River finds – Bronze Age depositions from the River Gudenå, Denmark

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Introduction

River finds from the Bronze Age are a common occurrence across large parts of Europe and they form a significant part of the research base for depositions[1] of the period[2]. The numerous examples of European river-find localities include the Thames and the Trent, both of which have yielded finds of weapons and tools[3], and the Rhine, with discoveries including weapons, axes and ornaments[4]. Swords are particularly frequent among river finds[5] and in this respect mention should be made of D. R. Fontijn's analyses of the finds from the River Meuse, together with his illustrative examples of the relationship between these artefacts and particular types / categories of find site, which demonstrate the obvious link between swords and rivers[6].

From the Danish Bronze Age, which covers the period c. 1700–500 BC and corresponds to Montelius' periods I–VI (Br A–Ha D1 in Central Europe), there are scattered river and lake finds[7]. Further to these are occasional river finds dating from the Neolithic[8], Iron Age[9] and Viking Age[10]. For the Bronze Age as a whole, relatively large quantities of gold and bronze artefacts have been found in graves and hoards[11], but the general Scandinavian tradition of deposition differs in that it is associated more with bogs and wetlands than with rivers. H. Thrane writes the following with respect to river finds from the Bronze Age: "Rivers have not been as productive in Scandinavia as elsewhere but there is a handful of swords from rivers which should not be forgotten … and may be taken as

1 In this study I perceive all depositions – river finds, hoards etc. – as expressions of ritual activity. However, this interpretation is not as unequivocal as for example grave finds, and it will always be open to discussion – as is reflected in the various terms used by researchers in reference to this find group (deposits, depositions, hoards, votive offerings etc.). I have chosen to use 'river finds' specifically in reference to finds from the Gudenå and 'depositions' as a general term for all finds of this type, whatever their context. I am very grateful to Karen Margrethe Hornstrup, Henrik Thrane, Mads Kähler Holst, Mette Løvschal and an anonymous reviewer for reading and commenting on the text and to Dorthe Haahr Kristiansen and Ea Rasmussen for their assistance with the illustrations.

2 Torbrügge 1972; idem 1996; Wegner 1976; idem 1995; Hansen 1997; idem 2000; Maraszek 1998; Falkenstein 2005; Huth 2011, 50.

3 Needham / Burgess 1980; Scurfield 1997; York 2002; Mullin 2012; Yates / Bradley 2010, 406.

4 Huth 2011, 50.

5 Wegner 1995, 268; Wüstemann 2004.

6 Fontijn 2002, 211 ff. Appendix 5.1; 5.2; idem 2008, 86.

7 Jensen 1997, 168; Frost 2010b.

8 Karsten 1994.

9 Martens 2011, 150.

10 Lund 2004.

11 Frost 2008; Thrane 2011, 579.

indicating that rivers, or some of them – for instance the biggest Danish river, Gudenå (God's river) – played their part in the deposition pattern"[12].

In this article, I have chosen to examine records of finds from the Gudenå and adjacent areas dating from the Late Neolithic, Bronze Age and Early Pre-Roman Iron Age. Remarkably, it turns out that there are significantly more river finds from the river Gudenå itself (38 in total) than previously realised. This constitutes an important new insight, partly because it links Southern Scandinavia with the widespread European tradition of river depositions, partly because the existence of river finds results in a more diverse picture of domestic depositional practice during the Bronze Age. This article not only focuses on the deposition of artefacts during the individual periods, but also on the finds from the Gudenå in a landscape-archaeological perspective. It makes good sense to evaluate these finds as a feature of their local or regional landscape, where depositions within particular areas were apparently important elements in the ritual landscape[13].

Depositions and the landscape

In Southern Scandinavia, depositions are often associated with bogs and wetlands, but they show great variation in both context and content[14]. In the case of Bronze Age depositions, it is therefore difficult to define general rules with respect to which artefacts were deposited together and in which context. To date, apparently only the magnificent bronze lurs stand out as an artefact type that is exclusively found in bogs and which does not occur in mixed assemblages with other artefact types[15]. There is also a source-related problem with the depositions as a whole, in that these finds were often discovered by chance during peat cutting, drainage work, river clearing etc. This means that there is often a lack of information on find context and possible activities related to the deposition and, typically, no archaeological investigations will have been carried out[16]. Depositions can, as a consequence, appear relatively scattered and be perceived as a reflection of isolated events across the landscape. In general, however, there are also examples of repeated depositions within specific regional areas, locally within delimited areas and also within features of limited areas such as small bogs[17].

In the Bronze Age, barrows stood as visible man-made monuments and they are therefore often interpreted as important elements in the organisation of the landscape[18]. Depositions, on the other hand, are invisible on the surface and neither were they apparently marked in any way. Nevertheless, certain deposition sites, such as particular bogs and wetland areas, were used repeatedly and sometimes at intervals of several centuries[19]. There must therefore have been a general cultural understanding of a place – for example a certain area of bog or a particular river, or part of a river – as being an appropriate landscape for depositions[20]. Fontijn has used the expression: 'landscapes of memory'[21] to describe places that were used repeatedly for depositions – sometimes over very long periods of time, during which they must have lived on in memories or as oral tradition. As will become apparent from the following, parts of the Gudenå were also places where people made depositions over the course of centuries.

12 Thrane 1999, 129.
13 Fontijn 2002, 259 ff.
14 Verlaeckt 1998; idem 2000, 195 ff.; Frost 2008.
15 Appel / Olsen 2011, 14 f.
16 Jensen 1997, 151 f.; Fontijn 2008, 87; Frost 2008; idem 2011a.
17 Jensen 1969; Frost 2008.
18 Bradley 1993; idem 2000; Llobera 2007.
19 Koch 1998.
20 Fontijn 2007.
21 Fontijn 2002, 260.

The Gudenå

The Gudenå drains a wide variety of landscape types and differs in several important respects from other Danish watercourses.

First of all, there is its length, width and depth. There are today differing perceptions as to the length of the river, partly because recent nature restoration projects have recreated various meanders and thereby extended the course of the river and partly because the river runs directly into Randers Fjord. E. Hofmeister's book on the cultural history of the Gudenå defines the beginning of the fjord as the bridge Sønderbro in Randers[22] *(Fig. 1)*. In prehistory in general, and specifically during the Bronze Age, it is uncertain how far inland the fjord extended. It reached as far as Langå during the Stone Age and this also seems likely to have been the case in the Bronze Age[23]. Regardless of where one measures from or

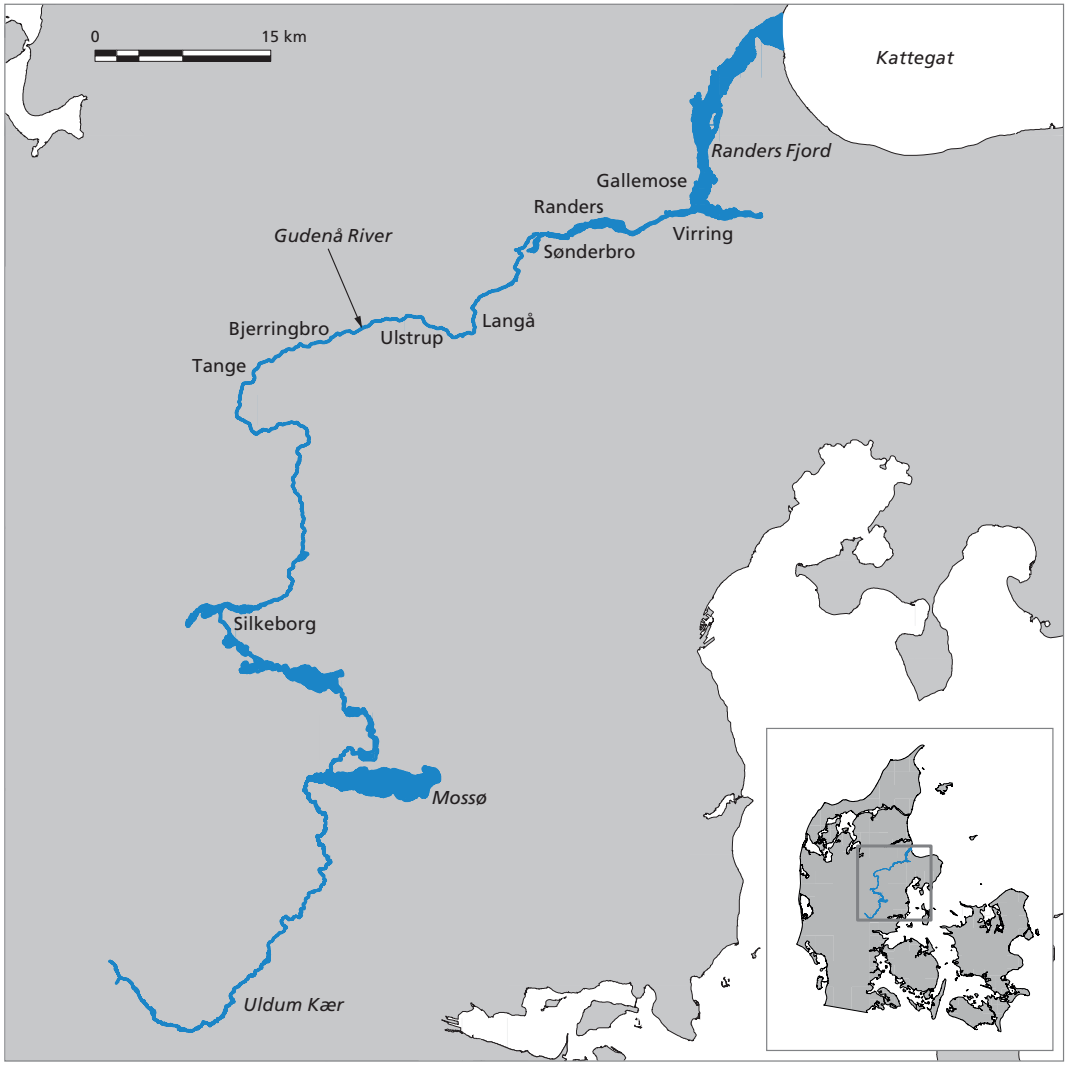


Fig. 1. Map of Denmark showing the location of the River Gudenå and some of the place names mentioned in the text. The course of the river is as shown on an historical topographic map from 1870.

[22] Hofmeister 2012, 17.

[23] Larsen / Kronborg 1994, 111.

to, this does not change the fact that the Gudenå is Denmark's longest river, with the total length of river and fjord being c. 160 km. Given its width and depth, it is the only Danish watercourse to achieve the status of an actual river.

The Gudenå also has many tributaries and lakes along its course and collectively represents the most varied aquatic system in Denmark. Parts of the river flow sedately, others have a vigorous current and northernmost lies Randers Fjord, which hosts Denmark's only river harbour. The river has therefore always been important in relation to communication and transport, fishing etc.[24].

The name

The religious name 'Gudenå' – God's river – is one of the oldest names associated with a Danish watercourse. The river is known by several other local names, but the nucleus in the present name: 'Guden' was its original name, found in documentary sources all the way back to the Early Middle Ages. 'Guden' is an uncompounded name and this is a characteristic element of ancient river or lake names, as can be seen for example in various European rivers such as the Elbe, Rhine, Thames and Seine. The Gudenå is not the only Danish river to have borne the name 'Guden'. This name was also applied to the Storå in central Western Jutland in a document from the 16th century, but only the Gudenå has retained the name. The precise age of the name is, of course, uncertain, but according to place-name researchers a large proportion of the old uncompounded names originate from the 1st millennium AD – and some are even older. It is a sacral name and presumably represents a religious perception associated with water. Without it being possible to say anything specific about the name's religious content, according to place-name researchers the term 'Guden' should probably be understood in the sense of 'consecrated to the gods'[25]. This suggests some kind of personification of the river, as discussed by S. Hansen in a general description of river finds: "Auch bleibt ungewiss, ob der Fluss selbst als göttlich gedacht wurde, wie wir dies aus der griechischen und römischen Antike kennen"[26]. W. Torbrügge expresses a similar view[27], i.e. the eternal flow of the river has often been regarded as a symbol of immortality and even if the river itself was not perceived as a personification of a god, it was a good place to make contact with the world beyond[28].

The Gudenå as a locality for depositions: Preliminary investigations

A certain stretch of the Gudenå, extending for about 20 km from Tange through Bjerringbro to Ulstrup, has a remarkable concentration of river finds, which is particularly striking between Tange and Bjerringbro *(Fig. 2)*.

The river finds from this section of river are surprising in terms of the number of Bronze Age artefacts, especially daggers and swords, represented in them. Chronologically, they extend across the entire Bronze Age, but with an emphasis in the earliest part of the period[29]. In a broader European context, river finds occur from the Neolithic and the Early and Late Bronze Age, as well as from later periods. In term of numbers, however, there is a

24 Hofmeister 2012.

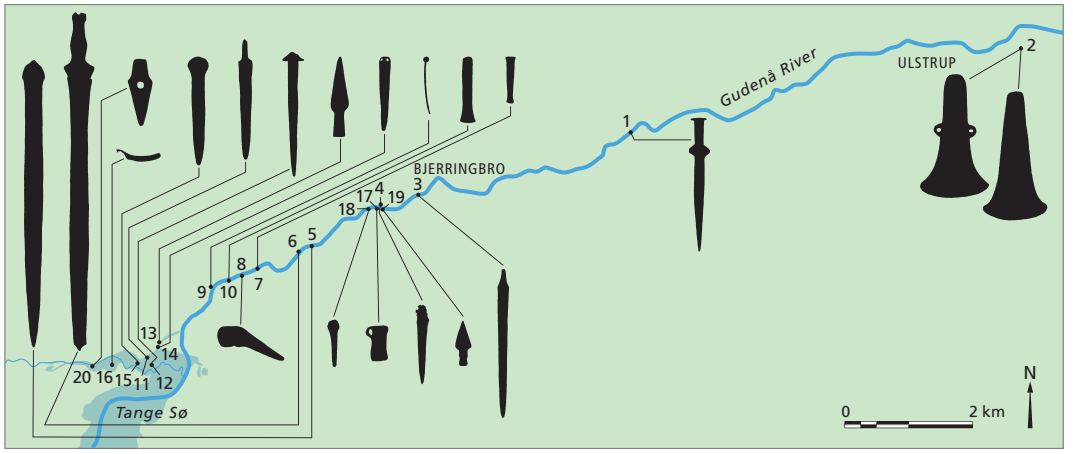
25 Kousgård Sørensen 1973, 286 ff.; Jørgensen 2004, 289 f.; Hofmeister 2012, 27 ff.

26 Hansen 1997, 31: "Moreover it remains unclear, whether or not the river itself was envisioned as divine, as is known to us from Greek and Roman antiquity."

27 Torbrügge 1996, 569.

28 Maraszek 1998, 9.

29 Frost 2010b.



Late Neolithic	Early Bronze Age			Late Bronze Age		
	4 7 14 18			8		
	Montelius I - II - III			Montelius IV - V - VI		
2	1 12 13	5 10 15	16	17	3 11 19	6 9 20
	1750 BC			1100 BC		500 BC

Fig. 2. Map showing river finds from the Gudenå in the area around Tange, Bjerringbro and Ulstrup. The finds: swords (3, 5, 6, 11), daggers (1, 4, 12, 14, 15, 18), spears (13, 19), axes (2, 7, 10, 17, 20), dress pin with cup-shaped head (9), bone handle (8), razor (16). Ref. to catalogue: no 1=C26, no 2=C32, no 3 = C42, no 4 = C17, no 5 = C28, no 6 = C49, no 7 = C15, no 8 = C51, no 9 = C50, no 10 = C31, no 11 = C9, no 12 = C11, no 13 = C7, no 14 = C6, no 15 = C8, no 16 = C12, no 17 = C48, no 18 = C52, no 19 = C41, no 20 = C47.

peak during the Urnfield culture of the Late Bronze Age[30], whereas the Gudenå, as already mentioned, shows a peak during the Early Bronze Age (c. 1700–1100 BC). As has already been touched upon above, swords and other weapons are typical river finds in a European context. Swords and, to a lesser extent, daggers also feature in depositions from the Danish Early Bronze Age, but are much more frequently associated with inhumation graves[31]. With the universal introduction of cremation as a burial practice in the middle of the Bronze Age (c. 1100 BC), changes occurred with respect to which artefacts were included as grave goods in cremation graves and which ended up in depositions. In general, the majority of the South Scandinavian depositions date from the Late Bronze Age, with bogs and wetland areas being the most used sites for these. However, this picture is challenged by the evidence from the Gudenå which – both via relatively numerous finds from the Early Bronze Age and single finds of weapons and tools in water – differs fundamentally from the general picture for depositions in Scandinavia. Furthermore, the finds from the Gudenå reflect a common European view that swords, daggers and spears were the primary objects relative to deposition in rivers *(Fig. 3a–d)*. The composition of the finds is therefore consistent with the widespread European practice of deposition in water[32]. The concentration of river finds in the Gudenå adds a new dimension to Scandinavian records for depositions and I have therefore investigated their distribution along the entire length of the river.

