# HULJE: CALENDRICAL RITES ALONG A SMALL STREAM

#### Maria Petersson

Abstract: In 2010, a ceremonial site dated to the Late Bronze Age and the Iron Age was excavated. The name of the site is Hulje and it is situated a couple of kilometres to the north of the town of Mjölby in Östergötland (East Gothland) County, Sweden. A small rocky hillock with several hundred cup-marks dominates the area of the ceremonial site. Approximately 50 metres from the site, a small stream once flowed. From the Late Bronze Age and Early Pre-Roman Iron Age to Early Medieval Times (c. 700 BC–AD 1100) the area around the stream was a site of activities charged with religious meaning. There were cooking pits of an exceptional size, in which most probably ceremonial meals were prepared. Fire-cracked stones and other waste materials from ceremonial meals were specially treated and deposited in the bed of the stream or along its banks. A few boulders might have constituted the foundation of a platform projecting out into the stream. Dug into the side of the stream there was a well, in which religious ceremonies were held, mainly during the Early Roman Iron Age (AD 1–200). Extremely well-preserved wooden artefacts have been found in this context.

In this article, my aim is to give quite a detailed overview of the site and the excavations. Some further aspects to be discussed concern the type of the site, the origin of the people who performed the ceremonies that we can see traces of, the time when the ceremonies were performed, and their purpose. Finally, Hulje is compared to other similar sites in Sweden.

**Keywords:** Iron Age, Old Norse religion, ritual meals, sacrifices, well, wooden objects

#### INTRODUCTION

In 2010, the excavation section of the Swedish National Heritage Board (RAÄ), UV Öst, conducted an archaeological excavation of a ritual site dated to the Iron Age (Petersson 2013a). The name of the site is Hulje and it is situated a couple of kilometres to the north of the town of Mjölby in Östergötland County, Sweden (Fig. 1).

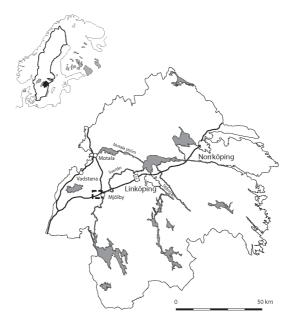


Figure 1. The location of Hulje in western Östergötland, Sweden. Map by Lars Östlin, RAÄ.

The remains discovered at the site might best be described in ritual terms. Amongst many other remains, traces of meals dated to around 700 BC–AD 1100 were found. Furthermore, exceptionally well-preserved wooden artefacts dated to the Early Roman Iron Age were recovered from a well.

In this article, my aim is to give quite a detailed description of the site and the excavations. The reason for this is that there have been few excavations in Sweden of similar sites; this is due to their location in the landscape and their unassuming assemblages of finds. An approach based on a landscape perspective and on comparative religion was included in the theoretical background used to make the site apprehensible. These theoretical perspectives constitute the starting point in discussions concerned with the type of the site, the origin of the people who performed the ceremonies that we see traces of, the time when the ceremonies were performed, and their purpose. Finally, Hulje is compared to other similar sites in Sweden.

#### THE SETTING

Hulje is situated in a slightly undulating countryside, on the edges of the Östgöta Plain. The area constitutes a spatially well-defined prehistoric section of the landscape delimited by burial sites, which demarcate and emphasise the topographic boundary (Molin 1999; cf. Fallgren 2006). In recent times, the southern part of this prehistoric landscape was farmland and the northern part was formerly marshy. Until recently, a stream flowed along the southern side of the marshy land. In the entire area, there were no less than 13 cup-mark sites; a notable number of these were located near running water (Fig. 2).

The Early Iron Age society in Östergötland was stratified (Petersson 2011). A current research project, focusing mainly on the region around Linköping (located 50 kilometres to the east of Hulje), has shown that the Iron Age society consisted of farmsteads of different sizes and of varying significance. The highest stratum appears to have consisted of large farmsteads, each of these dominating their local society. Scattered around the landscape, surrounding these large farmsteads, there were a number of smaller subordinate farms, which are assessed to have been heavily dependent on the larger farms. Moreover, there



Figure 2. The ceremonial site at Hulje was situated in the same place as the pond, in the middle of the picture. Photo by Rikard Hedvall 2010.

seem to have been medium-sized farms, which were relatively independent in their relation to the dominant farmsteads. Yet another stratum of society seems to have consisted of farm workers, who did not own land but who lived together at the large farmsteads.

