arrowheads (37.2%) and on a quarter of Danish Late Neolithic arrowheads (26.7%), while Southern British finds it was noted on just on two arrowheads, from the Amesbury Archer grave (UK-37; Nicolas 2016). Blunted barbs have also been

noticed occasionally on some Dutch Bell Beaker arrowheads (van Gijn 2010). It is not possible to determine, from macroscopic inspection alone, whether this blunting results from hafting use-wear or from deliberate abrasion. The latter could have served several functions, including preventing the bowstring from being cut as the arrow was shot and facilitating the withdrawal of the arrowhead from the prey (Gassin 1996, 117–118).

Use-wear analysis has been carried out with Colas Guéret (University of Paris 1) on recently excavated Armorican arrowheads. (For further details, see Nicolas 2016; Nicolas & Guéret 2014). This study has shown that these blunt areas are not only located on the edges but also on the arris of the flake scars where they are associated with bright spots (Fig. 18B), which are sometimes even visible to the naked eye. These bright spots are generally located on the barbs and, on rare occasions, extend over the half of the arrowhead. They often have short and wide striations, the latter being parallel and at right angles to the arrowheads' long axis (Fig. 18). To judge from their distribution, these blunt and bright spots result most probably from transversal and repeated movements of the arrowhead in its haft. Equally, with regard to the blunt areas, the absence of a clear orientation, their "smoothness" and their location indicates that they developed progressively, and this would seem to be linked to the binding threads that helped to secure the arrowhead in position. This would imply quite a loose hafting which enabled the piece to move in a sideways manner (to judge from the direction of the striations). It should therefore be concluded that, from a practical point of view, the hafting of these Armorican arrowheads was of poor quality and not destined to ensure efficient shots. The hafting of the Armorican arrowheads thus seems to be symbolic rather than functional and it lasted long enough to produce bright spots and blunt areas. Moreover, this pattern of use-wear, coupled with the presence of glue traces suggest that, once hafted, the long barbs of the Armorican arrowheads were probably not visible.

A few of the studied arrowheads have diagnostic impact fractures, corresponding to step- or hinge-terminating bending fractures (> 2 mm) or spin-off fractures. (For a detailed description of fracture types, see Fischer *et al.* 1984; Gassin 1996). Two such fractures have been found on French Bell Beaker arrowheads (Mané-Roh-en-Tallec, FR-52; Luffang, FR-54), four on British Early Bronze Age arrowheads (Barrow Hills, grave 203, UK-28; Stonehenge Archer, UK-39; Sarn-y-bryn-caled, UK-66) and two on Danish Late Neolithic arrowheads (Østbirk, grave 4, DK-56; Hvingningdal III, grave B, DK-80). The absence of such fractures on Armorican arrowheads (except for undiagnostic features, such as tiny step- or hinge-terminating bending fractures or burination of the tip) is particularly significant given the large number of arrowheads in question (778) and this supports the hypothesis that they had been non-functional display items.

Where skeletons are preserved, as in southern England, it is clear that some arrowheads (impacted or not) had definitely been used to deadly effect. In grave 203 in Barrow Hills, Radley (UK-28), one arrowhead with a clear impact fracture and two broken barbs was located between the vertebrae and ribs (Fig. 19.5). In the ditch of Stonehenge, the so-called 'Stonehenge Archer' was found with four arrowheads between his pelvis and chest, of which one has an impacted fracture and two have snap fractures – the tip of one of them found stuck into one rib. The fourth is represented by only a tiny tip (Fig. 19.1–4). Three further ribs have cut-marks, probably made by arrows shot at short range (Evans *et al.* 1984). These four deadly arrowheads attest to a brutal killing: the 'Stonehenge Archer' was indeed on the wrong side of the bow. Indeed, the findspot context (in the ditch and close to the entrance of Stonehenge) hints that this might even have been a sacrificial killing. The specific position in which the body was lying, largely on its back, is not typical for Bell Beaker burial practices

(Case 2004a). This exceptional case evokes the concept of ‘overkill’, a practice known ethnographically, whereby the use of violence over and above that required to kill a person was carried out in order to achieve the honour and prestige of shooting an enemy, display hatred and enrage the surviving (Keeley 1996; Smith & Brickley 2009, 111). A similar scenario (involving a sacrificial victim) has been proposed for cremated remains found in the middle of the Sarn-y-bryn-caled timber circle (UK-66). Finally, a possibly deadly arrowhead, albeit lacking any impact fracture, has been recovered in the skull of the aforementioned adult female at QEQM Hospital, Margate (UK-21).

Even taking into account the undiagnostic impact fractures, the incidence of evidence for arrowheads in graves having been shot appears to be quite low (< 3%; Nicolas 2016). However, some variables are unknown: on the one hand, impacted arrowheads could have been deposited as grave goods, while on the other, some arrowheads lacking impact fractures could nevertheless have arrived in the grave lodged into human flesh. Overall, however, it appears more likely that funerary arrowheads had almost all been deposited as grave goods, as part of a symbolic representation of the deceased. In Bell Beaker contexts across Europe, studies have noted a similar pattern, with evidence for impact being either absent or very rare (van Gijn 2010; Sosna 2012; Soriano *et al.* 2015).

ARROWS OF HUNTING, WAR AND POWER

Ethnographic examples demonstrate that arrowheads vary greatly according to their use, especially as regards the contrast between hunting animals and killing people, with the latter requiring more complex arrowheads as it is more important to kill a human than an animal (Pétrequin & Pétrequin 1990). The great diversity and complexity of Late Neolithic arrowheads found in and around France could indeed reflect this functional division (Pétrequin & Pétrequin 1990; Fouéré 1994; Saintot 1998; Honegger 2006; Renard 2010). However, there are some arrowheads that do not fit this pattern: these were clearly conceived as display items.

In north-west France, for the Bell Beaker period and the Early Bronze Age, non-funerary arrowheads are more diverse than those found in graves: while the latter are mostly of barbed-and-tanged shape, the former also include transverse, leaf-shaped and hollow-based forms, and also include rougher forms of barbed-and-tanged arrowhead (Nicolas, 2016). The examples found in graves had thus been specially selected. While few arrowheads have been found in domestic contexts, it is clear that arrowhead shape underwent a relatively rapid evolution in this area (Fig. 10). For the Bell Beaker period, there are no differences in the size and quality of knapping between squared barbed-and-tanged arrowheads (type 43) found in funerary and non-funerary contexts (Fig. 20.1). During Early Bronze Age, non-funerary Armorican arrowheads are relatively rare and they are clearly smaller than those found in graves (Fig. 20: 2). The latter are definitely the result of specialised production.

In southern Britain, there is no clear picture of non-funerary arrowheads. There is a great continuity of the same types (but varying in size) through the Chalcolithic period and the Early Bronze Age (Fig. 11). In the case of barbed-and-tanged arrowheads that lack contextual information, it is not easy to date these precisely and reliable domestic contexts are scarce (Allen 2005; Woodward 2008). Therefore, there is limited scope for comparing the size of arrowheads from funerary and non-funerary contexts, even if examples from ‘ceremonial’ sites (graves, enclosures, henges) seem to be fancier than those from non-‘ceremonial’ sites (Devaney 2005). Indeed, some finely-shaped arrowheads (Fig. 9.3–5) do not seem to have any

equivalent outside funerary contexts. However, the few domestic contexts that exist demonstrate that the main types are barbed-and-tanged (including the classical types 43 and 45), but the range also includes some types (namely oblique and leaf-shaped arrowheads) that do not appear in graves but they could be residuals from earlier Neolithic activity (see detailed references in Nicolas, 2016). No certain example of a transverse arrowheads has been identified in Chalcolithic and Early Bronze Age settlements but the few examples known from graves suggest that they may have formed part of the everyday range of forms (for example UK-31).

In Denmark, many Bell Beaker settlements are known (Sarauw 2007b; 2008), and from these contexts come the same kinds of hollow-based arrowhead as are found in contemporary graves (see detailed references in Nicolas 2016). Their dimensions are similar but slightly smaller in settlements than in graves (Fig. 20.3), with the larger arrowheads generally being found in graves (Fig. 9.6–7). A similar pattern has been observed for flint daggers (Sarauw 2006; 2008). In settlements, additional arrowhead types are known, such as transverse arrowheads, triangular points, or points with concave proximal edges. Arrowheads with squared barbs and tang are also known outside burials (Ebbesen 1979).

So, in the three study areas, it appears that specific types of arrowhead were abstracted from the ‘everyday quiver’ for use in graves, or in some cases were subject to a specific production. This raises the question: were people selecting hunting arrows, or those used for interpersonal combat (or a combination of the two) – and/or were some or all of them purely for show? And is it possible to distinguish between these categories on the basis of formal or technological characteristics? As far as identifying hunting arrowheads is concerned, to judge from the ethnographic evidence mentioned above, it may be that the relatively simple types (for example transverse arrowheads and rough barbed-and-tanged examples) had been produced for this purpose. During the Bell Beaker period (and probably also during the Early Bronze Age), wild species are fairly marginal in the faunal spectra of France and Central Europe (Lemerrier 2011; Kysely, 2012). This is not, however, to minimize the social value of hunting in these societies: hunting was primarily a prestigious practice, rather than just a strategy for obtaining food. In the exceptional find from Holloway Lane (London), different parts of one aurochs were deposited together with six fine barbed-and-tanged arrowheads (Cotton *et al.* 2006), indicating a kind of ritualized prestigious hunting. However, some barbed-and-tanged arrowheads have also clearly been used in human combat, as noted above. Piercing points are more frequently found stuck into human bones than transverse arrowheads during the 4th and 3th millennia BC (Dias-Meirinho 2008). It should also be noted that the arrowheads carved on the famous Bell Beaker stelae from the Petit-Chasseur cemetery (Sion, Switzerland; Corboud 2009) are of the piercing type. Finally, some types of barbed-and-tanged arrowhead – those that are rarely found in settlements – give the impression of having been produced for specific purposes and, in the case of the Armorican examples, used as display items. Therefore, it can be hard to assign a definitive function to every type of arrowhead. Furthermore, the fact that some of these types occur only in graves suggests that the primary purpose of depositing arrowheads with certain individuals was to signal social status, the arrowheads acting as ‘object-signs’ and, in some cases, as symbols of power. In this respect, Bell Beaker arrowheads are not only part of a “symbolical hunting equipment”, as argued by Humphrey Case (2004b), but expression of prestige gained during hunting or war and social status, probably hereditary as suggested by children burials with weapons (Turek, 2000), including arrowheads and dagger in the case of the grave GP of Solbakkegård IV (DK-31; Fig. 5.5).

CRAFT SPECIALIZATION AND SOCIAL INEQUALITY

Craft specialization is a difficult issue to address for prehistoric societies, where the only evidence we have for the modes of production comes from finished products, with or without the waste left from their manufacture. Ethnography and history provide us with examples of many ways of production (Costin 1991), both specialised and non-specialised, that are not easily identifiable from the finished products alone. Nevertheless, the quality of knapping and the contexts of production and consumption of arrowheads allow us to envisage several scenarios for their production, from the knapper working to make arrowheads for his own use to the specialized craftworker practising in a workshop.

In Bell Beaker contexts, arrowheads do not show a high level of technical expertise, even though they appear to have been worked significantly better than the rest of the lithic industry (Fouéré 1994; Bailly 2002; Furestier 2007; Nicolas *et al.* 2015b). While arrowheads required a higher degree of skill to manufacture than most other lithic artefacts, the requisite level of skill would have been attainable by a person knapping on an occasional basis. For example, the Amesbury Archer's arrowheads (UK-37) display a low degree of morphological standardization and a low degree of expertise, suggesting that his set of arrowheads could have been made by a non-specialist. Preforms and one antler spatula deposited in the same grave suggest that the Amesbury Archer knapped his own arrowheads. This suggests that during the currency of Bell Beaker use hunters, or rather warriors, maintained their own quiver of arrows and were buried with their own equipment. This pattern does not exclude the possibility that some knappers acquired greater skill than others (Wiessner 1983); in these cases one could speak of 'experts' as defined by Jacques Pelegrin (2007). They could derive a certain prestige from this competence and could exchange some of their arrowheads, but without getting a real benefit in return for their (low) investment. The existence of this kind of skilled knapper could then be a step towards craft organization of arrowhead production. In Bell Beaker contexts, the recurrence of archery equipment in graves and its depiction on the stelae of the Petit-Chasseur cemetery (Sion, Valais, Switzerland; Gallay 1995) suggest the existence of a warrior class displaying itself through 'object-signs' (Bailly 2002; Lemerrier 2011).

In the Danish Late Neolithic, arrowheads show a low degree of standardization – ie great morphological diversity –and highly variable levels of technical expertise, ranging from those that had been produced quickly to others that had been carefully worked. Several contexts of production show that they were firstly roughed out in workshops and then finished in settlements, with mined flint being used in some cases (see detailed references in Nicolas, 2016; Apel 2001). Arrowhead preforms are never found alone and are always accompanied by other bifacially-reduced preforms (for daggers, axeheads and sickles). Arrowheads are generally in the minority in these industries and so they were not the main objective of the production. Moreover, the hypothesis that arrowheads could have been knapped from flakes resulting from the production of larger bifacial objects (Apel 2001) would imply that they were a by-product of this other activity. Arrowhead production in Denmark thus seems to be a secondary craft, with little effort invested owing to the low gain from production. It could have served to provide training for apprentices learning the skill of bifacial knapping. This is not, however, to deny the existence of exceptional examples that had been made by master knappers (Fig. 9.6–7). In the Danish graves, arrowheads are regularly associated with flint daggers, which once again seem to represent the personal equipment of warriors (Sarauw 2007a).

In Brittany, Early Bronze Age Armorican arrowheads appear to be very standardized, comprising sets of homogenous type or even of subtype, and to have required a high level of know-how for their manufacture. Experiments carried out by Frédéric Leconte suggest that several years of daily practice were required to master the production of the finest pieces. Different skill levels observed in individual arrowhead sets, and even on a single arrowhead at different stages of the *chaîne-opératoire*, suggest the involvement of several knappers, with varying degrees of expertise (Nicolas 2016). It is likely that they were organized in workshops, with a minimum of one master and one or several journeymen or apprentices. Such organization is necessary for maintaining a high level of know-how and for transmitting this over generations (Apel 2001; Pelegrin 2002). The limited distribution of these products and the high level of know-how involved in their manufacture suggest that this craftsmanship could not have been developed without the support or the control of an elite. This elite could have facilitated access to raw materials and could have supported craftsmen. In this scenario, Armorican arrowhead knappers could be considered as specialists producing for the elite, working either in a dispersed manner or grouped together under the elite's direct control (Costin 1991). There is little doubt that the Armorican arrowheads, buried in their dozens in monumental and richly equipped graves, were intended for the chiefs in Brittany (Briard 1984). The large number of Armorican arrowheads (up to 60) deposited in each of these graves exceeds the size of arrow sets found in most Neolithic graves. This kind of over-provisioning ('*Überausstattung*') is also frequent in Germany and, to a lesser extent, in Wessex (Hansen 2002). These fancy Armorican points, which were not designed to be shot but to be displayed, definitely count as 'precious objects' as defined by Maurice Godelier (1999). Furthermore, these display items were kept exclusively for chiefly use (no classical Armorican arrowheads having been found outside the graves) and they were not exchanged with Wessex elites, even though Armorican ceramics and copper alloy daggers were found there as grave goods (Needham 2000a). In these respects, Armorican arrowheads could be considered as sacred objects, ie inalienable goods which do not fit into the logic of a gift economy (Godelier 1999). These sacred objects generally have a mythical origin, as items reportedly inherited from distant ancestors or given by divinities. In this respect, Armorican arrowheads, derived from earlier patterns (Fig. 10), could be interpreted as a clear reference to the ancestors and the representation of the Bell Beaker warrior. In some historical contexts when social hierarchy exceeds divisions on the basis of sex, family and clan, these kinds of sacred objects become for the elite a real means of social reproduction and of intercession with the gods (Godelier 1999; Pétrequin *et al.* 2012), which would explain the prominent place of Armorican arrowheads in elite burials.

In southern Britain, the mode of production is less obvious for the Early Bronze Age: sets of arrowheads are smaller, and fewer examples exist than in Brittany. Nevertheless, the remarkable character of some arrowheads suggests a craft specialization similar to that hypothesized for Brittany (Fig. 9.3–5). Without being dominant, arrowheads are part of the prestige goods of the Wessex elites.

CONCLUSION: ARROWHEADS IN ATLANTIC NETWORKS

Between 2500 BC and 1700 BC, arrowheads were definitely 'object-signs' signalling the social status of their owner, whether they were made by that individual himself (as seems to be the case for Bell Beaker-associated arrowheads) or by more or less specialized craftsmen (in post-Beaker contexts). The functional properties of arrowheads play a secondary role to this display of identity: the Armorican arrowheads provide an exaggerated demonstration of

this. Furthermore, arrowheads constitute broader signs of cultural expression and reflect interactions on a large geographic scale, especially in the Atlantic area.

Atlantic exchange networks are well known through a set of items which circulated or were copied over long distances. During the currency of Bell Beaker use, the distribution of maritime Bell Beakers decorated with shell impressions (Drenth & Salanova 2012), copper Palmela points (Harrison 1977; Labaune 2010), domed V-perforated buttons (Barge-Mahieu 1981), gold ornaments (Taylor 1980; Éluère 1982; Hernando Gonzalo 1983; Needham 2011; Nicolas *et al.* 2013) and amber ornaments (du Gardin 1998) attest to contacts stretching from Portugal to Denmark, especially between the Tagus river and the Gulf of Morbihan. During the last quarter of the third millennium, gold lunulae (Taylor 1970) and long arsenical copper daggers (Needham 2000b; Nicolas 2016) attest to the maintenance of these exchange networks. During the early second millennium amber, faience, jet and jet-like ornaments, precious cups, Armorican *vases à anses* and daggers show Atlantic connections within the Channel, the North Sea and the Irish Sea regions (Briard 1984; du Gardin 1996; Sheridan & Shortland 2004; Needham 2000a; 2009). The elite of the Armorican Tumulus culture and its counterpart across the Channel is likely to have been the driving force behind the dynamics of these exchanges, constituting a ‘maritory’, to use Stuart Needham’s term (2009). Lithic industries played a role in these Atlantic networks, and we can see the copying of arrowhead types at the scale of Atlantic Europe and indeed more widely.

Bell Beaker arrowheads in the west

Arrowheads with squared barbs and tang (type 43) have been long recognised to be typical of the users of Bell Beakers. They are found mainly in north-western Europe (Bailly 2014). The genesis of this type has formed part of the debate about the origin of Bell Beaker use, being cited in support of both the ‘Dutch model’ (Lanting & van der Waals 1976) and the ‘Portuguese model’ (Case 2004b). However, type 43 is still unknown in Portugal and is generally scarce in the Iberian Peninsula as a whole. Building on previous work by Maxence Bailly (2014), we have listed 310 arrowheads of type 43 from 141 graves in Europe, avoiding variations of this type (ie types 23, 33, 43, 44 and 45; Nicolas 2016; Fig. 21). These are distributed mostly in north-western Europe and especially along the Atlantic coast. Further non-funerary discoveries complete this distribution in Ireland (O’Kelly 1973), in Galicia (in Zas parish, A Coruña; Prieto Martinez, pers. comm.), in Tuscany (Cocchi Genick 2001), in north-eastern Germany (Schirren 2009), in Norway (Skjølsvold 1977; Østmo 2005) and in Sweden (Montelius 1917). All over Europe, these arrowheads are quite homogeneous in shape and size (Fig. 22.1–10), even if this trend encompasses some variations, as attested in north-west France and southern Britain.

Only a few European regions could claim to be the area of origin of type 43 arrowheads. Britain and Ireland, central Europe, Sardinia and the Iberian peninsula can be ruled out, as the type is too rare in these regions, and/or was clearly introduced from outside. Fifteen findspots in Europe have yielded a total of 22 radiocarbon dates, mainly on human bone (Table 4); two further sites have provided old and unreliable dates determined from charcoal (D-131, HAR-5619). The oldest radiocarbon dates for this type of arrowhead come from graves in and around the Rhine valley, between *c.* 2700 and 2300 cal BC. At first glance, these dates could be taken to indicate an origin in the Rhine area and so to support the ‘Dutch model’ of Bell Beaker origins. However, we have to take in account that in south-west Europe reliable contexts are scarce, since Bell Beaker funerary practice there mainly featured the re-use of older collective graves (Guilaine 2004). In western France, finds from several settlements

suggest the existence of similar arrowheads during the Late Neolithic (c. 2900–2600 cal BC), especially in the Ardenac culture (Roussot-Laroque 1990; Fouéré 1994; Hamon 2006; Burnez 2010; Blanchard & Guyodo 2015). The Ardenac culture is known too for its abundant production of barbed-and-tanged arrowheads (Fouéré 1994). It is probably in this area that we should locate the origin of this type of arrowhead. If one accepts Salanova's argument for the spread of Bell Beaker material culture and practices along the Atlantic façade from Portugal (Salanova 2004), the people involved in its spread could have adopted this type of arrowhead as a result of contact with Ardenac communities, as attested by ceramic evidence (Cormenier 2009). According to this model, versions of the type 43 arrowhead could then have circulated along the Channel and around the North Sea (thereby uniting Britain and Ireland, the Netherlands and Scandinavia); along the Bay of Biscay (towards northern Spain); and also, at quite an early stage, along continental routes, following major and secondary rivers, towards Central Europe and the Mediterranean. This model accommodates the probability that we are not dealing with a one-way movement of a Bell Beaker 'package' from a single centre in Portugal, but rather a syncretic phenomenon, featuring the multi-directional adoption of early Bell Beakers and associated artefacts (Palmela points, domed V-perforated buttons, gold ornaments), across complex networks of contacts (Gallay 2001; Vander Linden 2004; Besse 2015).

Atlantic arrowheads in the Early Bronze Age

In northern Atlantic Europe, knappers from Western France and Britain and Ireland made very specific types of arrowhead featuring slanted barbs, the similarities resulting from gradual convergence or imitation. Slanted barbs are occasionally found in Beaker contexts in north-west France and southern Britain (Fig. 22) but the shape of the Early Bronze Age Armorican arrowheads – with their ogival form, pointed tang and long barbs – has clearly been copied in north-west France, southern Britain and Ireland (Nicolas 2016). In Brittany, arrowheads with slanted barbs are strictly connected to the elite. In Britain and Ireland, they represent just small percentage of all barbed-and-tanged arrowheads (6.5%) but they are more frequent in graves (18.9%), especially those that demonstrably date to the Early Bronze Age (31.7%; after Green 1980). Both in Armorica and in Britain and Ireland, we seem to be dealing with display items.

There are no regionally-exclusive arrowhead types in north-west Europe; there are only general trends. Surprisingly, the main inter-regional difference occurs on the tang, which was designed to be inserted into the shaft and thereby hidden. In Brittany, slanted barbs are mostly associated with pointed tangs (type 25). In Normandy and the Channel Islands, the tang is generally more prominent and rounded (type 35). In southern Britain, the tang is generally squared (type 45). In Scotland, Stephen Green (1980) recognised a Kilmarnock type with slanted barbs associated with a prominent and pointed tang. Hollow-based arrowheads with slanted barbs are known in north-west France, England and Ireland (Ashbee 1958; Villes 1987; Woodman *et al.*, 2006).

Knapping slanted barbs is not straightforward and requires close attention to achieving the desired shape. We know that Early Bronze Age societies in north-western Europe were in regular in contact and so, in theory, there should be a shared knowledge of arrowheads morphology. The fact that arrowheads with slanted barbs were made in each of the regions in question supports such a view. The distribution of these arrowheads, which corresponds to the pattern of Atlantic networks (see above), suggest that it is highly likely that some kind of Atlantic cultural complex was operating, similar to that seen during the Late Bronze Age and

reflected, for example, in the distribution of specific sword pommel types (Coffyn 1985; Brun 1991). Therefore, it could be argued that Early Bronze Age arrowheads express identity at several scales: that of the individual, his social status, his membership of a community, culture or ethnic group, and his integration at a broader level within the broader Atlantic cultural complex. Arrowheads as such are the ‘object-signs’ of men, as confirmed by ethnographic data and more widely by a cross-cultural ‘ideology of blood’, excluding women from weapons that shed blood (Testart 1986). The piercing barbed-and-tanged arrowheads were initially the possession of warriors before becoming symbols of the elite in some areas. The regional variability in tang design may have been one way in which different cultural groups expressed their identity. Finally, the shared use of slanted barbs suggests a way of signalling (inter alia) the affiliation of these societies to the broader Atlantic cultural complex.

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Résumé

Cette article porte sur les pointes de flèches découvertes dans les tombes de la fin du Néolithique (Campaniforme) et de l'âge du Bronze ancien (2500-1700 av. n. è.) dans le nord-ouest de la France, le sud des îles Britanniques et au Danemark. L'objectif est de caractériser les modes de production et les fonctions des flèches en pierre durant une période, qui voit successivement l'introduction de la métallurgie du cuivre puis du bronze. Plusieurs modes de production sont proposées du guerrier renouvelant son carquois au Campaniforme aux artisans fabriquant des biens de prestige destinés à l'élite à l'âge du Bronze ancien. Qu'elle qu'en soit leur fonction d'armes – plutôt associées au combat qu'à la chasse -, les armatures de flèches sont des objets-signes, soulignant le statut des individus. Dans le cas des pointes armoricaines de l'âge du Bronze ancien, elles doivent être considérées comme des objets sacrés, conçus pour l'apparat et légitimant le pouvoir des chefs. Enfin, les flèches sont mises en perspective avec les grands mouvements qui traversent l'Europe au Campaniforme puis au Bronze ancien, où les armatures aux ailerons obliques semblent signer l'appartenance au complexe culturel atlantique.

Mots-clés : pointe de flèche, silex, pierre, Bretagne, Massif armoricain, Grande-Bretagne, Danemark, Europe atlantique, typologie, matières premières, technologie, expérimentation, tracéologie.

	Single grave	Double grave	Collective burial	Total
NW FRANCE	39 (792)	-	38 (84)	77 (876)
Bell Beaker	2 (4)	-	34 (76)	36 (80)
Bell Beaker/Early Bronze Age	3 (10)	-	4 (8)	7 (18)
Early Bronze Age, stage 1	11 (334)	-	-	11 (334)
Early Bronze Age, stage 2	17 (405)	-	-	17 (405)
Early Bronze Age, stage 3	5 (38)	-	-	5 (38)
Early Bronze Age unspecified	1 (1)	-	-	1 (1)
S BRITAIN	58 (193)	3 (14)	5 (11)	66 (218)
Period 1	10 (52)	1 (4)	3 (4)	14 (60)
Period 1/2	3 (15)	-	-	3 (15)
Period 2	14 (46)	1 (4)	-	15 (50)
Period 2/3	8 (24)	1 (6)	-	9 (30)
Period 3	4 (17)	-	-	4 (17)
Period 3/4	4 (4)	-	-	4 (4)
Period 4	3 (8)	-	-	3 (8)
Period unspecified	12 (27)	-	2 (7)	14 (34)
DENMARK	84 (265)	1 (5)	3 (11)	88 (281)
Early Bell Beaker ?	1 (4)	-	2 (2)	3 (6)
Late Neolithic I	76 (247)	1 (5)	1 (9)	78 (261)
Late Neolithic II	4 (5)	-	-	4 (5)
Late Neolithic unspecified	3 (9)	-	-	3 (9)

Table 1. Inventory of graves with arrowheads by place and period. Number of arrowheads is given in brackets after number of graves.