30 Hansen 1997, 29; idem 2000, 37; Wegner 1995; Scurfield 1997, 31 f.

31 Aner / Kersten 1973–2008.

32 Hansen 1997; idem 2000; Huth 2011, 50.

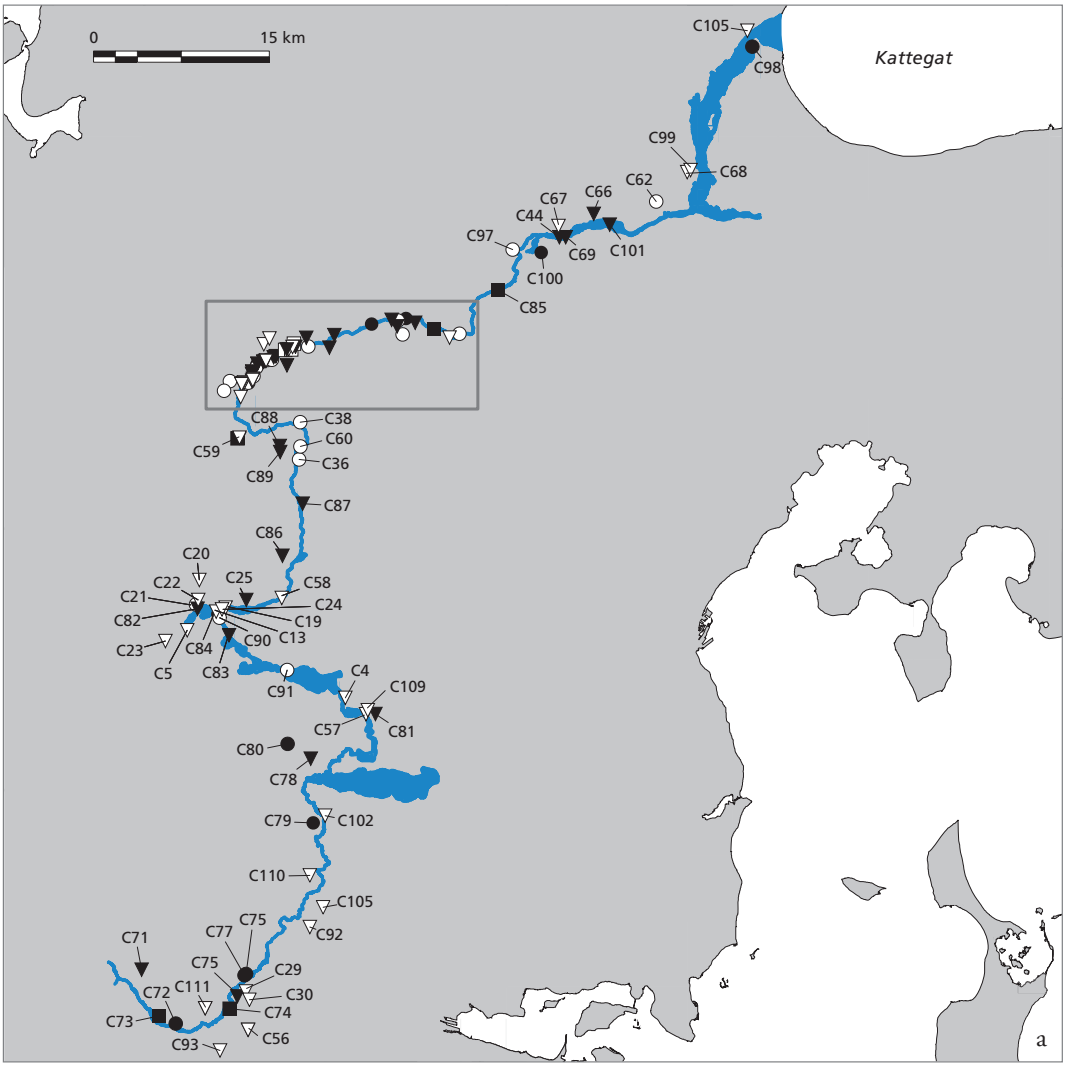
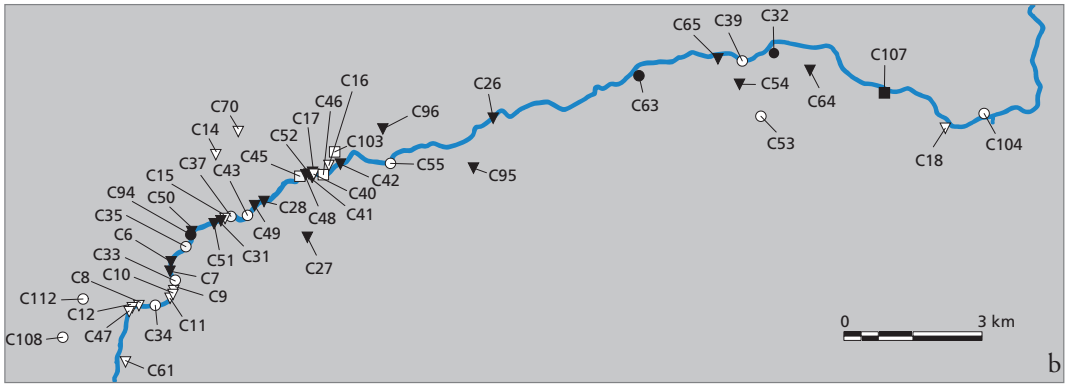


Fig. 3. (a) Map showing the distribution of the 112 finds in this study. The concentration of finds in the Tange–Bjerringbro and Ulstrup area is framed *(Fig. 3b)*. Sometimes it was possible to mark an exact find site (black dots), otherwise the location is approximate and refers to place names and / or land register numbers (white dots). C-numbers refer to the catalogue. Circles: Late Neolithic; triangles: Bronze Age; squares: Early Pre-Roman Iron Age. (b) The concentration of finds in the Tange–Bjerringbro and Ulstrup area (framed area on *Fig. 3a*). (c) In a European context, weapons are common river finds. This map shows the distribution of weapons (spears, swords and daggers) found in or near the Gudenå. The concentration of finds in the Tange–Bjerringbro area is framed. White dots: Early Bronze Age; black dots: Late Bronze Age. All solid dots are river finds; open dots denote other find contexts such as bogs, fields, meadows etc., in the vicinity of the river. Star: spear; square: sword; triangle: dagger. (d) Weapon finds in the Tange–Bjerringbro area (the framed area on *Fig. 3c*). All six metal daggers in the study were found in this part of the river. White dots: Early Bronze Age; black dots: Late Bronze Age. All solid dots are river finds; open dots denote other find contexts, such as bogs, fields, meadows etc., in the vicinity of the river. Star: spear; square: sword; triangle: dagger.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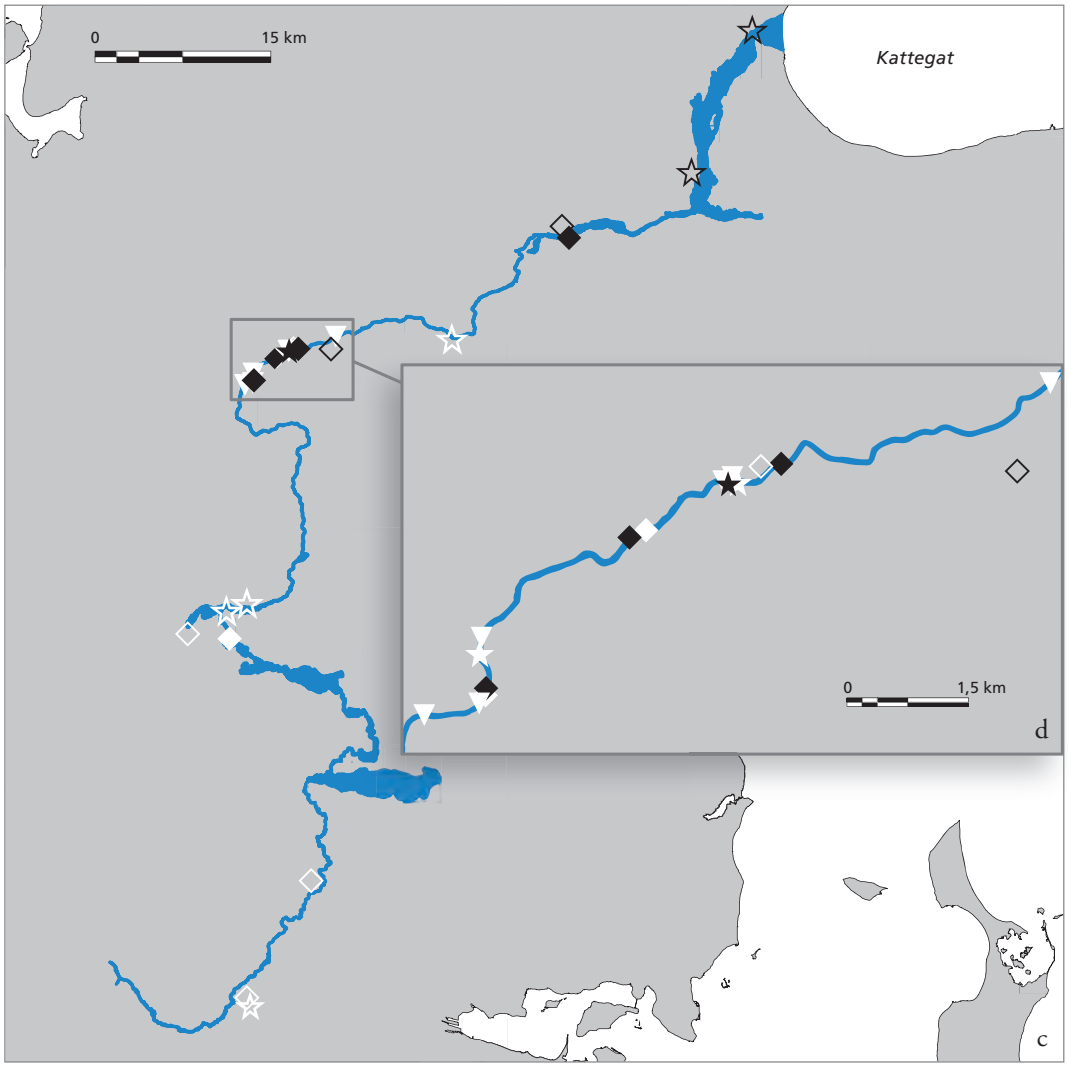
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Depositions and river finds: Methods and materials

Records for a total of 73 parishes located on both sides of the river – from its source at Tinnet Krat and the lake Rørbæk Sø to where Randers Fjord meets the Kattegat – were examined for finds relating to depositions[33].

Chronological and geographical scope

Chronologically, depositions from the Bronze Age (c. 1700–500 BC) constitute the primary focus of the project, but finds from the Late Neolithic (c. 2350–1700 BC) and Early Pre-Roman Iron Age (c. 500–200 BC) are also included. This is because any possible specific phenomenon in an archaeological period stands out more clearly when compared with the neighbouring periods and because R. Bradley and D. R. Fontijn[34] – and others – are undoubtedly correct in asserting that depositions and, not least, the use of a particular landscape for the purposes of deposition, should ideally be evaluated in a long-term perspective and not as isolated shorter periods. Traditions of deposition often extend both backward and forward in time[35] and in the Gudenå it is also possible to find votive offerings from the Neolithic Funnel Beaker culture. The repeated use of certain landscapes for deposition is therefore an aspect which must be assessed in the broadest possible terms, because it can be a key to a better understanding of the deposition traditions.

The main focus of this study is on the river finds. However, in geographical terms not only actual river finds have been included, but also depositions recorded within a distance of c. 1 km from the river on both sides. This was done in order to examine any possible coincidence between concentrations of actual river finds and near-river finds, with the latter also contributing to the diversity and detail of the distribution picture. The focus on records from the near-river areas is also important in relation to an evaluation of whether concentrations of finds are specifically linked with crossings and other significant travel- and transport- related locations, as has been suggested for certain of the European river finds[36]. Furthermore, it is important to take account of the various man-made changes, such as drainage work, dredging and canal digging, which have taken place along the banks of a river like the Gudenå. Up through historical times, the river has been subjected to significant modification and rationalisation, meaning that it does not follow the same course today as it did in the Bronze Age. Consequently, and on a par with the European finds, it can be difficult to determine whether artefacts were originally deposited in running water, even though they were found on adjacent meadows – or vice versa[37].

Finds

This study encompasses a total of 112 finds (*Fig. 3a–b* and catalogue). Of the 112 finds, 38 are river finds, 30 are from fields / meadows, 27 are from bogs and two are from marl

33 The project was made possible by a grant from the Danish Agency for Culture in 2011. Collection of data on the finds was carried out at various museums (The Danish National Museum, Moesgård Museum, Silkeborg Museum, Viborg Museum, Horsens Museum and Museum Østjylland Randers), via internet databases such as 'Sites and Monuments' and 'Museernes Samlinger' and via the literature. The various museums are thanked for their help and cooperation.

34 Bradley 1990; idem 2000; Fontijn 2007.

35 Koch 1998, 164; idem 2004; Müller-Wille 1999, 13 ff.

36 Anders 2011; Fontijn 2002; May / Hauptmann 2011.

37 Hansen 2000, 38 ff.; Fontijn 2002, 47.

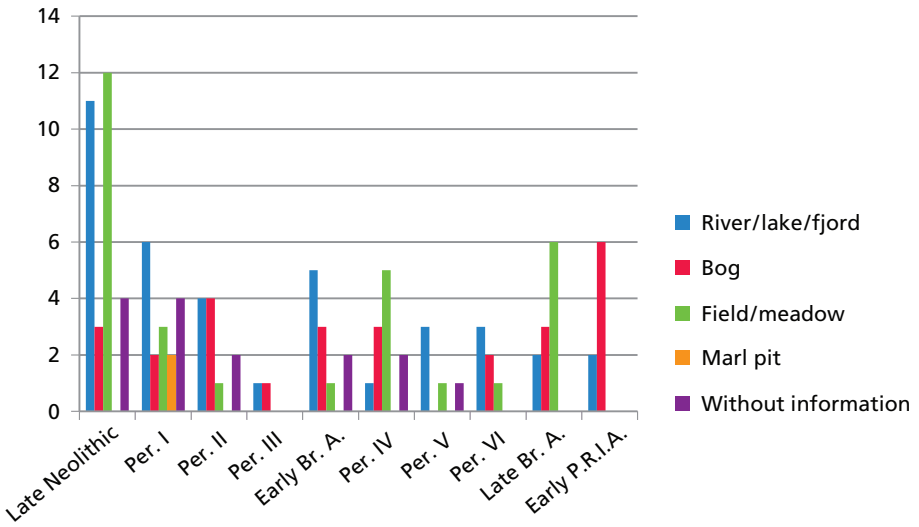

Fig. 4. The find contexts for the 112 finds in the study, arranged by archaeological period.

pits – probably originally associated with calcareous carr. Further to these are 15 finds for which there is no information on their find context *(Fig. 4)*. These are nevertheless included because – for various reasons – it is presumed that they were single depositions. This conclusion is justified by the fact that, in specific periods, certain artefacts appear as single depositions (for example flanged axes in period I [C13] or spears in period IV [C105]). *Figure 4* includes information on 40 individual artefacts from the Late Neolithic, 98 individual artefacts from the Bronze Age and 16 individual artefacts from the Pre-Roman Iron Age.