In the surroundings of Hulje, the prehistoric remains could be interpreted as representing this type of social structure during the Roman Iron Age. Smaller settlement sites have been encountered, which were dispersed throughout this well-defined section of the prehistoric landscape. The large settlement site at Hulje (RAÄ 89), of which roughly half has been excavated, is situated in the centre of the spatially defined prehistoric landscape (Carlsson et al. 1996; Kaliff 1999; Petersson 2013b). There were traces at this site of permanent settlement dating from the Late Pre-Roman Iron Age to Roman Iron Age, as well as from the Migration Period (c. 200 BC-AD 550). Parts of a very large farm site (c. 50,000 square metres) were excavated. This site is best described by the Scandinavian term 'gårdstun', meaning a site with the farm buildings including the adjacent area regularly used for a diversity of activities. The farm site was divided into functionally separate parts, including a workshop area and an area with furnaces for producing iron. Farm sites of such a size, divided into functional areas, are characteristic of high-status farmsteads of the Early Iron Age (Petersson 2006: 37f.). The buildings belonging to this elite farmstead are estimated to have been situated outside the area so far excavated.

The extensive burial site, Kungshögagravfältet, on Mjölbyåsen Hill, with 125 registered features, dominates the landscape. It is situated at a distance of 300 metres from Hulje and could have functioned as the burial site of the large farmstead during both the Early and Late Iron Age. No substantial excavations have been conducted at the burial sites in the area, which makes it difficult to use the burials in any interpretation of the arrangement of society in this region.

Another high-status characteristic in the Hulje area is the paved road, dated to the Early Iron Age, on the eastern side of the settlement site. This road has been partly excavated (Carlsson et al. 1996: 56). Paved roads from this period have only been discovered in exceptional cases. However, a network of roads dated to the Early Iron Age, surfaced with fire-cracked stones and edged with larger stones, was recently discovered in the region of Linköping. This system of roads was related to a regional power centre established during the period around AD 1. The construction might have been inspired by the Roman art of building roads, although in Östergötland the road was surfaced with fire-cracked stones instead of a paving of flat stones (Petersson 2011). The roads seem to have passed close by the buildings of large farmsteads.

#### **EXCAVATIONS AT HULJE**

The excavated site at Hulje was located approximately 300 metres to the north of the large settlement site. Formerly, a stream flowed through the site, but currently the area is drained. The site is situated aside from other known settlement sites, in a shallow basin where the stream once flowed.

Around 60 metres to the east of the stream and 100 metres to the south of the excavated site, there is a small hillock constituting the highest point in the landscape. This is the site of Östergötland's second largest occurrence of cup-marks, containing 275 registered cup-marks.

In 1994, trial trenches were excavated between the hillock with cup-marks and the currently investigated site. Several hearths were discovered, but no postholes indicating prehistoric buildings (Zetterlund & Helander 1995). Nor were any traces of buildings found at the currently excavated site when the preliminary archaeological investigation was conducted in 2009 (Holm 2009). On that occasion, about ten test pits were excavated in an approximately 20-centimetre-thick layer beside the stream bed. The layer contained fire-cracked stones, unburnt animal bones, one or two potsherds and a blue glass bead. A few hearths were also observed. These remains were radiocarbon-dated to the Roman Iron Age. The character and geography of the site along with the assemblage of finds, particularly the bead, was a possible indication of ritual activities, although the archaeologist who performed the excavation also maintained that the site included profane features.

During the excavation in 2010, the stream bed was surveyed along a stretch of around 170 metres. In the surroundings of the entire section, there were traces of a variety of activities, but the remains were particularly concentrated in the lower part of the stream towards the outlet into the marshy stretch of land. There is a clear spatial division of the site. In part, this is chronological, but above all, it features a functional division (Fig. 3). The clearest and most easily understood traces are associated with meals. The exploration covered an area that was 18,500 square metres in size. The topsoil of 5,500 square metres was stripped with a machine excavator. Along with previously investigated parts, the examined area now amounts to 25,000 square metres. It should be particularly noted that there are still no traces of buildings.