Type	11	12	13	14	15	21	22	23	25	30	31	33	34	35	40	41	42	43	44	45	M	Uns.	Unk.	TP	T
NW FRANCE																									
BB								7	1			2					1	49		1	6	13			
BB/EBA								3	1			1						5				1	7		
EBA 1									252					9						5	3	30	35		
EBA 2									223					1							1	78	102		
EBA 3					8				10													5	15		
EBA uns.																							1		
S BRITAIN																									
Per. 1						1	1	6							2	3		34	2	1	8	1			1
Per. 1/2						1					3					2		5	1		2	1			
Per. 2						1			2	1	2	2		6		7		8	1	9	5	5			1
Per. 2/3	1							1									1	13	3	5	3	1	2		
Per. 3																		4	8	3		1	1		
Per. 3/4																			1	1		1			1
Per. 4		1																		4	2	1			
Per. uns.					1	1						3	1			2		5	2	8	4	6	1		
DENMARK																									
BB			1															4				1			
LN I	116	89		3	1																2	31	19		
LN II	2	3																							
LN uns.	4	4																				1			

Table 2. Inventory of types of arrowheads by place and period

BB: Bell Beaker; EBA: Early Bronze Age; Per.: Period; LN: Late Neolithic; M: Mixed type; Uns: Unspecified type; Unk: Unknown type; TP: Triangular point; T: Transverse arrowhead

Type	Subtype	Tang	Form	Ratio length/width	Length of the barbs	Total number
15	Keruzoret	No	triangular	23	-	8
25	Cruguel	pointed	Eiffel tower shape to triangular	1.5–3	-	10
	Cazin	pointed	subtriangular	1–2	< 12 mm	23
	Kerguévarec	pointed	ogival	1–1.49	< 12 mm	94
	Kernonen	pointed	ogival	1.5–1.99	< 12 mm	192
	Kervini	pointed	ogival	2– 3	< 12 mm	82
	Limbabu	pointed	ogival	3– 3.5	≥ 12 mm	82
	Graeoc	pointed	pointed horseshoe shape	2–3	≥ 12 mm	3
35	Rumédon	rounded	subtriangular to ogival	–1–2	< 12 mm	10
					Total	504

Table 3. Description and inventory of subtypes of Armorican arrowheads in north-west France

Site	Sample	Date BP	cal BC 95.4%	Lab. no.	References
Wijkhuis, Kruishoutem, Belgium	charcoal	4036 ± 189	3090-2029	D-131	de Laet & Rogge 1972
Amesbury Archer, Amesbury England	human bone	3895 ± 32	2471-2290	OxA-13541	UK-38
Barrow Hills, Barrow 4a, Radley, England	human bone	3880 ± 90	2581-2043	OxA-4356	UK-32
Barrow Hills, Grave 4660, Radley, England	human bone	3650 ± 50	2192-1894	BM-2704	UK-30
Cowleaze, Cremation 1, Winterbourne Steepleton, England	charcoal	4080 ± 140	3008-2205	HAR-5619	UK-09
Fordington Farm, Grave 61, Dorchester, England	human bone	3844 ± 30	2457-2204	UB-3306	UK-07
QEQM Hospital 1, Margate, England	human bone	3852 ± 33	2460-2206	Wk-18733	UK-20
Stonehenge Archer, Amesbury, England	human bone	3715 ± 70	2338-1913	BM-1582	UK-39
	human bone	3775 ± 55	2451-2030	OxA-5046	
	human bone	3785 ± 70	2458-2034	OxA-5044	
	human bone	3825 ± 60	2468-2063	OxA-5045	
	human bone	3960 ± 60	2828-2235	OxA-4886	
Thomas Hardye School, Grave 1643, Dorchester, England	human bone	3856 ± 30	2460-2208	NZA-23745	UK-08
La Gravière Peer II, Riom, France	human bone	3830 ± 55	2464-2141	Ly-7681	Loison 2003
La Sente, Grave 2788, Mondelange, France	?	3925 ± 40	2565-2291	GrN-32101	Lefebvre 2010
Les Villas d'Aurèle, Grave 69, Sierentz, France	human bone	3925 ± 30	2489-2299	Poz-41228	Vergnaud 2013
	human bone	3935 ± 35	2565-2299	Poz-41229	
ZAC de la Fontaine des Saints, Grave 2105, Tréméry, France	human bone	4020 ± 50	2855-2409	GrN-25476	Brunet 2012
Angelslo, Emmen, Netherland	cremated bone	3925 ± 40	2565-2291	GrA-27937	Lanting 2008
	cremated bone	3940 ± 50	2573-2291	GrA-13614	
Dornoch Nursery, Dornoch, Scotland	cremated bone	3850 ± 50 BP	2468-2151	GrA-26515	Ashmore 1989
Tavelty Farm, Kintore, Scotland	human bone	3710 ± 70	2334-1903	GU-2169	Ralston 1996
Perro-Alto, Fuente- Olmedo, Spain	human bone	3620 ± 50	2140-1829	CSIC-483	Garrido-Pena 2000
	human bone	3730 ± 65	2340-1943	OxA-2907	

Table 4. Inventory of radiocarbon dates for squared barbed-and-tanged arrowheads (type 43) in Bell Beaker graves

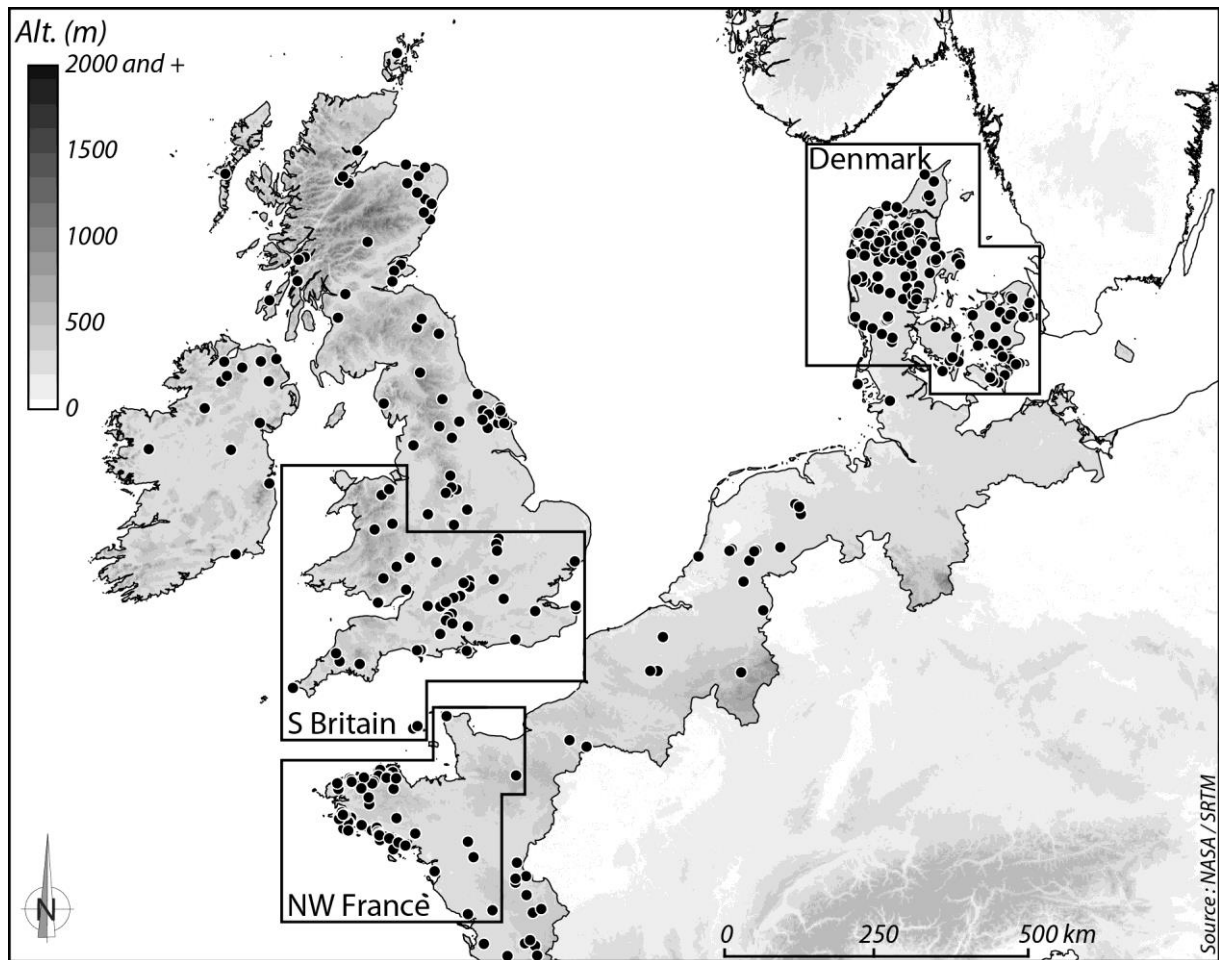


Fig. 1. Distribution map of graves with arrowheads dating to between 2500 BC and 1700 BC along the Channel and around the North Sea, showing the three main concentrations presented in this article (after Nicolas 2009; 2015)

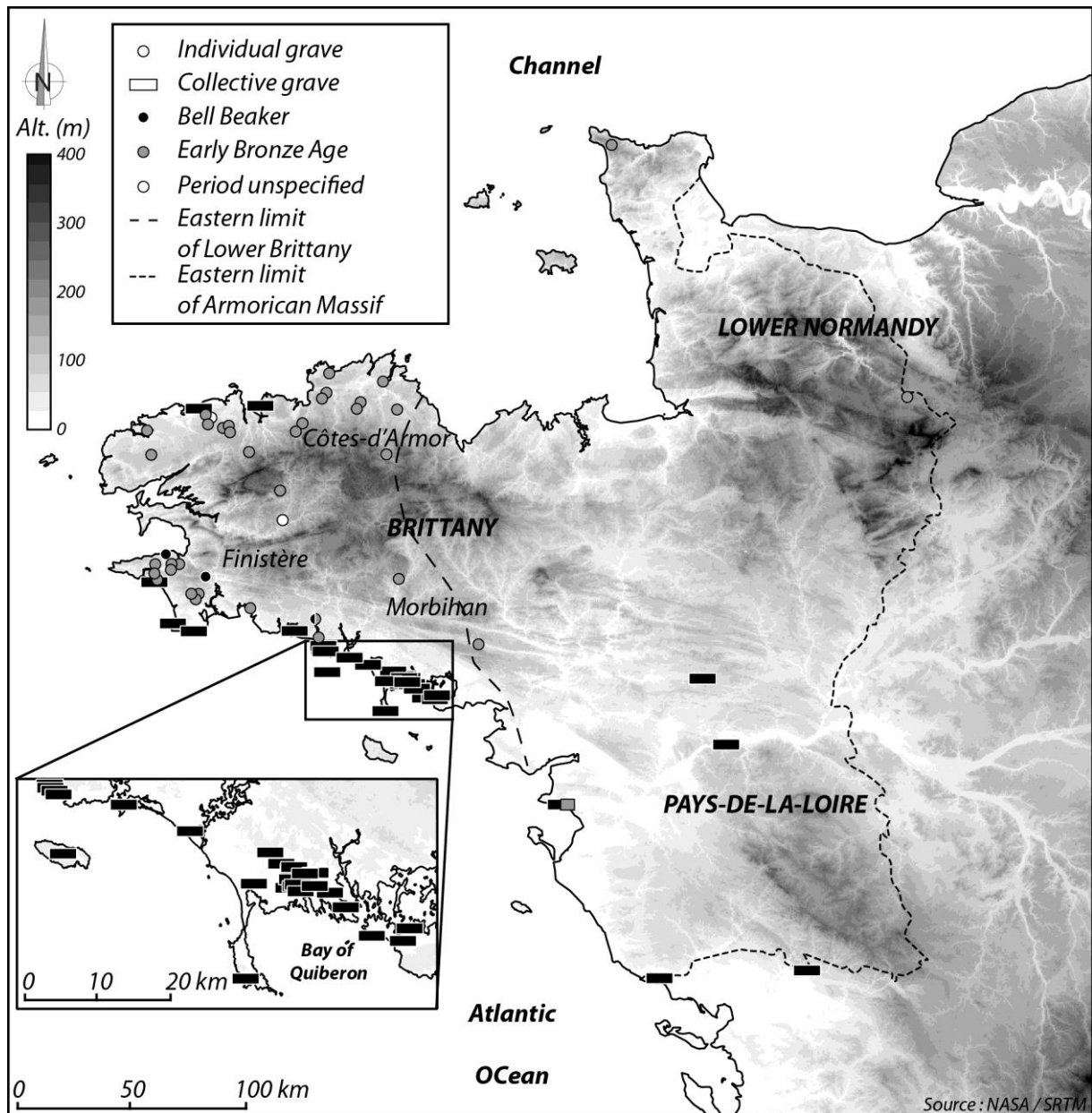


Fig. 2. Distribution map of graves with arrowheads dating to between 2500 BC and 1700 BC in north-west France.

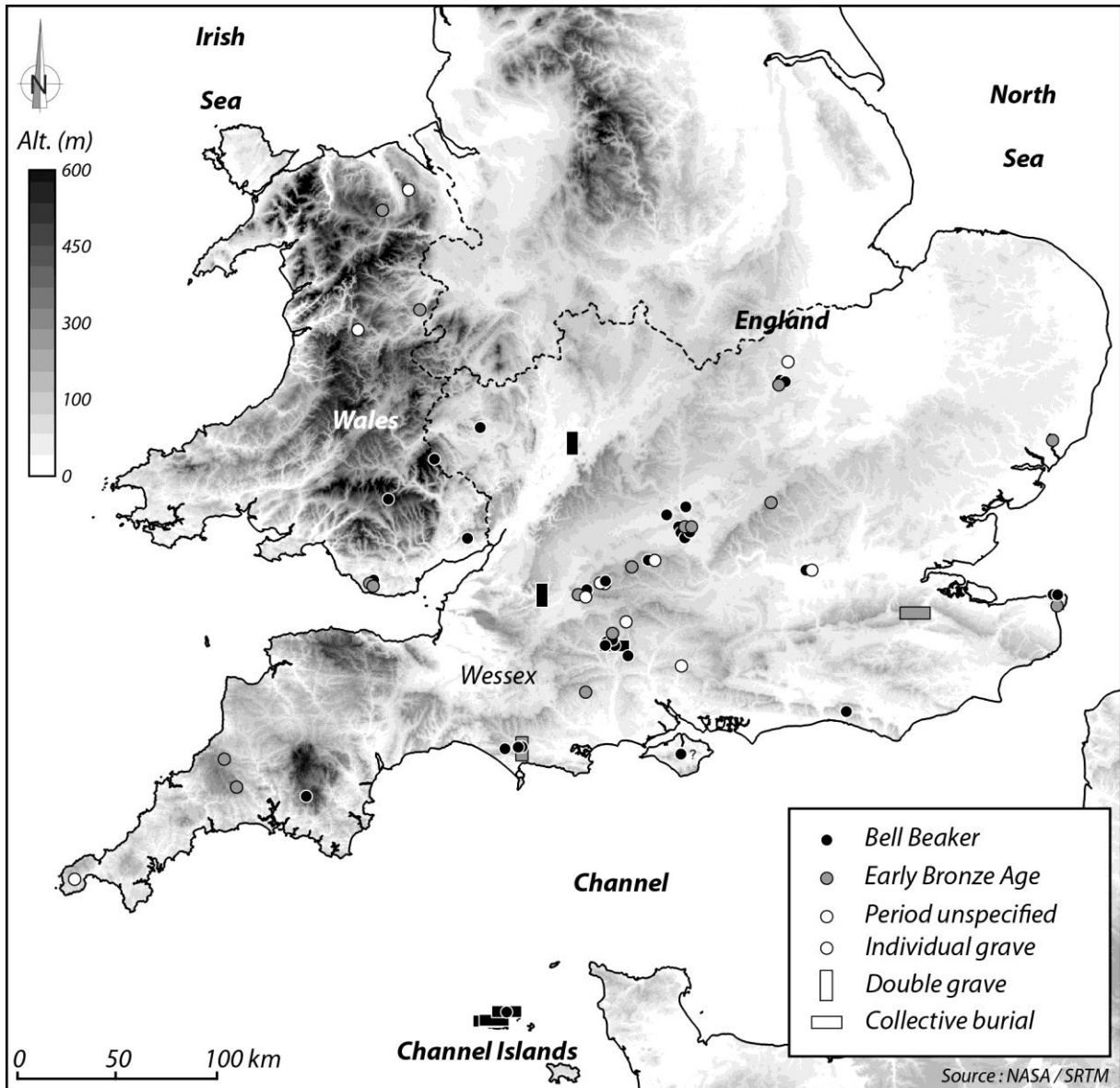


Fig. 3. Distribution map of graves with arrowheads dating to between 2500 BC and 1700 BC in southern Britain.

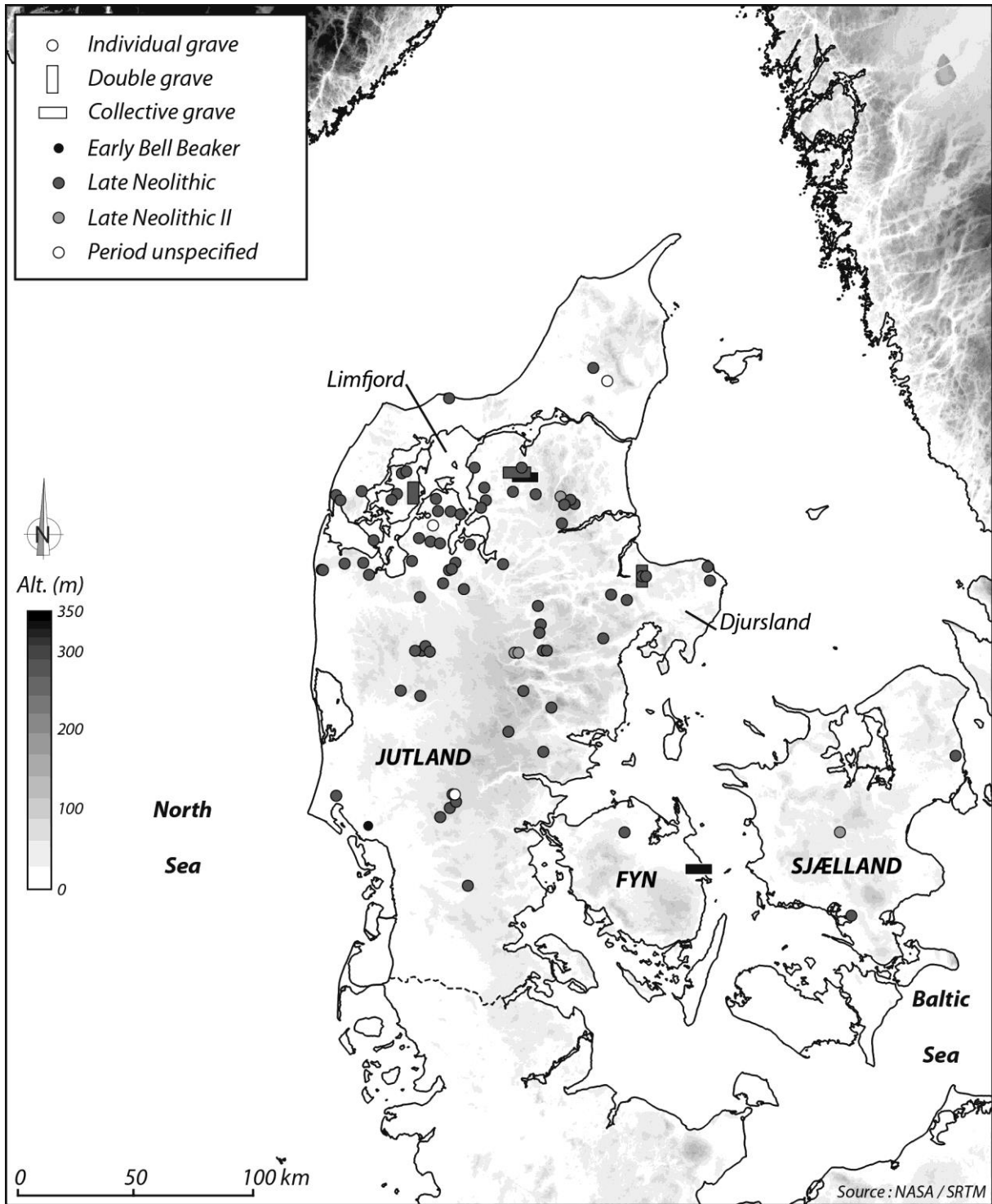


Fig. 4. Distribution map of graves with arrowheads dating to between 2500 BC and 1700 BC in Denmark.

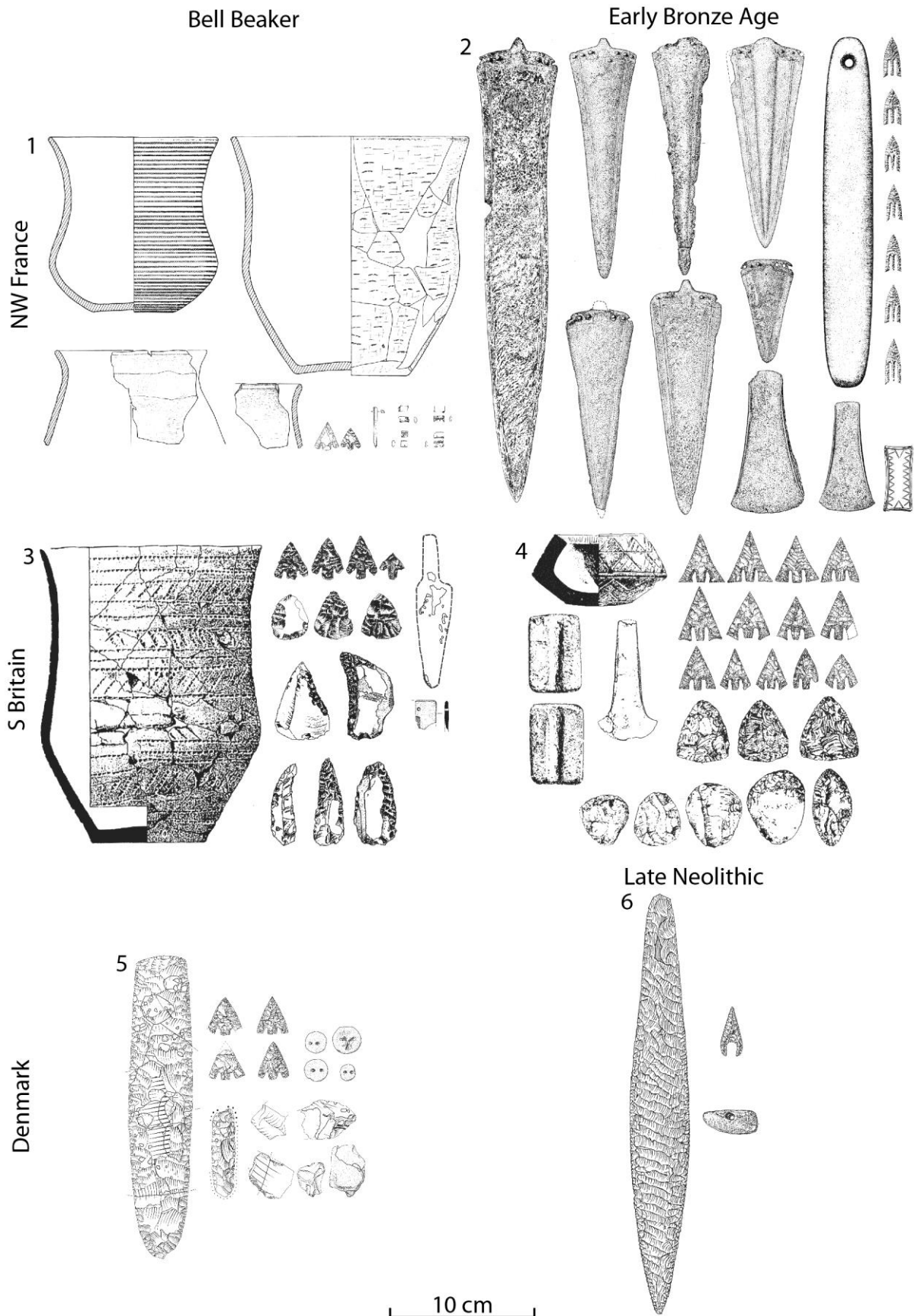


Fig. 5. Examples of grave goods associated with arrowheads from Bell Beaker, post-Beaker Early Bronze Age and Danish Late Neolithic contexts the study areas.

1 & 2. Scale 2:3. 1. Low-Carinated and undecorated Bell Beakers, flint arrowhead, arsenical copper awl and gold-sheet ornaments from Neolithic megalithic grave with lateral entrance in Goërem, Gâvres, Morbihan, Brittany (FR-56). 2. Copper alloy Armorican daggers and low-flanged axeheads, large slate whetstone, flint arrowheads and sheet-gold bracer-ornament from La Motta barrow, Lannion, Côtes-d'Armor, Brittany (FR-01). 3. Low-Carinated Bell Beaker, flint arrowheads and preforms, flint tools, copper dagger and fragment of shale wristguard from Wellington Quarry flat grave, Marden, Herefordshire (UK-15). 4. Accessory vessel (cup), copper alloy low flanged axehead, sandstone arrowshaft smoother, flint arrowheads, flint bifacial points (preforms ?), flint tools (scrapers and knife) from Breach Farm barrow, Llanbleddian, Vale of Glamorgan, Wales; note dagger and chisel not shown (UK-60). 5. Flint dagger ('Madkniv'), flint arrowheads, strike-a-light, flakes & pebble and amber V-perforated button from pit containing cremated remains in Solbakkegård IV, Grave GP, Bryndum, Ribe (DK-31). 6. Flint dagger (type IC), flint arrowhead and amber bead from Odby barrow, Grave A, Odby, Struer (DK-66). (No. 1, after L'Helgouac'h 1970, No. 2, after Butler & Waterbolk 1974, No. 3, after Harrison *et al.* 1999, No. 4, after Grimes 1938, No. 5, drawings C. Nicolas, No. 6, after Ebbesen 1995)

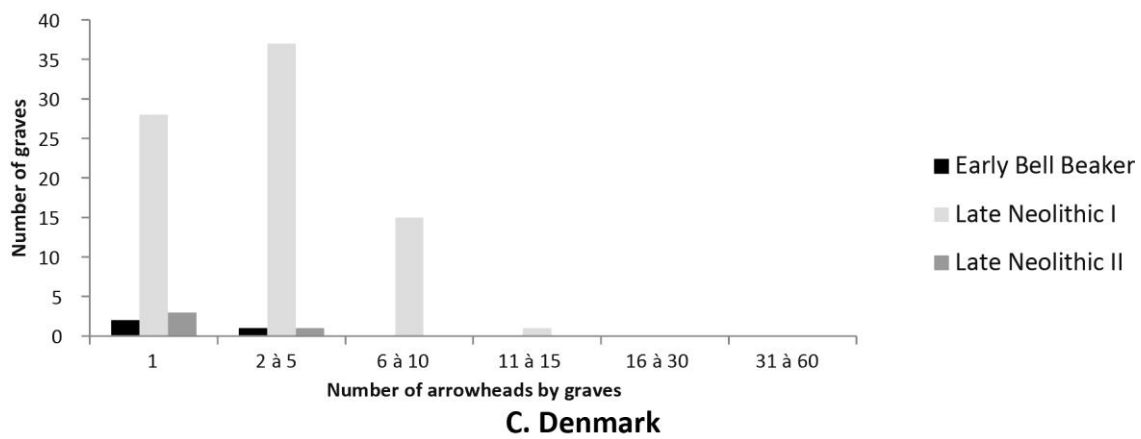
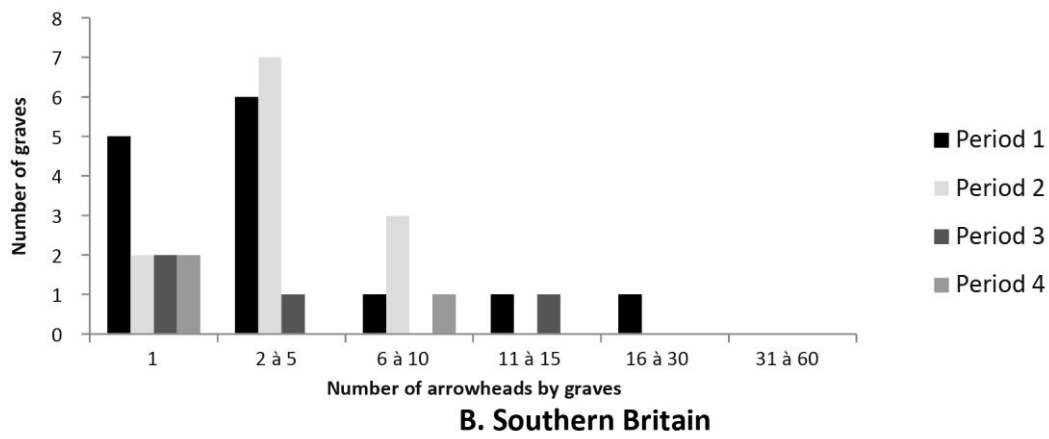
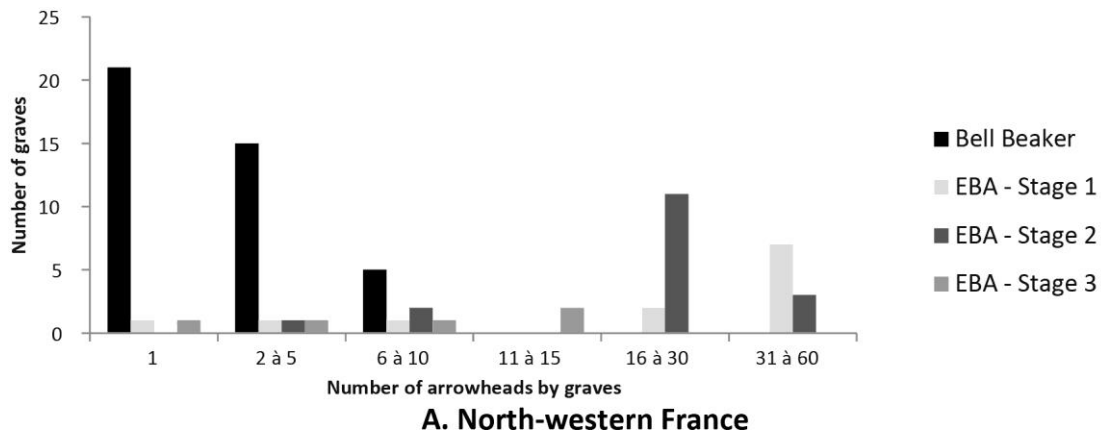


Fig. 6. Number of arrowheads in the graves in north-west France, southern Britain and Denmark.

	NW FRANCE <i>(Salanova 2011; Nicolas 2013)</i>	S BRITAIN <i>(Needham 2005 & 2012)</i>	DENMARK <i>(Vandkilde 1996)</i>
cal BC			
1500	Middle Bronze Age	Period 5	
		Period 4 <i>(Collared urn, Aldbourne cup, Wessex biconical urn, Trevisler urn)</i>	Bronze I
1700	Early Bronze Age <i>(Stage 4 ?)</i>		
	Early Bronze Age <i>(Stages 2 & 3)</i>	Period 3 <i>(Beaker, Food Vessel, Collared urn, Grape cup)</i>	Late Neolithic II
1900			
	Early Bronze Age <i>(Stage 1)</i>	Period 2 <i>(Bell Beaker, Beaker, Food vessel)</i>	Late Neolithic II <i>(Bell Beaker)</i>
2100			
	Bell Beaker <i>(Stages 1 & 2)</i>	Period 1 <i>(Bell Beaker)</i>	Early Bell Beaker ?
2300			
	Late Neolithic <i>(Conguel)</i>	Late Neolithic <i>(Grooved Ware)</i>	Single Grave culture <i>(Corded Ware)</i>
2500			
2700			

Fig. 7. Chronological framework.