Patina

A striking feature of the bronze river finds is their virtually unaltered surface; in some cases even the golden surface of the artefacts remains intact *(e.g. Fig. 15)*. A slight degree of corrosion can therefore in some cases help to determine whether or not the find came from a non-oxidising waterlogged environment, although artefacts found in water may also show a little transformation in the form of a dark brown to black 'bog patina'. There are, however, several pitfalls associated with the use of patina to ascertain depositional conditions. There may be examples where artefacts were deposited in a bog or a meadow close to a river, resulting in an initial corrosion which was later halted when the river flooded the area. Conversely, artefacts may initially have been deposited in a river which was subsequently dredged, causing any bronze artefacts present to be lifted out with the dredged-up sediment. After a period of drying, this was perhaps spread out across the neighbouring fields and, as a consequence, the patina would be altered significantly before the artefact was subsequently discovered[38]. As a consequence, I have not used patina to ascertain the find contexts for the above-mentioned artefacts lacking information in this respect.

[38] Fontijn 2002, 40 f.; Yates / Bradley 2010, 406.

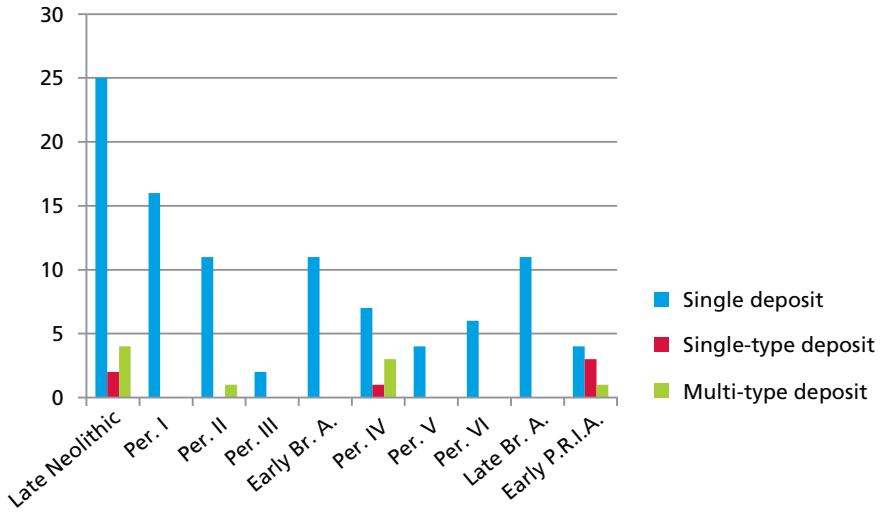

Fig. 5. Deposition type for the 112 finds in this study, arranged by archaeological period. Total numbers: single depositions (97), single-type depositions (6) and multi-type depositions (9).

River finds and depositions

Single depositions are included in the study for a number of reasons. The first is that river finds are typically single finds[39]. *Figure 5* shows the distribution by period for single depositions (97), single-type depositions (six) and multi-type depositions (nine). River finds are thereby linked to depositions, but can obviously be distinguished as a group via the find contexts. Moreover, the choice of artefacts differs in certain respects from that seen in depositions from fields and bogs[40]. In general, the deposition group is defined as being the deposition of at least two artefacts together in a context with no direct link to a burial or a settlement[41], but this picture is diversified if single depositions are included. There is therefore consistency in the depositional practice between, respectively, single depositions and single- or multi-type depositions[42]. Furthermore, there are some gender-specific artefacts which are not done full justice if single depositions are excluded. For example, in the Late Bronze Age in particular, single- and multi-type depositions show a predominance of female ornaments and costume accessories, whereas typical male artefacts such as swords, celts and other axes, spears and oath rings often occur as single depositions. Consequently, it is not possible to obtain a complete and comprehensive picture of the deposited artefacts if the items found singly are not included. Moreover, there is (especially in the light of the Late Bronze Age's uniform cremation burial tradition) a complementary relationship between artefacts in graves and artefacts in depositions. This shows that artefacts in graves and depositions have been subjected to clear selection criteria. A razor with a horse's head handle, dated to Early Bronze Age period III, has been found in the Gudenå (C12), but otherwise razors do not normally occur in depositions from the Late Bronze Age, whereas swords, spears and celts are, on the contrary, not typical contents of the urn burials of the Late Bronze Age[43]. There are only a few graves containing swords from period IV[44]. How-

39 Torbrügge 1996, 572.
40 Hansen 2000, 54.
41 Harding 2000, 352.
42 Bodilsen 1987.
43 Verlaeckt 2000, 195; Falkenstein 2005, 493; Frost 2008, 62 ff.
44 Thrane 1968, 205.

Fig. 6. Workers with their shovels and wheelbarrows during the construction of the hydro-electric power plant at Tange.

ever, it should be pointed out that cremation graves in Scandinavia contain miniature versions of the ordinary swords of the Late Bronze Age (including antenna swords and swords with a cruciform hilt)[45]. Warrior identity can also be signalled by swords in miniature[46]. On the other hand, in the Early Bronze Age in Southern Scandinavia the same artefact types can occur in both graves and depositions. This is true of swords and also of ornaments, and both collars and belt plates are relatively common in graves and depositions across a large area extending from NW Germany and Denmark up to Central Sweden and Southern Norway[47].

Special circumstances relating to representativity

Various circumstances are important with respect to the representativity of the finds from around Tange, Bjerringbro and Ulstrup. One important explanation for the many records of finds is linked with the construction of a large hydro-electric power plant at Tange in 1921. Huge volumes of earth were moved in the construction of this power station *(Fig. 6)*[48] and a good number of archaeological artefacts were found in connection with work on the Tange hydro-electric power plant (cf. C6, C7, C8, C9, C10, C11, C12, C15 and C28)[49].

Another explanation for this concentration of finds relates to the activities of amateur archaeologists, of which there is a particularly good example from the area: In 1957, a large, well-documented private collection accompanied by maps on which finds were marked was submitted to Moesgård Museum by amateur archaeologist Ulrik Balslev[50]. Bal-

45 Baudou 1960, 11 ff.
46 Thrane 2006, 499.
47 Oldeberg 1974; Aner / Kersten 1973–2008; Randsborg 2006; Selling 2007.
48 Hofmeister 2012, 96 ff.
49 Aner / Kersten 2008, 179.
50 Balslev's collection has archive no. FHM 0793 at Moesgård Museum.

Fig. 7. A spear from Balslev's collection, found in the Gudenå (Early Bronze Age period I, 1700–1600 BC) (C40). – Scale 1 : 2.

slev was particularly active in the area around Bjerringbro, and no fewer than 15 of the finds in this study are from his collection (cf. C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C53, C55, C88, C104 and C107). Of these 15 finds, ten are river finds – marked by underlining. Ten of the artefacts are Neolithic sickles, daggers and axes, while there are two river finds of spears from, respectively, Early Bronze Age period I *(Fig. 7)* and Late Bronze Age period V. Balslev was also the intermediary for the submission of a Hallstatt sword of Mindelheim type found in 1952 at the northern bank of the Gudenå, c. 1500 m west of Bjerringbro (C49)[51].

In recent years, the use of metal detectors has also had a significant effect with respect to finds from the area (including C80 and C95). Denmark has an ancient law relating to so-called 'Danefæ' – Treasure Trove – which means that all artefacts found in the earth and of known provenance that are considered by the Danish National Museum to be of sufficient cultural-historical significance can be declared to be Danefæ – Treasure Trove. This results in an appropriate reward to the finder and the law also applies to detector finds[52].

The tang-hilted sword (C95) from period IV of the Late Bronze Age (c. 1100–900 BC) *(Figs. 8* and *9)* is an example of a detector find from the area which turned up in summer 2011. The sword was found on a field c. 500 m south of the Gudenå. A later reinvestigation of the find site yielded two further fragments of the sword, which is now complete and measures more than 75 cm in length. It also became clear that the sword had been deposited in relation to a spring-fed pond on the edge of a hill.

The examples from Balslev's collection and the later detector finds demonstrate how amateur archaeologists generally can have a major influence on the find-distribution map. In general, the composition and distribution of the finds depend very much on events that took place after deposition[53]. Consequently, find-rich micro-areas need not necessarily, on their own, reflect a rich tradition of deposition at one place rather than another.

51 Lavrsen 1958, 64 fig. 1; Jensen 1966, 28 no. 8; idem 1989, 150 fig. 1,4; idem 1997, 296 no. 169.

52 Moesgård / Pedersen / Petersen 2010, 21 f.

53 Fontijn 2002, 49.

Fig. 8. Tang-hilted sword found with a metal detector about 500 m from the Gudenå (Late Bronze Age period IV, 1100–900 BC) (C95). – Scale 1 : 5.

Late Neolithic

Figure 10 shows all the single finds from the Late Neolithic. The most frequent river finds are flint daggers and sickles, of which some of the latter may also date from the Early Bronze Age.

In the Late Neolithic, and in the time of change and upheaval around 2000 BC, early metal depositions in Southern Scandinavia are characterised by single finds of flanged axes[54]. In the following, a couple of special examples will be highlighted.

[54] Vandkilde 1996.

Fig. 9. A small excavation at the find site of the tang-hilted sword (*Fig. 8*, C95), south of the Gudenå river valley.

An uncultivated area of bog at Ulstrup near the Gudenå has yielded finds of two special bronze axes. These have flared edges and they show great similarity to Anglo-Irish ornamented bronze axes of the time *(Fig. 11,* C32*)*: The axes were found in 1940 and 1952, respectively. They are not identical in either decoration or form, but they must originally have belonged together, constituting a collective deposition. Their form is related to the broad-bladed working tools of the time, but their size means that they are classified as

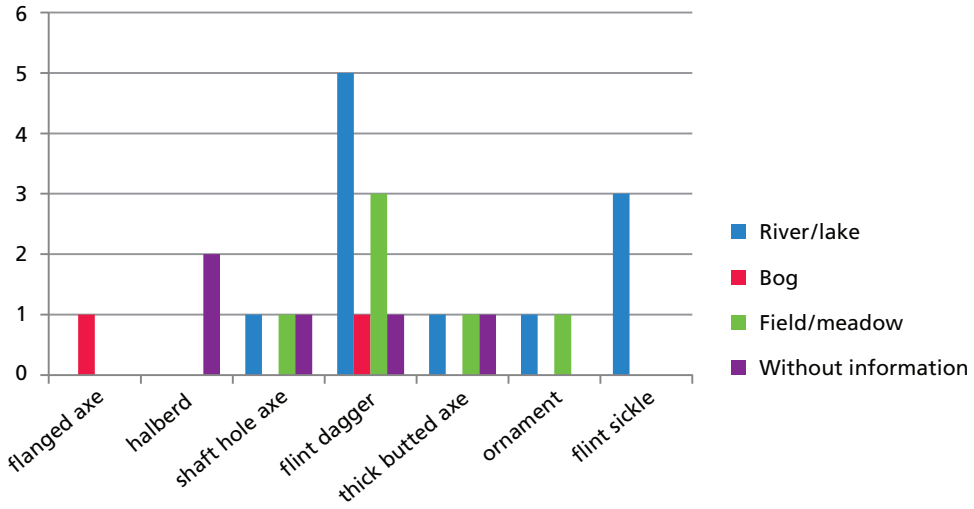

Fig. 10. Distribution of the 24 single depositions from the Late Neolithic (artefact types and find contexts). Three flint sickles are included but these could also date from the Early Bronze Age.

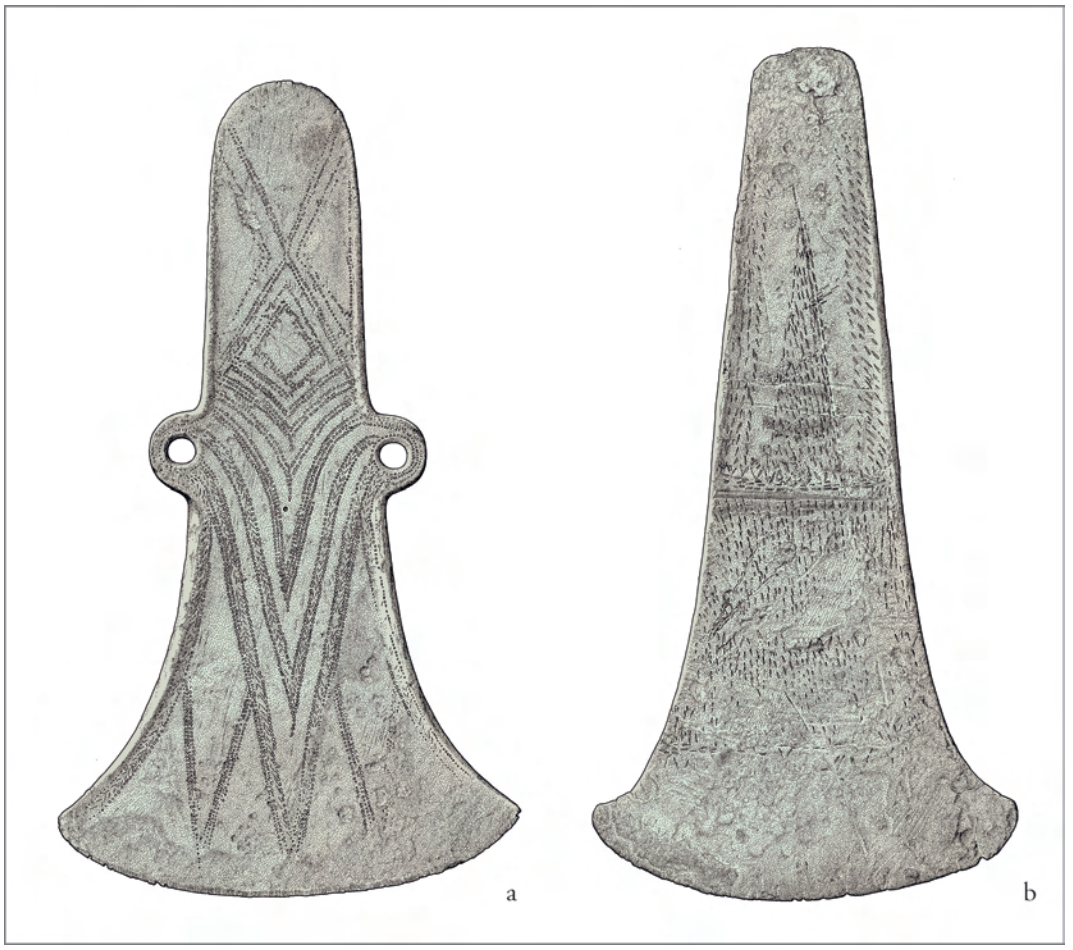

Fig. 11. The Ulstrup axes were found in a bog in the immediate vicinity of the Gudenå. One axe (a) has a loop at either side, is 27.5 cm long and c. 1cm thick; its edge measures 16 cm. The other axe (b) is larger (29 cm long and 1.5 cm thick); its edge measures 14 cm (after Aner / Kersten 2008). – No scale.

processional axes and thereby forerunners of the later Bronze Age cult axes[55]. The Ulstrup axes are presumed to be imports from the Anglo-Irish area[56]. The find site at Ulstrup is located c. 30 km from where the Gudenå enters Randers Fjord, and in his 1955 publication dealing with the axes, J. Butler also underlines the importance of the river as a main transport route for imported artefacts. According to Butler, this conclusion is supported by the geographically and chronologically adjacent multi-type finds from, respectively, Gallemose[57] and Virring[58], which lie on opposite sides of the Gudenå.