Pollen analysis of the material in the well situated in the part of the site excavated in 2010 shows that the ground along the valley of the stream was intensively grazed (Bergman 2012).

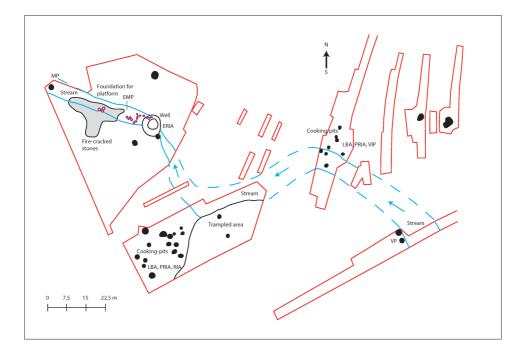


Figure 3. The ceremonial site at Hulje. Illustration by Lars Östlin, RAÄ.

## Cooking

By the side of the stream at the site at Hulje, meals were cooked in cooking pits and hearths dated to the period between the Late Bronze Age, the earliest part of the Pre-Roman Iron Age and the Vendel Period, continuing until the Early Middle Ages (about 700 BC–AD 1100). These hearths and cooking pits were considerably larger than those at other settlement sites dated to the same period (cf. Petersson 2001; Petersson 2004: 117ff.). The reason for the substantial size of the cooking pits was that food was cooked for so many more people than usual in normal everyday contexts.

On the site, there were two clearly defined areas where meals were cooked. One of them was an area,  $25 \times 25$  metres in size, situated on the western side of the former stream, on a slight slope down towards the stream bed (Fig. 4). Among other features within this area, there were 12 comparatively large hearths and cooking pits.

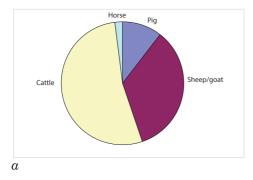


Figure 4. The area of large cooking pits. Photo by Maria Petersson 2010.

The other area used for cooking meals was  $15 \times 10$  metres in size, situated in the eastern part of the excavated surface, close to the former stream. In this part of the site, there were hearths, pits and postholes. Moreover, the hearths and cooking pits were scattered over the entire excavated surface.

## **Meals**

The archaeological finds from Hulje might in part illuminate what meals were like, what ingredients they were made of and how they were prepared (Fig. 5). The animal bones discovered on the site amounted to 2.2 kilos, mainly interpreted as waste from meals (Vretemark 2012). Furthermore, analysis of macrofossils was carried out, in which burnt seeds were identified mainly as grain.



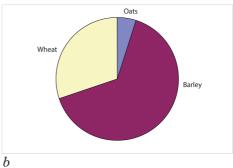


Figure 5. Chart showing a) the proportions of species of animals used for their meat, based on the total number of identified fragments [NISP], and b) types of cereals. The chart is based on the data in (a) Vretemark 2010 and (b) in Heimdahl 2012.

The skeletal material of the site consisted of animal bones, which for the most part were unburnt bones of cattle, sheep/goats, pigs, horses and dogs. All the fragments of bone belonging to sheep/goats that could be determined by their species were from sheep. Cattle bones dominated among bones from animals used for their meat, followed by sheep/goats, pigs and horses.

Most of the bones of cattle came from fully-grown individuals, while the bones from pigs or sheep largely came from younger individuals; these were around 2–3 years old. The two teeth from horses came from adult individuals, at least five years old, but most likely older.

There was a clear predominance of bone fragments from meaty parts; most of the fragments came from the trunk of the animals and from the upper meaty parts of the extremities. This means that the skeletal material mainly consists of the remains from preparing and cooking meals and from the remains of meals. Consequently, the actual slaughtering and butchering was done somewhere else.

In 72% of the samples collected in cooking pits and hearths, burnt grain was identified. This shows that grain was regularly included in the food that was cooked and eaten (Heimdahl 2012). Hulled barley was most common, naked wheat also occurred, and there was some hulled wheat and oats. Further finds discovered in the macrofossil samples from Hulje showed that herbs such as, for example, Summer Savoury (*Satureja hortensis*), were included in the food.