Tang \ Barbs	1 Concave basis	2 Pointed	3 Rounded	4 Squared
0 Without barbs	N/A	Type 20	Type 30 <i>= Green's Sutton A type (a to c)</i>	Type 40 <i>= Green's Sutton A type (d to f)</i>
1 Pointed	Type 11 <i>= Kühn's types 6a, 7b & 8 to 10</i>	Type 21 <i>= Green's Sutton B type (i) & Kilmarnock type (m)</i>	Type 31	Type 41 <i>= Green's Sutton B type (h & j) & Sutton C type (l & n)</i>
2 Rounded	Type 12	Type 22	Type 32	Type 42
3 Squared	Type 13 <i>= Kühn's type 7a</i>	Type 23	Type 33 <i>= Green's Sutton B type (k)</i>	Type 43 <i>= Green's Conygar Hill type = Kühn's type 5a</i>
4 Bevelled	Type 14	Type 24	Type 34	Type 44
5 Slanted	Type 15	Type 25 <i>= Green's Kilmarnock type (k) = Briard's Armorican type</i>	Type 35	Type 45 <i>= Green's Green Low type</i>

Fig. 8. Schematic representation of types of barbed-and-tanged and hollow-based arrowheads

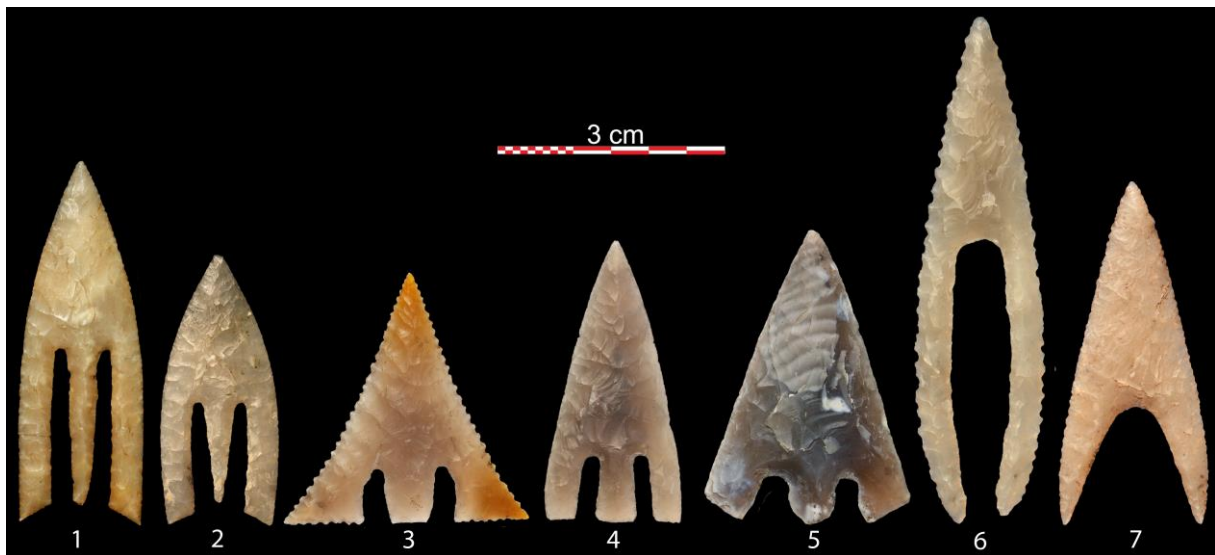


Fig. 9. Some of the most exquisite arrowheads in north-west France (1-2), southern Britain (3-5) and Denmark (6-7).

1. La Motta (FR-01). 2. Graeoc 2 (FR-39). 3. Breach Farm (UK-60). 4. Conygar Hill (UK-06). 5. Snail Down (UK-45). 6. Vust (DK-69). 7. Kjeldsminde (DK-25). (photos C. Nicolas)

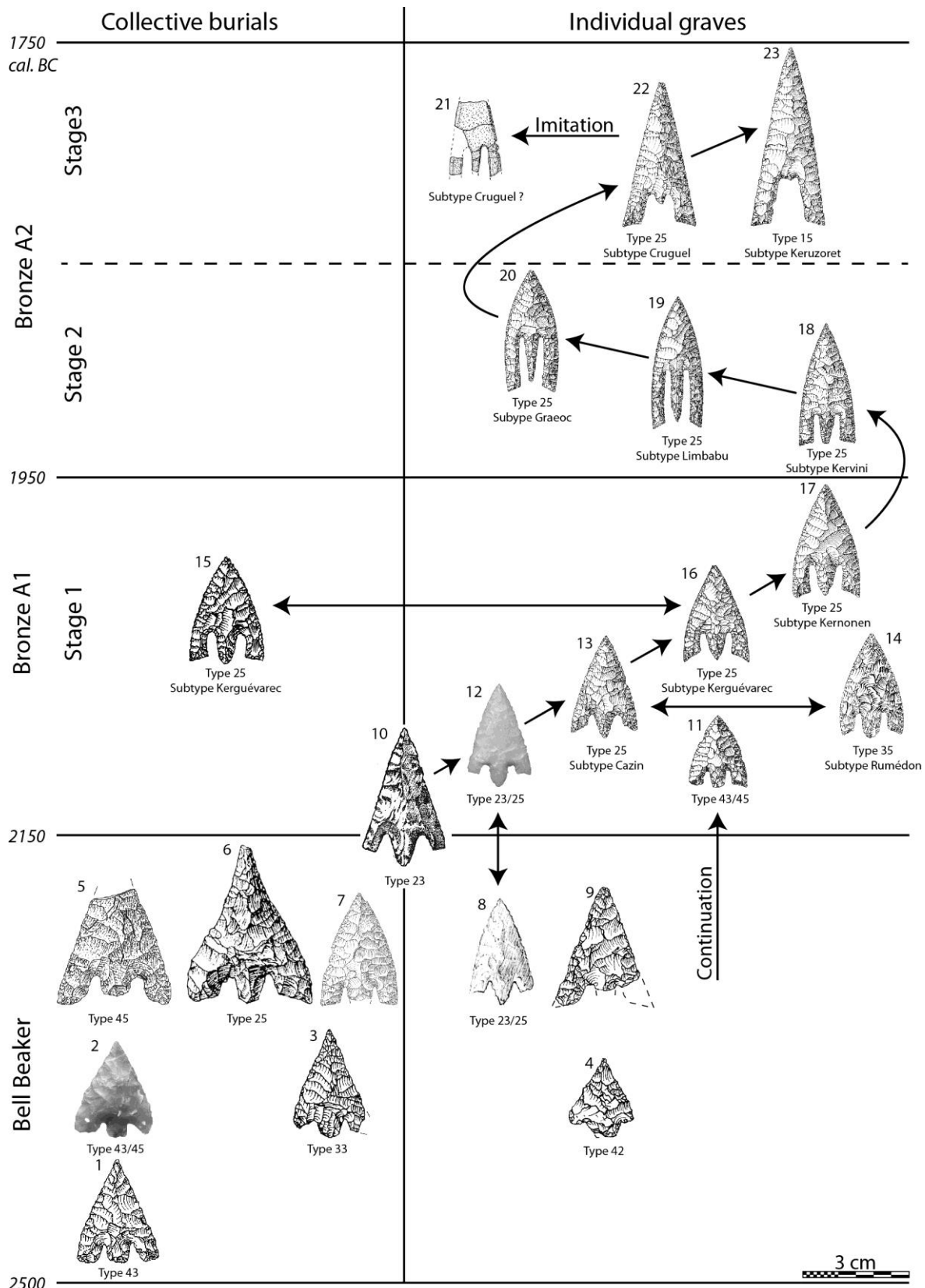


Fig. 10. Interpretative scheme of the typological evolution of Bell Beaker and Early Bronze arrowheads in north-west France.

1. Kercadoret (FR-62). 2. Kernic (FR-22). 3. Kerlagat (FR-49). 4 & 9. Coatjou-Glas (FR-18). 5. Le Run (FR-40). 6. Er-Roh / Kermarker (FR-59). 7. Barnenez (FR-32). 8. Kermenhir (FR-34). 10. Lothéa (FR-37). 11 & 13. Cazin (FR-26). 12. Fao-Youen (FR-20). 14. Rumédon (FR-

04). 16 & 17. Kerguévarec (FR-31). 18. Crec'h-Perros (FR-02). 19. Limbabu (FR-38). 20. Graeoc 2 (FR-39). 21. Saint-Fiacre (FR-64). 22 & 23. Keruzoret (FR-29). (Nos 1, 3–5, 7, 9, 11, 13 & 15–23, drawings C. Nicolas, Nos 2 & 12, photos C. Nicolas, No. 6, after Le Rouzic 1934, No. 8, after du Chatellier, departemental archives, Quimper, No. 10, after Bertrand 1891, No. 14, after Briard *et al.* 1982)

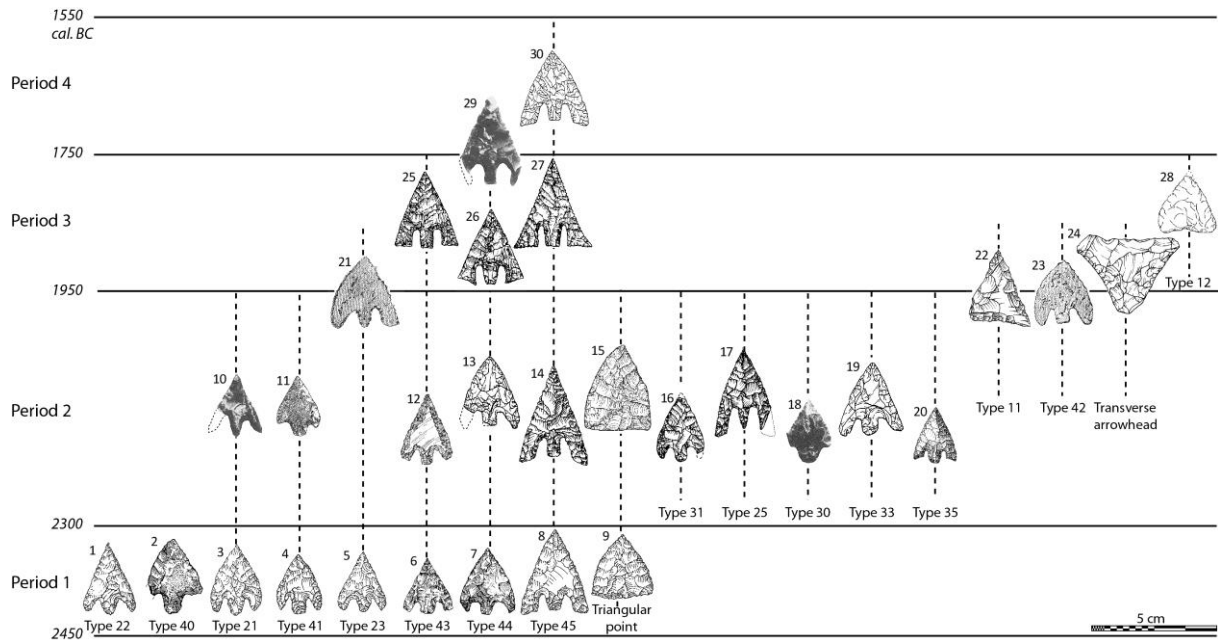


Fig. 11. Typochronology of Chalcolithic and Early Bronze arrowheads in southern Britain.

1, 3–5 & 8–9. Amesbury Archer (UK-37). 2 & 7. Stanton Harcourt (UK-34). 6. Mucking 137 (UK-11). 10 & 18. Sutton 268, Inhumation 1 (UK-62). 11. Plym Valley (UK-05). 120 Raunds, Barrow 5, F 47179 (UK-25). 13 & 19. Barrow Hills, Grave 4660 (UK-30). 14. Lambourn, Barrow 31 (UK-01). 15. Raunds, Barrow 1, F 30476 (UK=24). 16. StonehengeArcher (UK-39). 17. Nodgham (UK-17). 20. Les Fouaillages (UK-56). 21 & 23. Tring 30 (UK-16). 22. Durrington G67 (UK-46). 24. Barrow Hills, Grave 5274 (UK-31). 25–27. Breach Farm (UK-60). 28. Wanborough I (UK-49). 29. Sutton 268, Cremation C (UK-61). 30. Barrow Hills, Grave 203 (UK-28). (Nos 1, 3–5, 8 & 9, after Fitzpatrick 2011, Nos 2 & 7, after Grimes 1944, No. 6, Mucking after Jones & Jones 1975, Nos 10, 18 & 29, after Fox 1943, No. 11, after Worth 1900, Nos 12 & 15, after Harding & Healy 2011, Nos 13, 19, 24 & 30, after Barclay & Halpin 1999, Nos 14, 17, 20 & 22, drawing C. Nicolas, Nos 21 & 23, after Anonym 1787, Nos 25-27, after Grimes 1938, No. 28, after Smith 1927)

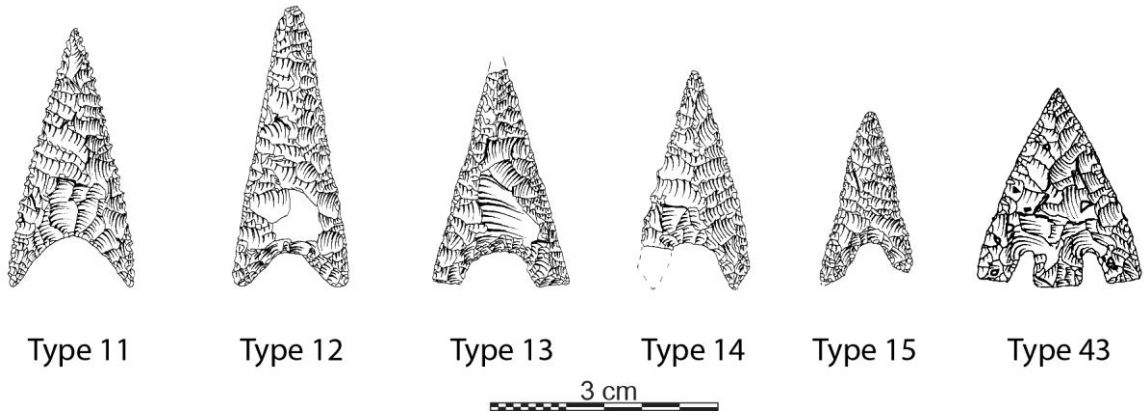


Fig. 12. Typology of Bell Beaker and Late Neolithic arrowheads in Denmark. (Drawing C. Nicolas).

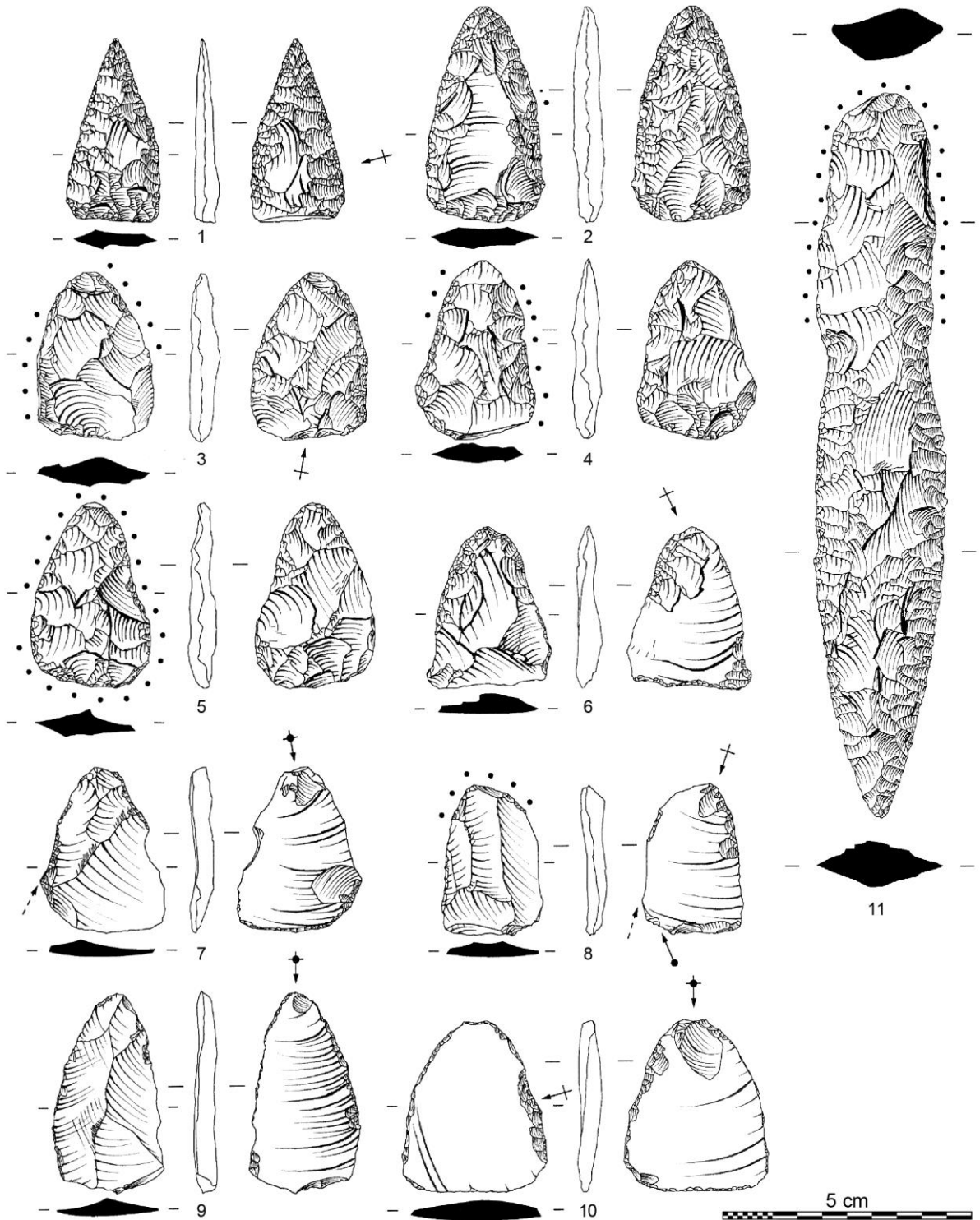


Fig. 13. Grave goods from the Late Neolithic I grave of Ål (Vester Horne, Ribe; DK-36), probably illustrating the different stages of arrowhead production. 1. Pressure-flaked preform with final shape (stage 3). 2–5. Ogival preform flaked by direct percussion or pressure (stage 2). 6–10. Slightly roughed-out blank (stage 1). 11. Associated flint dagger (type I-A/B).. (Drawings C. Nicolas).

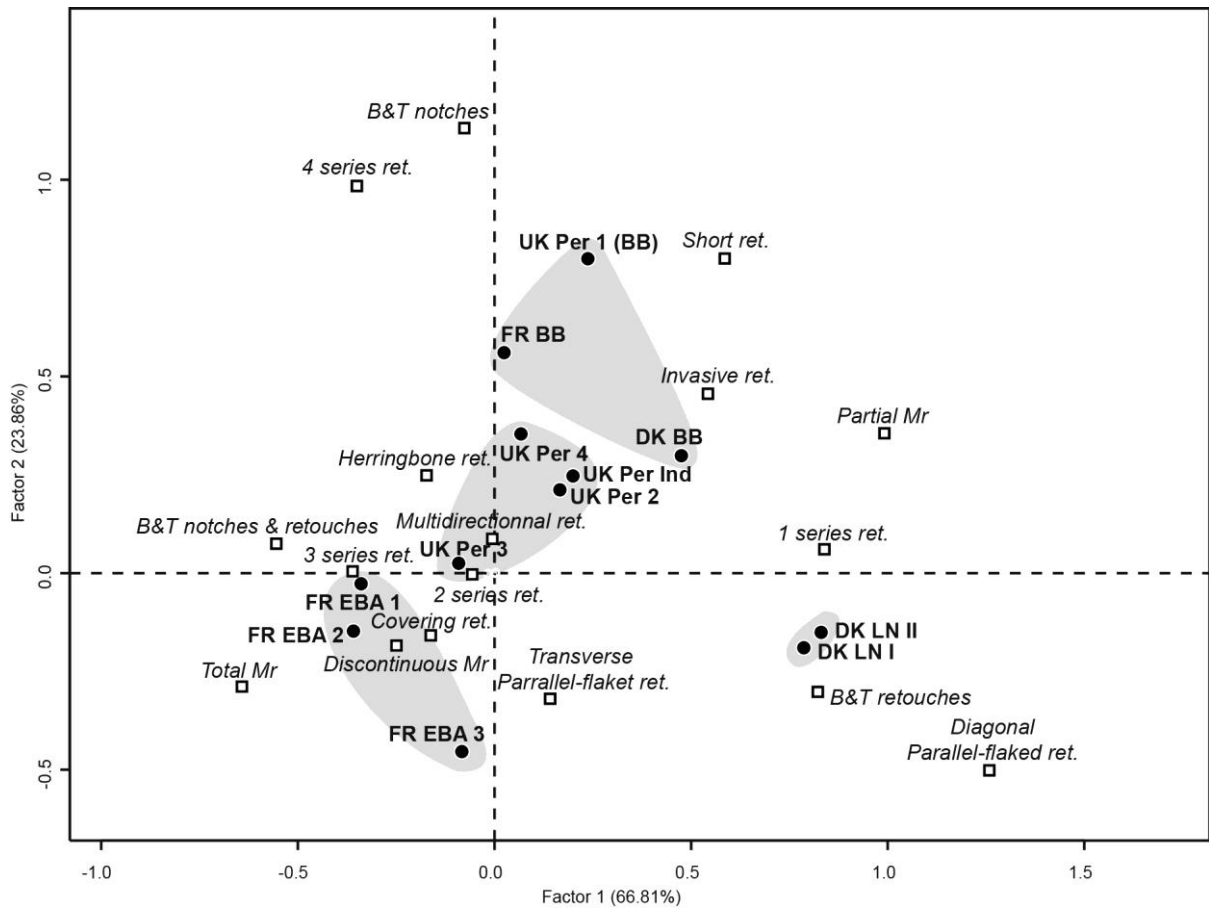


Fig. 14. Factorial correspondence analysis of methods of retouch according to time and place. Abbreviations: BB: Bell Beaker. EBA: Early Bronze Age. LN: Late Neolithic. Per: Period. B&T: Barbed-and-tanged. Ret.: Retouch. Mr.: Microretouch.

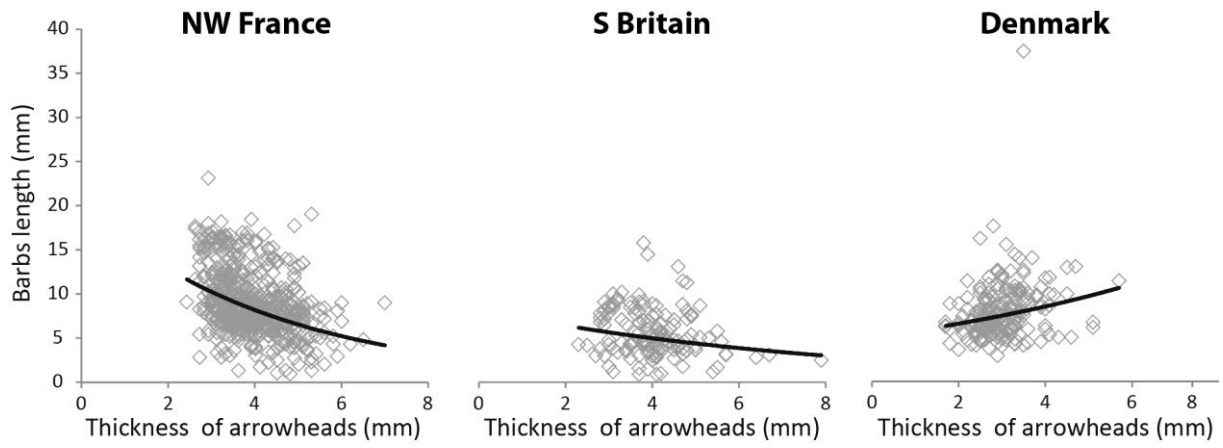


Fig. 15. Diagrams of barblength and thickness on arrowheads found in north-west France, southern Britain and Denmark.

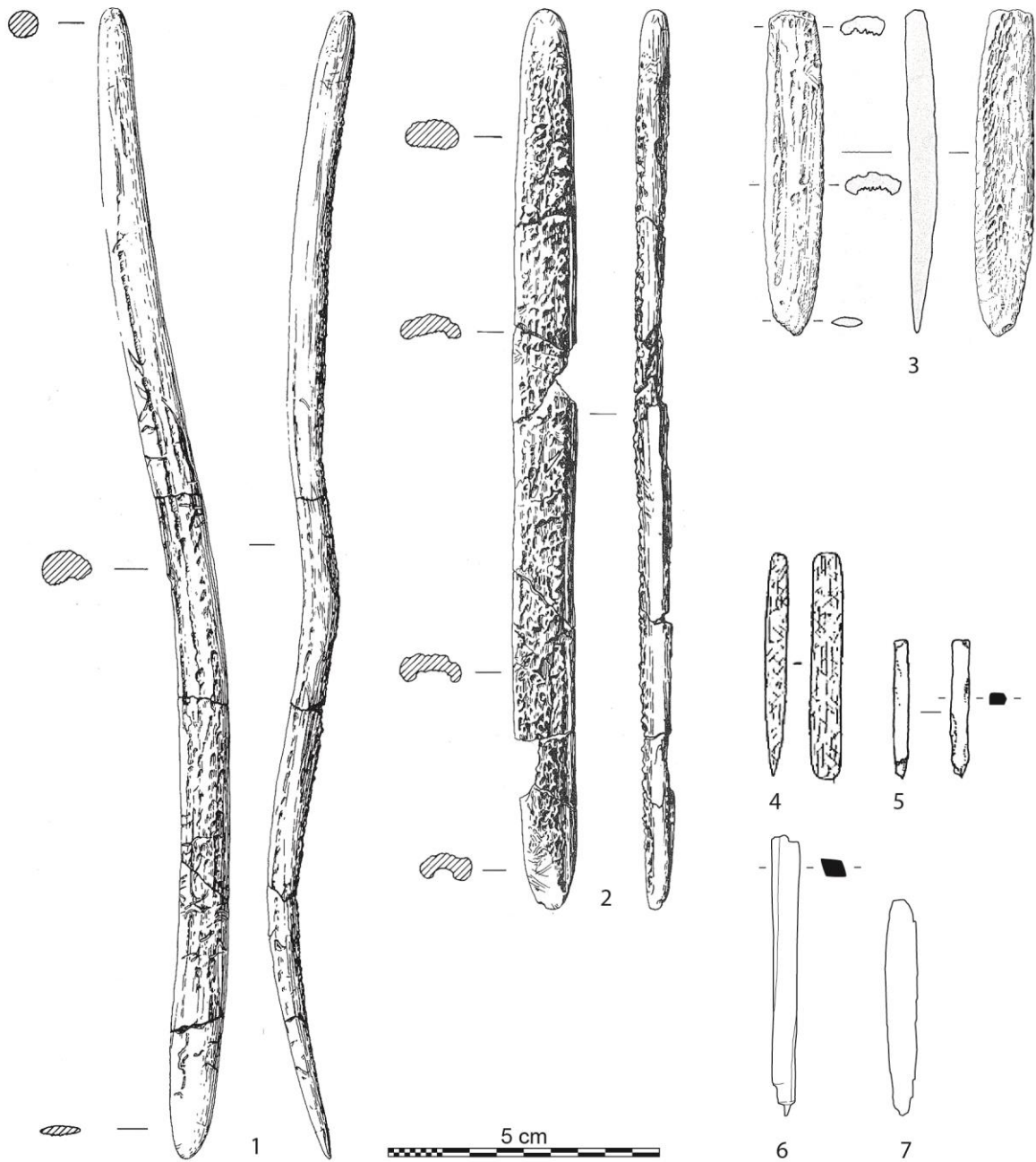


Fig. 16. Examples of probable tools used for retouching arrowheads. 1-3. Antler spatulae from England (scale 1:2). 4-7. copper alloy awls from Brittany. 1-2. Easton Lane (UK-13). 3. Amesbury Archer. 4. La Pierre-Levée (FR-76). 5. Tumulus de la Motte (FR-43). 6. Goërem (FR-56). 7. La Pierre-Couvretière (FR-41). (Nos 1-2, after Fasham *et al.* 1989, No. 3, after Fitzpatrick 2011, No. 4, after Joussaume 1976, No. 5, drawing C. Nicolas, No. 6, after L'Helgouac'h 1970, No. 7, after L'Helgouac'h 1975)