The first gold also appeared in Scandinavia during the Late Neolithic. For example, the Skeldal hoard from the Silkeborg area (C80) contains a unique beehive-shaped bronze ornament casket which contained gold 'Noppenrings' from the Aunjetitz area[59].

55 Kaul 2010, 80.

56 Butler 1955; Aner / Kersten 2008, 164 no. 5941; Vandkilde 1996, 425 no. 266; Kaul 2001, 64 f.

57 Broholm 1943, 207, no. I.11; Randsborg 1992; Vandkilde 1996, 98 fig. 83.

58 Broholm 1943, 209 no. 1; Vandkilde 1996, 98.

59 Vandkilde 1988.

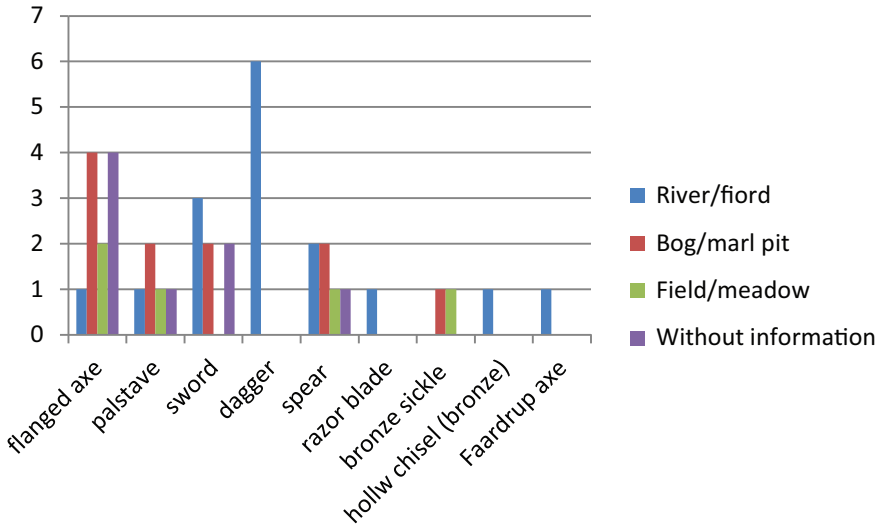

Fig. 12. The 40 single depositions from the Early Bronze Age (artefact types and find contexts).

Other artefacts from the Late Neolithic which ended up in the Gudenå include several flint daggers and sickles (e.g. C33, C34, C35, C36, C37 and C43). The flint daggers – found singly – also show a great similarity to the early metal daggers[60] and are presumably to be perceived as being equivalent to the metal depositions which gradually gained ground at the transition between the Late Neolithic and Bronze Age.

Early Bronze Age

In the Early Bronze Age, metal daggers were a prominent artefact group and, seen in the light of river finds of flint daggers from the Late Neolithic (C36, C37, C43, C90 and C94), they demonstrate a continuity of dagger deposition in certain parts of the Gudenå *(Fig. 12)*.

The relatively numerous river finds of daggers from these periods are, however, remarkable as these weapons are generally a rarity in depositions from the Early Bronze Age – both as single finds and as components of single- or multi-type depositions[61]. Conversely, metal daggers are found in both female and male graves during the Early Bronze Age: Almost 100 female graves have been recorded in Southern Scandinavia, where belt plates and collars were found together with a dagger or a dagger substitute[62]. Despite this relatively common occurrence in female graves, daggers do not, however, occur together with belt plates and collars in depositions[63]. Perhaps daggers were linked to the individual or the family and possibly also bound up a particular role performed by an individual. They could, accordingly, have had special significance as a weapon which was placed in the graves of both men and women[64]. In any case, it is important to note that all the Early Bronze Age metal daggers from the Gudenå (a total of six) are actual river finds[65]. The total number of river finds of metal daggers from Denmark is not great, but it is significant nevertheless in the light of the generally small number of Danish river finds, the continuity

60 Frieman 2010.

61 Willroth 1985; Bradley 1990, 77 f.; Fontijn 2002, 212 f.; Selling 2007, 77.

62 Bergerbrant 2007, 212 ff. Appendix 8.

63 Frost 2011a, 43.

64 Selling 2007, 78.

65 Daggers are here defined as having a maximum length of 30 cm (cf. Harding 2000, 277).

Fig. 13. The Fårdrup axe, recovered from the Gudenå at Vorup Kær near Randers. – Scale 1 : 2.

in the deposition of metal daggers from the Late Neolithic and the above-mentioned special status of these weapons with respect to graves and depositions. Moreover, it is interesting that daggers, otherwise rare in a deposition context, occur as river finds within a relatively limited part of the river (illustrated in *Fig. 3b* as white triangles and on *Fig. 2* as nos. 1[66], 4[67], 11[68], 12[69], 14[70] and 18[71]). This underlines the fact that the Gudenå finds deviate from the general pattern of depositions in the Early Bronze Age of Southern Scandinavia.

Daggers also occur in European river finds up until the beginning of the Urnfield culture, when their function as short stabbing weapons and cutting implements is taken over by various forms of knife[72]. Daggers thereby underline the fact that river finds are something special, which not only differ from the Scandinavian group of depositions as a whole, but which must also be perceived as a local variant of a European tradition.

A bronze version of an artefact resembling the heavy Late Neolithic stone shaft-hole axes makes its début in Early Bronze Age period IB (c. 1600–1500) in the form of the metal-consuming shaft-hole axes of Fårdrup type. These are often decorated with fine line ornamentation and, like the morphologically very different Ulstrup axes, are thought to be forerunners of the later cult axes, found from period II onwards in the Bronze Age[73].

A Fårdrup-type axe was also found in the Gudenå (C44). This is undecorated and it turned up in sediment dredged up from the bed of the Gudenå in the Randers area *(Fig. 13)*.

Late Bronze Age

In the Late Bronze Age there is a general increase in depositions, culminating in period V (c. 900–700 BC). This general picture differs slightly from that for the Gudenå's river finds, which show a preponderance of finds dating from the Early Bronze Age.

66 Aner / Kersten 2008, 150 no. 5899.
67 Ibid. 207 no. 6027.
68 Ibid. 179 no. 5971.
69 Ibid. 179 no. 5974.
70 Ibid. 179 no. 5969.
71 Geographical code ref. to the Danish database "Fund og fortidsminder" (Danish Agency for Culture): 130702-27, dagger in private collection.
72 Wegner 1995, 269; Maraszek 1998.
73 Malmer 1989; Kaul 2001.

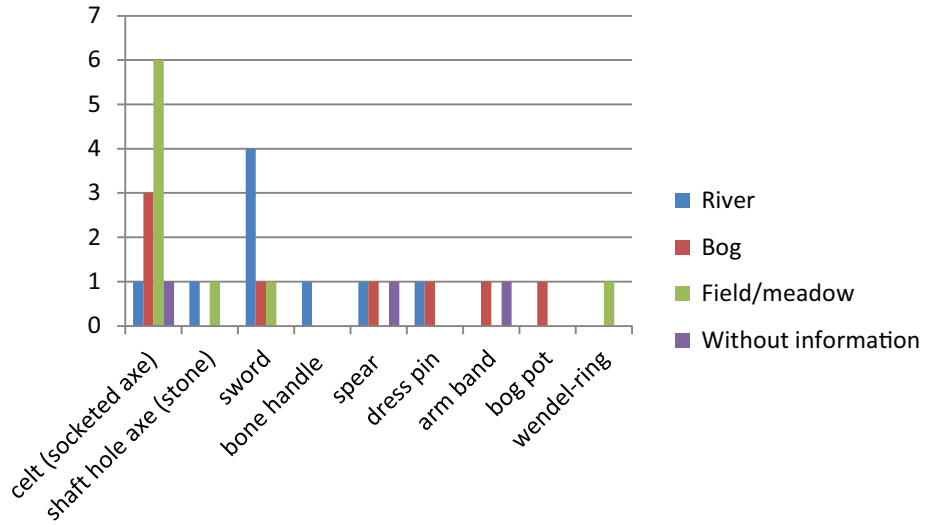

Fig. 14. The distribution of the 29 single finds from the Late Bronze Age (artefact types and find contexts).

Figure 14 shows the finds distribution for the Late Bronze Age. As can be seen, swords feature among the river-found artefacts and the more unusual of these include an example of each of the two rare, imported Hallstatt sword types of which only six have to date been found in Denmark. One of them is the only Danish example of a Gündlingen sword (Ha B3 / Ha C1)[74], which turned up in the Gudenå, SW of Randers, during the digging of a canal (C69)[75].

This sword, which is 70.5 cm long, was also found very close to the above-mentioned Fårdrup axe (C44), providing an example of the continuity of use of the landscape for depositions.

The other Hallstatt sword from the Gudenå is of the later Mindelheim type (Ha C1 / Ha C) (C49); in a European context this can occur both as a bronze and an iron sword[76]. The sword was discovered by the northern bank of the Gudenå at Bjerringbro. Only the point stuck out of the water; the remainder was pushed into the river bank[77] *(Fig. 15)*.

A problem of representativity associated with river finds is that, particularly in the case of relatively light objects, it is impossible to know whether and by how much the object has moved with the current during its time in the water. The Mindelheim sword from Bjerringbro is, accordingly, a rare example of a river find where the exact location of deposition is known and also when this took place, in what can be referred to as an arranged deposition, in contrast to the idea of a randomly-lost object.

A corresponding rich find of Central European origin, and of similar date and find context in a river bank, was discovered at Hassle in Närke, north of Stockholm in Sweden: Two long cutting swords, made in Bohemia, Austria or Southern Germany in the late 8th or early 7th century BC, were deposited here. With the swords were two cylindrical bronze buckets, thought to have been manufactured in the Southern Alps, and a cauldron

74 Jensen 1997, 83 ff.
75 Jensen 1989, 153 fig. 2 no. 3.
76 Jensen 1997, 85 ff.
77 Lavrsen 1958, 63 f. fig. 1; Jensen 1966, 28 no. 8; idem 1989, 150 fig. 1,4; idem 1997, 296 no. 169.

Fig. 15. The Mindelheim sword found in the northern bank of the Gudenå (C49). The sword is 76.5 cm long. – Scale 1 : 5.

(a so-called 'dinos') which reached Sweden all the way from eastern Central Europe. This remarkable deposition also contained twelve circular bronze plates (probably semi-armour plates)[78].

78 Arbman 1938, 83 ff.; Stjernquist 1962.

The sword from Bjerringbro differs from the Central European Mindelheim swords but, according to J. Jensen, parallels are to be found in Southern Germany, Austria and Romania, where the Wels-Pernau variant resembles the Bjerringbro sword so closely that the latter must have its origin in Central Europe[79]. A South Scandinavian dating is rather difficult, partly because the long Hallstatt swords have typically turned up as single finds or in a chronologically rather mixed deposition such as that from Holbæk Slots Ladegård, or in the above-mentioned Hassle hoard[80], partly because the imported swords have a significantly longer period of use in Scandinavia than in Central Europe. As J. Jensen states, the Eastern Danish period VI swords are only associated with bogs, whereas the Jutish finds were all found in connection with open water. In addition to the two examples from the Gudenå, a Hallstatt sword was also found in the Limfjord, suggesting that the Jutish finds may have a closer association with the Continent where swords of the same date typically turn up in rivers[81].

All in all, seven swords have been found which definitely come from the Gudenå; this includes the example from Randers Fjord. A few spears also occur in the river finds, whereas celts and flanged axes show a closer association with depositions from bogs and fields *(Fig. 14)*. However, this does not mean that celts are unrepresented in river finds, but there is some suggestion of differentiation in the finds corresponding to that demonstrated by D. R. Fontijn in his analyses of the relationship between particular artefacts and particular find sites[82].

Female and male artefacts in Late Bronze Age depositions

During the Late Bronze Age in Southern Scandinavia, typical female objects, such as ornaments and costume accessories, are primarily seen in multi-type depositions. The ornaments occur as sets and some depositions even contain parts of several sets of ornaments, where the individual objects may display varying degrees of wear from use[83]. The female objects in the multi-type depositions mean that, in numerical terms, there is an overall predominance of artefacts associated with women[84]. However, if the single depositions of typical male objects, such as celts, spear heads, swords and oath rings, are included, then depositions associated with men constitute the majority. This shows that, to some degree, artefacts associated with men and with women were subjected to different forms of deposition. Nevertheless, there are some general tendencies within this, in interpretational terms, difficult area. On the basis of analyses of South German river finds, F. Falkenstein has been able to identify a tendency for male artefacts to be associated with running water, whereas female artefacts are linked with bogs with standing water[85]. The picture presented by the Danish finds is not as clear-cut, because there are numerous finds of swords from bogs. In the case of the Gudenå, more male than female objects are associated with the river finds. However, as finds within c. 1 km of the river, on both sides, have been included, there are also a few typical multi-type depositions containing artefacts associated with the female sphere. For example, a deposition was found during gardening work in 1942 c. 500 m from Randers Fjord (C66). It dates from Late Bronze Age period IV and comprises a hang-

79 Jensen 1997, 87.
80 Ibid. 153.
81 Jensen 1997, 163; Torbrügge 1972, addendum 16.
82 Fontijn 2002; idem 2008.
83 Sprockhoff / Höckmann 1979; Sørensen 1989, 190; Frost 2003; idem 2008.
84 Glob 1969, 197 f.; Thrane 1975, 130.
85 Falkenstein 2005, 501 f.

Fig. 16. Part of the Gudenå river valley with the hill Busbjerg in the background.

Fig. 17. The Busbjerg hoard (C54). – Scale 1 : 2.

ing vessel and two heavy spiral arm rings[86]. Another find from the same period turned up as early as 1866 on the striking hill of Busbjerg (C54) *(Figs. 16* and *17)*. Busbjerg offers fantastic views across the Gudenå river valley, and this could also have been significant relative to the position of the deposition. The expression: "At high points, commanding a fine view of the area" is one of the parameters Fontijn has recorded in connection with his investigations of depositions and the landscape[87]. The Busbjerg deposition comprises fragments of ornaments and a fragment of a casting jet derived from the casting of an object with a socket. This illustrates some of the complexity involved in assigning the individual finds to a particular gender[88].

Summary conclusions: The nature of the river finds during the Late Neolithic and Bronze Age

Figures 10, 12 and *14* show, respectively, the distribution of single finds from the Late Neolithic and the Early and Late Bronze Age. If the figures are compared with each other, it becomes clear that there are slightly different distributions of finds with respect to bog, field and river finds. For example, the river finds include a number of flint daggers, and metal daggers from the Early Bronze Age come exclusively from the river. The swords and spears of the Early Bronze Age also include a number of river finds, whereas an artefact group such as the celts occur more in field and bog finds than as river finds. Even though their total number is not very great, a similar situation is evident with respect to the Early Bronze Age flanged axes. In general, it can be said that these single depositions are dominated by artefacts from the male sphere.

If the finds contexts during the Late Neolithic and the Bronze Age are compared, a tendency is seen for particular contexts to be associated with certain artefact types. Moreover, the relatively limited range of artefact types seen in river finds – especially in the Late Bronze Age – appears more structured than is immediately apparent in the other groups of depositions. Nevertheless, it remains difficult to define general rules with respect to the relationship between specific artefacts and particular types of find site for Scandinavian depositions. The sorting of artefacts into, respectively, typical grave goods and typical objects in depositions as well as the question of gender association demonstrate, however, that it was not just a matter of depositing any old piece of metal. Consequently, continued interaction with the finds, coupled with map and landscape analyses and the incorporation of other categories of finds, such as those associated with roads, graves etc. within microregions, will probably be able to give us a greater and better understanding of the landscape context of depositions. In this respect, it will also be important to adapt a diachronous approach to the finds[89], which will illustrate the existence of some long-term structures.