The discovery of a large drinking vessel (see below) is a sign that beverages were an important part of the meals consumed on the site. There are no indications as to what kind of drinks existed, but it seems highly probable that it was some kind of beer or a similar beverage.

## Refuse from cooking

The cooking process by the stream at Hulje resulted in large amounts of fire-cracked stones. These brittle stones were deposited in the stream bed and along the banks. There were unburnt bones among the fire-cracked stones. It is striking that the stones were not transported to other places to be used as building material. Instead, the people using the site chose to keep them in the area of the stream.

## The platform

Along the stretch of the stream where fire-cracked stones were deposited, about ten boulders were found, approximately 0.5–0.8 metres in height (Fig. 6). The boulders lay on the western side of the stream bed and were interpreted as a foundation for a 4-7-metre-long and 2-metre-wide platform. According to the stratigraphy, the boulders were placed in the stream either during the period when the site was still in use or later. Fire-cracked stones were found underneath

the boulders. An indication in favour of this interpretation is the clear spatial connection between the boulders/foundation and a laver of fire-cracked stones situated in the slope, proceeding down towards the area with the boulders. The surface of laid cracked stones was clearly confined to this particular part of the slope; it continued all the way down to the bank of the stream. A possible interpretation is that the surface of laid stones was part of a paved road.

Figure 6. Boulders at the edge of the stream, which may have constituted the foundation of a platform. Photo by Maria Petersson 2010.



## Finds discovered alongside the stream

By the side of the stream, near the largest area of cooking pits, a blue glass bead was recovered, as well as part of an iron knife or sickle. Further, the metacarpal bone of an adult dog was discovered in this part of the site.

Immediately beside the other cooking area, we found a ceramic pot placed on the shore of the former stream. This is a vessel with thick walls, most likely used for storage or cooking. A posthole was discovered about 1.5 metres from the pot, implying the occurrence of a pole. Most likely, there is a connection between the posthole and the pot.

#### A well with unusual content

Almost in the centre of the site, a well had been dug into the side of the old stream bed (Fig. 7). The well was surrounded by a layer of laid stones, the main part consisting of fire-cracked stones. The actual well was funnel-shaped, with a diameter at the upper edge of around 7 metres and a depth of just over 1.5 metres. At the bottom of the well, a boulder was naturally embedded in the



Figure 7. The well. Note the layer of fire-cracked packed stones surrounding the well. Photo by Maria Petersson 2010.

moraine, which would have come as an unexpected consternation for the people digging the well. In the upper parts of the well, there were traces of a wicker basket lining with stakes of oak and weaves mainly of alder. The analysis of the wood species showed that the material for the basketwork was harvested during the spring and summer, most likely before July. Thus, the basketwork must have been woven shortly after that (Strucke 2012).

There were signs of various types of intentional activity in the well. In the middle of the well, on different levels in the fill, loosely lying sticks of alder, hazel and non-specified *Salix* were encountered, several of which were sharpened to a point. The context was difficult to understand, but the sticks did not seem to belong to the basketwork in the well. These long sticks had been thrust into the well, either while the well was still in use or after it had been abandoned.

Several well-preserved wooden artefacts were encountered in the well. Among the objects there was a complete wooden drinking vessel, which was found near the big boulder. There was also part of a rake head and a board decorated with chip-carving, which had been a part of a composite object (Fig. 8). It was painted in black in such a way as to enhance the decorative design. These three objects were dated to the Early Roman Iron Age (AD 1–200). Further, wooden artefacts were found, such as fragments of pot and plate rims. Wooden plugs, a sawn-off horn of a fully grown cow, two polished handstones for grinding and potsherds from a ceramic vessel were also discovered in the well.

Towards the bottom of the well, seeds and fibres from flax were encountered (Heimdahl 2012). The fact that fibres of flax were found shows that the entire plant occurred in the well, which might mean that bundles of flax had been placed there.

Furthermore, remains of meals in the form of unburnt animal bones were found in the well. Bones from the front part of a young dog, 10–12 months old, were also recovered.

A 2-3-months-old ram was discovered in the well, dated to the end of the period when the well was still in use. It lay *on top* of the layers that had accumulated during the period of use. After this, the well had fallen into disuse; a layer of shells indicates that it was still damp and at times filled with water, but that the water was somewhat stagnant. The period of use was limited to the Early Roman Iron Age, and extended throughout 200 years at the most.



a



b



c



Figure 8. Wooden artefacts from the well: a) chip-carved and painted board; b) part of a rake head; c) drinking vessel; d) ear of a drinking vessel. Photos by Acta Konserveringscentrum AB.