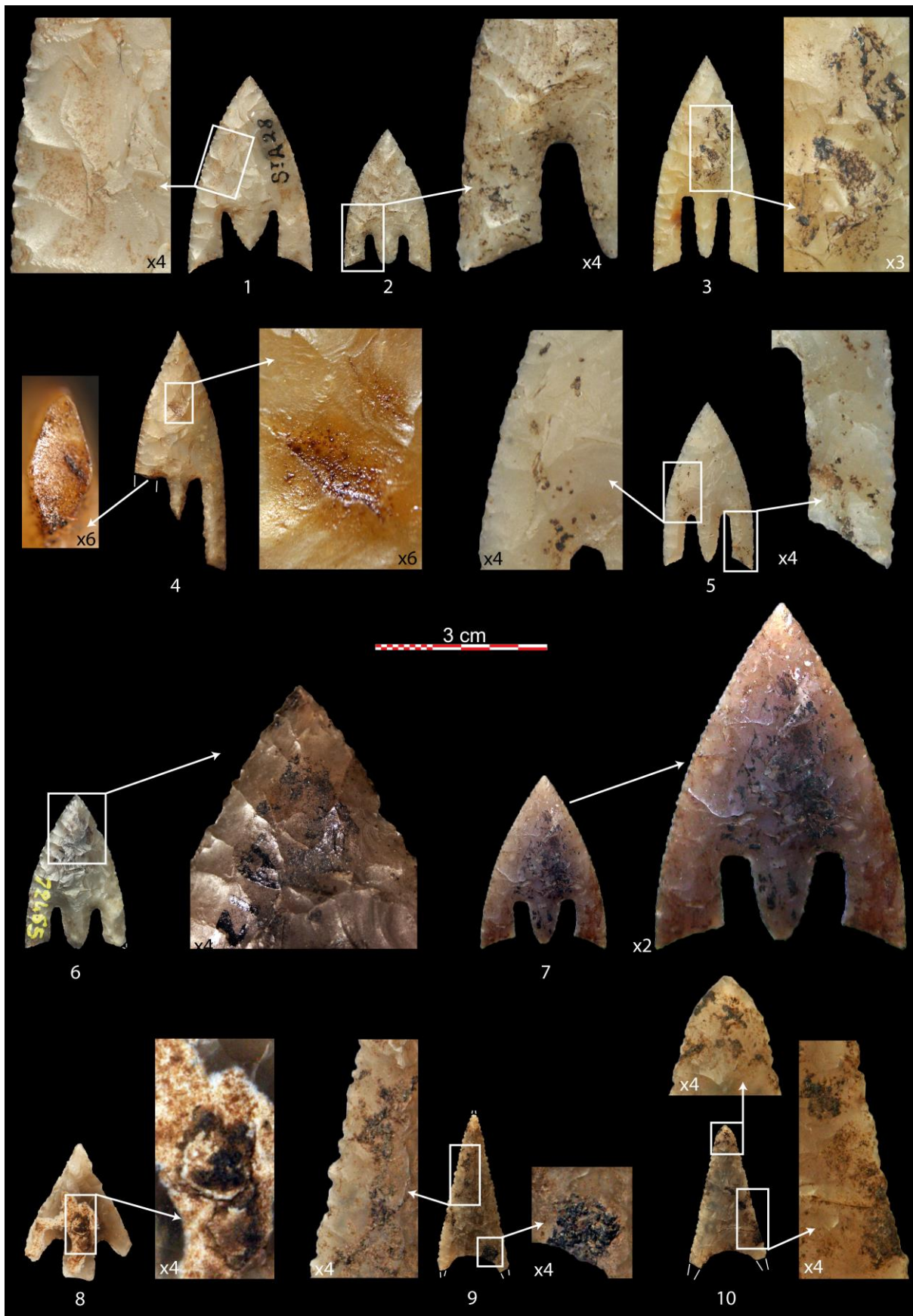
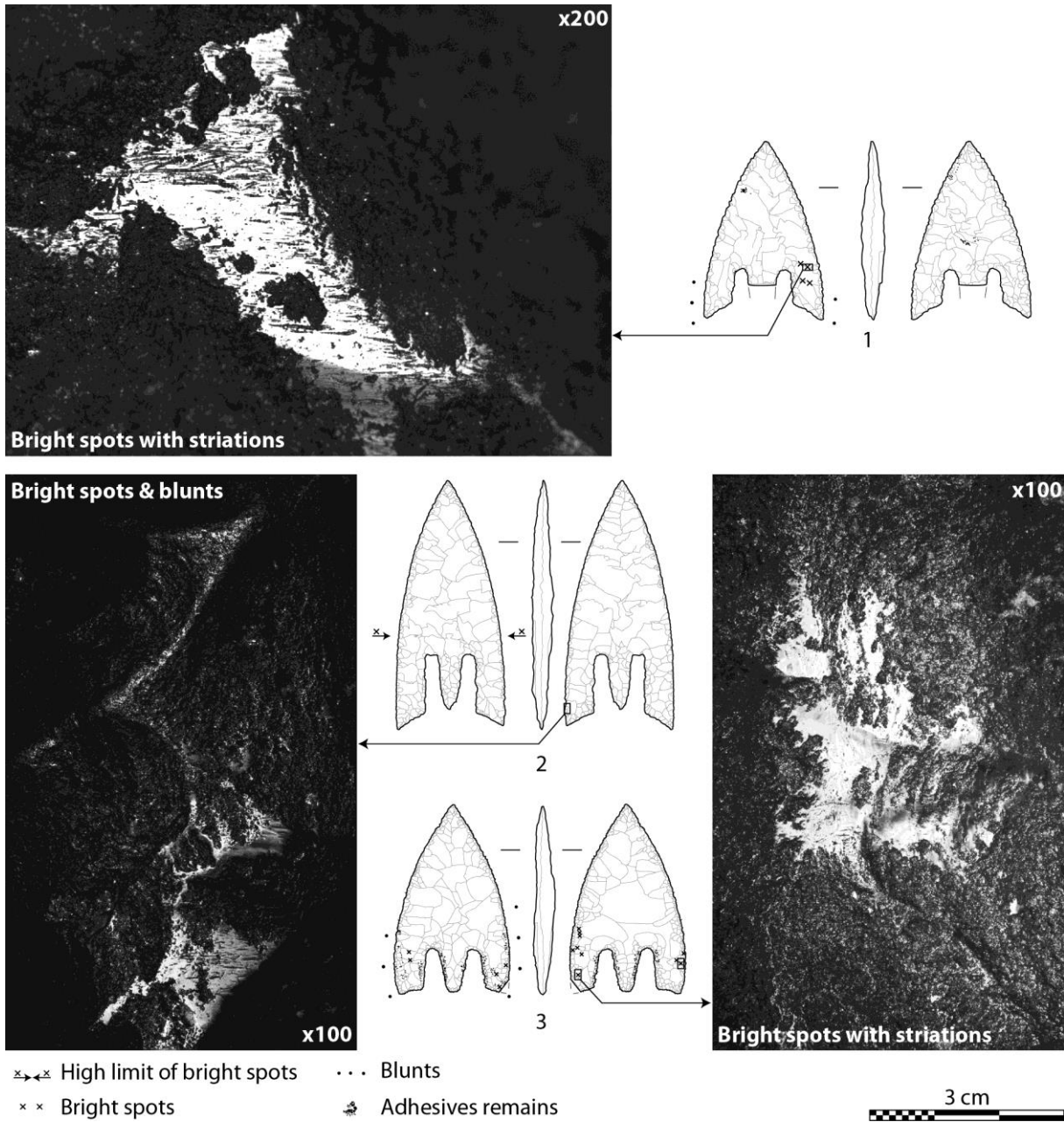


Fig. 17. Macroscopic remains of glue on arrowheads.

1. Brun-Bras (FR-07). 2 & 4. Rumédon (FR-04). 3. Graeoc 2 (FR-39). 5. Unknown origin, France (Kerhué-Bras, FR-21 ?). 6. Gray Hill (UK-63). 7–8. Vester Egebjerg (DK-38). (Nos 1–4 & 6–8, photos C. Nicolas, No. 7, photo Y. Paillet).



↔↔ High limit of bright spots ··· Blunts
 × × Bright spots 🐛 Adhesives remains

Fig. 18. Bright spots and blunt areas on Armorican arrowheads.
 1. Brun-Bras (FR-07). 2. Prat-ar-Simon-Pella (FR-15). 3. Crec'h-Perros-Guirec (FR-02).
 (Drawings C. Nicolas, a, photo C. Nicolas, b–c, photos C. Guéret).

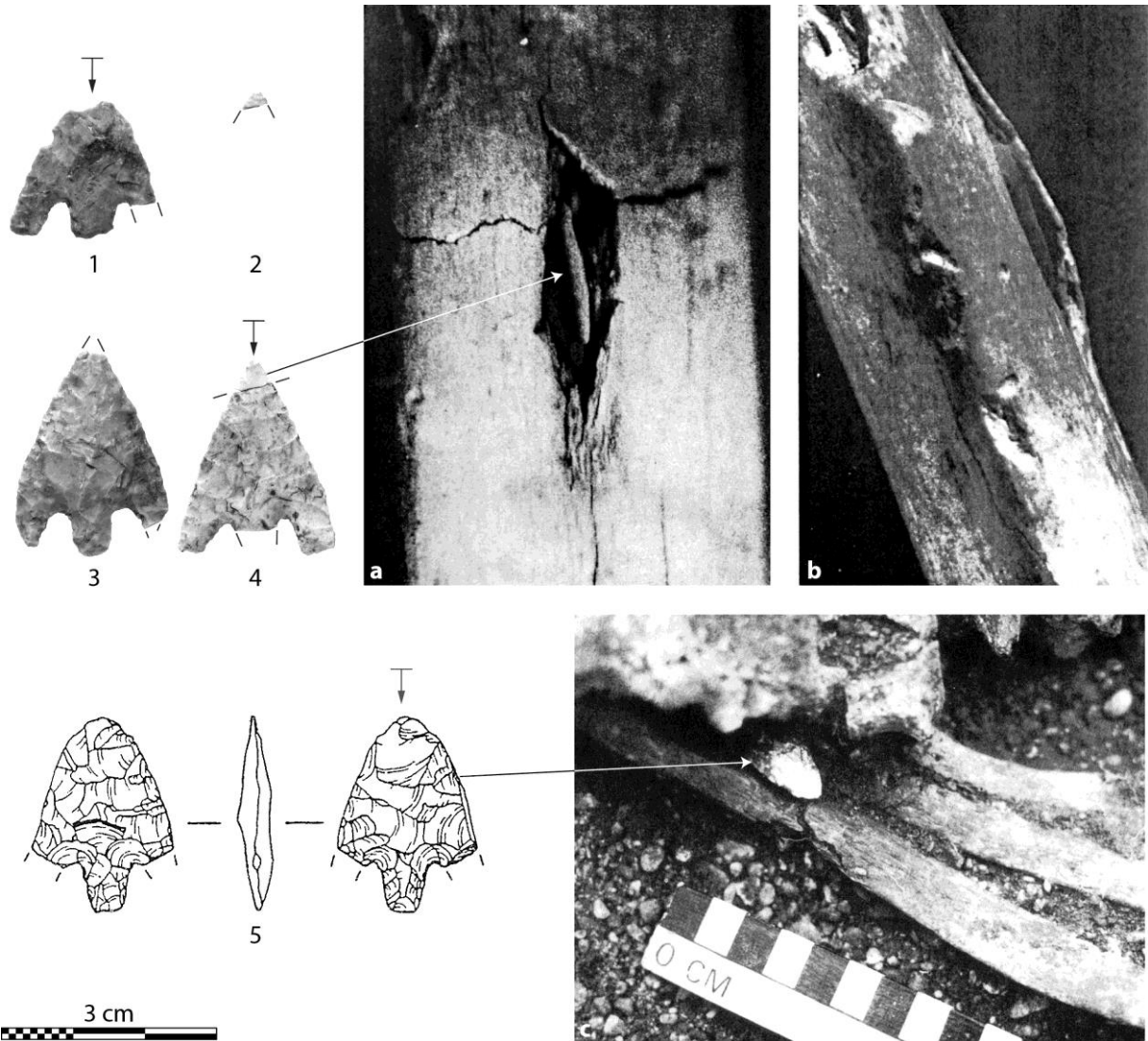


Fig. 19. Deadly arrowheads.

The arrowheads of the Stonehenge Archer (UK-39) all have breaks on the tip, of which (1) is a spin-off fracture diagnostic of impact, (2) is a fragment of tip and (3–4) have breaks at the tip. The tip of the fourth one was found in a rib of the individual (a–b). In grave 203 of Barrow Hills, Radley (UK-28), one arrowhead with a bending fracture diagnostic of impact was found jammed between vertebrae and ribs. (Nos 1–4, photos C. Nicolas, a–b, after Evans *et al.* 1984, 5 & c, after Barclay & Halpin 1999)

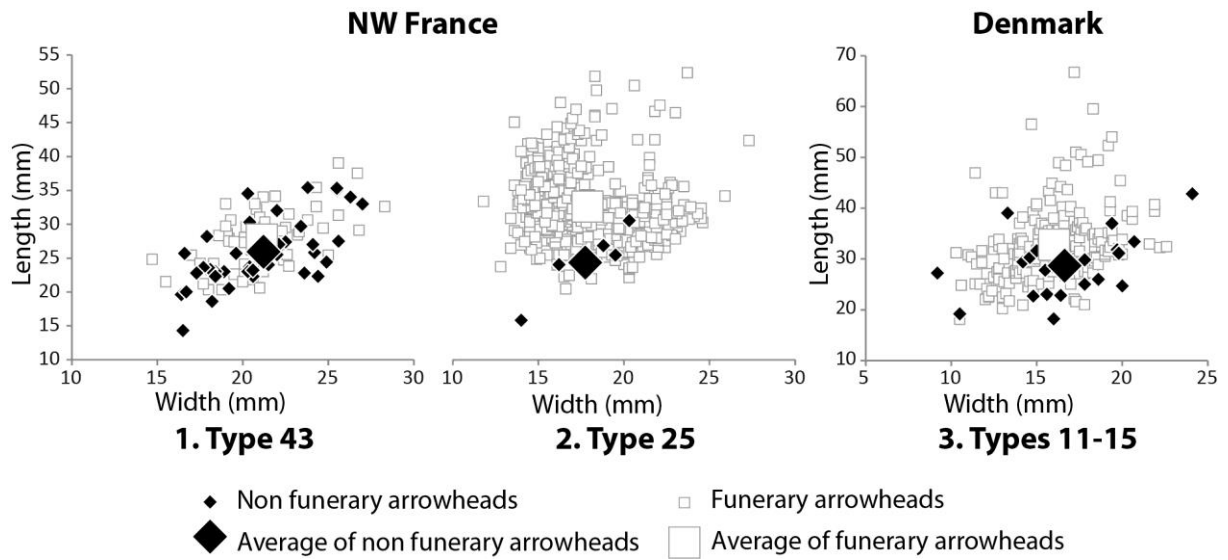


Fig. 20. Diagrams of length and width illustrating the sizes of arrowheads according to their type in north-west France and Denmark.

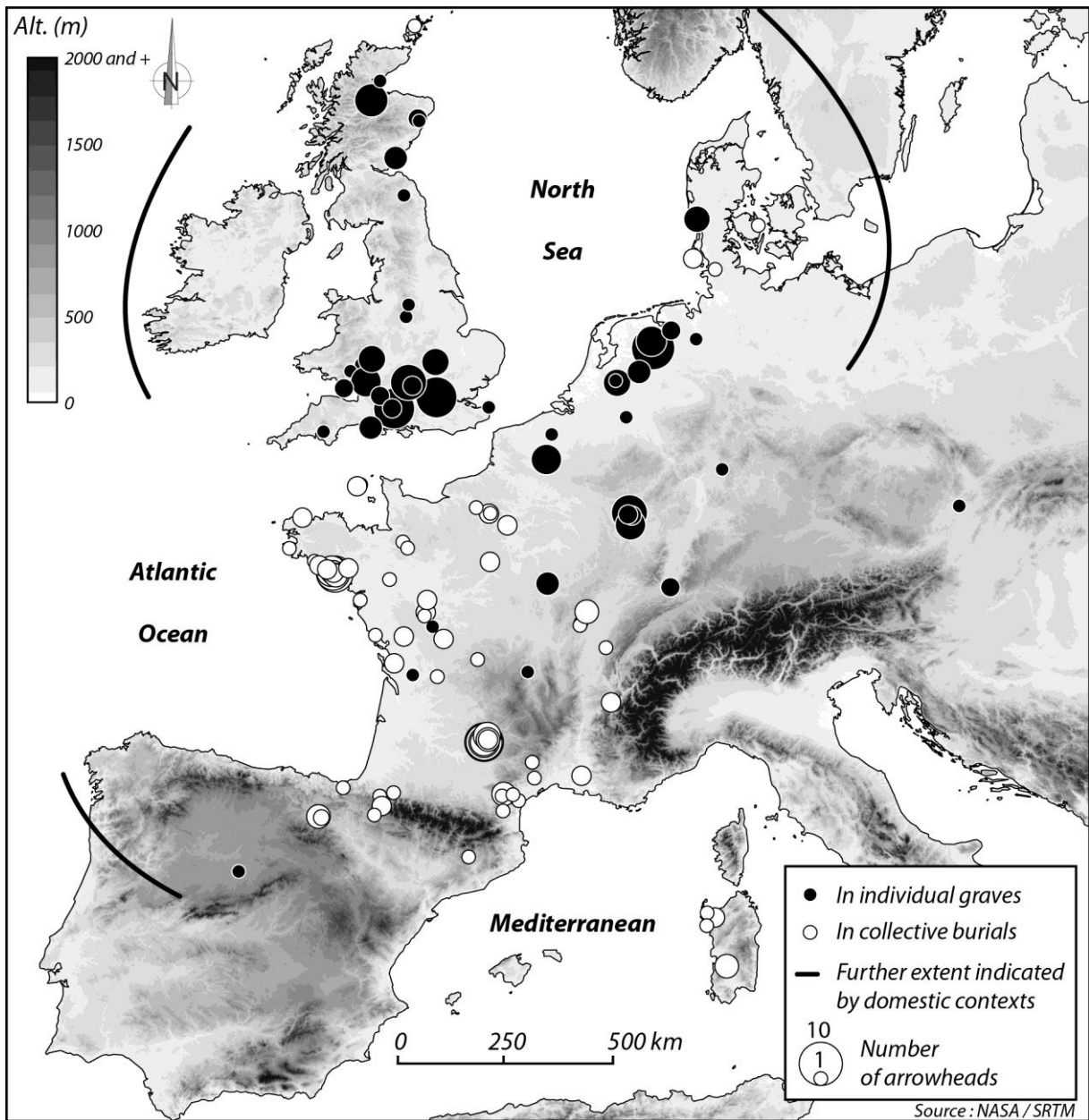


Fig. 21. Distribution map of arrowheads with squared barbs and tang (type 43) in Europe, according to funerary contexts.

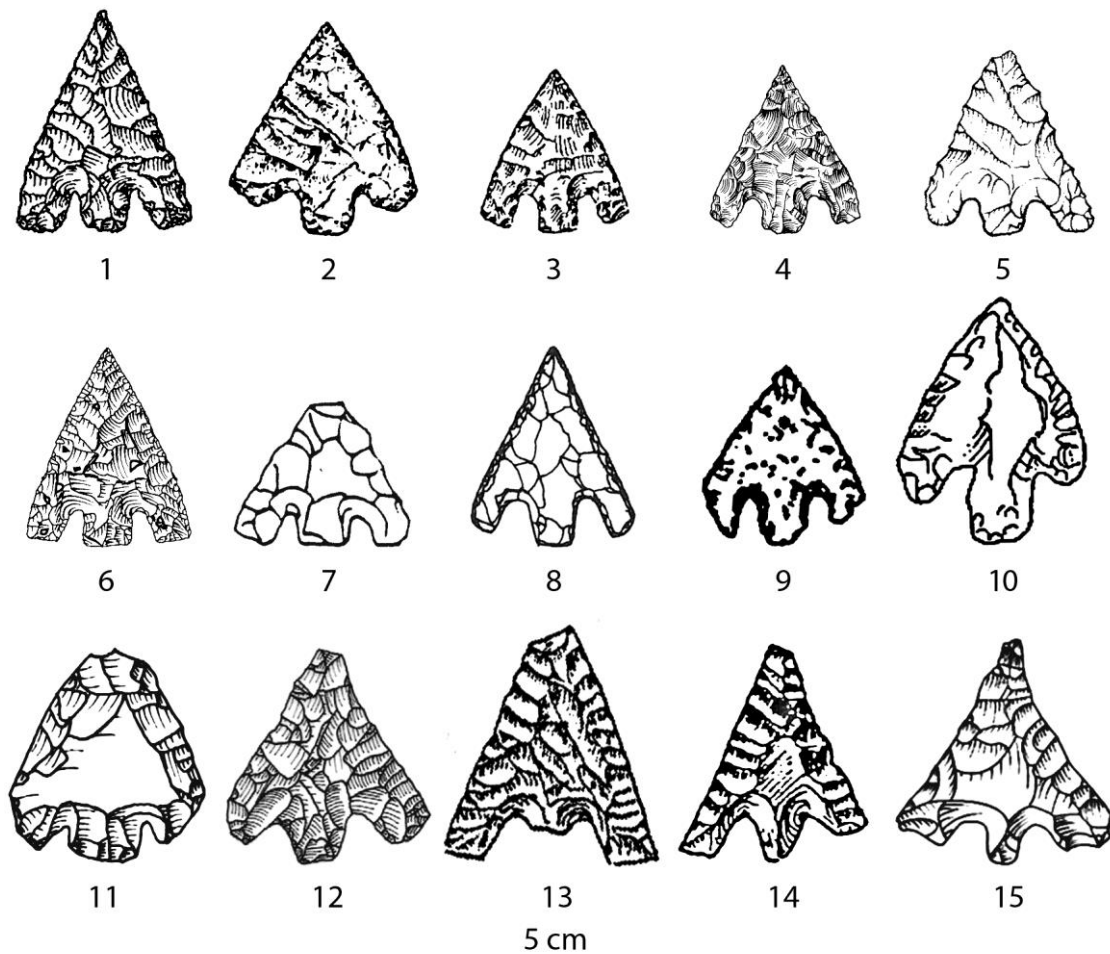


Fig. 22. Examples of barbed-and-tanged arrowheads with squared barbs and tang (type 43) from Bell Beaker contexts in Europe (1–10) and similar arrowheads in Late Neolithic settlements in western France (11–15).

1. Kercadoret, Locmariaquer, Brittany, France. 2. Coppières, Montreuil-sur-Epte, Île-de-France. 3. Emmen, Angelslo, Drenthe, Netherland. 4. Mucking 137, Essex, England. 5. Dornoch Nursery, Dornoch, Scotland. 6. Solbakkegård, Ribe, Denmark. 7. La Buisse, Isère, Rhône-Alpes, France. 8 : Borkovany I 1/59, Moravia, Czech Republic. 9. Bingia 'e Monti, Gonnostramatza, Sardinia, Italy. 10. San Martin, La Guardia, Alava, Pays Basque, Spain. 11-12. Groh-Collé, Saint-Pierre-de-Quiberon, Morbihan, France. 13-14. Le, Camp, Challignac, Poitou-Charentes, France. 15. Les Vaux, Moulins-sur-Céphons, Centre region, France. (Nos 1 & 6, drawings C. Nicolas, No. 2, after de Mortillet 1906, No. 3, after Lanting 2008, No. 4, after Jones & Jones 1975, No. 5, after Ashmore 1989, No. 7, after Bill 1973, No. 8, after Dvořák *et al.* 1996, No. 9, after Atzeni 1998, No. 10, after Harrison 1977, Nos 11-12, after Blanchard 2012, Nos 13-14, after Burnez 2010, No. 15, after Hamon 2006)

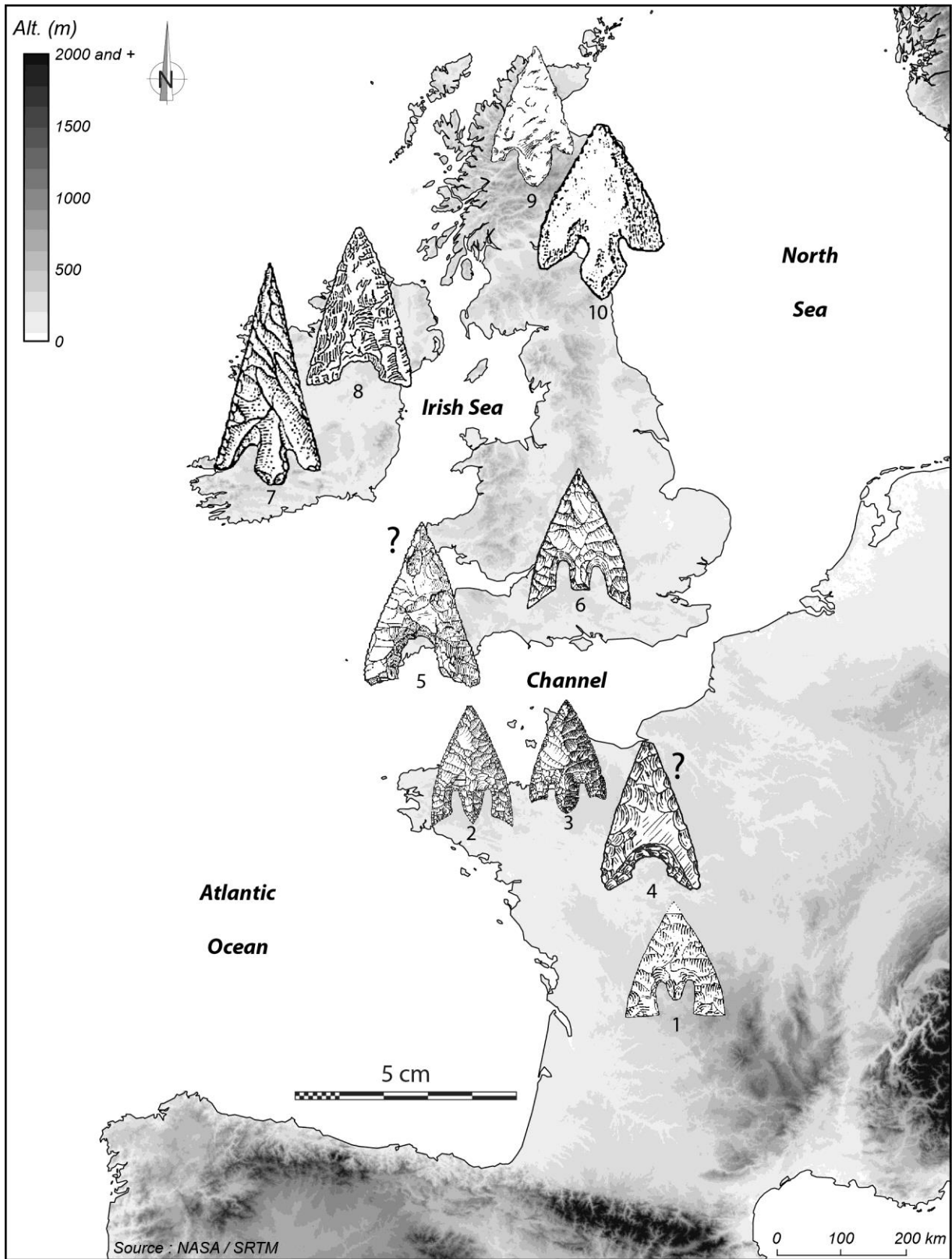


Fig. 23. Arrowheads with slanted barbs in north-western Europe.

1. Quatre Routes, Marsac, Limousin, France. 2. Kerguévarec, Plouyé, Finistère, Brittany, France. 3. Les Fouaillages, Vale, Guernsey. 4. Le Ménil-de-Briouze, Normandy, France. 5 : Tregulland Burrow, Treneglos, Cornwall, England. 6. Wimborne St. Giles G9, Woodyates, Dorset, England. 7. Galgorm Parks, Fenagh, Antrim, Ireland. 8. Unknown origin, Ireland. 9. Kingskettle, Fife, Scotland. 10. Banff, Aberdeenshire, Scotland. (No. 1, after Jousaume *et al.*

2002, Nos 2–3, drawing C. Nicolas, No. 4, after Verron 1980, No. 5, after Ashbee 1958, No. 6, after Annable & Simpson 1964, No. 7, after Kavanagh 1976, No. 8, after Buick 1895, No. 9, after Smith 1927, No. 10, after Pennant 1776)

APPENDIX: CATALOGUE OF GRAVES WITH ARROWHEADS IN NORTH-WEST FRANCE, SOUTHERN BRITAIN AND DENMARK (2500–1700 BC)

In this catalogue, the following typological schemes have been used: for copper alloy daggers in north-west France: Gally 1981; Needham 2000; Nicolas 2015; and in southern Britain: Gerloff 1975; for goldwork in north-west France: Éluère 1982 (we use here the term 'clip' for small piece of perforated - or not - sheet gold with its edges rolled up; Labaune 2013); for Bell Beaker pottery in north-west France: Salanova 2000; and in southern Britain: Needham 2005; for flint daggers in Denmark: Lomborg 1973; Nielsen 1974. Note that entries for the Channel Islands are listed at the end of the English section.

North-west France

FR-01. La Motta, Lannion, Côtes-d'Armor

Individual grave: barrow 26–29 m diameter x 4.6 m height, cairn 14 m diameter x 1 m height, stone cist 1.12 x 1.96 x 1.08 m, oriented NW–SE, made of one bottom slab, 4 upright slabs and 2 capstones, erected in pit
Grave goods: 7 flint arrowheads, 7 copper alloy daggers (1 Quimperlé type, 2 types Rumédon, 1 Trévéc type, 2 Longues type, 1 Saint-Frégant type), 2 copper alloy low-flanged axeheads, 1 sheet-gold bracer ornament, 1 slate whetstone

Chronological attribution: Early Bronze Age, stage 2

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 86180

Comment: Arrowheads found together as a group

Butler & Waterbolk 1974; Lanting 1974; Taylor 1974

FR-02. Crec'h-Perros, Perros-Guirec, Côtes-d'Armor

Individual grave: cairn 4.5–5.5 m diameter, wooden chamber? oriented NE–SW

Grave goods: 25 flint arrowheads, 6 copper alloy daggers (Rumédon type), 2 copper alloy low flanged axeheads, gold studs ornamenting daggers

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 3542 ± 22 BP (UBA-11989), 1947–1775 (95.4 %), dagger sheath

Musée d'Art et d'Histoire, Saint-Brieuc, no. 2001.185

Blanchet 2005; Henri Gandois, pers. comm.

FR-03. Mouden-Bras, Pleudaniel, Côtes-d'Armor

Individual grave: barrow 25 m diameter x 1.3 m height, wooden chamber oriented NW–SE, pit 3.6 x 1.4 m, inhumation, remains of bones

Grave goods: 36 flint arrowheads, 8 copper alloy daggers (1 Quimperlé type, 7 Rumédon types), 4 copper alloy low flanged axeheads, 1 copper alloy disc, 1 copper alloy pin, 4771 gold studs ornamenting daggers, 4 silver pins, 2 sandstone whetstones, 1 ivory object, 1 *dentalium* shell, 2 wooden boxes

Chronological attribution: Early Bronze Age, stage 1

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72470.A1–25

Comment: Under a large stone, 36 flint arrowheads deposited in a pile on clay. A layer of decayed wood was lying between those and the stone (Martin & Prigent 1907, 149)

Martin & Prigent 1907; Balquet 2001

FR-04. Rumédon, Ploumiliau, Côtes-d'Armor

Individual grave: barrow 45 m diameter x 0.8 m height, cairn, sand layer, wooden chamber?, two uprights oriented E–W, inhumation, remains of right pelvis

Grave goods: 25 flint arrowheads, 1 sherd decorated with two parallel lines, 4 copper alloy daggers (1 Quimperlé type, 3 Rumédon types), 2 copper alloy low flanged axeheads, 1 copper alloy pin, remains of bone dagger pommel, dagger sheaths and axehead haft

Chronological attribution: Early Bronze Age, stage 1

¹⁴C Dating: 3035 ± 50 BP (Ly-157), 1475–1129 cal BC (95.4 %), wood

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72465.A1–21

Comment: Arrowheads were scattered individually except in the middle of the deposit, where they were more numerous (Martin 1904, 132). One had traces on the tang of some wood fibres and gum or resin (Martin 1904, 147)

Martin 1904b; Balquet 1999; 2001; Banque Nationale de Données Radiocarbone

FR-05. Tossen-Kergourognon, Prat, Côtes-d'Armor

Individual grave: barrow 40 m diameter x 5 m height, crescent cairn 5 m length x 1.5 m height, wooden chamber?, pit 2.4 m x 0.85 x 0.35 m, inhumation, remains of bones

Grave goods: c. 50 flint arrowheads, 7 copper alloy daggers (1 Quimperlé type, 5 Rumédon types), 2 copper alloy pins, gold studs ornamenting daggers, 4 wooden boxes, remains of dagger

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 4070 ± 35 BP (Ly-8273/SacA-25465), 2857–2489 cal BC, dagger sheath

Musée Dobrée, Nantes, no. 892.1.5-37, 993.4.310; Musée de Bretagne, Rennes, no. 909.29.180–182

Comment: One box seemed to be divided in two compartments: one containing arrowheads wrapped in fabric and animal skin (Prigent 1881, 20). Most of the arrowheads were broken during excavation (Prigent 1881, 20–21)

Prigent 1881; Briard & Onnée, 1969; Balquet 2001.