The transition to the Pre-Roman Iron Age

A range of dress pins constitute typical grave finds in the Late Bronze Age[90], but cup-headed pins are an artefact type that marks the beginning of period VI in Denmark (corresponding to Ha C–D1). This pin type is represented by more than 20 examples, one of which turned up during dredging of the Gudenå close to Bjerringbro (C50)[91]. Relative to

86 Sprockhoff / Höckmann 1979, pl. 84.
87 Fontijn 2002, 212.
88 Jantzen 2008, 220 no. 294.
89 Løvschal 2013.
90 Baudou 1960, 77 ff. 260 ff.
91 Jensen 1973, 130; idem 1997, 49.

depositions earlier in the Bronze Age, these pins represent a totally new phenomenon which, furthermore, continues into the Pre-Roman Iron Age. These dress pins occur typically in bogs and can be of standard to more robust dimensions. This tendency thereby follows to some degree that seen in European river finds[92]. During period VI in Scandinavia, voluminous Late Bronze Age costume accessories and ornaments, in the form of belt ornaments, hanging vessels, two-piece fibulas (spectacle-like) disappear almost completely from bog depositions[93].

During the same period (c. 800 / 700–500 BC), there were various gradual changes generally with respect to depositions / hoards in bogs and wetland areas – also in a European context[94]. In addition to the deposition of female-related ornaments and costume accessories no longer being of the same magnitude, a significant shift is also seen in the deposition of metal weapons which, with a few exceptions, ceases almost completely[95]. Neck and arm rings do, however, continue to be deposited – either singly or as several together.

In short, the number of artefact types is reduced significantly in Southern Scandinavia, such that only four single depositions included in this study date from the Pre-Roman Iron Age (C45, C46, C59 and C85). Across Denmark as a whole, rings and neck rings constitute the most common artefact types in depositions dating from the end of the Bronze Age and the Pre-Roman Iron Age. A similar situation applies to pins and arm rings, whereas weapons are almost completely absent[96].

In the Pre-Roman Iron Age, the only finds recorded from the Gudenå in the find-rich area around Bjerringbro are a bronze double-spiral fibula and a ring, and with these the river finds also come more or less to an end. There are though scattered finds of much later date associated with the river – including a Viking Age sword from the Randers area[97] and a 16th century battle sword[98]. These later finds underline the river's continued significance as a locality for depositions further up in time and the remarkable continuity apparent in the ancient votive traditions[99]. Single finds of weapons from the Viking Age / Early Middle Ages have also been recovered from numerous other European rivers, thereby reflecting a widespread practice[100].

Pottery vessels can form part of Bronze Age depositions, functioning as containers for the various bronze objects etc., but they are not a general feature. The same is true of bones, stones, wooden objects etc., which are typically associated with the agrarian offerings of the Early Iron Age[101]. Around 500 BC, synchronous with numerous social transformations seen across Europe, various changes took place in Southern Scandinavia with respect to settlement patterns, burial practices and also the use of bogs and wetland areas. Bog pots, i.e. pottery vessels presumably containing foodstuffs which constituted a typical offering during the Early Neolithic Funnel Beaker culture[102], again begin to appear in bogs, with several usually being found together[103].

Bronze Age depositions typically represent one-off events, whereas in the Pre-Roman Iron Age it became more usual to make repeated offerings in the same bog. Changes in the use of bogs can be perceived as a step in a complicated social and cultural process, and the changes that apparently took place in offering rituals must therefore ideally be perceived as part of something greater. There is a lack of studies into these complex changes in deposi-

92 Hansen 1997, 29.
93 Jensen 1997, 163.
94 Fontijn 2002, 172.
95 Martens 2011, 149.
96 Kaul 2003, 31 f.
97 Hofmeister 2012, 234.
98 Ibid. 124.
99 Behrend 1970.
100 Lund 2004.
101 Lund 2002.
102 Koch 1998.
103 Sørensen 1987; Kaul 2003, 32.

tions; however a consideration of the use of bogs and wetland areas in isolation has prompted the suggestion that the introduction of iron extraction at the transition to the Pre-Roman Iron Age could be significant. This would have engendered a much greater requirement for the bog's own resources, in the form of bog iron ore and peat for fuel[104].

The transition to the Pre-Roman Iron Age also brought a drastic reduction in the number of finds recovered from the Gudenå. Finds from the Pre-Roman Iron Age included in this study comprise mostly bog pots, which were now apparently deposited in bogs, away from the actual river. At the same time, there was also significant local variation – both with respect to the intensity of deposition generally and to the tradition of deposition along the Gudenå. In the area at Uldum Kær, In the southern part of the Gudenå, there are no depositions from the actual river, but several finds dating from the Neolithic, Bronze Age and Iron Age have turned up in nearby areas of bog.

Discussion: The Gudenå and the depositions from a landscape-archaeological point of view

The Gudenå stands out in a Danish context by being the country's longest watercourse and by having a name that indicates a special significance. There are also scattered records of swords from other Danish watercourses, such as the Early Bronze Age period III example from Nørreå[105] and a sword blade from period I found in Odense Å[106], but the finds from the Gudenå stand out by virtue of the striking concentration seen around Tange – Bjerringbro and Ulstrup. This part of the river apparently had special significance in a depositional context, whereby the river, partly by virtue of its size, has invited deposition of weapons in open water. The degree to which this was associated with a common religious perception of this activity is, of course, difficult to say. Several later sources describe deities that are related to rivers, but whether a similar phenomenon could extend all the way back to the Bronze Age is uncertain[107].

Following on from the above section dealing with representativity, it is also unclear whether the concentration of finds around Tange, Bjerringbro and Ulstrup, relative to other and much less find-rich parts of the river, reflects the actual prehistoric situation. For many of the European river-find localities, it has often been highlighted that various modern development works, and the nature of these, are hugely significant with respect to both the number and type of artefacts recovered[108]. It is obvious that the major construction works associated with establishing the Tange power plant had major consequences with respect to the observed distribution of finds. Similar concentrations of finds have not been recorded elsewhere along the river, although we know nothing of the artefacts encountered by the monastic orders in their extensive milling activities along the river during the Middle Ages.

If it is assumed that the distribution of finds largely reflects a prehistoric reality, it was primarily along specific stretches of the Gudenå that people showed a predilection for deposition in water. This seems plausible because there were presumably quite considerable regional and local variations in depositional tradition during the Bronze Age – bound up to a very great extent with various local landscape features[109]. In this respect, the variation

104 Kaul 2003, 32.
105 Aner / Kersten 2008, 212, no. 6056.
106 Thrane 1982, 63.
107 Fontijn 2002, 267 ff.
108 Torbrügge 1996, 572; Ehrenburg 1980; Hansen 2000, 45 f.; Falkenstein 2005, 492.
109 Frost 2011b.

shown by the Gudenå along its course is important. Particular sections could therefore very well have been chosen as a particularly suitable depositional landscape on the basis of special natural criteria. In the area around Tange and Bjerringbro, the Gudenå runs through a pronounced valley, flanked by terraces, which fixes the river solidly in the landscape and this could have been significant with respect to the intensity of deposition seen here. The distribution of finds is also completely consistent with a clear tendency, in a European context, for depositions not to occur in all parts of a river or everywhere across a wetland area, but to be associated with particular zones or stretches[110].

The significance of the deposition site and special natural places

Water appears to be the common denominator with respect to depositions in the Bronze Age. As stated by C. Huth: "In der Bronzezeit, zumal in der Urnenfelderzeit, ist das mit Sicherheit das Wasser … als Fluss, Bach, Quelle, Brunnen, See, Moor oder Meer"[111]. Many finds are also associated with the term 'field'. Some of these were perhaps originally deposited by a large tree, a large stone or similar feature. However, it is thought-provoking that on one of the rare occasions when the find site for a deposition was subjected to archaeological excavation (cf. the above-mentioned detector find of a sword, C95) – this was located in a field and relatively high up in the terrain – it was possible to demonstrate a direct link between the sword and a spring. This example indicates the significance of water – in various forms – relative to the depositions and also that other similar spring offerings could well be concealed elsewhere in the general body of depositions and hoards. Obvious possibilities in this respect are depositions associated with slopes[112]. U. L. Rasmussen and H. Skousen write the following about springs: "These former springs are typically located at the foot of a hill near wetland, but can also appear on higher ground. Their geological premise takes the form of alternating layers of moraine sand and clay. In these, water pressure can be generated in the sandy layers by the movement of water from higher ground beneath a covering waterproof layer of clay. As the pressure increases, the water may find small cracks or earthworm burrows in the upper layers …, forming a spring"[113]. The authors also request information on further Danish examples of these spring offerings, on a par with those in Southern Sweden, for example the important Röekillorna 'spring', which has evidence of offering activity extending from the Early Neolithic to the Iron Age[114]. Numerous springs have fed the Gudenå through time, as well as being sources of drinking water for people and animals and providing water for the soil. The latter aspect was in itself a significant factor in an agricultural society such as that of the Bronze Age and perhaps also one of the reasons that offerings were made at wells. There are also numerous ethnographic examples of offerings associated with springs, and with water in general, where the spring can represent both the residence of good and bad spirits and an entrance to the underworld[115]. Bronze Age depositions across the landscape are not linked with particular, identifiable cult sites, but show a scattered distribution and are associated with natural places where the original character of the landscape can be difficult to ascertain. There is a general lack of relevant archaeological investigations and, consequently,

110 Fontijn 2008, 101; Mullin 2012, 47.

111 Huth 2011, 54: "During the Bronze Age, the Urnfield period in particular, this certainly was water … in its form as river, small stream, spring, well, bog or see."

112 Kaul 2004, 74 f.; Rasmussen / Skousen 2012, 156.

113 Rasmussen / Skousen 2012, 153.

114 Stjernquist 1997.

115 Rasmussen / Skousen 2012, 156.

information on the contexts. The landscape around the actual find site can also have been altered considerably since deposition and / or since discovery. A good example is the deposition found at Nymølle near Aarhus. This turned up on a slope running down towards a river which, in topographic terms, is an obvious place for a spring to break the surface. However, the find was discovered during gravel extraction and the slope was dug away long ago[116].

Anthropologist V. Strang, as well as several archaeologists, has written about the significance of water from a broader perspective, which not only focuses on 'wetlands' but water in relation to bogs, lakes, wells, springs, rivers and streams[117]. D. Yates and R. Bradley have incorporated Strang's analyses into their archaeological studies in the British Fenland area, where there are many Bronze Age sites. They write that: "What is striking is how many different kinds of deposits were associated with water, and just how varied those find spots actually were"[118]. Depositions are typically classified into broad categories such as bog finds, field finds and river finds – because information on the original find context does not extend beyond this. However, it can be important not only to differentiate between terrestrial finds and finds from rivers, lakes and wetlands but also to make a distinction between various forms of water[119]. This approach would provide a more nuanced insight into the find contexts for specific artefact types, particular ways of treating artefacts etc.[120]. D. R. Fontijn has suggested that not only should a distinction be made between various natural environments such as rivers and bogs in a deposition context, it is also necessary to differentiate between large and small rivers (e.g. the Rhine or Meuse relative to smaller rivers). As he writes: "There must have been some cultural notion that swords were preferably selected for sacrifice in major rivers, and nowhere else"[121].

In Southern Scandinavia, swords can occur in many different finds environments but Fontijn's comments are of direct relevance to the relatively large number of swords and daggers recovered from the Gudenå. Depositions can, of course, be evaluated at various levels. If the individual find sites are considered, there is a variation resulting from the actual local landscape and, in some cases, it is possible to proceed further through detailed studies of historical maps showing the original wetland areas, coupled with detailed investigation of the find sites. However, it is also important to take account of the overall finds distribution at a slightly larger geographical scale and assess the finds in a particular landscape as diverse expressions of votive practice.

Stream and river currents do, of course, make it difficult to determine whether the find site is equivalent to the original place of deposition. It is assumed, however, that bronze artefacts, such as swords, axes and so on, have not been moved significantly. Often there is a lack of detailed information on the find context, but sometimes the find sites show natural characteristics which, again in the light of the extensive evidence provided by European river finds, were probably significant for the choice of a particular place or area for the deposition.

Places where two watercourses meet

A characteristic feature of several of the Late Neolithic and Bronze Age finds from the Gudenå is that they turned up at the confluence of two watercourses: This applies to C31,

116 Frost 2010a.

117 Strang 2005; idem 2008; Stevens 2008, 244 ff.; Yates / Bradley 2010, 405.

118 ibid., 413.

119 Ibid.

120 Ibid.

121 Fontijn 2002, 212.

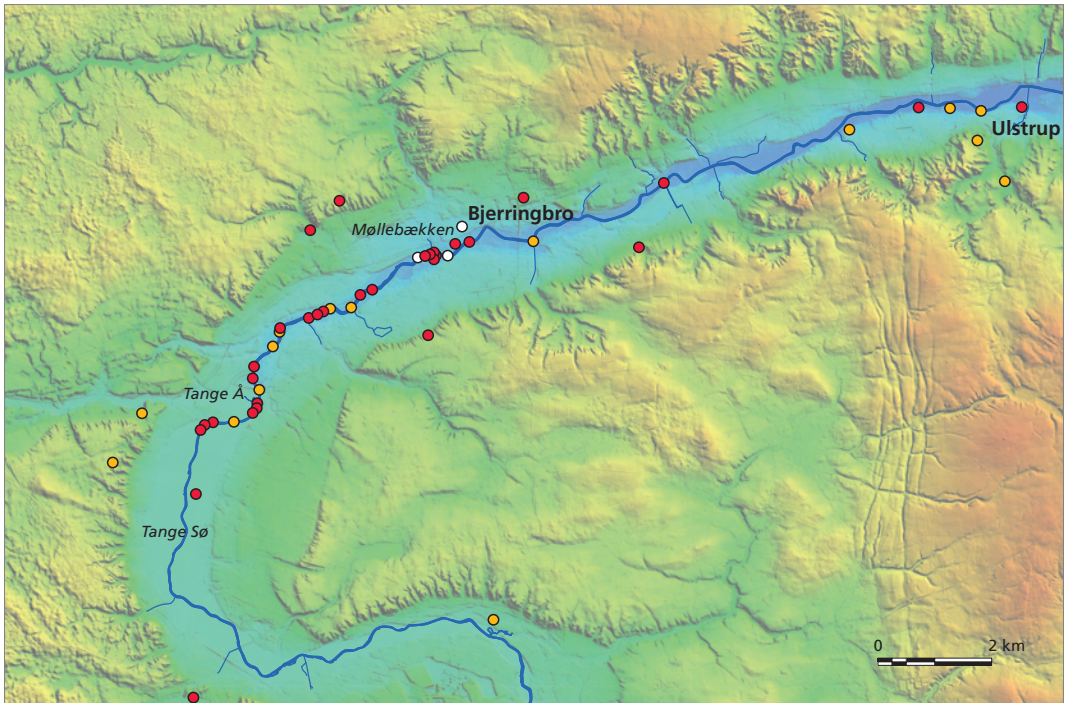

Fig. 18. Relief map taken from an historical topographic map (1870). The river runs through the later artificial lake (Tange Sø, 1921). The streams Tange Å and Møllebækken are marked as examples of find concentrations located at the confluence of a watercourse with the Gudenå. The Gudenå was dammed at a point just upstream from the place name 'Tange Å' marked on this map. Depositions: yellow dots: Late Neolithic; red dots: Bronze Age; white dots: Early Pre-Roman Iron Age.

C36, C48, C51, C52, C55 and C97. There can, of course, be some doubt as to whether the watercourses shown on historical maps had the same location in the Bronze Age. Nevertheless, there is a general tendency for stream and river finds to be concentrated at confluences – not least in a European perspective[122]. The distribution of the finds therefore suggests that water in itself and perhaps in particular due to its ability to flow and merge and to constantly change form and create new routes, was significant relative to the choice of deposition sites[123] *(Fig. 18)*.

At fords or crossings

In a European perspective, many river finds are typically associated with fords, bridges and crossings and several Danish examples have similar find contexts. As well as being places of special importance due to natural characteristics, they are also locations which, in the Bronze Age, presumably were of greater supra-regional significance than others[124]. Of course, these concentrations of artefacts at crossings could also be due to traffic converging from a large hinterland, resulting in objects more often being lost. But the crossing points

[122] Ibid.