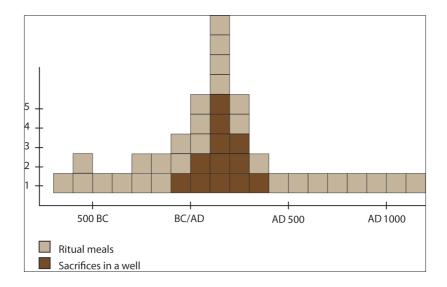
## The chronology of the site

At the former stream in Hulje, traces of a variety of activities could be found, which were radiocarbon-dated to the period 730 BC-AD 1160. The dated material included charcoal from hearths and cooking pits, animal teeth (remains of meals), and burnt cereal and flax seeds. Moreover, three of the wooden items from the well were dated, as well as material from the wicker basket of the well (Fig. 9).

Most of the dated features or artefacts are associated with meals; the dates cover the entire period. Only one date is from the Late Bronze Age, but during the period between the Pre-Roman Iron Age and Early Middle Ages the dates are quite evenly distributed. A striking point is that the most recent finds associated with cooking are situated on the outer edges of the site, on the southern and northern sides. A tooth of a horse, dated to AD 1010–1160, represents the latest known meal on the site.

The well was dug around the year AD 1, and it was abandoned around AD 200. Thus, the traces of activities that are centred around the well represent a limited period in the history of the site.

The rock with cup-marks is also regarded as a part of the context of the site at Hulje. In the west of Sweden, rock carving sites consisting entirely of cupmarks are dated mainly to the Early Iron Age (Bengtsson 2004).



**Figure 9.** Dating of the ceremonial site. The lighter shade represents meals and the darker shade shows dates from the well. Illustration by Lars Östlin, RAÄ.

## INTERPRETATION OF THE EXCAVATED SITE AT HULJE

The oldest written sources in Scandinavia that describe prehistoric religion originate from the 13th century AD. So they date from a period more than 1000 years later than the times of the most intensive activity at the stream at Hulje. During the period of around AD 400/500–700, the prehistoric society in Östergötland underwent fundamental changes and most farmsteads were abandoned (Lindeblad & Petersson 2008; cf. Pedersen & Widgren 1998: 309 ff.). Changes also occurred in the religious sphere; old burial sites were abandoned and new cemeteries were established. New burial practices were introduced and even the pantheon of deities appears to have changed (Nilsson 1987; Kaliff & Sundqvist 2004). In other words, there is a reason to be cautious about using written sources from the 13th century AD as a key to the religious life of Östergötland around the year AD 1, i.e., 1200 years previously.

All the same, many researchers consider the written sources to have some bearing on pre-Christian religion (Näsström 2002; Steinsland 2007).

## Some points of reference

Traces of human activity constitute the primary sources of archaeology. In Norse sources, descriptions of the activities related to religion and rituals are scarce. Instead, archaeology sometimes provides independent information about the religious world expressed in certain activities. Offerings under the foundation of houses and in wells are examples of this. Traces from ritual cooking are further examples; these occur at around 80% of all burial sites dated to the Early Iron Age in Östergötland (Carlie 2004; Århäll 1995; Petersson 2006).

My analysis of the excavated site at Hulje is founded on a landscape archaeological approach, which has been inspired by the past twenty years of research, in which Scandinavian researchers have played an important role (Asmore & Knapp 1999; Fabech & Ringtved 1999).

It is possible to discern three different levels on a geographical scale; this might prove to be a useful analytical tool when dealing with Early Iron Age society. In the archaeological finds, we have been able to observe rituals associated with each of these levels.

- The first level consists of buildings or separate farms. Rituals associated
  with this level comprise initiation rituals and closing rituals related to the
  abandonment of buildings and farms (Carlie 2004). There are also other
  types of rituals connected to wells and waterholes (Århäll 1995).
- The second level concerns the settled local area and local society. There are sites where out-door rituals were performed, which feature various kinds of offerings. The finds from these sites usually consist of artefacts for everyday use (cf. Lindeblad & Petersson 2009).
- The third level is regional; the sites are significant on a larger scale than the local level. At this type of sites, the assemblages of finds are much more diversified and there are indications of several different ritual themes. There might be buildings on this type of sites, but in most cases these sites are void of them (cf. Hagberg 1967).