FR-06. Tossen-Rugouec, Prat, Côtes-d'Armor

Individual grave: barrow 40/45 m diameter x 5 m height, wooden chamber 2 x 2 m

Grave goods: 46 flint arrowheads, 4 copper alloy daggers (1 Prat type, 2 Rumédon types), remains of dagger sheaths, 2 wooden 'clubs'

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 4070 ± 35 BP (Ly-8273/SacA-25465), 2857–2489 cal BC, dagger sheath

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72447.A1–33

Comment: Arrowheads were grouped in a pile between two layers of decayed wood (Martin 1904, 14).

Martin 1904a; Balquet 2001

FR-07. Brun-Bras, Saint-Adrien, Côtes-d'Armor

Individual grave: barrow 30 m diameter x 2 m height, cairn 6 m length x 4 m width, wooden chamber oriented NW–SE, pit 2.5 x 0.9 x 1.8 m

Grave goods: 45 flint arrowheads, 4 copper alloy daggers (1 Quimperlé type, 1 Longues type, 1 Trévère type), 1 low flanged axehead, gold studs ornamenting daggers, 1 riveted handled silver cup, remains of dagger handle and arrow shaft, remains of dagger sheath

Chronological attribution: Early Bronze Age, stage 1

¹⁴C Dating: 3650 ± 35 BP (GRN-7176), 2137–1929 cal BC (95.4 %), wooden chamber

UMR 6566 CReAAH, Université de Rennes 1, Rennes

Comment: Arrowheads placed side by side, probably hafted (Briard 1984, 226). Possible remains of shaft on one arrowhead

Briard 1976; 1978; 1984

FR-08. Porz-ar-Saoz, Trémeil, Côtes-d'Armor

Individual grave: barrow 25–30 m diameter x 5/6 m height, wooden chamber, low dry-stone wall, pit oriented E–W 3.1 x 1.1 x 3 m

Grave goods: 29 flint arrowheads, 4 copper alloy daggers (Rumédon types ?), 1 copper alloy low flanged axehead, gold studs ornamenting daggers, 2 wooden boxes, remains of axehead haft and dagger handle, remains of dagger sheaths

Chronological attribution: Early Bronze Age, stage 2

Musée de Bretagne, Rennes, no. 909.29.183–4

Comment: Some arrowheads piled up haphazardly, without order or symmetry (Prigent 1880, 190)

Prigent 1880; Bertrand 1891; Briard & Onnée 1969; Briard et al. 1977

FR-09. Tossen-Maharit, Trévère, Côtes-d'Armor

Individual grave: barrow 22 diameter x 1.5 m height, oak chamber 3 x 1.2 m oriented NW–SE, small layer of stones 1 x 0.7 m, inhumation, tiny remains of bones

Grave goods: 20 flint arrowheads, 8 copper alloy daggers (3 Rumédon types, 1 Trévère type, 1 Longues type, 1 Bourbriac type), 2 copper alloy low flanged axeheads, 1 copper alloy pin (or awl), 445 gold studs ornamenting daggers, 1 slate whetstone, 1 axehead haft made of oak and animal skin, remains of decorated sheaths (one decorated) for daggers, 1 wooden box

Chronological attribution: Early Bronze Age, stage 2

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72448.A1–13

Comment: Arrowheads were lying in a hollow curved groove on the edge of a wooden plate, scattered without order (Martin & Berthelot du Chesnay 1899, 11–12)

Martin & Berthelot du Chesnay 1899; Chaigneau-Normand 1994; Balquet 2001

FR-10. Kerodou/Parc-ar-Liou, Beuzec-Cap-Sizun, Finistère

Individual grave: barrow 24 m diameter x 1 m height, capstone 3.2 x 2.1 m, stone cist made of 2 uprightsuprights and two dry-stone walls oriented E–W 2.55 x 1.55 x 1.3 m

Grave goods: 3 flint arrowheads, 2 copper alloy daggers (1 Trévélec type), 1 copper alloy low flanged axehead

Chronological attribution: Early Bronze Age, stage 2

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72458.E1–3

Comment: Arrowheads were not mentioned by Paul du Chatellier (1907, 286) but they are recorded in the catalogue of the Musée d'Archéologie Nationale

Du Chatellier 1907; Chaigneau-Normand 1994; Archives, UMR 6566, Rennes

FR-11. Coatanéa, Bourg-Blanc, Finistère

Individual grave: barrow, 3 capstones, dry-stone cist oriented E–W 2.5 x 1 x 1.1 m

Grave goods: 17 flint arrowheads, 1 copper alloy dagger (Bourbriac type)

Chronological attribution: Early Bronze Age, stage 2

Musée de Préhistoire Finistérienne, Penmarc'h, no. 53.8.1–18

Comment: Arrowheads probably stood upon during excavation. Some intrusive objects (piece of socketed axehead, bronze debris, iron nails)

Giot 1953; Briard & Maréchal 1958; Archives, UMR 6566, Rennes

FR-12. Kergournadec'h, Cléder, Finistère

Individual grave: barrow 2 m height, capstone, dry-stone cist 2.6 x 1.1 x 1.6 m

Grave goods: 2 flint arrowheads, 2 copper alloy daggers

Chronological attribution: Bell Beaker/Early Bronze Age

Du Chatellier 1898c

FR-13. Le Rhun, Concarneau, Finistère

Individual grave: barrow, dry-stone cist

Grave goods: 2 flint arrowheads, sherds, 1 copper alloy 'flat axehead', 1 gold spiral, 1 stone pendant

Chronological attribution: Early Bronze Age, stage 1

Du Chatellier 1879a; 1907; Halna du Fretay 1889; Briard, 1984

FR-14. Ty-Roué 2, Landeleau, Finistère

Individual grave?: barrow

Grave goods: 1 flint arrowhead

Chronological attribution: Bell Beaker/Early Bronze Age

Halna du Fretay 1889

FR-15. Prat-ar-Simon-Pella, Lannilis, Finistère

Individual grave: 3 capstones, cist made of 2 dry-stone walls and 2 uprightsuprights oriented NW–SE 2.8 x 1.26 m, pit 5.2 x 3 m

Grave goods: 25 flint arrowheads, 3 copper alloy daggers, 1 copper alloy low flanged axehead, gold studs ornamenting daggers

Chronological attribution: Early Bronze Age, stage 2

Centre départemental d'Archéologie du Finistère, Le Faou

Comment: 23 arrowheads arranged in the same direction on three or four layers like a bundle (Le Goffic & Nallier 2008)

Le Goffic, 2006; 2007; Le Goffic & Nallier, 2008

FR-16. Kerandrèze, Moëlan-sur-Mer, Finistère

Collective grave: gallery grave

Grave goods: 2 flint arrowheads, 4 Bell Beakers (2 epimaritime types), 1 copper alloy tanged dagger, 1 copper alloy ring (?), 1 stone wristguard

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye

Comment: wristguard was not mentioned by Paul du Chatellier (1886a) but only recorded in the catalogue of Musée d'Archéologie Nationale

Du Chatellier 1883; Départemental archives, Quimper; Martin 1900; Briard & L'Helgouac'h 1957; Salanova, 2000

FR-17. Grand-Rosmeur, Second dolmen, Penmarc'h, Finistère

Collective grave: gallery grave

Grave goods: 1 flint arrowhead

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 73144.A

Du Chatellier 1879b

FR-18. Coatjou-Glas, Plonéis, Finistère

Individual grave: barrow 14 m diameter x 1.5 m height, cairn, capstone 1.9 x 1 m, dry-stone cist oriented W–E, oak floor, stone paving

Grave goods: 2 flint arrowheads, 1 flat-based pot, 1 copper alloy tanged dagger, 4 slate beads, 1 slate wristguard, '4 ovoid polished stones weighing 50 to 54 grams, opened by us, and which have yielded bronze' (du Chatellier 1887, 51)

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 73075.A–B

Du Chatellier 1887; Departemental archives, Quimper

FR-19. Cosmaner, Plonéour-Lanvern, Finistère

Individual grave: barrow 18 m diameter x 1.5 m height, capstone 2.5 x 2 m, dry-stone cist oriented E–W, wooden floor

Grave goods: 25 flint arrowheads, 2 copper alloy daggers (1 Rumédon type?, 1 Trévère type)

Chronological attribution: Early Bronze Age, stage 2

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72463.A1–20; Musée de Préhistoire Finistérienne, Penmarc'h, no. C306

Comment: Arrowheads broken during excavation (du Chatellier 1898b, 397)

Du Chatellier 1898a; 1898b

FR-20. Fao-Youen, Plonéour-Lanvern, Finistère

Individual grave: barrow 50 m diameter x 2.5 m height, cairn 8.5 m diameter, 2 capstones 0.4 m thick, dry-stone cist oriented E–W 3 x 1.05 x 1.1 m, stone paving

Grave goods: 32 flint arrowheads, 2 copper alloy daggers (2 Rumédon types)

Chronological attribution: Early Bronze Age, stage 1

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72472.A1–32

Comment: at the western end of the grave, four arrowheads, towards the east end eight others, and near the centre 20 arrowheads were grouped (du Chatellier 1898b, 395)

Du Chatellier 1898a; 1898b

FR-21. Kerhué-Bras, Plonéour-Lanvern, Finistère

Individual grave: barrow 60 m diameter x 6 m height, cairn, 2 capstones 2 x 2.4 m & 3 x 3.5 m, cist made of dry-stone walls and 2 uprights oriented E–W 3.5 x 1.5 x 1.4 m, wooden floor (oak?)

Grave goods: 32 flint arrowheads, 1 rock crystal arrowhead, 1 sherd (intrusive?), 7 copper alloy daggers (1 Quimperlé type, 4 + 2? Rumédon types), 2 copper alloy low flanged axeheads, 1 whetstone, 1 wooden box?, remains of wooden axehead haft and wooden dagger handle, oak leaves, acorns and hazelnuts

Chronological attribution: Early Bronze Age, stage 1

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72455.A1–30 & 72455.B

Comment: Towards the centre of the grave, between four stones placed edgewise, 33 arrowheads, one of them with remains of its shaft (9 mm diameter), were lying on the wooden floor (du Chatellier 1880a, 292).

Du Chatellier 1880a; 1880b; Balquet 2001

FR-22. Kernic, Plouescat, Finistère

Collective grave: gallery grave with peristalith, inhumation, remains of bones

Grave goods: 4 flint arrowheads, Beaker sherds (maritime type)

Chronological attribution: Bell Beaker

Musée de Préhistoire Finistérienne, Penmarc'h, no. 91.2.1–13

Comment: Arrowheads come from field surveys in and around the grave, funerary context insecure

Lecerf 1985; Le Roux 1985

FR-23. Kersandy, Plouhinec, Finistère

Individual grave: barrow 28 m diameter x 5 m height, cairn 6.25 x 5.7 m, capstone (reused anthropomorphic stele) 3.1 x 1.7 x 0.4 m, cist made of 5 uprights oriented E–W 2.5 x 1.2 x 1.2 m, stone paving, oak chamber 2 x 0.8 m

Grave goods: 38 flint arrowheads, 1 copper alloy dagger

Chronological attribution: Early Bronze Age, stage 1

¹⁴C Dating: 3350 ± 100 BP (Gif-4159), 1888–1433 cal BC, wooden chamber (treated wood)

Musée de Préhistoire Finistérienne, Penmarc'h, no. 98.1.1–37

Comment: Arrowheads in irregular position. One of them had slight traces of white wood on the tang, probably the remains of the wooden shaft (Briard *et al.* 1982, 29)

Briard 1977b; Briard et al. 1982

FR-24. Lescongar, Plouhinec, Finistère

Individual grave: barrow 17 m diameter x 2.5 m height, capstone 2.7 x 2.7 x 0.4 m, dry-stone cist oriented E–W 1,85 x 0,9 x 1 m, wooden floor, pit

Grave goods: 17 flint arrowheads, 1 sherd, 4 copper alloy daggers (1 Rumédon type, 1 Longues type, 2 Saint-Frégant types?)

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 3570 ± 115 BP (Gif-749), 2278–1622 cal BC (95.4 %), wooden floor (disturbed)

Musée de Préhistoire Finistérienne, Penmarc'h, no. 66.5.1–17

Comment: Disturbed funerary deposit

Briard 1968

FR-25. Le Souc'h, Plouhinec, Finistère

Collective grave: megalithic necropolis

Grave goods: 1 flint arrowhead, 8 Bell Beakers (7 maritime types)

Chronological attribution: Bell Beaker

Grenot 1871; 1873; Salanova 2000; Le Goffic 2003

FR-26. Cazin, Plouigneau, Finistère

Individual grave: barrow 20 m diameter x 1 m height, cairn 6–7 m diameter, wooden chamberchamber? oriented NW–SE 2 x 0.8 m, stone paving

Grave goods: 33 flint arrowheads, 1 copper alloy dagger

Chronological attribution: Early Bronze Age, stage 1

¹⁴C Dating: 3700 ± 105 BP (Gif-4388), 2459–1782 cal BC (95.4 %), charcoal from the barrow

Musée de Préhistoire Finistérienne, Penmarc'h, no. 77.2.1–33

Comment: Although they were disturbed, the arrowheads are still in a good state of preservation (Briard 1984, 259)

Briard 1977a; 1984

FR-27. Goarillac'h, Plounévez-Lochrist, Finistère

Individual grave: barrow 8–10 m diameter x 4–5 m height, 2 capstones 3 x 1.5 m, cist made of 2 dry-stone walls and 2 uprights oriented N–S 3 x 1.2 x 1.8 m, oriented N–S, wooden floor, 1 flat slab, sand layer

Grave goods: 22 flint arrowheads, sherds of rough pottery, 1 copper alloy dagger (Trévélec type)

Chronological attribution: Early Bronze Age, stage 2

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 7920 & 22078

Comment: In the same pile, near the centre, were a bronze dagger and 22 arrowheads (Le Hir in Giot 1988, 23). There was some infiltrated soil

Bertrand 1869; Micault 1881; de Mortillet & de Mortillet 1881, no. 393; du Chatellier, 1882; Archives, Musée d'Archéologie nationale, Saint-Germain-en-Laye; Giot 1988; Balquet 2001

FR-28. Kernonen, Plouvorn, Finistère

Individual grave: barrow 50 m diameter x 6 m height, cairn 11 x 8–9 m, 3 capstones (one 3.5 x 2.7 x 0.4 m), dry-stone cist oriented NW–SE 4.7 x 1.4 x 1.6 m, wooden floor, stone paving

Grave goods: 60 flint arrowheads, 1 sherd of flat-based pottery (coming from infiltrated earth), 4 copper alloy daggers (1 Quimperlé type, 2 Trévélec types), 5 copper alloy low flanged axeheads, 5 copper alloy pins, 1 bone pommel, gold studs ornamenting daggers, 1 Baltic amber bracer-ornament, 3 Baltic amber discoid beads, 8 Baltic amber trapezoidal pendants, 3 oak boxes, remains of axehead haft and of dagger sheaths, remains of wool on one axehead, hazelnuts

Chronological attribution: Early Bronze Age, stage 1

¹⁴C Dating: 3910 ± 120 BP (Gif-805), 2858–2036 cal BC (95.4 %), oak box; 3200 ± 100 BP (Gif-806), 1739–1216 cal BC (95.4 %), charcoal from barrow; 3150 ± 120 BP (Gif-807), 1733–1057 cal BC (95.4 %), charcoal from palaeosol; 3430 ± 120 BP (Gif-1149), 2035–1451 cal BC (95.4 %), charcoal from barrow; 4505 ± 35 BP (Ly-7747/SacA-23298), 3353–3095 cal BC (95.4 %), dagger sheath

Musée de Préhistoire Finistérienne, Penmarc'h, no. 69.10.2.1–18 & 69.10.5.1–42

Comment: three sets of arrowheads: the first comprising 18 arrowheads positioned in a bundle according to Jacques Briard (1970a) or placed haphazardly (Pierre Gouletquer, pers. comm.), a second comprising 30 arrowheads in a pile placed in a wooden box, and a third comprising 7 arrowheads; 5 further arrowheads were disturbed

Du Chatellier 1907; Briard 1970a; Gardin 1989; Henri Gandois, pers. comm.

FR-29. Keruzoret, Plouvorn, Finistère

Individual grave: barrow 20 m diameter x 4 m height, pit 2 x 1.3 x 1.6 m filled with sand, wooden structure?, inhumation, fragment of a jaw.

Grave goods: 11 flint arrowheads, 2 copper alloy daggers (1 Bourbriac type?)

Chronological attribution: Early Bronze Age, stage 3

Musée des Jacobins, Morlaix, no. 77–81; Musée de Préhistoire Finistérienne, Penmarc'h, no. 2007.0.156.1–2;

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72454.B1–3

Comment: Arrowheads clustered as if they had belonged to a bundle (Kerdrel 1898)

Kerdrel 1898; Briard & Maréchal 1958; Briard 1970b

FR-30. Lambader, Plouvorn, Finistère

Individual grave: capstone, dry-stone cist?

Grave goods: 1 arrowhead, 2 copper alloy daggers (1 Bourbriac type?)

Chronological attribution: Early Bronze Age, stage 3

Fréminville 1832; du Chatellier 1907; Briard 1970b

FR-31. Kerguévarec, Plouyé, Finistère

Individual grave: barrow 27 m diameter x almost 2.6 m height, 2 capstones 1.5 x 1 x 0.12 m each, stone cist made of one upright supported by two stones and three dry-stone walls oriented E–W 1.2 x 0.8 m, inhumation, two fragments of a skull

Grave goods: 24 flint arrowheads, 6 copper alloy daggers (1 Quimperlé type, 4 Rumédon types), 3 copper alloy low flanged axeheads, 1 Whitby jet bracer ornament (made from an old spacer plate)

Chronological attribution: Early Bronze Age, stage 1

Musée de Préhistoire Finistérienne, Penmarc'h

Comment: Arrowheads placed in a circle around the bracer ornament, according to the searchers.

Lukis 1884a; 1884b; 1886; Archives, UMR 6566, Rennes; Piggott 1939; Briard et al. 1994; Needham 2009

FR-32. Barnenez, Chamber D, Plouzéoc'h, Finistère

Collective grave: passage tomb under cairn

Grave goods: 1 flint arrowhead, 5 Bell Beakers (1 maritime type, 1 epimarine type), 2 late Beakers, 1 sherd of Cordoned Urn with finger impressions, 1 sherd with fingernail impressions, 1 sherd with hand-grip

Chronological attribution: Bell Beaker/Early Bronze Age

Musée de Préhistoire Finistérienne, Penmarc'h, no. 68.10.4

Giot 1987

FR-33. Kerlivit 2, Pouldergat, Finistère

Individual grave: barrow 5 m diameter x 2 m height, 2 capstones, stone cist made of 6 uprights oriented NW–SE 1.9 x 1.43 x 1.42 m, 2 paving stones, pit?

Grave goods: 1 flint arrowhead, 3 copper alloy daggers (2 Trévère types), flint scrapers and points, stone 'balls'

Chronological attribution: Early Bronze Age

Halna du Fretay 1893; Lukis, Archives, UMR 6566, Rennes

FR-34. Kermenhir, Poullan-sur-Mer, Finistère

Individual grave: barrow 24 m diameter x 2 m height, capstone, dry-stone cist oriented E–W 2.9 x 1 m

Grave goods: 2 flint arrowheads, 1 Bell Beaker?, 1 decorated sherd?, 1 copper alloy flat axehead, 1 slate disc pendant, 1 flint scraper?

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye?

Comment: Scraper and ceramics are illustrated in the Paul du Chatellier archives but they are not recorded in the publication (du Chatellier 1888; 1907)

Du Chatellier 1888; 1907; Départemental archives, Quimper; Salanova, 2000

FR-35. Kervini Nord, Poullan-sur-Mer, Finistère

Individual grave: barrow 20 m diameter x 3 m height, cairn 18 m diameter x 1.5 m height, capstone 3.3 x 2.18 x 0.35 m, stone ciste made of 6 uprights oriented E–W 2.8 x 1.38 x 1.23 m, wooden chamber, stone paving, sand layer, pit?

Grave goods: 43 flint arrowheads, 4 copper alloy daggers (1 Quimperlé type?), 15 flint & quartz flakes

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 1760 ± 90 BP (Gif-2374), cal AD 61–531, charcoal from hearth in the barrow; ‘contemporary age’ (Gif-2480), charcoal from palaeosol and barrow

Musée de Préhistoire Finistérienne, Penmarc'h; old coll. Vayson de Pradenne (Emmanuel Weber, pers. comm.); coll. J.-L. Piel-Desruisseaux, Sergeac

Halna du Fretay 1887; 1898; de Mortillet 1920; Briard 1972

FR-36. Kervini Sud, Poullan-sur-Mer, Finistère

Individual grave: barrow 17 m diameter, stone semicircle, cairn 8 m diameter x 2 m height, 2 capstones 2.55 x 2.1 x 0.5 m & 2.1 x 0.8 m, dry-stone cist oriented E–W 2.3 x 1 x 1 m, wooden chamber, stone paving, pit?

Grave goods: 9 flint arrowheads, 1 copper alloy dagger (Quimperlé type?), 2 copper alloy axeheads

Chronological attribution: Early Bronze Age, stage 2

¹⁴C Dating: 3510 ± 100 BP (Gif-2481), 2136–1608 cal BC (95.4 %), charcoal from palaeosol

Musée de Préhistoire Finistérienne, Penmarc'h; old coll. Vayson de Pradenne (Emmanuel Weber, pers. comm.); coll. J.-L. Piel-Desruisseaux, Sergeac

Halna du Fretay 1887; 1898; de Mortillet 1920; Briard 1972

FR-37. Lothéa, Quimperlé, Finistère

Individual grave: barrow 26 m diameter x 4 m height (c. 1580 ± 48 m3), cairn 1.7 m height, capstone 2.2 x 1.8 x 0.45 m, stone cist made of 9 uprights oriented E–W 2.25 x 1.65 x 1.45 m, stone paving?, pit?

Grave goods: 7 flint arrowheads, 4 copper alloy daggers (3 Quimperlé types, 1 Trévélec type), 1 copper alloy low flanged axehead, 1 bronze socketed point, 1 ‘copper rod’, 1 gold spiral chain, 1 silver spiral chain, 1 axehead-pendant in jadeite from Mont Viso in Italy, 1 slate wristguard, 1 quartzite pebble

Chronological attribution: Bell Beaker/Early Bronze Age, stage 1

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 30494

Comment: the origin of the bronze socketed point is insecure. It is possible that this object did not originate from the tomb of Lothéa (intrusive object, mixed collections?; Nicolas *et al.* 2013)

Taylor et al. 1846; Le Men 1877; Bertrand 1891; de Mortillet 1903; Briard & Mohen 1974; Nicolas et al. 2013

FR-38. Limbabu/Creac'h-Morvan, Saint-Thégonnec, Finistère

Individual grave: cairn 5/6 m diameter, capstone 2.5 x 1.15 m, dry-stone cist oriented NW–SE 2.75 x 0.9 x 1.7 m

Grave goods: 19 flint arrowheads, few sherds from infiltrated earth, 5 copper alloy daggers (2 Rumédon types, 1 Trévélec type, 1 Longues type)

Chronological attribution: Early Bronze Age, stage 2

Musée de Préhistoire Finistérienne, Penmarc'h, no. 78.2.9.1–19

Comment: Most of the arrowheads were arranged in a diffuse trail but clearly following the grave's long axis (Briard & Le Roux 1972, 5)

Briard & Le Roux 1972; Briard, 1984

FR-39. Graeoc/Liorzou 2, Saint-Vougay, Finistère

Individual grave: barrow 40 m diameter x 2.2 m height, capstone, dry-stone cist

Grave goods: 19 flint arrowheads, 2 copper alloy daggers (1 Rumédon type, 1 Longues type), 1 copper alloy low flanged axehead

Chronological attribution: Early Bronze Age, stage 2

Musée de Préhistoire Finistérienne, Penmarc'h, no. 1953; coll. Paul Mesangroas, Plounévez-Lochrist
Waquet 1928; 1929; Bénard 1929; Briard & Maréchal 1958; Le Goffic 1989; Nicolas 2010; Archives, UMR 6566, Rennes; Archives, Centre départemental d'Archéologie du Finistère, Le Faou

FR-40. Le Run, Tréffiagat, Finistère

Collective grave: V-shaped passage grave under barrow

Grave goods: 1 Eocene sandstone arrowhead, 1 copper alloy object

Chronological attribution: Bell Beaker
Musée d'Archéologie Nationale, Saint-Germain-en-Laye
Du Chatellier 1879a

FR-41. La Pierre-Couvretière, Ancenis, Loire-Atlantique
Collective grave: dolmen, inhumation, a dozen individuals
Grave goods: 1 flint arrowhead, 1 Bell Beaker with fingernail impressions, 1 copper alloy awl, 1 gold rectangular perforated sheet
Chronological attribution: Bell Beaker
Musée d'Ancenis
L'Helgouac'h 1973; 1975; Éluère 1982; Salanova 2000

FR-42. La Couronne-Blanche, Petit-Auverné, Loire-Atlantique
Collective grave: dolmen
Grave goods: 1 flint arrowhead
Chronological attribution: Bell Beaker
Musée Dobrée, Nantes, no. 993.4.305
Pitre de Lisle du Dréneuc 1880

FR-43. Barrow de la Motte, Pornic, Loire-Atlantique
Collective grave: passage grave, inhumation, bones
Grave goods: 2 flint arrowheads, 5 pots of which at least one is a Bell Beaker (maritime type?), 1 arsenical copper awl, 12 gold tubular beads, 1 variscite discoid bead, 1 jadeitite chisel
Chronological attribution: Bell Beaker/Early Bronze Age, stage 1
Musée Dobrée, Nantes, no. 993.4.313–314
Comment: a similar jadeitite chisel has been found in an Early Bronze Age grave at Brownstone Farm (Kingswear, Devon; Sheridan & Pailler 2012)
Pitre de Lisle du Dréneuc 1892; L'Helgouac'h & Poulain 1984; Marie-Hélène Santrot, pers. comm.

FR-44. Fosse-Yvon, Beaumont-Hague, Manche
Individual grave: barrow 25 m diameter x 1.5 m height
Grave goods: c. 10 flint arrowheads, 1 copper alloy 'sword' (probably a dagger)
Chronological attribution: Early Bronze Age, stage 3
Musée E. Liais, Cherbourg
De Pontaumont 1856; Coutil 1895; Vilgrain et al. 1989

FR-45. Petit-Mont, Grave IIIa, Arzon, Morbihan
Collective grave: passage tomb under cairn
Grave goods: 1 flint arrowhead, almost 5 Bell Beakers (some of maritime type), 1 gold rectangular perforated sheet
Chronological attribution: Bell Beaker
Comment: Bell Beaker artefacts, partly disturbed, were found inside the grave IIIA and in front of the eastern façade of the cairn
Le Rouzic 1912; Éluère 1982; Lecornec 1985; 1987; 1994

FR-46. Belz/Erdeven/Plouharnel, Morbihan
Collective grave: various dolmens
Grave goods: 5 flint arrowheads, 1 microquartzite arrowhead
Chronological attribution: Bell Beaker
Carré Plantagenêt, Le Mans, nos. Pr10–20
Comment: these arrowheads come from the Chaplain-Duparc mixed collection, deriving from excavations of several dolmens in the parishes of Belz, Erdeven and Plouharnel. In this collection, there are abundant Bell Beakers (Le Boulaire 2005)
Le Boulaire 2005

FR-47. Coët-a-Tous/Mané-Gragueux, Carnac, Morbihan
Collective grave: passage tomb
Grave goods: 1 flint arrowhead, 4 or 5 Bell Beakers (2 maritime types).
Chronological attribution: Bell Beaker
Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.56.25

Miln 1881; Le Rouzic 1939; Jacq 1940; Salanova 2000

FR-48. Kercado, Carnac, Morbihan

Collective grave: passage tomb, inhumation, bones and teeth (remains of an adult male and one child?)

Grave goods: 3 flint arrowheads, 1 burnt flint arrowhead, 14 Bell Beakers (6 maritime types, 4 epimarine types, 1 with fingernail impressions), 1 cordoned sherd with finger impressions, 2 gold clips

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, nos. R. 81.2.55–7 and 81.1.389

Comment: artefacts come from the sieving of the contents of the chamber and passage layers, where one arrowhead and several Bell Beakers were found, and from a disturbed area in the middle of the cairn at the level of the chamber. In this area, there was a modern shaft at the top, whose surroundings have yielded three arrowheads, two gold clips and almost six Bell Beakers (Le Rouzic 1927)

Lefebvre & Galles 1863; de Closmadeuc 1863; 1865; Le Rouzic 1927; 1933; 1934; Jacq 1940; Riquet et al. 1963; Éluère 1982; Salanova 2000

FR-49. Kerlagat, Second dolmen, Carnac, Morbihan

Collective grave: passage tomb, bones (cremated?)