[123] Hansen 1997, 31; Wegner 1995, 272; Strang 2008, 125.

[124] Hansen 1997, 31; Falkenstein 2005, 492; Yates / Bradley 2010, 412; Anders 2011; May / Hauptmann 2011.

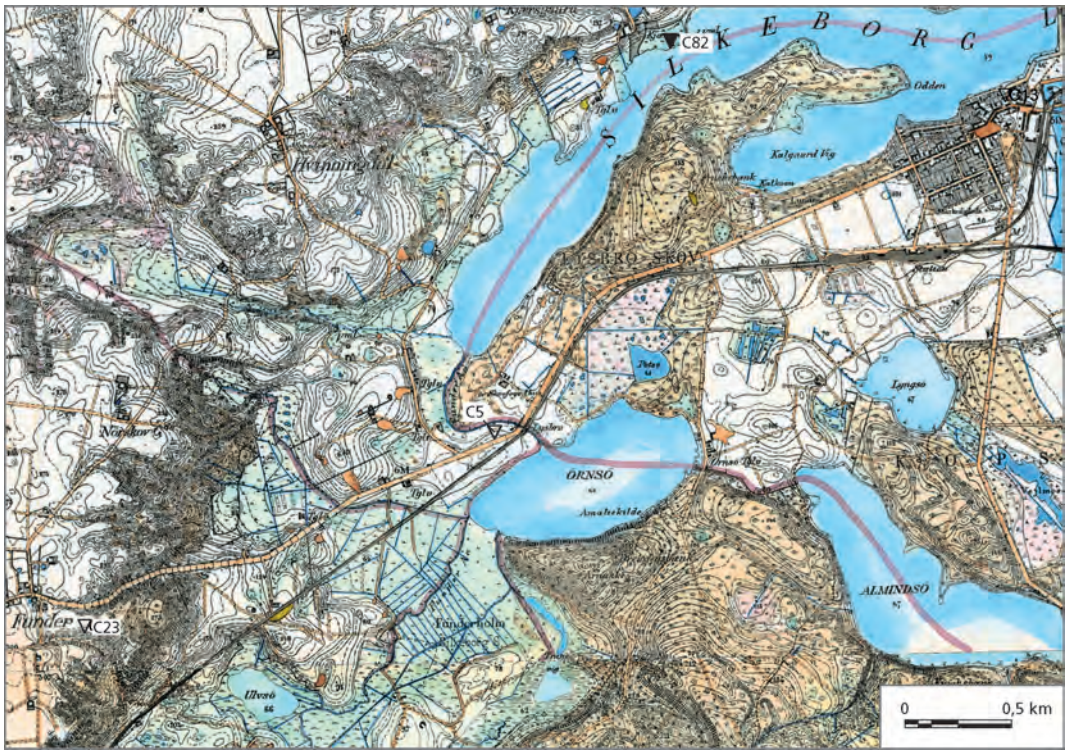

Fig. 19. An example of a find site of a sword (C5) at a crossing place called Lysbro, surrounded by lakes, streams, meadows and bogs (part of an historical topographic map, 1870).

were apparently also places chosen for depositions – perhaps because they were typically gathering places and / or because they were seen as being dangerous to negotiate[125]. Crossing open water can, accordingly, be perceived as a hazardous liminal passage which perhaps, in some cases, required the performance of depositions?[126]

Many fords and bridges along the Gudenå presumably go a long way back in time[127]. Again, there is a lack of detail with respect to the precise find circumstances, and it should also be pointed out that the topographic criteria for bridges and fords can be diametrically opposed. Bridge crossings are typically characterised by a short distance over deep, swiftly-flowing water, whereas fords typically constitute a much longer crossing through shallow water. A number of finds from the Gudenå are associated with presumed crossings although, in several cases, this categorisation is based solely on the place name for the find relating to a bridge or ford, for example Lysbro (C5). This latter site is located between two lakes, Ørnsø and Silkeborg Langsø, where the watercourse Funder Å and its associated wetland areas narrow the crossing point *(Fig. 19)*. There is also a find of a celt from Resenbro (C58), where a bridge crosses the river. A similar situation applies to the dress pin from Voervadsbro (C102) and there are other find sites at places with names indicating crossings, for example the flint dagger found at Fladbro (C97).

125 Høgsbro 2004.
126 Rudebeck 2001, 95 ff.
127 Høgsbro 2004, 269.

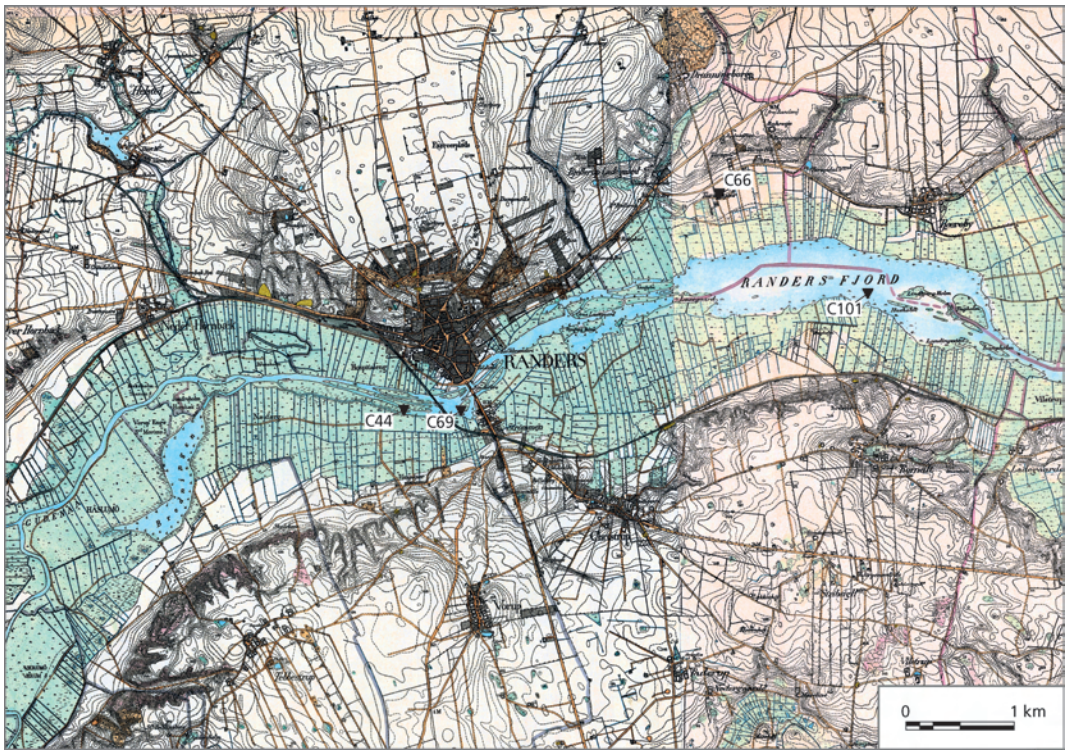

Fig. 20. Part of an historical topographic map (1870) showing the Sønderbro area near Randers.

On an island in the river

In a European context, depositions are also found on islands in rivers[128]. The above-mentioned Hallstatt sword of Gündlingen type (C69) is interesting in this respect because it was found during the digging of a canal in the Gudenå at Skallekrogen, the western part of a small island near Randers, adjacent to the bridge over the Gudenå *(Fig. 20)*. In 1922, the intervening water was filled in so the island no longer exists. Together with the Fårdrup axe (C44) found nearby, the Gündlingen sword is yet another example of a find discovered at a crossing.

In bogs by a watercourse

A number of the finds come from bogs not located in the immediate vicinity of the river, whereas others, such as the Ulstrup axes (C32), are from bogs directly adjacent to it. One of Fontijn's definitions of places related with depositions refers to peat bogs immediately adjacent to a watercourse[129]. In the case of larger bogs, I have made references above to the Uldum area (e.g C30, C56, C72, C73, C74, C75 and C111). Another good Danish example is provided by Gammelsole and Råddenkær next to Gjesager Å near Vejle. Here there are scattered depositions dating from period VI of the Late Bronze Age. These comprise eight gold artefacts and 24 larger bronzes distributed across three localities and located at at least 13 different find sites within a large area of meadow and wetland. Some of the

[128] Hansen 2000, 54.

[129] Fontijn 2002, 212.

objects were deposited together, while others were single depositions. These coeval finds do not come from the actual river but turned up on both sides and in close proximity to it. The objects were found at shallow depth, suggesting that they were originally placed on the open surface of the bog[130].

A sacred valley

The various find situations and characteristics relating to the choice of deposition site can either be assessed very locally, where each individual find site is examined in relation to water, crossings etc., or they can be evaluated collectively, as elements in a landscape at a greater geographic scale and, thereby, as components of a ritual landscape which may have existed over a longer period of time. Further to the fact that Bronze Age depositions can apparently be associated with specific natural sacred places in the landscape, rather than actual man-made cult sites, in some instances, clusters of finds are also associated with particular zones and areas[131]. This characteristic has been compared with the tendency of barrows to be gathered in groups and to form ritual landscapes[132]. The Tange – Bjerringbro and Ulstrup section of the river has both a concentration of river finds and also records from river-near areas of artefacts discovered in bogs and wetland areas. An appraisal of the natural environment along this stretch reveals a characteristic feature: the river runs through a distinctive valley flanked by terraces. A possible parallel to this situation is seen in NE Holstein where the Oldenburg depression extends from the Bay of Kiel in the NW to the Bay of Mecklenburg to the SE, across the peninsula located directly south of Fehmarn. This feature has records of 16 depositions dating from the Late Bronze Age, prompting M. Müller-Wille to coin the term 'Heiliges Tal'[133]. A similar situation has been reported for a section of valley with a concentration of bronze finds in Lincolnshire, Central England[134]. Given the nature and distribution of the finds and the morphology of the landscape, this term can therefore also be applied to the Tange – Bjerringbro and Ulstrup section of the Gudenå river valley. The Gudenå situation do not equate readily with the finds along the banks of the River Tollense in north-eastern Germany[135]. However, I see some similarities regarding the landscape and the association of the metalfinds with particular zones or stretches.

It is beyond the scope of this article to include grave and settlement remains associated with the river, but in the light of the concentration of finds and its characteristic natural environment, it is interesting that this area is generally rich archaeologically with several finds from the Late Bronze Age – including grave finds from some of the area's many barrows *(Fig. 21)*.

In addition to depositions associated with the river, settlement traces, graves and systems of multi-stringed cooking pits (c. 300 have been recorded) have been found across a large area to the south of the Gudenå[136]. The generally accepted interpretation of these collections of cooking pits today is that they represent large places of assembly and, consequently, social meeting places, where various rituals could also have been performed[137]. Together with a number of finds from graves (including gold artefacts and razors bearing ship motifs) the cooking-pit area marks a landscape bearing traces of numerous ritual

130 Jensen 1969; idem 1997, 166 f.
131 Fontijn 2002, 262 f.
132 Parker-Pearson 1993, 91; Scurfield 1997, 35.
133 Müller-Wille 1999, 21 f.
134 Scurfield 1997, 33.
135 Jantzen et al. 2011.
136 Kristensen 2008.
137 Fendin 2005, 377; Henriksen 2005.

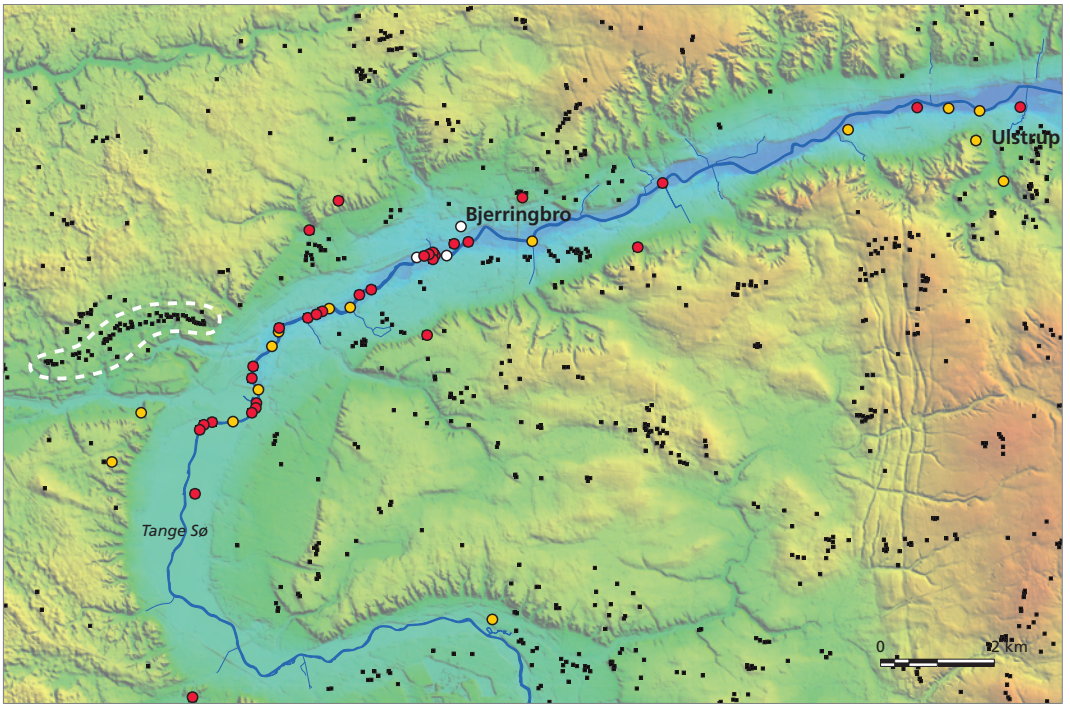

Fig. 21. Relief map showing the distribution of depositions and burial mounds in the Tange–Bjerringbro and Ulstrup area. The white dotted line marks a particular linear distribution of barrows used by S. Müller as an example of the close relationship between the monuments and what was originally a sunken road[138]. However, it is not easy to trace the barrow line unambiguously to the southern side of the river. Small black dots: burial mounds; yellow dots: Late Neolithic depositions; red dots: Bronze Age depositions; white dots: Early Pre-Roman Iron Age depositions.

activities[139]. The systems of cooking pits are located high up in the terrain and the majority of the features pointed directly out towards the river valley. Pottery from the settlements and radiocarbon dates indicate an overall date of around 1020–800 BC, corresponding to Late Bronze Age periods IV–V.

In general, the distribution of the Gudenå finds show that it is not possible to identify specific, organised cult sites. Presumably the choice of these areas for depositions was governed by several factors. The fact that adjacent areas were characterised by great activity with respect to settlement, transport, burials and special cooking-pit systems was probably significant. Furthermore, there is the Gudenå's course through a special and distinctive valley landscape, in which the river was an important common pivotal feature for large numbers of people on both sides. Then there is the actual name of the river, of ancient but unknown age, which indicates a personification or animation of the river. A striking feature is also the considerable period of time over which the area for depositions was, to some extent, fixed and maintained in the landscape. In reference to this, it is interesting to note that several cultures believe that a river unites the world of people with that of the spirits. The same is true in Nordic mythology, where the river Slidr flows from the land of people to the realm of the dead[140].

138 Müller 1904, 29 fig. 19.
139 Kristensen 2008, 22 ff. fig.10.
140 Koch 2004, 333.

Concluding comments

As pointed out by H. Thrane in the quote cited in the introduction, the Gudenå proved to be an obvious place to look for river finds. These finds are identified as a new phenomenon that adds depth and detail to the overall picture of the deposition and offering traditions in Southern Scandinavia and also forges links with a far-reaching European tradition of river finds. This is shown by the high proportion of weapons and by the river finds' generally more limited range of artefact types, which appear more structured than is the case for the more varied range of artefacts seen in the other categories of depositions. Consequently, the Gudenå finds stand out from the Scandinavian votive tradition, as exemplified by the river finds of daggers. And while these finds display clear points of similarity with those associated with the European tradition of river finds, there are also differences, because the relatively numerous Early Bronze Age artefacts from the Gudenå also confer a special individual character on the finds. In any case, the Bronze Age finds from the Gudenå provide an interesting example of how special depositional traditions can arise in particular areas, while otherwise only making a very slight impact in other places within the Nordic Bronze Age culture.