When working with the analysis of the site at Hulje, I adopted the methods and terminology of comparative religious studies, applied by the American scholar of religion, William E. Paden (1994). Paden's categorisation is well suited for the conditions of the Early Iron Age in Scandinavia.

Paden uses the concept of 'world' in the analysis of different religious systems. His view is that "religious systems are more effectively understood as 'worlds' than as 'beliefs', and that these worlds are embodied in the languages of myth, ritual and other expressive forms" (ibid.: xiii).

According to Paden, religious "reality" is primarily constituted through the following:

- (1) Mythic language and prototypes. Myth articulates the foundations of what is sacred. In addition, myth serves as the matrix of religious practice, of lived religious time and space, providing authoritative, sacred prototypes for human behaviour.
- (2) Ritual times. Ritual is "the deliberate structuring of action and time in order to give focus and expression to what is considered sacred. Ritual connects its participants with the sacred through (a) calendrical observances that renew what is foundational to the religious system, and (b) special observances that deal with changes or crises in one's world".
- (3) The engaging of gods. The term 'god' is used here as a thematic label to include any beings that humans engage in a religious manner.
- (4) The distinction between pure and profane behaviour. Every religious system observes distinctions between proper and improper behaviour, acts that foster sacred order and acts that diminish it (ibid.: 8f.).

## The setting of the site in the landscape

A circumstance that determined the outcome of the excavation and the interpretation of the finds was that such a large area as 25,000 square metres was surveyed by trial trenching. The results indicated that these were not the outer edges of the settlement site; in such a case, remains of buildings with postholes and similar features would have been uncovered. No traces of burials appeared either. Consequently, the interpretation of the site should be sought in another sphere. A possible interpretation of the remains that are associated with neither the settlement sites nor with burial sites is the context of the outlying land. The Late Bronze Age and Early Iron Age focal places in the grazing landscape are characterised by single hearths and groups of hearths (Petersson 2006). These places were frequented by shepherds and grazing animals. Some other usages of the outlying land might also be considered, such as iron production places, or even specialised forms of gatherings may have generated traces at a resting place (Svensson 1998).

Yet another type, usually situated at some distance from a contemporary settlement, was the ritual sites of the Early Iron Age (Hedeager 1989; Carlie 2009). These sites are often located close to water or marshland. Votive deposits in bogs characterise the period. A typical feature of archaeologically excavated ritual sites is traces of ritual meals found in the form of an abundance of firecracked stones, along with bones that were left over from meals. Hearths for

cooking commonly occur on these sites. According to Lotte Hedeager, the Early Iron Age is characterised by outdoor cult and sacrifice in marshland (Hedeager 1989). Her conclusion is that this practice ceases during the Late Iron Age when the cult moves indoors, into the houses of the elite.

## Cooking and meals

At Hulje, traces of a considerable variety of activities can be found, but one practice that occurred repeatedly through the course of the centuries is cooking and eating meals. Meals were prepared in cooking pits and hearths on the site. These structures are much larger than the corresponding structures at excavated settlement sites. The twelve structures in the western part of the site were between 1.6 and 2.8 metres in diameter. This can be compared with hearths found on the settlement site at Hulje, which were between 0.6 and 1.6 metres in diameter, with an average of 1.1 metres. This size corresponds exactly with the results from the excavated settlement site at Abbetorp, located ten kilometres to the west of Hulje (Petersson 2013b). Single hearths associated with pasturelands in the western parts of Östergötland had an average diameter of 0.94 metres (Petersson 2006: 158). The comparison with the size of hearths at settlement sites is most informative. At settlement sites, hearths have primarily been used for everyday cooking. The substantial hearths and cooking pits at Hulje imply that another kind of cooking occurred here; probably, food was cooked for a larger number of people. There was room for at least four times the amount of food in these structures compared to the corresponding structures at settlement sites. Large amounts of food indicate a context of either storage economy or cooking for a feast, with more people participating than usual. Remains associated with specialised cooking, which may have been part of storage economy, had previously been excavated at Abbetorp. These remains were situated within the site (gårdstun) of a large farm, at a distance of 40 metres from the main building (Petersson 2004). The hearths of the grazing land are also much smaller than those at Hulje. The conclusion is that the size and position of the hearths at Hulje indicate an association with cooking for a large number of people on festive occasions.