Grave goods: 2 flint arrowheads, several Bell Beakers (3 maritime types), 1 fragment of copper alloy dagger (or Palmela point?), 4 serrated gold sheets, 1 fragment of sandstone wristguard

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R. 82.23.1-2; British Museum, London

Le Rouzic 1930a; 1934; Jacq 1940; Éluère 1982

FR-50. Kerlescan, Carnac, Morbihan

Collective grave: lateral entrance grave

Grave goods: 4 flint arrowheads, 1 Bell Beaker with fingernail impressions, 1 Bell Beaker (maritime type), 1

Early Bronze Age decorated handled pot

Chronological attribution: Bell Beaker/Early Bronze Age

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, nos. R.83.18.37 & R.82.56.27; British Museum, London, no. 1875.0403.649–50

De Villemeureuil 1860; Lukis 1868; Gaillard 1887c; 1888; Jacq 1940; Salanova 2000

FR-51. La Rogarte, Carnac, Morbihan

Collective grave: passage tomb

Grave goods: 7 flint arrowheads, 5 Bell Beakers (2 maritime types, 3 epimarine types)

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72754.A–G

Gaillard 1883; 1884b; 1887a; Treinen 1970; Salanova 2000; Ihuel 2008

FR-52. Mané-Roh-en-Tallec, Carnac, Morbihan

Collective grave: dolmen

Grave goods: 1 flint arrowhead, 2 or 3 Bell Beakers

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.81.5.13

Galles 1869; Jacq 1940; Treinen 1970

FR-53. Er-Mar, Crac'h, Morbihan

Collective grave: passage tomb

Grave goods: 2 flint arrowheads, 1 Bell Beaker

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72689.A–B

Gaillard 1890; L'Helgouac'h 1965

FR-54. Luffang, Crac'h, Morbihan

Collective grave: angled grave

Grave goods: 4 flint arrowheads, 1 Bell Beaker, 1 copper alloy spiral, 1 copper alloy perforated and flat fragment

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.81.16.72–75

Le Rouzic 1898; 1939; Jacq 1940; L'Helgouac'h 1965

FR-55. Coët-er-Garf, Elven, Morbihan

Individual grave: barrow 1.5 m height, 2 capstones 2.2 x 1.3 m & 2.1 x 1.8 m, wooden chamber oriented E–W, pit 2.6 x 2.3 x 1 m

Grave goods: 29 flint arrowheads, 3 copper alloy daggers (1 Trévélec type, 1 Longues type), 1 copper alloy low flanged axehead, 1 flint flake, 1 *Sus* incisor, remains of dagger sheath

Chronological attribution: Early Bronze Age, stage 2

Musée d'Histoire et d'Archéologie, Vannes, no. 1223.1–29

Comment: Louis Marsille (1913) recorded 28 arrowheads but 29 arrowheads, all similar, are present in Vannes museum

Marsille 1913

FR-56. Goërem, Gâvres, Morbihan

Collective grave: angled grave

Grave goods: 2 flint arrowheads, 3 Bell Beakers (1 AOC type, 1 with fingernail impressions), 2 late Beakers, 1 arsenical copper awl, 4 gold clips

Chronological attribution: Bell Beaker

¹⁴C Dating: 3860 ± 200 BP (Gif-329), 2888–1778 cal BC (95.4 %), charcoal from the passage; 2620 ± 200 BP (Gif-330), 1311–233 cal BC (95.4 %), charcoal from the passage; 4100 ± 140 BP (Gif-768), 3020–2213 cal BC (95.4 %), charcoal under fallen down slab; 3470 ± 120 BP (Gif-769), 2133–1502 cal BC (95.4 %), charcoal from fallen rocks; 4430 ± 120 BP (Gif-1148), 3508–2777 cal BC (95.4 %), charcoal from lower filling

Comment: the grave was divided into four compartments. The first and last ones have each yielded one arrowhead. The last one yielded a lot of Bell Beaker artefacts (3 Bell Beakers, 1 arsenical copper awl, 4 gold clips). Several changes to the wall and the roofing are related to the re-use in Bell Beaker times of this Late Neolithic grave (L'Helgouac'h 1970)

L'Helgouac'h 1970

FR-57. Parc-Menhir/Kermario, Groix, Morbihan

Collective grave?: barrow

Grave goods: 1 flint arrowhead, 1 Bell Beaker sherd (epimaritime type)

Chronological attribution: Bell Beaker

Ecomusée, Ile de Groix, no. 84640.A

Martin 1900; Le Rouzic 1965

FR-58. Cruguel, Guidel, Morbihan

Individual grave: six standing stones around the barrow, barrow 28.5 m diameter x 5.3 m height, sand layer, cairn made of 10 standing stones covered by a flat stone, rubble stone cairn, capstone, low dry-stone wall, wooden chamber oriented NW–SE 2.55 x 1.5 x 1.32 m, pit, bones

Grave goods: 14 flint arrowheads, 4 copper alloy daggers (2 Trévélec types, 1 Bourbriac type), 1 copper alloy axehead, 1 copper alloy rod, gold studs ornamenting daggers, remains of dagger sheaths

Chronological attribution: Early Bronze Age, stage 3

¹⁴C Dating: 3270 ± 200 BP (Gif-235), 2121–1025 cal BC (95.4 %), charcoal from the barrow

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72453.B2–10

Comment: arrowheads positioned in a layer of decayed wood (wooden box?). Le Pontois (1890, 327–328) reported that 'At the base of the tang on one of these arrowheads, we can see remains of resin and of the binding thread that secured it on the shaft. We may have seen some fragments of these shafts but they fell into dust as soon as we touched them'.

Le Pontois 1890; Bertrand 1891; Le Rouzic 1934; Giot 1966; Balquet 1999; 2001

FR-59. Er-Roh/Kermarker, La Trinité-sur-Mer, Morbihan

Collective grave: passage graves with lateral cells

Grave goods: 2 flint arrowheads, 8 Bell Beakers (1 maritime type, 5 epimaritime types, 1 with fingernail impressions), 1 gold pommel, 1 gold nugget

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. 82.75.1; Musée d'Histoire et d'Archéologie, Vannes, no. IM-0292

De Cussé & Galles 1866; Gaillard 1890; Le Rouzic 1930b; 1933; 1934; Jacq 1940; Treinen 1970; Salanova 2000; Archives, Société polymathique du Morbihan, Vannes

FR-60. Kervilor, La Trinité-sur-Mer, Morbihan

Collective grave: passage tomb

Grave goods: 6 flint arrowheads, 1 gold sheet

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72895.A–F

De Cussé & Galles 1866; Gaillard 1886; 1887b; du Chatellier, Départemental archives, Quimper; Le Rouzic 1930b; Jacq 1940

FR-61. Mané-Roullarde, La Trinité-sur-Mer, Morbihan

Collective grave: gallery grave

Grave goods: 1 flint arrowhead, 3 Bell Beakers (1 maritime type, 2 epimarine types)

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.7.28

Le Rouzic 1901; Jacq 1940; Salanova 2000

FR-62. Kercadoret, Locmariaquer, Morbihan

Collective grave?: simple dolmen

Grave goods: 8 flint arrowheads, 6 sherds of a thin-walled Beaker, 2 sherds with red slip, 1 cordoned sherd with finger impressions, 1 arsenical copper Palmela point

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.52.38–45

Le Rouzic 1931; Jacq 1940; Briard et al. 1998

FR-63. La Table des Marchands, Locmariaquer, Morbihan

Collective grave: passage tomb

Grave goods: 3 flint arrowheads, Bell Beakers sherds (maritime & epimarine types), 1 gold wire ball

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.36.1–2; Musée d'Histoire et d'Archéologie, no. IM0354

Fréminville 1829; de Closmadeuc 1892; Jacq 1940; Cassen 2009

FR-64. Saint-Fiacre, Melrand, Morbihan

Individual grave: barrow 50 m diameter x 5 m height, stone semicircle wall, cairn, capstone 2.5 x 0.9 x 0.2 m, dry-stone cist oriented E–W 2.3 x 0.8 x 1.3 m, oak floor

Grave goods: 2 copper alloy arrowheads, 10 copper alloy daggers (6 Rumédon types, 1 Trévère type, 1 Rhône/Unétice type), 2 copper alloy low flanged axeheads, 1 silver cup, gold studs ornamenting daggers, 1 amber bracer-ornament, remains of dagger sheaths

Chronological attribution: Early Bronze Age, stage 3

¹⁴C Dating: 3555 ± 35 BP (SUERC-30676), 2016–1771 cal BC, dagger sheath; 3900 ± 135 BP (Gif-863), 2864–1983 cal BC, oak floor

Ashmolean Museum, Oxford, no. AN.TN.2648

Aveneau de la Grancière 1898; Giot 1969; Needham 2000; Needham et al. 2006; Nicolas et al. 2015

FR-65. Beg-er-Lann/Fort-Bloqué, Ploemeur, Morbihan

Collective grave: passage tomb?

Grave goods: 1 flint arrowhead, 3 Bell Beakers (epimarine types), 1 copper alloy 'grain'

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye?

Martin 1900; du Chatellier, Départemental archives, Quimper; Salanova 2000; Gouézin 2007

FR-66. Port-Féti'h/Runélen, Ploemeur, Morbihan

Collective grave: dolmen, inhumation, bones

Grave goods: 2 flint arrowheads, Bell Beaker sherds (epimarine types), 1 leaf-shaped copper alloy point (Palmela-like point?)

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye, no. 72943

Du Chatellier, Départemental archives, Quimper; Martin 1900; Gouézin 2007; Ihuel 2008

FR-67. Saint-Adrien, Ploemeur, Morbihan

Collective grave: passage tomb with partitioned chambers, inhumation, bones

Grave goods: 1 flint arrowhead, 1 Bell Beaker

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac , no. R.82.27.26
Le Rouzic & Péquart 1922; Jacq 1940; Gouézin 2007

FR-68. Tuchenn-er-Hroëk, Ploemeur, Morbihan

Collective grave: long barrow

Grave goods: 1 flint arrowhead, 11 Bell Beaker (2 AOC types, 2 maritime types, 3 epimarine types)

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye?

Martin 1900; Salanova 2000; Gouézin 2007

FR-69. Rondosse, Plouharnel, Morbihan

Collective grave: passage graves with lateral cells, inhumation, bones

Grave goods: 1 flint arrowhead, 1 pot, 2 gold 'gargantillas de tiras'

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.24.4

Comment: the two 'gargantillas de tiras' were found inside the pot

Fréminville 1857; de Closmadeuc 1882; Le Rouzic 1930b; Jacq 1940; Éluère 1982

FR-70. Mané-Bras, Plouhinec, Morbihan

Collective grave: passage tomb

Grave goods: 2 flint arrowheads, Beaker sherds (2 epimarine types, 1 with fingernail impressions)

Chronological attribution: Bell Beaker

Musée d'Archéologie Nationale, Saint-Germain-en-Laye?

Gaillard 1884a

FR-71. Mané-Meur, Second dolmen, Quiberon, Morbihan

Collective grave: dolmen

Grave goods: 1 flint arrowhead, Bell Beaker sherds

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.47.3

Gouézin 2007

FR-72. Le Net/Clos-er-Bé, Saint-Gildas-de-Rhuys, Morbihan

Collective grave: gallery grave

Grave goods: 1 flint arrowhead, 5 Bell Beakers (1 maritime type, 4 epimarine types)

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.25.6

Le Rouzic et al. 1922; Jacq 1940; Salanova 2000

FR-73. Mané-Han/Le Petit-Kerambel, Saint-Philibert, Morbihan

Collective grave: passage tomb

Grave goods: 1 flint arrowhead, 2 Bell Beakers (1 epimarine type)

Chronological attribution: Bell Beaker

Musée de Préhistoire J. Miln - Z. Le Rouzic, Carnac, no. R.82.52.37

Le Rouzic 1939; Jacq 1940; L'Helgouac'h 1965; Treinen 1970

FR-74. Brehuidic, Sarzeau-Brillac, Morbihan

Collective grave: passage tomb?

Grave goods: 1 flint arrowhead, up to 8 Bell Beakers (1 maritime type, 3 epimarine types, 1 with fingernail impressions), sherds of Early Bronze Age decorated pot

Chronological attribution: Bell Beaker/Early Bronze Age

Lecornec 1988

FR-75. Loucé, Loucé, Orne

Individual grave: barrow

Grave goods: 6 flint arrowheads, 5 copper alloy daggers (2 Rumédon types, 1 Longues type), 1 copper alloy low flanged axehead

Chronological attribution: Early Bronze Age, stage 1

Verron 1976

FR-76. La Pierre-Levée, Nieul-sur-l'Autise, Vendée

Collective grave: passage tomb with partitioned chambers

Grave goods: 2 flint arrowheads, 1 arrowhead preform?, 15 Bell Beakers (5 maritime types, 2 epimarine types), 3 gold spiral strips, 1 copper alloy chisel or awl, 2 bone V-perforated buttons

Chronological attribution: Bell Beaker

¹⁴C Dating: 4040 ± 130 BP (Gif-3417), 2901–2206 cal BC, bones in contact with copper alloy chisel

Dépôt archéologique et musée des Sables-d'Olonne

Comment: most of the Bell Beaker artefacts were found in the façade area of the grave

Joussaume 1976; Éluère 1982; Joussaume & Pautreau 1990; Salanova 2000; Gandois 2008

FR-77. Le Grand-Bouillac, Saint-Vincent-sur-Jard, Vendée

Collective grave: passage tomb, inhumation, bones

Grave goods: 1 flint arrowhead, Bell Beaker sherds (with epimarine ornamentation or fingernail impressions)

Chronological attribution: Bell Beaker

Historical de Vendée

Baudouin & Lacouloumère 1907; Chaigneau & Sacchi 1965; Poissonnier 1997

Southern Britain

UK-01. Lambourn, Barrow 31, Lambourn, Berkshire, England

Individual grave: barrow 7.9 m diameter x few centimetres height, ring-ditch 9.75 m diameter, probable sandstone cairn, inhumation, 1 adult male? on the left side

Grave goods: 6 flint arrowheads, 1 Bell Beaker (Long-Necked type), 1 flint scraper, 1 flint knife, 1 flint strike-a-light, 1 flint flake used on left edge, 1 cortical flake, 1 jet V-perforated button of Shepherd's Type 6a

Chronological attribution: Period 2

British Museum, London, no. [18]62:0707:15–23

Comment: possible adhesive residues on arrowheads noted during excavation. The V-perforated button was described as being of shale by Humphrey Case (1957) but the colour, texture and pattern of surface crackling is typical of jet (Alison Sheridan, pers. comm.; see also Woodward & Hunter 2015, 150)

Case 1957; Clarke 1970, no. 27, fig. 892; Green 1980, no. 260; Shepherd 2009, 356; Woodward & Hunter 2015, table 5.2.1 and 150

UK-02. Cheesewring, Linkinhorne, Cornwall, England

Individual grave: barrow, cremated remains

Grave goods: 'over c. 100' flint arrowheads, 1 urn

Chronological attribution: Period unspecified

British Museum, London, no. 1903.11-15.182–183

Brent 1886; Green 1977; 1980, no. 286

UK-03. Botrea Hill, Sancreed, Cornwall, England

Individual grave: stone cist made of 3 uprights 2 x 0.8 m

Grave goods: 2 flint arrowheads

Chronological attribution: Period unspecified

Borlase 1872; Smith 1927; Green 1980, no. 281

UK-04. Tregulland Burrow, Treneglos, Cornwall, England

Individual grave: pit oriented E–W 1.3 x 0.55 x 0.55 m, cremated remains

Grave goods: 2 burnt flint arrowheads

Chronological attribution: Period unspecified

Royal Cornwall Museum, Truro, no. 1957.11.2

Comment: the pit was beneath a barrow that covered a central grave, a double ring-cairn, a double timber circle and one ditch. The pit could pre- or post-date this monument

Ashbee 1958; Green 1980, no. 287

UK-05. Plym Valley/Deadman's Bottom, Langcombe, Devonshire, England

Individual grave: barrow, ring-cairn, 9 m diameter, stone cist made of 3 uprights (1 missing) oriented NW–SE, 1.3 x 0.75 x 0.85 m

Grave goods: 3 flint arrowheads, 1 Bell Beaker (Low-Bellied type)

Chronological attribution: Period 2

Worth 1900; Clarke 1970, no. 159; Green 1980, no. 291

UK-06. Conygar Hill, Dorchester, Dorset, England

Double grave: barrow 21.3 m diameter x 4.3 m height, capstone made of Portland stone 2.13 x 1.26 x 0.45 m, 1 contracted (crouched) skeleton with head towards S, 1 deposit of cremated human remains

Grave goods: 6 flint arrowheads, 1 Food Vessel

Chronological attribution: Period 2/3

Dorset County Museum, Dorchester, no. 1884.9.43–48

Comment: arrowheads were positioned near the knees of the skeleton

Cunnington, Archives du Dorset County Museum, Dorchester; Acland 1916; Smith 1927, 99; Piggott 1938, no. 22; Green 1980, no. 307

UK-07. Fordington Farm, Grave 61, Dorchester, Dorset, England

Individual grave: pit oriented NE–SW 1.68 x 0.96 x 1.1 m, inhumation, adult male (25–30 years), head towards S facing E, legs bent and hands close to the head

Grave goods: 1 flint arrowhead, 1 *Bos* scapula, 1 *Bos* axis, 3 *Bos* scapulae, 1 *Bos* pelvis, 1 *Bos* humerus (in the filling)

Chronological attribution: Period 1

¹⁴C Dating: 3844 ± 30 BP (UB-3306), 2458–2204 cal BC (95.4 %), human bone

Dorset County Museum, Dorchester

Comment: arrowhead found close to the pelvis

Bellamy et al. 1991

UK-08. Thomas Hardy School, Grave 1643, Dorchester, Dorset, England

Individual grave: possible wooden superstructure 1.7 m length, pit oriented SE–NW 2.5 x 1.6 x 0.7 m, inhumation, adult male (15–21 years) on the left side, legs bent, hands close to the neck

Grave goods: 3 flint arrowheads, 1 Bell Beaker (Tall Mid-Carinated type), 1 copper alloy tanged dagger, 1 amphibolite wristguard, 1 bone perforated button

Chronological attribution: Period 1

¹⁴C Dating: 3856 ± 30 (NZA-23745), 2462–2208 cal BC (95.4 %), human bone

Dorset County Museum, Dorchester, no. W7838.1823.2031–2033

Gardiner et al. 2007; Woodward & Hunter 2011, 145, ID 67

UK-09. Cowleaze, Cremation1, Winterbourne Steepleton, Dorset, England

Individual grave: pit 0.45 m diameter x 0.26 m deep, deposit of cremated remains

Grave goods: 1 flint arrowhead

Chronological attribution: Period 1

¹⁴C Dating: 4080 ± 140 BP (HAR-5619), 3009–2206 cal BC (95.4 %), charcoal

Dorset County Museum, Dorchester

Woodward 1991

UK-10. Wimborne St. Giles G9, Woodyates, Dorset, England

Individual grave: barrow 20 m diameter x 2 m height, flint cairn with antlers and one fragment of stone axehead, inhumation, skeleton on left side, legs bent, oriented NE–SW

Grave goods: 4 flint arrowheads, 1 Beaker, 1 copper alloy dagger (Milston type) with remains of sheath, 1 copper alloy awl, 1 jet V-perforated button of Shepherd's type 1, 1 shale pulley belt ring, 1 flint strike-a-light

Chronological attribution: Period 2

Wiltshire Heritage Museum, Devizes, no. DZSWS:STHEAD.203–209

Comment: Button and belt ring analysed by Pollard *et al.* (1981, table 5 and appendix 2, nos. XXIII and XXIV); button found to be jet, rather than shale as previously claimed, while belt ring found to be of shale, probably Kimmeridge shale

Hoare 1812, 238-241; Crooker, Archives, Wiltshire Heritage Museum, Devizes; Grinsell 1959; Gerloff 1975, no. 69; Green 1980, no. 202; Needham 2000; Pollard et al. 1981, 158 and table 5 and appendix 2, nos. XXIII and XXIV; Shepherd 2009, 347, 357 (no. 23); Woodward & Hunter 2015, 63–64, 66, tables 3.4.1 and 5.2.1 and figs. 3.4.3 and 5.2.2

UK-11. Mucking no. 137, Mucking, Essex, England

Individual grave: wooden chamber? 1.35 x 0.6 m oriented N–S, pit 1.9 x 1.2 m, inhumation, traces of a skeleton on left side, legs bent, head towards N

Grave goods: 11 flint arrowheads, 1 Bell Beaker (Low-Carinated/AOO type)

Chronological attribution: Period 1

Comment: five arrowheads were positioned as in a quiver, all facing in the same direction
Jones & Jones 1975; Green 1980, no. 416

UK-12. Mucking no. 786, Mucking, Essex, England

Individual grave: wooden chamber? oriented N–S 1.35 x 0.6 m, pit 1.9 x 1.2 m, inhumation, skeleton on left side, legs bent, head towards NNE

Grave goods: 2 flint arrowheads

Chronological attribution: Period 2/3

¹⁴C Dating: 3580 ± 90 BP (Har-450), 2198–1691 cal BC (95.4 %), oak ‘chamber’

Comment: arrowheads were positioned behind shoulders and on (or in) the chest

Jones & Jones 1975; Green 1980, no. 416/1

UK-13. Easton Lane, Inhumation 2752, Winchester, Hampshire, England

Individual grave: reused pit 2.9 m diameter x 2.08 m deep, inhumation, adult male (35–45 years), legs bent, head towards S

Grave goods: 6 flint arrowheads, 3 flint blades (1 retouched, 2 refitting), 2 flint flakes & 3 flint flakes? (1 retouched), 4 antler spatulae, 1 bone point

Chronological attribution: Period unspecified

Hampshire Museums and Archives Services, Winchester, no. TWA1982.W29

Comment: Burial disturbed by burrowing animals. An antler found near the skeleton may belong to the funeral structure

Fasham et al. 1989

UK-14. Olchon Valley, Cist 1, Llanveynoe, Herefordshire, England

Individual grave: flat slabs circle around the grave, capstone, stone cist made of 4 uprights oriented N–S 0.81 m x 0.41 m x 0.38 m, contracted crouched skeleton, adult male (25–30 years) on left side, head towards N facing E

Grave goods: 1 flint arrowhead, 1 Beaker (Mid-Bellied type)

Chronological attribution: Period 3

Museum Services and Learning resources, Hereford, no. 1345

Comment: arrowhead close to the feet

Marshall 1932; Archives, Museum Services and Learning Resources, Hereford; Clarke 1970, no. 354; Green 1980, no. 164

UK-15. Wellington Quarry, Marden, Herefordshire, England

Individual grave: oval pit oriented NW-SE 1.8 x 1.2 x 0.54 m

Grave goods: 4 flint arrowheads, 1 Bell Beaker (Low-Carinated/maritime type), 1 copper alloy tanged dagger, 3 flint arrowhead preforms, 2 flint blades (1 point, 1 retouched), 7 flint flakes (2 knives, 1 point), 1 fragment of amphibolite wristguard

Chronological attribution: Period 1

Worcester Historic Environment and Archaeology Services, Worcester

Comment: Harrison *et al.* (1999) described the wristguard fragment as being of shale, but Woodward & Hunter’s analysis demonstrated that the material was an amphibolite (Woodward & Hunter 2011, 140, ID 26)

Harrison et al. 1999; Woodward & Hunter 2011, 140, ID 26

UK-16. Tring 30, Tring, Hertfordshire, England

Individual grave: inhumation, skeleton in extended position

Grave goods: 3 flint arrowheads, 1 pot, 1 stone wristguard, 1 stone arched plate (wristguard?), 1 jet pulley belt ring

Chronological attribution: Period 2/3

Comment: Analysis has demonstrated that the stone used for the wristguard was Langdale tuff (Woodward & Hunter 2011, 142, ID 31)

Anon 1787; Smith 1927; Clarke 1970, no. 361-362; Green 1980, no. 182; Woodward & Hunter 2011, 142, ID 31

UK-17. Nodgham, Carisbrooke, Isle of Wight, England

Individual grave?: surface finds

Grave goods: 1 flint arrowhead, 1 Beaker (Long-Necked type)

Chronological attribution: Period 2

Isle of Wight Heritage Service, Cothey Bottom Heritage Centre, Ryde, no. 492.0.2

Comment: there is some uncorroborated information about this old fund. Wilkins (1859, 52) noticed the discovery of fragments of two ‘celtic urns roughly decorated’. The archives of the Isle of Wight Heritage Service

confirm that these objects had been found together. Poole (1929, 440–441) reported that the arrowhead was found with the Beaker and with half of a limestone cup. Dunning (1937, 292) mentioned only the arrowhead and the Beaker. Restoration of the sherds has shown that at least two, possibly three Beakers are represented. Here, we consider that only one Beaker and the arrowhead to have belonged to one possible grave
Archives, Isle of Wight Heritage Service, Cothey Bottom Heritage Centre, Ryde; Wilkins 1859; Poole 1929; Dunning 1937; Clarke 1970, no. 382; Green 1980, no. 318

UK-18. Chestnuts, Addington, Kent, England

Collective grave: long barrow, chamber tomb, disturbed, cremated human remains
Grave goods: 2 flint arrowheads, Early Bronze Age sherds
Chronological attribution: Period 3/4
Maidstone Museum & Bentriff Art Gallery, Maidstone, nos. CA.79 & CA.469
Alexander 1961; Green 1980, no. 414

UK-19. Lord of the Manor 1, Grave 6, Margate, Kent, England

Individual grave: ring-ditch, pit, cremated human remains, 1 immature individual (few months old)?
Grave goods: 1 flint arrowhead, 1 Food Vessel
Chronological attribution: Period 2/3
MacPherson-Grant 1977; Moody 2008

UK-20. QEQM Hospital 1, Margate, Kent, England

Individual grave: wooden chamber? oriented N–S 2.19 x 1.26 m, pit 2.58 x 2.08 x 0.45 m, inhumation, adult male (40–50 years) on left side, legs bent, head towards N, facing E
Grave goods: 3 flint arrowheads, 1 Bell Beaker (Low-Carinated type), 1 fragment of amber
Chronological attribution: Period 1
¹⁴C Dating: 3852 ± 33 BP (Wk-18733), 2460–2206 cal BC (95.4%), human bone
Trust for Thanet Archaeology, The Antoinette Centre, Birchington, no. NAM05.2002.1–3
Comment: the grave is recut by QEQM Hospital 2 (UK-21)
Hart & Moody 2008; Needham 2012

UK-21. QEQM Hospital 2, Margate, Kent, England

Individual grave: pit oriented N–S 1.3 x 0.86 x 0.26 m, inhumation, adult female (25–35 years) on right side, legs bent, head towards S, facing E
Grave goods: 1 flint arrowhead
Chronological attribution: Period 1
Trust for Thanet Archaeology, The Antoinette Centre, Birchington, no. NAM05.2001
Comment: the arrowhead was found inside the skull. The grave recut QEQM Hospital 1 (UK-20)
Hart & Moody 2008

UK-22. Aldwincle, Barrow 1, Aldwincle, Northamptonshire, England

Individual grave: barrow 36.5 m diameter x 2.4 m height, ring-ditch, wooden chamber? oriented NE–SW 2 x 0.85 x 0.4 m, central pit 3.05 x 1.9 x 0.85 m, inhumation, adult male (40–45 years) on left side, legs bent, head towards S, facing W
Grave goods: 1 flint arrowhead, 1 flint scraper, 1 flint arrowhead preform?, 1 Millstone Grit whetstone, 2 bone spatulae on large mammal ribs
Chronological attribution: Period unspecified
Jackson et al. 1976; Green 1980, no. 183

UK-23. Raunds, Barrow 1, F 30012, Raunds, Northamptonshire, England

Individual grave: reusing barrow (UK-24), cremated human remains
Grave goods: 1 flint arrowhead, 1 Collared Urn, truncated
Chronological attribution: Period 3/4
Comment: the artefacts were found among disturbed material on the top of the cairn covering the barrow's central grave (UK-24)
Harding & Healy 2007; 2011, 161

UK-24. Raunds, Barrow 1, F 30426, Raunds, Northamptonshire, England

Individual grave, primary, under barrow 40 m diameter, with triple ring-ditch, limestone cairn with, on its top, 185 *Bos* skulls, 40 *Bos* mandibles, 35 *Bos* scapulae, 15 *Bos* pelvis and remains of aurochs, dog and *Sus*, burnt

oak chamber oriented NE–SW 2 x 0.75 x 0.8 m, central pit 2.8 x 2.3 x 0.95 m, inhumation, adult male on left side, legs bent, head towards SW, facing NW

Grave goods: 1 flint triangular point (arrowhead preform?), 1 Beaker (Long-Necked type), 1 flint dagger, 2 flint knives, 2 flint scrapers, 1 flint retouched flake, 6 flint flakes, 1 half of Great Langdale tuff wristguard, 1 slate burnisher?, 1 chalk pressure flaker?, 1 amber ring, 5 Whitby jet V-perforated buttons of Shepherd's types 1, 2 and 2B, 1 boar's tusk, 3 spatulae on large mammal ribs

Chronological attribution: Period 2

¹⁴C Dating: 3681 ± 47 BP (UB-3148), 2201–1940 cal BC (95.4 %), human bone; 3775 ± 45 BP (OxA-7902), 2345–2035 cal BC (95.4 %), oak chamber; 4100 ± 80 BP (OxA-4067), 2879–2483 cal BC (95.4 %), boar's tusk; Dents du cairn : 3610 ± 110 (OxA-2084), 2292–1687 (95.4 %), tooth from the cairn; 4040 ± 80 BP (OxA-2085), 2876–2348 cal BC (95.4 %), tooth from the cairn; 3810 ± 80 (OxA-2086) & 3810 ± 80 BP (OxA-2087), 2472–2032 cal BC (95.4%), teeth from the cairn

Harding & Healy 2007; 2011, 162, 177; Shepherd 2009, 337, 358 (no. 35)

UK-25. Raunds, Barrow 5, F 47179, Raunds, Northamptonshire, England

Individual grave: barrow 34 m diameter, double ring-ditch, wooden chamber oriented NE–SW, central pit 1.5 x 0.85 x 0.3 m, inhumation?