Translated by David E. Robinson and Anne Bloch

Catalogue

Data: location, parish, geographical code, find site, year of discovery / first record, deposition type, chronology, object types, museum: abbreviation followed by archive number (e.g. VSM 152), specified find context, information and references.

Abbreviations for relevant Danish Museums: FHM and AM (Moesgård Museum in Aarhus [formerly Aarhus Museum]), HOM (Horsens Museum), KHM (Museum Oestjylland Randers), NM (The Danish National Museum in Copenhagen), SBM (Skanderborg Museum), SIM (Silkeborg Museum), VSM (Viborg Museum), VKH (Vejle Museum).

LN (Late Neolithic), EBA (Early Bronze Age), LBA (Late Bronze Age), PRIA (Pre-Roman Iron Age)

Montelius period I: 1700–1500, period II: 1500–1300, period III: 1300–1100 = EBA
Montelius period IV: 1100–900, period V: 900–700, period VI: 700–500 = LBA

C1. Ans Kær, Grønbæk parish, 130604 – not accurately provenanced
Bog find
Find year / record year: 1938
Single deposition (LBA period IV / V), celt (socketed axe) (VSM 151)
Found during drainage work in Ans Kær. Three single depositions from three different Bronze Age periods (C1, C2 and C3).
Ref.: Aner / Kersten 2008, 177 no. 5962.

C2. Ans Kær, Grønbæk parish, 130604 – not accurately provenanced
Bog find
Find year / record year: 1938
Single deposition (EBA period I), flanged axe (VSM 152)
Found during drainage work in Ans Kær (see C1).
Ref.: Vandkilde 1996, 443 no. 435; Aner / Kersten 2008, 177 no. 5962.

C3. Ans Kær, Grønbæk parish, 130604 – not accurately provenanced
Bog find
Find year / record year: 1938
Single deposition (EBA period II), palstave (VSM 153)
Found during drainage work in Ans Kær (see C1).
Ref.: Aner / Kersten 2008, 177 no. 5962.

C4. Between Alling and Rye, Alling parish, 160101 – not accurately provenanced
Marl pit

Find year / record year: unknown
Single deposition (EBA period I): flanged axe (private collection)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6418.

C5. Lysbro, Silkeborg parish, 160108 – not accurately provenanced
No find information
Single deposition (assumed) (EBA), sword (part of blade) (NM B2339)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6479.

C6. Tange, Højbjerg parish, 130606–27
River find
Find year / record year: 1920
Single deposition (EBA), dagger blade (NM B10903)
Found in the Gudenå during construction of the power plant at Tange.
Ref.: Aner / Kersten 2008, 179 no. 5969.

C7. Tange, Højbjerg parish, 130606–28
River find
Find year / record year: 1920
Single deposition (EBA period I), spear (NM B10902)
The find was submitted from the power plant.
Ref.: Jacob-Friesen 1967, 322 no. 577 Taf. 31,12; Vandkilde 1996, 473 no. 857; Aner / Kersten 2008, 179 no. 5970.

C8. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: 1922
Single deposition (EBA period II), dagger blade (AM 6073)
Found in the Gudenå at Tange.
Ref.: Aner / Kersten 2008, 179 no. 5971.

C9. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: 1927
Single deposition (LBA period V), tang-hilted sword (AM 6174)
Found at the confluence of Tange Å and the Gudenå.
Ref.: Aner / Kersten 2008, 179 no. 5972.

C10. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find,
Find year / record year: 1928
Single deposition (EBA period II), flange-hilted sword (AM.6313)
Ref.: Aner / Kersten 2008, 179 no. 5973.

C11. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: 1930
Single deposition (EBA period I), dagger blade (AM 6334)
Found on the bottom of the Gudenå at Tange.
Ref.: Aner / Kersten 2008, 179 no. 5974.

C12. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: 1930
Single deposition (EBA period III), razor (with a horse's head handle) (AM 6335)
Discovered in sediment from the bottom of the Gudenå at Tange.
Ref.: Aner / Kersten 2008, 179 no. 5975.

C13. Near Silkeborg, Silkeborg parish, 160108 – not accurately provenanced
No find information
Find year / record year: 1865
Single deposition (assumed) (EBA period I), flanged axe (NM B26073)
Found near Silkeborg and handed in to the National Museum in 1865 from King Frederik VII´s collection.
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6481.

C14. Bjerring, Bjerring parish, 130701 – not accurately provenanced
Bog find
Find year / record year: 1880
Single deposition (EBA), sickle (bronze) (NM B2516)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6023.

C15. Bjerring, Bjerring parish, 130701 – not accurately provenanced
River find
Find year / record year: 1921
Single deposition (EBA), hollow chisel (bronze) (AM 6041)
Found in the Gudenå between Bjerring and Tange.
Ref.: Aner / Kersten 2008, 206 no. 6025.

C16. Bjerringbro at the Station, Bjerringbro parish, 130702 – not accurately provenanced
No find information
Single deposition (assumed) (EBA), sword blade (KHM 1757)
Ref.: Aner / Kersten 2008, 207 no. 6026.

C17. Bjerringbro, Bjerringbro parish, 130702–17
River find
Find year / record year: 1980
Single deposition (EBA), dagger blade (VSM G561S1)
Ref.: Aner / Kersten 2008, 207 no. 6027.

C18. Langå, Langå parish, 130707 – not accurately provenanced
Bog find
Find year / record year: unknown
Single deposition (EBA period II), spear (KHM 1001)
Found during peat cutting in a bog at Østergård (Langå).
Ref.: Aner / Kersten 2008, 208 no. 6031.

C19. Near Silkeborg, Silkeborg parish, 160108 – not accurately provenanced
No find information
Find year / record year: 1865–72
Single deposition (assumed) (EBA period I), spear (AM 0970)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6483.

C20. Balle Bog, Balle parish, 130301 – not accurately provenanced
Bog find (hoard)
Find year / record year: 1899
Multi-type deposition (EBA period II), neck collar, four arm rings (AM 5171)
Presumably in a bog NE of the church at Balle.
Ref.: Aner / Kersten 2008, 84 no. 5748.

C21. Balle, Balle parish, 130301 – not accurately provenanced
No find information
Single deposition (LN), halberd (bronze) (SIM 1527)
Ref.: Aner / Kersten 2008, 84 no. 5750.

C22. Balle, Balle parish, 130301 – not accurately provenanced
No find information
Single deposition (assumed) (EBA period II), palstave (SIM 1544)
Ref.: Aner / Kersten 2008, 84 no. 5751.

C23. Funder, Funder parish, 130303 – not accurately provenanced
Marl pit
Find year / record year: 1857
Single deposition (EBA period I), flanged axe (NM 9572)
Ref.: Aner / Kersten 2008, 96 no. 5785.

C24. Near Silkeborg, Silkeborg parish, 160108 – not accurately provenanced
No find information, find year / record year: 1899
Single deposition (assumed) (EBA period I), flanged axe (AM 5154)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6484.

C25. Søholt, Gødvad parish, 130304–60
Field
Find year / record year: 1981
Single deposition (EBA period I), spear (SIM 207/1981)
Found close to the northern part of the lake Silkeborg Langsø.
Ref.: Aner / Kersten 2008, 109 no. 5803.

C26. Kjællinghøl, Gerning parish, 130502–112
River find
Find year / record year: 1918
Single deposition (EBA period I), dagger (FHM 4482)
Discovered during eel spearing.
Ref.: Aner / Kersten 2008, 150 no. 5899; Frost 2010b.

C27. Bøgeskov, Gullev parish, 130504–45B
Field
Find year / record year: 1932
Single deposition (EBA period I), flanged axe (ornamented) (VSM 6058)
Ref.: Aner / Kersten 2008, 151 no. 5901.

C28. Bøgeskov, Gullev parish, 130504–60
River find
Find year / record year: 1920
Single deposition (EBA period II), plate-hilted sword (NM B10904)
Discovered during the construction of the power plant at Tange. Submitted to the National Museum by an engineer.
Ref.: Aner / Kersten 2008, 151 no. 5902C.

C29. Rask, Hvirring parish, 160304 – not accurately provenanced
Bog find
Find year / record year: unknown
Single deposition (EBA period II) flange-hilted sword (HOM 223)
Found in a bog in the vicinity of Rask.
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6642.

C30. Rask Mose, Hvirring parish, 160304 – not accurately provenanced
Bog find
Find year / record year: unknown
Single deposition (EBA), spear (HOM 12xA260)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6643.

C31. Skibelund, Sahl parish, 130508–65
River find
Find year / record year: 1927
Single deposition (EBA period II), palstave (VSM 6099)
Found in the Gudenå at Skibelund.
Ref.: Aner / Kersten 2008, 159 no. 5926.

C32. Ulstrup, Vellev parish, 130513–165
Bog find
Find year / record year: 1941 & 1950
Single-type deposition (LN), two flanged axes (NM B17868, FHM 140A)
Ref.: Aner / Kersten 2008, 164 no. 5941.

C33. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN / EBA), flint sickle (symmetrical, convex reverse) (FHM 0793-CJ)
Ref.: unpublished.

C34. Tange, Højbjerg parish, 130606 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN/EBA), flint sickle (symmetrical, convex reverse) (FHM 0793-CK)
Ref.: unpublished.

C35. Between Tange and Bjerringbro – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN/EBA), flint sickle (symmetrical, thin) (FHM 0793-CL)
Ref.: unpublished.

C36. Trust, Tvilum parish, 160114 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN), flint dagger, type 1 (FHM 0793-DA)
Found at the confluence of the Gudenå and Alling Å.
Ref.: unpublished.

C37. Between Tange and Bjerringbro – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN), flint dagger, type 1 (FHM 0793-DL)
Ref.: unpublished.

C38. Borre Mark, Vejerslev parish, 130512 – not accurately provenanced
Field
Find year / record year: before 1957
Single deposition (LN), thick-butted axe with curved sides (FHM 0793-EF)
Ref.: unpublished.

C39. Sofienlund Teglværk, v/Ulstrup, Vellev parish, 130513 – not accurately provenanced

River find
Find year / record year: before 1957
Single deposition (assumed) (LN), slate ornament (FHM 0793-EG)
Ford in the Gudenå (crossing place).
Ref.: unpublished.

C40. Bjerringbro, Bjerringbro parish, 130702 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (EBA period I) spear (FHM 0793-FL)
Ref.: unpublished.

C41. Bjerringbro, Bjerringbro parish, 130702–15
River find
Find year / record year: before 1957
Single deposition (LBA period V), spear (FHM 0793-FM)
Found in the Gudenå approximately 400 m west of Bjerringbro.
Ref.: unpublished.

C42. Bjerringbro, Bjerringbro parish, 130702 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LBA period V), tang-hilted sword (FHM 0793-FN)
Ref.: unpublished.

C43. Between Tange and Bjerringbro – not accurately provenanced
River find
Find year / record year: 1923
Single deposition (LN), flint dagger, type IV (AM 6090)
Discovered during dredging in the Gudenå between Tange and Bjerringbro.
Ref.: unpublished.

C44. Vorup Kær, Vorup parish, 140310–18
River find
Find year / record year: 1920
Single deposition (EBA period I), Fårdrup axe (AM 6156)
Discovered in sediment from the Gudenå.
Ref.: Vandkilde 1996, 472 no. 845.

C45. Bjerringbro, Bjerringbro parish, 130702 – not accurately provenanced
River find
Find year / record year: 1931/32
Single deposition (PRIA), fibula with double spiral (AM 6699)
Discovered in sediment from the Gudenå at Bjerringbro.
Ref.: unpublished.

C46. Bjerringbro, Bjerringbro parish, 130702 – not accurately provenanced
River find
Find year / record year: 1931/32
Single deposition (assumed) (PRIA), ring (AM 6700)
Discovered in sediment from the Gudenå.
Ref.: unpublished.

C47. Tange, Højberg parish, 130606 – not accurately provenanced
River find
Find year / record year: 1922
Single deposition (LBA), shaft-hole axe (stone) (AM 6074)
Ref.: unpublished.

C48. Bjerringbro, Bjerringbro parish, 130702–22
River find
Find year / record year: 1952/54
Single deposition (LBA period IV), celt (socketed axe) (VSM G651, in private collection)
Found in gravel at the confluence of Møllebækken and the Gudenå.
Ref.: unpublished.

C49. Bjerringbro, Bjerring parish, 130701–57
River find
Find year / record year: 1952
Single deposition (LBA period VI), flange-hilted sword, Mindelheim-type (Hallstatt) (FHM 0147-A). Found in the northern bank of the Gudenå.
Ref.: Lavrsen 1958 64 fig. 1; Jensen 1966, 28 no. 8; Jensen 1989, 150 fig. 1,4; Jensen 1997, 296 no. 169.

C50. Lille Mølle, Vindum parish, 130715–194
River find
Find year / record year: 1929
Single deposition (LBA period VI), dress pin with cup-shaped head (VSM 06154)
Discovered in the Gudenå during dredging at Lille Mølle.
Ref.: Jensen 1973, 130 fig. 19,12; Jensen 1997, 296 no. 171 fig. 84,7.

C51. Skibelund Bæk, Sahl parish, 130508–53
River find
Find year / record year: 1957
Single deposition (LBA), bone handle (ornamented) designed for a celt (socketed axe) (NM B15176). Found at the confluence of Skibelund Bæk and the Gudenå.
Ref.: unpublished.

C52. Bjerringbro, Bjerringbro parish, 130702–21
River find
Find year / record year: 1952/54
Single deposition (EBA): plate-hilted dagger (private collection)
Discovered in gravel at the confluence of Møllebækken and the Gudenå.
Ref.: unpublished.

C53. Rughaven, Vellev parish, 130513 – not accurately provenanced
Bog find
Find year / record year: before 1957
Single deposition (LN): flint dagger, type I (FHM 0793-DR)
Rughaven, approximately 1.2 km north of Vellev.
Ref.: unpublished.

C54. Busbjerg, Sophienlunds Teglværk, Vellev parish, 130513–36
Field
Find year / record year: 1866
Multi-type deposition (LBA period IV): arm band (broad, ornamented), spiral arm band (fragmented), casting jet (AM 1173)
Discovered on a hillside during planting.
Ref.: Jantzen 2008, 220 no. 294 (Vellev).

C55. Gullev Bæk, Gullev parish, 130504 – not accurately provenanced
River find
Find year / record year: before 1957
Single deposition (LN): shaft-hole axe (FHM 0793-EL)
Found at the confluence of Gullev Bæk and the Gudenå.
Ref.: unpublished.

C56. Uldum, Uldum parish, 170814 – not accurately provenanced
Field
Find year / record year: 1937
Single deposition (LBA), celt (socketed axe) (AM 7342)
Found in a field near the Gudenå at Uldum.
Ref.: unpublished.

C57. Alken mose, Dover parish, 160203 – not accurately provenanced
Bog find
Find year / record year: 1891
Single deposition (LBA), celt (socketed axe) (AM 2667)
Crossing place?
Ref.: Baudou 1960, 189 no. 136.

C58. Resenbro, Linå parish, 160105 – not accurately provenanced
Field
find year / record year: 1925
Single deposition (LBA), celt (socketed axe, groove-ornamented, looped) (AM 6125)
Discovered in a field at Resenbro; crossing place?
Ref.: unpublished.

C59. Ans, Grønbæk parish, 130604 – accurately provenanced without number
Bog find,
Find year / record year: 1954
Single deposition (PRIA), lugged ring (large and heavy with small attached rings) (FHM 0350-A)
Ref.: unpublished.

C60. Kongensbro, Trust, Grønbæk parish, 130604 – not accurately provenanced
No find information
Find year / record year: 1861–64
Single deposition (LN), shaft-hole axe (AM 0296)
Found at Kongensbro (crossing place?). Uncertain whether found in water or not.
Ref.: unpublished.

C61. Sahl Kær, Sahl parish, 130508 – not accurately provenanced
Bog find
Find year / record year: 1893
Single deposition (EBA), palstave (AM 3134)
Found under a large stone at Sahl Kær.
Ref.: Aner / Kersten 2008, 159 no. 5925.

C62. Albæk, Albæk parish, 140901 – not accurately provenanced
Bog find
Find year / record year: 1920
Single deposition (LN), flanged axe (AM 6095)
Found in a peat bog in Albæk near Randers.
Ref.: Vandkilde 1996, 419 no. 212.

C63. Hagenstrupmølle, Hvorslev parish, 130507–63
Field
Find year / record year: 1893
Multi-type deposition (LN), six flint daggers, one shaft-hole axe (KHM 3359–64)
Found near some large stones.
Ref.: Lomborg 1973, 197.

C64. Vellev Præstegård, Vellev parish, 130513–54
Bog find
Find year / record year: 1893
Single deposition (LBA period VI), arm band (ornamented) (NM B5798)
Found during peat cutting in a bog at Vellev Præstegård.
Ref.: Jensen 1997, 296 no.165.

C65. Ulstrupbro, Hvorslev parish, 130507–76
Bog find
Find year / record year: 1977
Single deposition (LBA), bog pot (NM 2196/77)
Ref.: unpublished.

C66. Dronningborg, Dronningborg parish, 140903–10
Field
Find year / record year: 1942
Multi-type deposition (LBA period IV), hanging vessel, two spiral arm rings (KHM 5376)
Ref.: Sprockhoff / Höckmann 1979, Taf. 84.

C67. Hennersmose, Randers parish, 140908 – not accurately provenanced
Bog find
Find year / record year: 1825
Single deposition (LBA period IV), flange-hilted sword (NM 8071)
Ref.: Sprockhoff 1931, 100 no 29.

C68. Nielsminde Mose, Støvring parish, 140910 – not accurately provenanced
Bog find
Find year / record year: unknown
Single deposition (LBA period IV), spear (HOM 226)
Ref.: Jacob-Friesen 1967, 320 no. 536.

C69. Skallekrogen, Vorup parish, 140310 – accurately provenanced without number
River find
Find year / record year: 1955
Single deposition (LBA period VI), flange-hilted sword (Hallstatt sword Type Gündlingen) (KHM prot. 1, 483).
Discovered during dredging in the Gudenå.
Ref.: Lavrsen 1958, 64 fig. 2; Baudou 1960, 155 no. 76; Jensen 1966, 28; idem 1989, 153 fig. 2,3; idem 1997, 296 no. 178.

C70. Bjerring, Bjerring parish, 130701 – not accurately provenanced
Field
Find year / record year: unknown
Single deposition (LBA period V / VI), celt (socketed axe, Baudou's type C2b) (NM B2438)
Ref.: Baudou 1960, 188 no. 93.

C71. Lille Hammergård, Hammer parish, 160602–44
Field
Find year / record year: unknown
Single deposition (EBA), sickle (bronze) (NM B6472)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6862.

C72. Tørring, Tørring parish, 160607–77
Field near the river
Find year / record year: unknown
Single deposition (assumed) (LN), slat ornament (NM A34242)
Ref.: unpublished.

C73. Tørring, Tørring parish, 160607–80
Bog find
Find year / record year: unknown
Single-type deposition (PRIA), five bog pots (NM C20918–22)
Ref.: unpublished.

C74. Uldum Kær, Uldum parish, 170814–7
Bog find
Find year / record year: unknown
Single-type deposition (PRIA), bog pots (NM C15295)
Ref.: unpublished.

C75. Boringskov, Hvirring parish, 160304–126
Bog find
Find year / record year: 1979
Single deposition (EBA period I), flanged axe (NM 2578/79)
Ref.: Vandkilde 1996, 436 no. 370.

C76. Åle, Åle parish, 160609–24
Field
Find year / record year: 1967
Single deposition (LN), shaft-hole axe (NM 1130/16)
Ref.: unpublished.

C77. Lenes Gård, Åle parish, 160609–36
Field
Find year / record year: 1975
Single-type deposition (assumed) (LN): two shaft-hole axes (VKH 6933)
Ref.: unpublished.

C78. Gammel Rye Flyveplads, Sønder Vissing parish, 160406–181
Bog find
Find year / record year: 1940–45
Single deposition (LBA), celt (socketed axe) (NM 6398/86)
Found during World War II.
Ref.: AUD 1987, s. 165.

C79. Nedenskov, Sønder Vissing parish, 160406–230
Field near lake
Find year / record year: 1995
Single deposition (assumed) (LN), flint axe (HOM 1618)
Ref.: unpublished.

C80. Skeldal, Gl. Rye (Rye) parish, 160405–147
Field by Salten Langsø
Find year / record year: 1982
Multi-type deposition (LN), four flanged axes, flanged double-edged chisel, a bee-hive-shaped box with lid, an open solid-cast ring, a spiral arm ring, a spiral bead, two 'Noppenrings', a pair of golden 'Noppenrings', (SIM 217/1982; NM 4690/82)
Found with a metal detector.
Ref.: Vandkilde 1988.

C81. Kildebakken in Ry, Dover parish, 160203–226
Field
Find year / record year: 1983
Single deposition (EBA period I), flanged axe (SBM 119/7096/90)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6570.

C82. Gammel Kjærsgård, Silkeborg parish, 160108–35
Field in the vicinity of the lake Silkeborg Langsø
Find year / record year: 1950
Single deposition (EBA period II), palstave (SIM 12/1992)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6478.

C83. Nåege, Silkeborg parish, 160108–43
River find
Find year / record year: 1948
Single deposition (EBA), plate-hilted sword (SIM 4/1948)
Found during dredging in the Gudenå.
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6486.

C84. Åhavevej, Silkeborg parish, 160108–27
Field
Find year / record year: 1984
Single deposition (LN), flint dagger (SIM 2868)
Ref.: unpublished.

C85. Væth Enge, Ørum parish, 140314–14
Bog find
Find year / record year: 1924
Single deposition (PRIA), neck ring ('Kronenhalsring') (NM C19470)
Ref.: Jensen 1997, 307 no. 191.

C86. Vognkærslund, Svostrup parish, 130310–66
Field
Find year / record year: 1980
Single deposition (assumed) (LBA), stone axe (SIM 407/1999)
Ref.: unpublished.

C87. Tvilum Kirke, Tvilum parish, 160114–203
Field in the vicinity of the river
Find year / record year: 1995
Single deposition (LBA), celt (socketed axe), (SIM 25/1994)
Ref.: unpublished.

C88. Roe, Grønbæk parish, 130604–54
Field
Find year / record year: 1948
Single deposition (LBA period VI), 'Wendel ring' (FHM 0793-FU, NM 620/48)
Found between the Gudenå and the artificial lake Tange Sø.
Ref.: unpublished.

C89. Roevej, Grønbæk parish, 130604–63
No information
Find year / record year: 1950
Single deposition (EBA period II), flanged axe (VSM 549G1)
Ref.: unpublished.

C90. At Remstrup River south of Silkeborg (parish unknown)
River find
Find year / record year: unknown
Single deposition (LN), flint dagger (SIM 2879)
Discovered during dredging in the watercourse Remstrup Å.
Ref.: unpublished.

C91. Ålekroen, Svejbæk (parish unknown)
Lake find
Find year / record year: 2010
Single deposition (LN), thick-butted axe with curved sides (SIM 46/2010)
Ref.: unpublished.

C92. Nim, Nim parish, 160305 – not accurately provenanced
Field
Find year / record year: unknown
Multi-type deposition (LBA period IV), hanging vessel, celt (socketed axe), arm ring (NM B9613–15).
Ref.: Broholm 1946, 205 M92.

C93. Hesselballe, Uldum parish, 170814 not accurately provenanced
No find information
Find year / record year: unknown
Single deposition (LBA period V / VI), celt (socketed axe) (NM 19905)
Ref.: Baudou 1960, 189 no. 154.

C94. Lille Mølle, Vindum parish, 130715–194
River find
Find year / record year: 1947
Single deposition (LN), flint dagger (NM 949/47)
Ref.: unpublished.

C95. Stærkær / Busbjerg, Gerning parish, 130502–118
Field / spring
Find year / record year: 2011
Single deposition (LBA period IV), tang-hilted sword (FHM 5299)
Ref.: Frost 2012.

C96. Hjermind Hede, Hjermind parish, 130705–79
Field
Find year / record year: 1871
Single deposition (LBA), celt (socketed axe) (VSM 01399)
Ref.: Baudou 1960, 183, no. 164.

C97. Fladbro, Tånum parish, 131209 – not accurately provenanced
Meadow
Find year / record year: unknown
Single deposition (LN), flint dagger (KHM 420)
Fladbro is situated at the confluence of the Gudenå and Nørreå.
Ref.: unpublished.

C98. Udbyhøj, Udby parish, 140803–24
Coast
Find year / record year: 2001
Multi-type deposition (LN), flint spear and flint dagger (KHM 2453–54)
Found at the coast near Udbyhøj (the southern side of Randers Fjord).
Ref.: unpublished.

C99. Støvringgård, Støvring parish, 140910 – not accurately provenanced
Meadow
Find year / record year: unknown
Single deposition (LBA), celt (socketed axe) (KHM 404)
Found in a meadow in the vicinity of Randers Fjord.
Ref.: unpublished.

C100. Tebbestrup, Haslund parish, 140304–14
Meadow
Find year / record year: 1934
Single deposition (LN), flint dagger (KHM 542/34)
Found very close to the river.
Ref.: unpublished.

C101. Randers Fiord, 401240–4
Fiord
Find year / record year: 1955
Single deposition (EBA period I), flanged axe (KHM 73/80)
Found during eel spearing.
Ref.: Vandkilde 1996, 443, no. 440.

C102. Voervadsbro, Voerladegård parish, 160411 – not accurately provenanced
Bog find
Find year / record year: 1913
Single deposition (LBA period VI), dress pin (NM B10470)
Discovered during dredging.
Ref.: Jensen 1973, 129 fig. 9,4; idem 1997, 297 no. 193

C103. Bjerring / Taul Mose, Bjerring parish, 130701 – not accurately provenanced
Bog find
Find year / record year: unknown
Multi-type deposition (PRIA), lugged bronze ring, lugged ring and arm ring (KHM 1578–80)
Ref.: unpublished.

C104. Langå Statsbaneplanteskole, Langå parish, 130707 – not accurately provenanced
No find information
Find year / record year: before 1957
Single deposition (LN), flint dagger (FHM 0793-DO).
Ref.: unpublished.

C105. Udbyhøj, Udby parish, 140803 – not accurately provenanced
No find information
Find year / record year: unknown
Single deposition (LBA period IV), spear (NM B841)
Ref.: Baudou 1960, 160 no. 22.

C106. Underup, Underup parish, 160307 – not accurately provenanced
Field
Find year / record year: unknown
Single-type deposition (LBA period IV), three neck rings (NM B11270–72)
Ref.: Baudou 1960, 248 no. 31a.

C107. Aabro Mose, Vellev parish, 130513–140
Bog find
Find year / record year: before 1957
Single-type deposition (PRIA), bog pots (at least four) (FHM 0793-GQ)
Ref.: unpublished.

C108. Tange, Højberg parish, 130606 – not accurately provenanced
Meadow
Find year / record year: 1927
Multi-type deposition (assumed) (LN / BA), three flint daggers (one of type VI [period I]), three flint sickles (AM 6169)
Ref.: Aner / Kersten 2008, 179 f. no. 5978.

C109. Rye, Rye parish, 160405 – not accurately provenanced
No find information
Find year / record year: 1865
Single deposition (LBA period IV), spiral arm ring (probably part of a hoard) (AM 1170)
Ref.: unpublished.

C110. Træden, Træden parish, 160407 – not accurately provenanced
Bog find
Find year / record year: unknown
Single deposition (EBA period III), tang-hilted sword (HOM 12x238)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6744.

C111. Hjortsvang, Linnerup parish, 160604 – not accurately provenanced
No find information
Find year / record year: unknown
Single deposition (EBA period I), flanged chisel (NM B13902)
Ref.: Aner / Kersten (forthcoming: Aarhus and Skanderborg counties), no. 6874.

C112. In the vicinity of Tange, Højbjerg parish, 130606 – not accurately provenanced
No find information
Find year / record year: unknown
Single deposition (LN), halberd (triangular)
Ref.: Aner / Kersten 2008, no. 5977.

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Zusammenfassung: Flussfunde – Bronzezeitliche Hortfunde aus dem Fluss Gudenå, Dänemark

Bronzezeitliche Metallfunde aus den Flüssen Europas haben bereits seit vielen Jahren das Forschungsinteresse geweckt; von vergleichbaren Funden aus Dänemark ist jedoch nur wenig bekannt. Dieser Beitrag stellt eine Studie der in diesem Zusammenhang relevanten Fundberichte von Dänemarks längstem Fluss, der Gudenå, vor. Bemerkenswerterweise stellt es sich heraus, dass deutlich mehr bronzezeitliche Flussfunde aus der Gudenå stammen als zuvor beachtet. Damit können Verbindungen zu der weitverbreiteten europäischen Tradition des Opferns von Metallobjekten in Flüssen gezogen werden. Neue Erkenntnisse fügen dem übergreifenden Bild der Opfertraditionen in Südskandinavien weitere Details hinzu und geben diesen Funden eine landschaftsarchäologische Perspektive.

Abstract: River finds – Bronze Age depositions from the River Gudenå, Denmark

Bronze Age metalwork found in European rivers has aroused interest for many years, but only little is known of corresponding finds from Denmark. This article examines the relevant records from Denmark's longest river, the Gudenå. Remarkably, it turns out that there are significantly more Bronze Age river finds from the Gudenå itself than was previously realised. This phenomenon forges links with the far-reaching European tradition of offering metal objects in rivers, and new insights add depth and detail to the overall picture of offering traditions in Southern Scandinavia and put these finds into a landscape-archaeological perspective.

Résumé: Trouvailles fluviales – dépôts de l'âge du Bronze sortis de la rivière Gudenå, Danemark

Les objets en bronze sortis des cours d'eau européens ont éveillé l'intérêt des chercheurs depuis des années déjà. Mais l'on ne connaît que peu d'objets comparables au Danemark. Cet article présente une étude des rapports significatifs à cet égard concernant le plus long cours d'eau danois, la Gudenå. Et nous constatons avec étonnement que cette rivière a livré bien plus d'objets de l'âge du Bronze qu'on ne le pensait. Ceci nous permet d'établir des

liens avec la tradition très répandue en Europe de l'offrande d'objets métalliques dans les cours d'eau. Des nouveaux résultats complètent ce tableau généralisé des traditions d'offrande en Scandinavie méridionale et situent ces trouvailles dans une perspective archéologique paysagère.

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References of figures:
Fig. 1: Historical topographic map from 1870 (digital version produced by Dorthe Haahr Kristiansen), adapted by Lise Frost and Ea Rasmussen. – *Fig. 2*: After Skalk no. 2, 2010, 14–15. – *Fig. 3a–d; 4; 5; 10; 12; 14*: Lise Frost and Ea Rasmussen. – *Fig. 6*: Energy Museum, Bjerringbro. – *Fig. 7; 8; 13; 15; 17*: Rogví N. Johansen, Photo and Media Lab., Moesgård. – *Fig. 9*: Lise Frost. – *Fig. 11*: After Aner / Kersten 2008, no. 5941, Taf. 75. Drawing: Malgorzata Hansen. – *Fig. 16*: Jens Jeppesen. – *Fig. 18*: Relief map taken from an historical topographic map (1870) (Copyright: Danish Geodata Agency), adapted by Lise Frost and Ea Rasmussen. – *Fig. 19; 20*: Part of an historical topographic map (1870) (Copyright: Danish Geodata Agency), adapted by Lise Frost and Ea Rasmussen. – *Fig. 21*: Relief map taken from an historical topographic map (1870) (Copyright: Danish Geodata Agency), adapted by Lise Frost and Ea Rasmussen.