Grave goods: 5 flint arrowheads, 1 Beaker (Tall Mid-Carinated type)

Chronological attribution: Period 2

Comment: the grave was probably disturbed in antiquity (Early Bronze Age), which would account for the presence of sherds of a Collared Urn in the grave

Harding & Healy 2007; 2011, 211

UK-26. Letcombe Bassett, Barrow 290, Grave 1, Oxfordshire, England

Individual grave: secondary grave in barrow disturbed by badgers, cremated human remains

Grave goods: 1 flint arrowhead

Chronological attribution: Period unspecified

Greenwell 1890; Kinnes & Longworth 1985, no. 290

UK-27. Summertown, Oxford, Oxfordshire, England

Individual grave: inhumation

Grave goods: 1 flint arrowhead, 2 Beakers (Tall Mid-Carinated types)

Chronological attribution: Period 2

British Museum, London, no. 1879.12-9.1787

Smith 1927; Clarke 1970, no. 761–2; Green 1980, no. 180; Kinnes & Longworth 1985, no. Un. 48

UK-28. Barrow Hills, Grave 203, Radley, Oxfordshire, England

Individual grave: ring ditch 9.5 m diameter x 0.5 m deep, central pit oriented NW–SE 1.83 x 1.3 x 0.36 m, inhumation, adult male (20–30 years) on the left side, legs bent, head towards NW, facing E

Grave goods: 6 flint arrowheads, 1 Beaker (Long-Necked type), 1 copper alloy awl, 4 flint scrapers on flakes, 1 flint 'piercer' on flake, 1 flint retouched flake, 1 flint retouched blade, 4 flint flakes, 1 flint blade, 1 pyrite nodule, 1 bone point (*Ovis*), 1 antler spatula

Chronological attribution: Period 4

¹⁴C Dating: 3360 ± 50 (BM-2643) & 3360 ± 50 (BM-2700), 1768–1517 Cal BC (95.4 %), human bone

Comment: one arrowhead with broken barbs and diagnostic impact break was found stuck between vertebrae and ribs. Other arrowheads were positioned as in a quiver

Barclay & Halpin 1999; Needham 2005

UK-29. Barrow Hills, Grave 950, Radley, Oxfordshire, England

Individual grave: wooden chamber?, pit oriented NW–SE 2.7 x 1.8 x 0.6 m, inhumation, disturbed skeleton

Grave goods: 1 flint arrowhead, 1 Beaker (Tall Mid-Carinated type)

Chronological attribution: Period 2

¹⁴C Dating: 3720 ± 50 BP (BM-2703), 2285–1965 cal BC (95.4 %), human bone

Comment: the grave was recut by a pit containing cremated human remains. Skeleton and some of the artefacts were found on three layers, possibly due to the reopening of the grave. Only the artefacts located in the lower filling have been considered as grave goods (Barclay & Halpin 1999, 58)

Barclay & Halpin 1999

UK-30. Barrow Hills, Grave 4660, Radley, Oxfordshire, England

Individual grave: pit oriented NW–SE 2 x 1.75 x 0.3 m, inhumation, adult male (40–45 years) on left side, legs bent, head towards N, facing E
Grave goods: 2 flint arrowheads, 1 Bell Beaker (Low-Carinated/AOO type), 1 arsenical copper knife-dagger with projecting butt, 1 flint blade with use retouch and ferrous residues (strike-a-light?), 1 flake with shiny polish and ferrous residues (strike-a-light?), 1 pin on large mammal bone, 1 antler spatula, 1 *Sus* tooth (in the filling)
Chronological attribution: Period 2
¹⁴C Dating: 3650 ± 50 BP (BM-2704), 2193–1893 cal BC (95.4 %), human bone
Barclay & Halpin 1999

UK-31. Barrow Hills, Grave 5274, Radley, Oxfordshire, England
Individual grave: pit oriented NE–SW 1.4 x 0.9 m, inhumation, 1 immature on left side, legs bent, head towards N, facing E
Grave goods: 1 flint transverse arrowhead, 2 flint knives, 3 flint flakes
Chronological attribution: Period 3/4
¹⁴C Dating: 3480 ± 80 BP (OxA-1903), 2026–1612 cal BC, human bones
Barclay & Halpin 1999

UK-32. Barrow Hills, Barrow 4a, Radley, Oxfordshire, England
Individual grave: barrow 17 m diameter x 1.05 m height, ring-ditch 8.5 m diameter x 0.75 m width x 0.3 m deep, central pit oriented E–W 2.30 x 1.35 x 0.9 m, inhumation, adult male (25–35 years) on left side, legs bent, head towards W, facing N
Grave goods: 3 flint arrowheads, 1 Bell Beaker (Low-Carinated type), 2 gold basket ornaments
Chronological attribution: Period 1
¹⁴C Dating: 3880 ± 90 (OxA-4356), 2580–2043 cal BC (95.4 %), human bone
Ashmolean Museum, Oxford, no. AN.1944.123.a–c
Leeds 1938; Williams 1948; Clarke 1970. no. 33; Green 1980, no. 264; Barclay & Halpin 1999

UK-33. Barrow Hills, Barrow 15, Grave 1, Radley, Oxfordshire, England
Individual grave: double ring-ditch 21 & 36.5 m diameter, pit oriented N–S 3.1 x 1.55 x 0.9 m, disturbed inhumation?, remains of an adult male located in two areas of the grave (with several connected bones)
Grave goods: 1 flint arrowhead
Chronological attribution: Period 2/3
¹⁴C Dating: 3660 ± 80 BP (OxA-4357), 2287–1779 cal BC (95.4 %), human bone
Riley et al. 1982; Barclay & Halpin 1999

UK-34. Stanton Harcourt, Grave II, Stanton Harcourt, Oxfordshire, England
Individual grave: ring-ditch 8.7 x 7.75 x 0.85 m, wooden chamber oriented NW–SE almost 1.3 x 0.6 m, central pit 2 x 1.55 x 0.85 m, inhumation, young adult male on left side, legs bent, hands close to the neck, head towards N, facing E
Grave goods: 7 flint arrowheads, 1 Bell Beaker (Low-Carinated type), 1 bone ring-pendant
Chronological attribution: Period 1
Ashmolean Museum, Oxford, no. 1965.100.a–g
Grimes 1944; Grimes et al. 1960; Clarke 1970, no. 772; Green 1980, no. 178

UK-35. Sutton, Sutton, Suffolk, England
Individual grave: barrow?, cremated human remains, adult male
Grave goods: 1 flint arrowhead, 1 Collared Urn, 3 flint knives
Chronological attribution: Period 3/4
Ipswich, no. 962.115
Smedley & Owles 1964; Green 1980, no. 384; Longworth 1984, no. 1522

UK-36. Ditchling Road, Brighton, Sussex, England
Individual grave: crouched inhumation, adult male
Grave goods: 1 flint arrowhead, 1 Beaker (Mid-Bellied type), 1 pile of snails (*Helix memoralis* & *Cyclostoma elegans* mainly)
Chronological attribution: Period 2/3
Brighton Museum, London, no. R.2315
Smith 1927; Grinsell 1931; Clarke 1970, no. 992; Green 1980, no. 402

UK-37. Amesbury Archer, Amesbury, Wiltshire, England

Individual grave: pit oriented E–W 2.35 x 1.75 x 0.6 m, inhumation, adult male (35–45 years) on left side, legs bent, head towards W, facing N

Grave goods: 17 flint arrowheads, 1 flint triangular point (arrowhead preform ?), 1 flint arrowhead preform, 5 Bell Beakers (Low-Carinated types of which 3 are AOC), 3 copper alloy tanged daggers, 2 gold basket ornaments, 2 flint daggers, 3 flint knives, 2 flint strike-a-lights, 8 flint scrapers, 2 flint retouched flakes, 2 flint used flakes, 8 flint irregular blades and bladelets, 28 flint flakes, 1 cushion stone, 2 stone wristguards, 1 pyrite nodule, 1 shale ring, 1 antler T-shaped pin, 3 antler spatulae, 4 boar's tusks, 1 perforated oyster shell

Chronological attribution: Period 1

¹⁴C Dating: 3895 ± 32 BP (OxA-13541), 2471–2290 cal BC (95.4 %), human bone; 3877 ± 33 BP (OxA-13540), 2468–2212 cal BC (95.4 %), boar's tusk; 3866 ± 28 BP (OxA-13623), 2464–2211 cal BC (95.4 %), boar's tusk

Salisbury and South Wiltshire Museum, Salisbury, no. SBYWM:2003.23

Fitzpatrick 2011; Woodward & Hunter 2011, 143–144, ID 56, 57

UK-38. Boscombe Bowmen, Amesbury, Wiltshire, England

Collective grave: pit oriented NW–SE 2.6 x 0.9 x 0.46 m, 1 deposit of cremated human remains (2–4 years), 3 *in situ* inhumations (5–7 years, 5–7 years, adult male 35–45 years), remains of further 3 individuals (2 adult males, 25–30 years, 1 immature, 15–18 years)

Grave goods: 5 flint arrowheads, 7 Bell Beakers (Low-Carinated types of which 6 AOC & 1 AOO), 2 flint scrapers, 1 flint knife on blade, 1 flint strike-a-light, 1 flint irregular blade, 2 flint flakes, 1 boar's tusk, 1 antler toggle

Chronological attribution: Period unspecified (multi-period burial)

¹⁴C Dating: 3955 ± 33 BP (OxA-13542), 2571–2345 cal BC (95.4 %), human bone; 3822 ± 33 BP (OxA-13543), 2457–2144 cal BC (95.4 %), human bone; 3825 ± 30 BP (OxA-13681), 2458–2146 cal BC (95.4 %), human bone; 3889 ± 32 BP (OxA-13598), 2471–2243 cal BC (95.4 %), human bone; 3845 ± 27 BP (OxA-13624), 2458–2205 cal BC (95.4 %), human bone; 3613 ± 28 BP (OxA-13972), 2109–1891 cal BC (95.4 %), human bone; 3681 ± 30 BP (OxA-13599), 2142–1965 cal BC (95.4 %), human bone

Wessex Archaeology, Salisbury

Fitzpatrick 2011

UK-39. Stonehenge Archer, Amesbury, Wiltshire, England

Individual grave: pit in the filling of the Stonehenge ditch, disturbed by burrowing animals, inhumation, adult male (25–30 years) laying on its back oriented E–W, legs bent, head towards W

Grave goods: 4 flint arrowheads, 1 stone wristguard

Chronological attribution: Period 2

¹⁴C Dating: 3715 BP ± 70 BP (BM-1582), 2338–1913 cal BC (95.4 %), human bone; 3960 ± 60 BP (OxA-4886), 2828–2235 cal BC (95.4 %), human bone; 3785 ± 70 BP (OxA-5044), 2458–2034 cal BC (95.4 %), human bone; 3825 ± 60 BP (OxA-5045), 2468–2063 cal BC (95.4 %), human bone; 3775 ± 55 BP (OxA-5046), 2451–2030 cal BC (95.4 %), human bone

Salisbury and South Wiltshire Museum, Salisbury, no. SBYWM:1983.7

Comment: a tip of one arrowhead was found in the posterior face of the sternum. Another arrowhead tip was lodged in one rib. Three ribs have cut-marks, probably made by arrows shot at short range (Evans *et al.* 1984).

Green 1980, no. 226/I; Evans et al. 1984; Cleal et al. 1995; Woodward & Hunter 2011, 144, ID 58

UK-40. Avebury 37, Avebury, Wiltshire, England

Individual grave: barrow 15 m diameter x 1.5 m height, pit 0.45 m diameter, cremation

Grave goods: 1 flint arrowhead, 2 copper alloy fragments of a dagger?, 1 stone object, 1 iron 'arrowhead'?,

Chronological attribution: Period unspecified

Merewether 1851; Grinsell 1957; Green 1980, no. A131

UK-41. Avebury 46a, Avebury, Wiltshire, England

Individual grave: barrow 24 m diameter x 0.5 m height, inhumation, fragments of skull

Grave goods: 1 flint arrowhead, 1 boar's tusk, teeth of several animals

Chronological attribution: Period unspecified

Merewether 1851; Grinsell 1957; Green 1980, no. A120

UK-42. Morgan's Hill/Bishop Cannings 28a, Bishop Cannings, Wiltshire, England

Individual grave: barrow 0.6 m height, central circular pit, cremated human remains

Grave goods: 2 burnt flint arrowheads, 1 flint knife

Chronological attribution: Period unspecified

British Museum, London, no. [18]73.12-19.26

Thurnam 1860; Smith 1927; Green 1980, no. 207

UK-43. Roundway Hill G5b, Bishop Cannings, Wiltshire, England

Individual grave: two conjoined barrows forming an oval 40.8 x 29 m & 2.15 m height, ring-ditch 45 m diameter x 0.45 m deep, stone cist oriented SW–NE 1.75 x 0.75 x 0.60 m, cremated human remains, adult male

Grave goods: 1 flint arrowhead, 1 copper alloy grooved knife-dagger, 1 flint knife, 2 flint flakes, 1 flint burin spall, 2 sandstone arrowshaft smoothers, 2 sandstone polishers, 1 quartz pebble, 1 antler spatula, 1 antler fragment, 3 bone spatulae

Chronological attribution: Period 4

Wiltshire Heritage Museum, Devizes, no. DZSWS:STHEAD.2004.343.10

Cunnington 1860; Annable & Simpson 1964; Gerloff 1975, no. 325; Green 1980, no. 205

UK-44. Roundway Hill G8, Bishop Cannings, Wiltshire, England

Individual grave: barrow 16.5 m diameter x 0.15 m height, pit 1.52 x 0.71 x 0.15 m, inhumation, adult male (70–80 years (19th century determination) on left side, legs bent, left hand near the head, right arm on the body, head towards N

Grave goods: 1 flint arrowhead, 1 Bell Beaker (Low-Carinated type), 1 copper alloy tanged dagger with remains of dagger sheath, 1 copper alloy point, 1 stone wristguard

Chronological attribution: Period 1/2

¹⁴C Dating: 3734 ± 30 BP (OxA-V-2228-40), 2270–2034 cal BC (95.4 %)

Wiltshire Heritage Museum, Devizes, no. DZSWS:DM.443

Comment: The wristguard material was originally described as 'slate' but analysis has revealed that it is in fact an amphibolite (Woodward & Hunter 2011, 141, ID 28)

Cunnington 1857; Thurnam 1871; Annable & Simpson 1964; Clarke 1970, no. 1135; Gerloff 1975, no. 1; Green 1980, no. 206; Woodward & Hunter 2011, 141, ID 28; Needham 2012

UK-45. Snail Down, Grave 19/"Hunter's Barrow", Collingbourne Kingston, Wiltshire, England

Individual grave: barrow 25 m diameter x 2.7 m height, cremation

Grave goods: 5 flint arrowheads, 1 sandstone pebble

Chronological attribution: Period unspecified

Wiltshire Heritage Museum, Devizes, no. DZSWS:1960.10.693

Hoare 1812, 183–184; Crooker, Archives, Wiltshire Heritage Museum, Devizes; Green 1980, no. 256; Thomas & Watson, 2005

UK-46. Durrington G67, Durrington, Wiltshire, England

Individual grave: barrow?, double ring-ditch 13.8 & 20.5 m diameter, central pit oriented SW–NE 2.15 x 1.5 x 1.05 m, inhumation, adult male on left side, legs bent, hands on the chest, head toward N, facing E

Grave goods: 1 flint arrowhead, 1 Beaker (Collared type), 1 granite battle axehead

Chronological attribution: Period 2/2

Wiltshire Heritage Museum, Devizes, no. DZSWS:X143

Cunnington 1929; Annable & Simpson 1964; Clarke 1970, no. 1103; Green 1980, no. 235

UK-47. Alton Parva/Figheledean G26, Figheledean, Wiltshire, England

Individual grave: barrow, 36 m diameter x 1.5 m height, central pit 2.3 x 0.8 x 1.4 m, inhumation, skeleton on left side

Grave goods: 2 flint arrowheads, 1 Grape cup, 1 Collared Urn?, 1 copper alloy flat-riveted knife-dagger

Chronological attribution: Period 3

British Museum, London, no. 1902.6-16.13–14

Hawley 1910; Gerloff 1975, no. 299; Green 1980, no. 237; Kinnes 1994

UK-48. Monkton Farleigh 2/Jug's Grace, Monkton Farleigh, Wiltshire, England

Double grave: oval barrow 25 m length, stone cist, inhumation, 2 skeletons

Grave goods: 4 flint arrowheads, 1 Bell Beaker (Low-Carinated type), 1 gold disc, 1 flint blade, 2 proximal fragments of flint blades, 1 bone ring

Chronological attribution: Period 1

Bristol City Museum

Underwood 1948; Clarke 1970, nos. 1111–1112; Green 1980, no. 197

UK-49. Wanborough I/Popple Church/Aldbourn, Wanborough, Wiltshire, England

Individual grave: barrow 24.4 m diameter x 1.05 m height, burnt wooden chamber, cremated human remains

Grave goods: 1 flint arrowhead, 1 copper alloy knife-dagger with midrib
Chronological attribution: Period 4
Ashmolean Museum, Oxford, no. AN.1955.208.b
Passmore 1896; Smith 1927; Gerloff 1975, no. 308; Green 1980, no. 258

UK-50. Wilsford G54/Lake 21, Wilsford, Wiltshire, England
Individual grave: barrow 14 m diameter x 0.3 m height, flint cairn 5.5–7 m diameter, pit oriented NW–SE 2.35 x 1.5 x 0.45 m
Grave goods: 6 flint arrowheads, 3 Beakers (2 Tall Mid-Carinated types, of which 1 maritime type, 1 AOC)
Chronological attribution: Period 1/2
Wiltshire Heritage Museum, Devizes, no. DZSWS:STHEAD.173
Comment: grave disturbed and reused during the Early Bronze Age.
Hoare 1812, 210; Greenfield 1959; Clarke 1970, nos. 1173–1174; Green 1980, no. 225; Smith et al. 1991

UK-51. Winterbourne Monkton 9, Winterbourne Monkton, Wiltshire, England
Individual grave: barrow, pit 1.8 x 1.2 x 1.6 m, 2 *Bos* skulls on the top of the pit, inhumation, adult on left side, legs bent
Grave goods: 1 flint arrowhead, 1 Beaker (Mid-Bellied type), 2 flint daggers?
Chronological attribution: Period 3
Merewether 1851; Smith 1927; Clarke 1970, no. 1187; Green 1980, no. 252

UK-52. Winterslow Hut/Winterslow 3, Winterslow, Wiltshire, England
Individual grave: barrow, central pit, inhumation, skeleton oriented N–S, head towards N
Grave goods: 2 flint arrowheads, 1 Beaker (Tall Mid-Carinated type), 1 copper alloy tanged dagger, 1 amphibolite wristguard
Chronological attribution: Period 2
Ashmolean Museum, Oxford, no. AN.NC.207
Comment: the wristguard was originally thought to be of slate, but analysis has revealed that it is an amphibolite (Woodward & Hunter 2011, 133, ID 4)
Sydenham 1844; Thurnam 1871; Steven & Stone 1939; Clarke 1970, no. 1204; Gerloff 1975, no. 4; Green 1980, no. 254; Woodward & Hunter 2011, 133, ID 4

UK-53. Bredon Hill, Bredon, Worcestershire, England
Double grave: barrow 8.7–10.7 m diameter x 0.5 m height, ring-ditch 8.4–10.4 m diameter x 0.75 m width x 0.3 m deep, cairn 0.15 m height, stone cist made of 1 upright and dry-stone walls oriented N–S, central pit 1.7 x 0.9 m, inhumation, 1 adult male (40–50 years), 1 adult woman (25–30 years)
Grave goods: 4 flint arrowheads, 2 Beakers (Tall Mid-Carinated type), 1 flint scraper, 1 large mammal bone pressure flaker?
Chronological attribution: Period 2
Birmingham
Thomas 1965; Green 1980, no. 169

UK-54. Creux-es-Faies, Saint-Peter-in-the-Wood, Guernsey, Channel Islands
Collective grave: passage tomb, inhumation, 3 skeletons (1 adult, 1 immature)
Grave goods: 1 flint arrowhead, 8 Bell Beakers
Chronological attribution: Period 1
Guernsey Museum
Comment: the grave yielded only Bell Beaker artefacts.
Lukis 1866; Kendrick 1928; Kinnes & Grant 1983; Salanova 2000

UK-55. Le Trépied, Saint-Saviour, Guernsey, Channel Islands
Collective grave: gallery grave with peristalith
Grave goods: 2 flint arrowheads, 2 Bell Beakers
Chronological attribution: Period 1
Guernsey Museum
Comment: the grave yielded only Bell Beaker artefacts
Kendrick 1928; Kinnes & Grant 1983; Salanova 2000

UK-56. Les Fouaillages, Vale, Guernsey, Channel Islands
Individual grave: barrow, cairn 5 x 2.5 m, pit oriented E–W 1.8 x 1.1 m

Grave goods: 8 flint arrowheads, 1 Beaker (Tall Mid-Carinated type)

Chronological attribution: Period 2

Guernsey Museum

Comment: the barrow partially covers a Middle Neolithic long barrow. The grave has been disturbed by burrowing animals and by earthmoving work during the Second World War

Kinnes & Grant 1983; Cyril Marcigny, pers. comm.

UK-57. Platte Mare, Vale, Guernsey, Channel Islands

Collective grave: megalithic cist

Grave goods: 1 flint arrowhead, 2 Bell Beakers (1 maritime type)

Chronological attribution: Period 1

Guernsey Museum

Kendrick 1928; Kinnes & Grant 1983; Salanova 2000

UK-58. Bedd Emlyn, Grave III, Clocaenog, Denbighshire, Wales

Individual grave: secondary grave in a dry-stone cist possibly surrounded by ring-cairn, cremated human remains

Grave goods: 11 burnt flint arrowheads, 1 Food Vessel, 1 burnt flint knife

Chronological attribution: Period 2/3

National Museum Cardiff, no. 50.522/5–15

Savory 1961; Green 1980, no. 111

UK-59. Cefn Goleu Cairn, Cremation 3, Cefn Goleu, Flintshire, Wales

Individual grave: capstone 0.65 x 0.5 x 0.12 m, circular pit 0.3 m diameter x 0.35 m deep, cremated human remains, adult

Grave goods: 2 burnt flint arrowheads,

Chronological attribution: Period unspecified

Bevan-Evans & Hayes 1955; Green 1980, no. 115

UK-60. Breach Farm, Llanbleddian, Vale of Glamorgan, Wales

Individual grave: barrow 24.7 m diameter x 1.05 m height, ring-cairn 21 m diameter x 1.5–2.45 m width, central pit 0.7 m diameter x 0.7 m deep, cremated human remains

Grave goods: 13 flint arrowheads, 1 accessory vessel (cup), 1 copper alloy dagger with remains of hilt, 1 copper alloy low flanged axehead, 1 copper alloy chisel, 1 flint scraper, 1 flint knife, 3 triangular points (arrowhead preforms?), 3 flint scrapers, 2 sandstone arrowshaft smoothers

Chronological attribution: Period 3

¹⁴C Dating: 3520 ± 60 BP (GrA-19964), 2022–1692 cal BC (95.4 %), calcined human bone; 3530 ± 60 BP (GrA-20601), 2026–1694 cal BC (95.4 %), calcined human bone

National Museum Cardiff, no. 38.37/5–17

Grimes 1938; Green 1980, no. 186; Brindley 2007

UK-61. Sutton 268', Cremation C, Llandow, Vale of Glamorgan, Wales

Individual grave: secondary grave in barrow (UK-62), capstones, pit, cremated human remains

Grave goods: 1 flint arrowhead, 1 Collared urn, 1 flint knife, 1 polished bone object

Chronological attribution: Period 3/4

National Museum Cardiff

Fox 1943; Griffiths 1957; Green 1980, no. 185; Longworth 1984, no. 2176

UK-62. Sutton 268', Inhumation 1, Llandow, Vale of Glamorgan, Wales

Individual grave: barrow 8 m diameter (originally) or 21 m diameter (final state), cairn, surrounding stones oriented N–S 2.4 x 0.6 m, central pit 3.8 x 3 x 0.7 m, inhumation, adult male on left side, legs bent, head towards N, facing E

Grave goods: 7 flint arrowheads, 1 Beaker (Tall Mid-Carinated type), 1 flint scraper

Chronological attribution: Period 2

National Museum Cardiff

Comment: one arrowhead was located with the Beaker close to the head, two arrowheads close to the arms and four arrowheads near the feet

Fox 1943; Griffiths 1957; Clarke 1970, no. 1867; Green 1980, no. 184

UK-63. Gray Hill, Llanfair Discoed, Monmouthshire, Wales

Individual grave: ring-cairn 12 m diameter x 2 m width with sandstone slabs lining the interior, wooden superstructure oriented N–S 2.85 x 2.05 m, pit 4 x 3 m
Grave goods: 8 flint arrowheads, sherds of Beaker
Chronological attribution: Period 1/2
Archaeology Department, Bristol University, Bristol
Comment: disturbed grave probably reused for burial during the Early Bronze Age burial (accompanied by a faience bead, sherds of urn and a metal object)
Chadwick et al. 2003, Chadwick & Pollard 2005

UK-64. Cwm Car, Brecknock, Powys, Wales
Individual grave: capstone 1.2 x 0.6 x 0.05 m, stone cist made of 4 uprights 0.65 x 0.5 x 0.3 m, cremated human remains
Grave goods: 1 flint arrowhead, 1 Beaker (Long-Necked type)
Chronological attribution: Period 2
Ward 1902; Smith 1927; Griffiths 1957; Green 1980, no. 161

UK-65. Twr Gwyn Mawr, Carno, Powys, Wales
Individual grave: cairn 18 m diameter x 1.8 m height, six capstones, stone cist 2.7 x 0.6 x 0.65 m, layer of pebbles, inhumation, bones
Grave goods: 2 flint arrowheads, 1 flint knife
Chronological attribution: Period unspecified
Davies 1857; Green 1980, no. 160

UK-66. Sarn-y-bryn-caled, primary cremation, Welshpool, Powys, Wales
Individual grave: pit 1.7 x 1.2 x 0.6 m, cremated human remains, adult
Grave goods: 4 burnt flint arrowheads
Chronological attribution: Period 2/3
¹⁴C Dating: 3600 ± 35 BP (SUERC-27586), 2116–1881 cal BC (95.4 %), human bone
Comment: In its first phase, a double timber circle was built between the 22th and 21th centuries BC. In a second phase, a pit was dug in the centre of the monument between the 21th and 20th centuries BC in order to deposit cremated remains with arrowheads. In a third phase, a secondary deposit of cremated remains was placed over the first one between the 20th and 19th centuries BC (Gibson 2010)
Gibson et al. 1994; Gibson 2010

Denmark

DK-01. Stenilgård, Års, Års, Ålborg
Individual grave: stone layer, circular dry-stone cist 0.6 diameter, cremated human remains
Grave goods: 1 burnt flint arrowhead, 1 decorated Beaker, 1 tronconic pot, 1 distal fragment of flint dagger
Chronological attribution: Late Neolithic
Vesthimmerlands Museum, Års, no. VMÅ 486
Nielsen 1934; Lomborg 1973; Ebbesen 2004, no. 26; Sarauw 2007, no. 15

DK-02. Smørup, Brorstrup, Års, Ålborg
Individual grave: barrow, stone layer 10 m length x 1.2 m width, cremated human remains
Grave goods: 1 burnt flint arrowhead, 1 burnt flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM B.1959-60
Ebbesen 2004, no. 24; Sarauw 2007, no. 14

DK-03. Halsmandbro II, Ejdrup, Års, Ålborg
Individual grave: secondary grave in barrow
Grave goods: 3 flint arrowheads, 2 flint daggers (type I B)
Chronological attribution: Late Neolithic I
Ålborg Historiske Museum, no. ÅHM 3249x1-x52
Johansen 1996; Sarauw 2007, no. 16

DK-04. Lynnerup II, Skivum, Års, Ålborg
Collective grave: passage tomb
Grave goods: 1 flint arrowhead

Chronological attribution: Bell Beaker
Vesthimmerlands Museum, Års, no. VMÅ 278x51
Jørgensen 1986

DK-05. Blære, layer 6, Blære, Års, Ålborg

Collective grave: stone cist, inhumation and cremated human remains
Grave goods: 9 flint arrowheads, 2 Bell Beaker sherds, 4 flint daggers (1 type I, 2 type I B, 1 type I C), 1 amber bead
Chronological attribution: Bell Beaker/Late Neolithic I
Vesthimmerlands Museum, Års, no. VMÅ 1341
Fabech 1986

DK-06. Fandrup, Farsø, Gislum, Ålborg

Individual grave: barrow, stone layer oriented N–S 2.1 x 1.3 m, cremated human remains?
Grave goods: 3 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Vesthimmerlands Museum, Års, no. VMÅ 881
N. Bertelsens, Archives, Vesthimmerlands Museum, Års; Ebbesen 2004, no. 18; Sarauw 2007, no. 11

DK-07. Fredbjerg, Farsø, Gislum, Ålborg

Individual grave: barrow
Grave goods: 1 flint arrowhead, 1 flint dagger (type I A)
Chronological attribution: Late Neolithic I
Sarauw 2007, no. 12

DK-08. Foulum, Foulum, Gislum, Ålborg

Individual grave: barrow 35 m diameter, stone layer oriented N–S 1.6 x 0.6 m, inhumation
Grave goods: 4 flint arrowheads, 1 flint dagger (type II A)
Chronological attribution: Late Neolithic I
Vesthimmerlands Museum, Års, no. VMÅ 896-7
T. Kaldahl, Archives, Vesthimmerlands Museum, Års; Ebbesen 2004, no. 19; Sarauw 2007, no. 13

DK-09. Rold Mark, Rold, Hindsted, Ålborg

Individual grave
Grave goods: 1 flint arrowhead, 1 flint dagger (type IV B)
Chronological attribution: Late Neolithic II
Nationalmuseet, Copenhagen, no. NM I.5747-8
Catalogue, Nationalmuseet, Copenhagen

DK-10. Lundgård, Rostrup, Hindsted, Ålborg

Individual grave: barrow, stone layer
Grave goods: 1 flint arrowhead, 1 flint dagger (type I)
Chronological attribution: Late Neolithic I
Ebbesen 2004, no. 20

DK-11. Store Arden, Store Arden, Hindsted, Ålborg

Individual grave: barrow, pit
Grave goods: 3 flint arrowheads, 1 flint dagger (type I)
Chronological attribution: Late Neolithic I
Ebbesen 2004, no. 21

DK-12. Ulstrup, Valsgård, Hindsted, Ålborg

Individual grave: barrow, stone cist oriented E–W
Grave goods: 2 flint arrowheads, 1 flint dagger (type II B)
Chronological attribution: Late Neolithic I
Ebbesen 2004, no. 22

DK-13. Hvarre 1, Vebbestrup, Hindsted, Ålborg

Individual grave: barrow, central pit filled with stone oriented E–W 3.3 x 1.2 x 0.8 m,
Grave goods: 2 flint arrowheads, 1 flint dagger (type I A/B), 1 fossil sea urchin

Chronological attribution: Late Neolithic I
Ebbesen 2004, no. 23

DK-14. Hvarre 2, Vebbestrup, Hindsted, Ålborg
Individual grave: pit 0.6 x 0.2 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I
Comment: grave located in the Hvarre 1 barrow (DK-13)
Ebbesen 2004, no. 23

DK-15. Åle, Barrow 1, Ranum, Slet, Ålborg
Individual grave: barrow 11.5 m diameter, pit oriented NW–SE 2.5 x 1 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Vesthimmerlands Museum, Års, no. VMÅ 1917x2
Archives, Vesthimmerlands Museum, Års; Madsen 1997; Sarauw 2007, no. 17

DK-16. Damgården IV, Søften, Vester-Lisbjerg, Århus
Individual grave: barrow, oak chamber
Grave goods: 7 flint arrowheads, 1 flint dagger (type I B), 1 amber bead
Chronological attribution: Late Neolithic I
Forhistorik Museum, Moesgård, no. FHM 3567
Nielsen 1991; Sarauw 2007, no. 41

DK-17. Dyrehavegård, Lyngby-Tårnbæk, Sokkelund, Copenhagen
Individual grave: barrow 5 x 1.5 m, stone layer oriented E–W 2.4 x 0.9 m, inhumation, remains of skeleton
Grave goods: 1 flint arrowhead, 1 flint dagger (type II A), 1 amber bead
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.50763-4
Ebbesen 2004, no. 4

DK-18. Nustrup, Nustrup, Gram, Haderslev
Individual grave: barrow, wooden chamber oriented E–W blocked with stones, sand layer
Grave goods: 1 flint arrowhead, 1 flint dagger (type I)
Chronological attribution: Late Neolithic I
Haderslev Museum, no. 6029-31
Ebbesen 2004, no. 68; Sarauw 2007, no. 64

DK-19. Melbjerg høje/Stubdrup, Øster Brønderslev, Børglum, Hjørring
Individual grave: barrow 14 m diameter x 1 m height, stone layer, pit oriented E–W 2.4 x 0.6 m
Grave goods: 1 flint arrowhead, 2 flint daggers (1 type I B, 1 type I E)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.34532-4
Lomborg 1973; Ebbesen 2004, no. 11; Sarauw 2007, no. 2

DK-20. Lem, Hellevad, Dronninglund, Hjørring
Individual grave: sand barrow 12 m diameter x 1 m height, stone cist oriented NW–SE 2.65 x 1.3 x 0.8 m
Grave goods: 4 flint arrowheads, 1 flint dagger
Chronological attribution: Late Neolithic
Nationalmuseet, Copenhagen, no. NM A.32244-8
Catalogue, Nationalmuseet, Copenhagen; Ebbesen 2004, no. 12; Sarauw 2007, no. 3

DK-21. Søndersø Nørremark, Søndersø, Skovby, Odense
Individual grave: elongated barrow covering several structures, stone cist, cremated human remains, burnt bones
Grave goods: 1 flint arrowhead, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I
Lambertsen 1993; Sarauw 2007, no. 1

DK-22. Vester-Egesborg, Vester-Egesborg, Hammer, Præstø

Individual grave: barrow, stone cist made of 9 uprights 1.6 x 1.5 m, inhumation, contracted (crouched) skeleton on left side, head towards N, facing E
Grave goods: 1 flint arrowhead, 1 flint dagger (Madkneve type C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.16798
Müller 1896; Nielsen 1974

DK-23. Marshøj, Gjerrild, Djurs Nørre, Randers
Individual grave: barrow 8 m diameter, stone layer, pit
Grave goods: 3 flint arrowheads, 1 ceramic, 1 flint dagger
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM B.17018
Sarauw 2007, no. 40

DK-24. Thorsø Hede, Voldby, Djurs Nørre, Randers
Individual grave: barrow 25 m diameter x 0.5 m height, stone layer oriented E–W 4 x 3.5 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.12073-4
Ebbesen 2004, no. 46; Sarauw 2007, no. 35

DK-25. Kjeldsminde, Årslev, Sønderhald, Randers
Individual grave: wooden chamber? oriented NE–SW 2.2 x 0.6 m blocked by stone, pit 3,3 x 2.5 x 1.3 m
Grave goods: 8 flint arrowheads, 1 flint dagger (type I A), 1 flint axehead, 1 flint chisel
Chronological attribution: Late Neolithic I
Kulturhistorik Museum, Randers, no. KHM 5923
Kristensen 1972; Sarauw 2007, no. 39

DK-26. Lemmer, Lime, Sønderhald, Randers
Individual grave: barrow, stone layer, pit oriented NE–SW 2.3 x 0.92 m
Grave goods: 12 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Forhistorik Museum, Moesgård, no. FHM 5118
Comment: 11 arrowheads were positioned in a bundle
Ebbesen 2004, no. 47; Sarauw 2007, no. 36

DK-27. Allestrup Vest, Grave Bz, Vejlbj, Sønderhald, Randers
Individual grave: wooden chamber? blocked by stone, pit oriented E–W 3.4 x 2.3 m
Grave goods: 4 flint arrowheads, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I
Kulturhistorik Museum, Randers, no. KHM 6649
Comment: the grave cut the grave Cn of Allestrup Vest (DK-28)
Schmidt 1989; Jensen 1995; Sarauw 2007, no. 38

DK-28. Allestrup Vest, Grave Cn, Vejlbj, Sønderhald, Randers
Individual grave: stone layer, pit oriented E–W, pit 2.9 x 1.3 m
Grave goods: 8 flint arrowheads
Chronological attribution: Late Neolithic I
Kulturhistorik Museum, Randers, no. KHM 6650
Comment: the grave is cut by grave Bz of Allestrup Vest (DK-27).
Schmidt 1989; Jensen 1995

DK-29. Allestrup Vest, Grave Eh, Vejlbj, Sønderhald, Randers
Double grave: wooden chamber oriented NE–SW 2.2 x 1 m, stone layer, pit 2.9 x 1.7 x 1.1 m, inhumation, remains of 2 skulls
Grave goods: 5 flint arrowheads, traces of copper, 2 flint daggers (types I B)
Chronological attribution: Late Neolithic I
Kulturhistorik Museum, Randers, no. KHM 331/75
Schmidt 1989; Jensen 1995; Ebbesen 2004, no. 48; Sarauw 2007, no. 37

DK-30. Vittrup, Barrow 3, Grave A, Lindknud, Malt, Ribe

Individual grave: stone cist constructed of uprights and dry-stone walling oriented E–W 1.5 x 1 x 0.5 m, inhumation, remains of skeleton

Grave goods: 1 flint arrowhead, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.26274-5

Comment: the grave reused an older barrow

Forssander 1936; Ebbesen 2004, no. 66; Sarauw 2007, no. 62; Siemen, 2009, no. 23.66

DK-31. Solbakkegård IV, Grave GP, Bryndum, Skads, Ribe

Individual grave: circular pit 0.6 m diameter, cremated human remains, 1 immature (c. 12 years)

Grave goods: 3 burnt flint arrowheads, 1 flint arrowhead, 1 burnt flint dagger (Madknife type B), 1 burnt flint flake, 1 burnt flint retouched flake, 1 burnt flint pebble, 2 flint flakes, 4 amber V-perforated buttons

Chronological attribution: Bell Beaker

Esbjerg Museum, Esbjerg, no. ESM 2216

Siemen 1999a; 1999b; Sarauw 2007, no. 63

DK-32. Fredshavn, Vorbasse, Slaugs, Ribe

Individual grave: stone layer 1.5 x 2.3 m, pit oriented E–W 1.1 x 2 m

Grave goods: 1 flint arrowhead, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Esbjerg Museum, Esbjerg, no. ESM 2573

Comment: the grave reused a Single Grave Culture barrow

Siemen 2005; 2009, no. 58.96; Sarauw 2007, no. 66

DK-33. Vorbasse 6c, Grave C2, Vorbasse, Slaugs, Ribe

Individual grave: barrow, stone layer, wooden chamber? oriented E–W 1.25 x 0.5 x 0.6 m, central pit 1.8 x 1.2 m

Grave goods: 1 flint arrowhead, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Esbjerg Museum, Esbjerg, no. ESM 1563

Siemen 1987; 1992; 2009, no. 58.102; Sarauw 2007, no. 65

DK-34. Vorbasse 20a, Vorbasse, Slaugs, Ribe

Individual grave: barrow 14 m diameter x 1.05 m height, cairn 8.5 m diameter x 0.8 m height, stone layer oriented E–W 1.6 m length x 0.8 m width, inhumation, 1 skull

Grave goods: 6 flint arrowheads, 1 flint dagger (type I A), 1 flint scraper, 5 arrowhead preforms, 14 flint flakes, 2 irregular flint blades, 2 sandstone arrowshaft smoothers

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.15081-8

Comment: dagger association with grave goods is insecure

Müller 1898; Siemen, 2009, no. 58.105

DK-35. Slavgård, Barrow 13, Vorbasse, Slaugs, Ribe

Individual grave

Grave goods: 1 flint arrowhead preform?, 1 flint dagger

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.15041-2

Comment: the grave reused a Single Grave Culture barrow

Catalogue, Nationalmuseet, Copenhagen; Müller 1898; Ebbesen 2004, 67

DK-36. Ål, Ål, Vester Horne, Ribe

Individual grave: barrow, stone layer, inhumation, teeth

Grave goods: 10 flint arrowhead roughouts, 1 flint dagger (type I A/B)

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.781-3

Siemen 2009, no. 72.09

DK-37. Ulvehøj, Man grave, Nørre Vium, Bølling, Ringkøbing

Individual grave: barrow 15 m diameter x 1.7 m height, pit

Grave goods: 1 flint arrowhead, 1 flint dagger (type I A/B)

Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.5535-6
Catalogue, Nationalmuseet, Copenhagen

DK-38. Vester Egebjerg, Ejsing, Ginding, Ringkøbing
Individual grave: wooden chamber oriented E–W, pit 2.3 x 1.6 m
Grave goods: 8 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Holstebro Museum, Holstebro, no. HOL 20.315
Bodilsen 1998a; 1998b; Sarauw 2007, no. 60

DK-39. Kirkegårde, Assing, Hammerum, Ringkøbing
Individual grave: barrow 16 m diameter x 3.2 m height, stone layer 1.9 x 0.6 m
Grave goods: 9 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.17317-26
Catalogue, Nationalmuseet, Copenhagen; Ebbesen 2004, no. 54; Sarauw 2007, no. 51

DK-40. Kvindvad, Barrow 1, Grave A, Sinding, Hammerum, Ringkøbing
Individual grave: barrow 0.3 m height, stone layer oriented NW–SE, wooden chamber?
Grave goods: 1 flint arrowhead, 1 flint dagger (type I A)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.44632-3
Comment: the grave reused a pit of an older grave with dagger
Ebbesen 2004, no. 55; Sarauw 2007, no. 52

DK-41. Kvindvad, Barrow 3, Sinding, Hammerum, Ringkøbing
Individual grave: barrow 0.3 m height, stone layer, wooden chamber?, pit NW–SE 3.75 x 1.85 x 0.65 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I A)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.44637-8
Ebbesen 2004, no. 56; Sarauw 2007, no. 53

DK-42. Kvindvad, Barrow 4, Grave B, Sinding, Hammerum, Ringkøbing
Individual grave: barrow 10 m diameter x 0.5 m height, stone layer, wooden chamber 2.5 x 0.5 m, pit oriented NW–SE 3.3 x 1.75 x 0.7 m
Grave goods: 2 flint arrowheads,
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.44641-2
Comment: the grave pit has been reused by a grave with dagger
Ebbesen 2004, no. 57

DK-43. Nøvling Plantage, Vildbjerg, Hammerum, Ringkøbing
Individual grave: stone layer, pit oriented E–W 3.5 x 2 x 0.65 m
Grave goods: 3 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Herning Museum, Herning, no. HEM 3731
Kærgård & Rostholm 2000; Sarauw 2007, no. 61

DK-44. Tingerdal, Barrow 7, Grave F, Borbjerg, Hjerm, Ringkøbing
Individual grave: barrow, stone layer
Grave goods: 6 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.30725-31
Ebbesen 2004, no. 59; Sarauw 2007, no. 54

DK-45. Råbjerg Hede, Barrow 1, Grave C, Fovsing, Hjerm, Ringkøbing
Individual grave: barrow, stone layer, wooden chamber oriented E–W
Grave goods: 4 flint arrowheads, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.40535-9
Ebbesen 2004, no. 60; Sarauw 2007, no. 55

DK-46. Gudum, Gudum, Skodborg, Ringkøbing
Individual grave: barrow, stone layer oriented E–W 3.3 x 1.35 m
Grave goods: 3 flint arrowheads, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I
Lemvig Museum, Lemvig, no. 878
Ebbesen 2004, no. 62, Sarauw 2007, no. 56

DK-47. Roesgård, Rom, Skodborg, Ringkøbing
Individual grave: barrow, pit 2.5 x 1.1 m
Grave goods: 5 flint arrowheads, 1 flint dagger (type I)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.21146-51
Ebbesen 2004, no. 63; Sarauw 2007, no. 57

DK-48. Øster Herupgård, Dybe, Vandfuld, Ringkøbing
Individual grave
Grave goods: 2 flint arrowheads, 1 flint dagger (type II B)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.27380-2
Comment: the grave reused a Single Grave Culture barrow
Ebbesen 2004, no. 64, Sarauw 2007, no. 58

DK-49. Rammedige, Ramme, Vandfuld, Ringkøbing
Individual grave: cremation
Grave goods: 4 burnt flint arrowheads, 1 burnt flint dagger (type I)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.27268
Comment: the grave reused an older barrow
Kunwald 1954; Ebbesen 2004, no. 65; Sarauw 2007, no. 59

DK-50. Trust, Barrow 12, Tvilum, Gjern, Skanderborg
Individual grave: barrow, stone layer 4.5 x 2.5 m, inhumation, remains of skeleton
Grave goods: 7 flint arrowheads, 1 fragment of copper alloy ring, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.12494-5, B.6022
Ebbesen 2004, no. 49; Sarauw 2007, no. 45

DK-51. Tvilum, Grave CS, Tvilum, Gjern, Skanderborg
Individual grave: cairn oriented E–W 4 x 2.2 x 0.9 m, dry-stone walls
Grave goods: 2 flint arrowheads, 1 flint dagger (type I D)
Chronological attribution: Late Neolithic I
Silkeborg Museum, Silkeborg, no. SIM 459/75
Comment: the grave reused a Single Grave Culture barrow and is recut by another grave with arrowheads (DK-52)
Sønderby 1976; Sarauw 2007, no. 42

DK-52. Tvilum, Grave CT, Tvilum, Gjern, Skanderborg
Individual grave: stone layer oriented E–W 3.5 x 1.4 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type II B)
Chronological attribution: Late Neolithic I
Silkeborg Museum, Silkeborg, no. SIM 459/75
Comment: the grave reused a Single Grave Culture barrow and cut by another grave with arrowheads (DK-51)
Sønderby 1976; Sarauw 2007, no. 43

DK-53. Karolinelund, Grave A, Voel, Gjern, Skanderborg
Individual grave: stone layer oriented E–W 2.8 x 1 m
Grave goods: 2 flint arrowheads, 1 flint dagger (type II A)

Chronological attribution: Late Neolithic I

Silkeborg Museum, Silkeborg, no. SIM 29/1998

Comment: the grave reused a Single Grave Culture barrow and it is upon another grave with arrowheads (DK-54)

Jensen 1999; 2002a; Sarauw 2007, no. 49

DK-54. Karolinelund, Grave F, Voel, Gjern, Skanderborg

Individual grave: stone layer, wooden chamber oriented E–W 2.7 x 0.6 m

Grave goods: 5 flint arrowheads, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Silkeborg Museum, Silkeborg, no. SIM 29/1998

Comment: the grave reused a Single Grave Culture barrow and it is above another grave with arrowheads (DK-53)

Jensen 1999; 2002a; Sarauw 2007, no. 48

DK-55. Vinding, Grave O, Vinding, Tyrsting, Skanderborg

Individual grave: stone layer 3.5 x 1.8 m, wooden chamber (oak?) oriented E–W 2 x 0.5 m, inhumation laying in its back, head towards E

Grave goods: 4 flint arrowheads, 1 tronconical ceramic, 1 flint dagger (type I C), 1 stone battle axehead

Chronological attribution: Late Neolithic I

¹⁴C Dating: 3750 ± 85 BP (K-2962), 2459-1950 cal BC (95.4 %), charcoal; 3740 ± 85 BP (K-2963), 2458-1938 cal BC (95.4 %), charcoal; 3880 ± 85 BP (K-2964), 2577-2058 cal BC (95.4 %), charcoal

Silkeborg Museum, Silkeborg, no. SIM 268/75

Comment: the grave reused a Single Grave Culture barrow

Sønderby 1977; Vandkilde 1996; Sarauw 2007, no. 44

DK-56. Østbirk, Grave 4, Østbirk, Voer, Skanderborg

Individual grave: barrow 19,5 diameter x 1.1 m height, stone layer oriented E–W 2.3 x 0.6 x 0.15 m

Grave goods: 4 flint arrowheads, 1 flint dagger (type I), 1 amber pendant

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.15095-8

Comment: the barrow contained several burials

Catalogue, Nationalmuseet, Copenhagen; Ebbesen 2004, no. 51, Sarauw 2007, no. 46

DK-57. Plovstrup, Tørring, Vrads, Skanderborg

Individual grave: barrow, stone layer 0.7 m height, pit oriented E–W 3 x 1.2 m

Grave goods: 1 flint arrowhead, 1 flint dagger (type I A/B)

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.34024-5

Ebbesen 2004, no. 52, Sarauw 2007, no. 47

DK-58. Ølmoose Huse, Haraldsted, Ringsted, Sorø

Individual grave: stone layer, pit oriented NE–SW 5.9 x 2.4 x 0.9 m

Grave goods: 1 flint arrowhead, 1 ceramic, 1 flint dagger (type V B)

Chronological attribution: Late Neolithic II/Bronze I

Nationalmuseet, Copenhagen, no. NM A.50974-6

Siemen 1978; Ebbesen 2004, no. 7

DK-59. Juelsberg, Avnslev, Vindinge, Svendborg

Collective grave: stone cist

Grave goods: 1 flint arrowhead

Chronological attribution: Bell Beaker

Nationalmuseet, Copenhagen, no. NM A.38670

Lomborg 1973

DK-60. Visby, Grave N8, Visby, Hassing, Thisted

Individual grave: barrow, wooden chamber?, stone layer, pit oriented NW–SE 3 x 1.6 m

Grave goods: 3 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Thisted Museum, Thisted, no. THY 3848x172-7

Nielsen 1999a; 1999b; Sarauw 2007, no. 9

DK-61. Bjergby, Bjergby, Morsø Nørre, Thisted

Individual grave: stone cist

Grave goods: 2 flint arrowheads, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Morslands Historike Museum, Nykøbing Mors, no. MHM

Catalogue, Morslands Historike Museum, Nykøbing Mors

DK-62. Højsager, Bjergby, Morsø Nørre, Thisted

Individual grave: barrow, stone layer, several capstones, stone cist made of 10 uprights oriented E–W 1.9 x 0.4 m, stone paving, inhumation, adult male (30–40 years) lying on his back, head towards W, fragment of femur of a second individual

Grave goods: 2 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Morslands Historike Museum, Nykøbing Mors, no. MHM x44

Nørgaard 1967; Ebbesen 2004, no. 13; 2005; Sarauw 2007, no. 4

DK-63. Trinddøjs, Lødderup, Morsø Sønder, Thisted

Individual grave: 4 capstones, stone cist made of 8 uprights oriented E–W 2 x 0.6 x 0.4 m

Grave goods: 3 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.31166-8

Comment: the grave reused the barrow of a megalithic grave

Ebbesen 2004, no. 14; Sarauw 2007, no. 5

DK-64. Fjallerslev, Grave A, Ovtrup, Morsø Sønder, Thisted

Individual grave: stone layer

Grave goods: 1 flint arrowhead, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

¹⁴C Dating: 3840 ± 85 BP (K-3015), 2562–2037 cal BC (95.4 %), charcoal; 3890 ± 90 BP (K-3016), 2620–2048

cal BC (95.4 %), charcoal; 3920 ± 85 BP (K-3017), 2832–2141 cal BC (95.4 %), charcoal

Comment: the grave reused the pit of two previous graves and was then covered by a barrow

Simonsen 1978; Vandkilde 1996; Sarauw 2007, no. 33

DK-65. Rakkeby Hede, Rakkeby, Morsø Sønder, Thisted

Individual grave: barrow, ring-cairn 11 m diameter, stone layer oriented E–W 2.6 x 1 m

Grave goods: 7 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Morslands Historike Museum, Nykøbing Mors, no. MHM 2616

Mikkelsen 1998a; 1998b; Sarauw 2007, no. 8

DK-66. Odby, Grave A, Odby, Refs, Thisted

Individual grave: barrow, stone layer

Grave goods: 1 flint arrowhead, 1 dagger (type I C), 1 amber bead

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.26846-8

Ebbesen 1995; 2004, no. 16; Sarauw 2007, no. 6

DK-67. Tåbel Renseanlæg, Vestervig, Refs, Thisted

Individual grave: stone layer, pit oriented E–W 2.7 x 1.45 x 0.8 m, inhumation, adult male

Grave goods: 7 flint arrowheads, 1 flint dagger (type I A)

Chronological attribution: Late Neolithic I

Thisted Museum, Thisted, no. THY 3409x20A

Bjerrekær 1994a; 1994b; 1994c; Sarauw 2007, no. 7

DK-68. Vestervig, Grave C, Vestervig, Refs, Thisted

Individual grave: 5 capstones, stone cist made of 8 uprights oriented E–W 2.17 x 0.67 x 0.47 m, inhumation, skeleton lying on its back, head towards E

Grave goods: 7 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I
Thisted Museum, Thisted, no. THY 1165x33
Comment: the grave reused an older barrow
Cristoffersen 1974; Ebbesen 2005; Sarauw 2007, no. 10

DK-69. Ellidsbøl, Vust, Vester Han, Thisted
Individual grave: stone cist
Grave goods: 1 flint arrowhead, 2 flint daggers (1 type I B, 1 type I C)
Chronological attribution: Late Neolithic I
Thisted Museum, Thisted, no. THY 3221-3
Comment: association with the two daggers is insecure
Catalogue, Thisted Museum, Thisted

DK-70. Løsning, Løsning, Hatting, Vejle
Individual grave: barrow, timber holes of a wooden superstructure, wooden chamber oriented NW–SE 3.5 x 0.75 m, stone layer, pit 5.35 x 3.24 m, inhumation, remains of skeleton
Grave goods: 7 flint arrowheads, 2 flint daggers (types I B)
Chronological attribution: Late Neolithic I
¹⁴C Dating: 3730 ± 60 BP (K-5039), 2334–1949 cal BC (95.4 %), charcoal from wooden superstructure
Vejle Kulturhistoriske Museum, no. VKH 525
Eihelberg 1982; Vandkilde 1996; Ebbesen 2004, no. 53; Sarauw 2007, no. 50

DK-71. Daugbjerg, Daugbjerg, Fjends, Viborg
Individual grave: barrow, stone cist oriented N–S 1.25 x 1 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.17716-7
Ebbesen 2004, no. 27, Sarauw 2007, no. 18

DK-72. Kjærgård, Fly, Fjends, Viborg
Individual grave: barrow 16 m diameter x 3 à 4 m height, pit oriented E–W 2.5 x 0.95 m
Grave goods: 3 flint arrowheads, 1 flint dagger (type I C), 1 flint retouched blade
Chronological attribution: Late Neolithic I
Skive Museum, Skive, no. SMS 1051x90
Archives, Skive Museum, Skive; Ebbesen 2004, no. 28; Sarauw 2007, no. 19

DK-73. Kobberup, Kobberup, Fjends, Viborg
Individual grave: barrow 16.5 m diameter x 1 m height, pit oriented E–W 2.7 x 1.3 m
Grave goods: 4 flint arrowheads, 1 flint dagger (type II B)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.43947-51
Ebbesen 2004, no. 29; Sarauw 2007, no. 20

DK-74. Tastum, Kobberup, Fjends, Viborg
Individual grave: stone layer 3.4 x 0.4 x 1.15 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Skive Museum, Skive, no. SMS Ref. I 688
Comment: the grave reused a Single Grave Culture barrow
Ebbesen 2004, no. 30; Sarauw 2007, no. 21

DK-75. Hald By, Ørslevkloster, Fjends, Viborg
Individual grave: stone layer oriented E–W
Grave goods: 7 flint arrowheads, 1 flint dagger (type I B)
Chronological attribution: Late Neolithic I
Comment: arrowheads were positioned in a pile (quiver?). The grave reused a Single Grave Culture barrow
Noe 1971; Sarauw 2007, no. 34

DK-76. Vridsted, Vridsted, Fjends, Viborg
Individual grave: barrow, stone layer 3.2 x 1.3 m

Grave goods: 5 flint arrowheads, 1 flint dagger (type I C), 1 amber bead
Chronological attribution: Late Neolithic I
Skive Museum, Skive, no. SMS 1044Ax439-44
Archives, Skive Museum, Skive; Ebbesen 2004, no. 31; Sarauw 2007, no. 22

DK-77. Nissum, Åsted, Harre, Viborg
Individual grave: barrow, stone layer oriented E–W 2 x 0.7 m
Grave goods: 4 flint arrowheads, 1 flint dagger (type I C)
Chronological attribution: Late Neolithic I
Skive Museum, Skive, no. SMS 1048Ax575
Ebbesen 2004, no. 33; Sarauw 2007, no. 24

DK-78. Roslev, Roslev, Harre, Viborg
Individual grave: barrow 16 m diameter x 2 m height, stone layer, pit oriented E–W 2.4 x 0.95 x 0.45 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type I A/B)
Chronological attribution: Late Neolithic I
Skive Museum, Skive, no. SMS Reff. I 694-6
Ebbesen 2004, no. 32; Sarauw 2007, no. 23

DK-79. Hvinningdal III, Grave A, Balle, Hids, Viborg
Individual grave: wooden chamber, stone layer oriented E–W 2.1 x 0.9 m
Grave goods: 1 flint arrowhead, 1 flint dagger (type V B)
Chronological attribution: Late Neolithic II
Silkeborg Museum, Silkeborg, no. SIM 6/2003
Comment: the grave reused a Single Grave Culture barrow
Archives, Silkeborg Museum, Silkeborg; Jensen, 2003

DK-80. Hvinningdal III, Grave B, Balle, Hids, Viborg
Individual grave: stone layer oriented E–W 1.3 x 0.7 m, pit
Grave goods: 2 flint arrowheads
Chronological attribution: Late Neolithic II
Silkeborg Museum, Silkeborg, no. SIM 6/2003
Comment: the grave reused a Single Grave Culture barrow. It is stratigraphically and spatially contemporaneous with grave A (DK-79)
Archives, Silkeborg Museum, Silkeborg; Jensen 2003

DK-81. Grove, Brøndum, Hindborg, Viborg
Individual grave: barrow, stone layer 5 x 3.5 m, grave oriented E–W 2.7 x 1.25 m
Grave goods: 5 flint arrowheads, 1 flint dagger (type I C), 1 amber V-perforated button
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.43540-6
Ebbesen 2004, no. 35, Sarauw 2007, no. 25

DK-82. Tolstrup, Central Grave, Dølby, Hindborg, Viborg
Individual grave: barrow, stone layer
Grave goods: 5 flint arrowheads, 1 flint dagger (type II A)
Chronological attribution: Late Neolithic I
Nationalmuseet, Copenhagen, no. NM A.43627-32
Comment: in the stone layer, there was another Late Neolithic grave and a Bronze Age grave
Ebbesen 2004, no. 36; Sarauw 2007, no. 26

DK-83. Savstrupgård, Oddense, Hindborg, Viborg
Individual grave: barrow 20 m diameter, central grave oriented E–W 2.8 x 1.4 x 0.55 m
Grave goods: 4 flint arrowheads, 1 flint dagger
Chronological attribution: Late Neolithic
Nationalmuseet, Copenhagen, no. NM A.43615-9
Ebbesen 2004, no. 37; Sarauw 2007, no. 27

DK-84. Bøgeskov, Grave C, Gullev, Houlbjerg, Viborg

Individual grave: barrow 20 m diameter x 3 m height, grave 2.3 x 1.3 m, oak chamber oriented E–W 2.25 x 0.6 m

Grave goods: 2 flint arrowheads, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Forhistorik Museum, Moesgård, no. FHM 5619

Ebbesen 2004, no. 38; Sarauw 2007, no. 28

DK-85. Kistrup, Løvel, Nørlyng, Viborg

Individual grave: barrow, central grave

Grave goods: 2 flint arrowheads, 1 flint dagger (type I B), amber fragments

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.39015-7

Ebbesen 2004, no. 39; Sarauw 2007, no. 29

DK-86. Rærup, Grinderslev, Nørre, Viborg

Individual grave: barrow 18 m diameter x 0.7 m height, stone and sand layers, wooden chamber?, pit oriented E–W, 2.8 x 1.15 m

Grave goods: 6 flint arrowheads, 1 flint dagger (type I C)

Chronological attribution: Late Neolithic I

Skive Museum, Skive, no. SMS 1048Ax620-6

Ebbesen 2004, no. 43, Sarauw 2007, no. 31

DK-87. Puushøi, Thise, Nørre, Viborg

Individual grave: barrow 16 m diameter x 0.5 m height, central grave oriented E–W 2.2 x 0.9 m

Grave goods: 3 flint arrowheads, 1 flint dagger (type I B)

Chronological attribution: Late Neolithic I

Nationalmuseet, Copenhagen, no. NM A.43861-4

Ebbesen 2004, no. 45; Sarauw 2007, no. 32

DK-88. Sønder Andrup, Ramsing, Rødding, Viborg

Individual grave: barrow, stone layer oriented E–W

Grave goods: 3 flint arrowheads, 1 flint dagger (type II A)

Chronological attribution: Late Neolithic I

Skive Museum, Skive, no. SMS 1048Ax644-7

Archives, Skive Museum, Skive; Ebbesen 2004, no. 42; Sarauw 2007, no. 30

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