The dominant ingredient in the food at Hulje was probably meat, beef being the most important kind. A relevant question for the understanding of rituals at Hulje is whether the assemblage of animal bones is representative of the consumption at an ordinary settlement site, or whether particular species were preferred for these meals. A comparison can be made with the finds from the large settlement site at Hulje (Carlsson et al. 1996) (Fig. 10).

Species	The settlement site at Hulje, proportion of identified species (%)	The ritual site at Hulje, proportion of identified species (%)
Cattle	38	53
Sheep/goats	36	34
Pigs	21	10
Horses	4	2

Figure 10. Comparison between the proportions of identified fragments (NISP) of animal bones from the large settlement site (RAÄ 89) and the ritual site (RAÄ 281) at Hulje.

Figure 10 shows that the proportion of cattle was much larger at the site by the stream than it was at the settlement site at Hulje. The large proportion of cattle is associated with high status settlement sites in Östergötland, but also with ritual sites (Petersson 2006). An important conclusion in this context is that the higher quota of cattle bones among the animal bones reflects the fact that beef was a more important part of the food here than it was at other places. In Old Norse stories, it is clear that beef was the most highly valued kind of meat. The high proportion of beef in the assemblage of bones further emphasises the festive character of the meals. The dominance of bones from the meatiest parts is also a prominent feature of the site.

Burnt grain occurred in most of the cooking pits and hearths, indicating that it was an ingredient in the food that was cooked by the stream at Hulje. The distribution of different types of grain, as well as the combination of species among the edible animals, illuminates the character of the site. The most common grain at Hulje was hulled barley, which was predominant at most farms during the Early Iron Age (Pedersen & Widgren 1998: 379). In Early Iron Age society, consumption of wheat was related to high status. At the farm at Abbetorp, which belonged to a higher social level, the majority of the grain was wheat, while hulled barley dominated at a neighbouring subordinate farm (Petersson 2001). In this respect, the predominance of hulled barley at Hulje shows that the site did not belong among high status farmsteads.

A circumstance of considerable interest is that seasoning was included in the festive meals that were cooked in the large cooking pits at Hulje. Summer Savoury (*Satureja hortensis*) is a herb that spread to the Roman provinces during the expansion of the Roman Empire; it shows how Roman influences extended to places far beyond the borders of the Empire (Heimdahl 2012). Roman influence is mainly prominent in the ideas that were adopted by the elite; maybe the practice of growing herbs was an idea originating in Roman contacts. In this context, the inclusion of herbs further accentuates the impression that this was a case of a specific kind of meal.

The cooking of such substantial amounts of meat in these gigantic cooking pits implies a process that would have taken a long time, several hours. Perhaps the grain was placed with the meat to absorb the juice from the meat.

Beverages are rather difficult to trace in the archaeological material. In rare cases, glass goblets have been found, and sometimes fine pottery occurs, which can be interpreted as fragments of drinking vessels. Several researchers consider beer to be a better way of preserving the nutritional value of grain, which is otherwise liable to be spoilt in storage. An almost complete wooden drinking vessel was found at Hulje. It was not possible to identify the original content, but the vessel may well have been used for drinking beer. It could have contained several litres and might have been passed around in a company of people.

The meals were eaten on the site, out of doors, by the side of the small stream. The finds that support this interpretation include the drinking vessel, pieces of a wooden plate found in the well and pieces of pottery occurring in the vicinity of the stream; another circumstance is the lack of any traces of buildings in the area.

Supplies of food and beverages were unevenly distributed in Early Iron Age society. There were groups of people who regularly starved (cf. Brøste 1984). However, at the ceremonies held at Hulje, there was probably an excess of food and drink. Since the festivities were not held at one of the large farms, it is feasible that other persons than the elite took part. It is possible that one or several of the leading farmsteads in the neighbourhood contributed all or at least a large part of the food for the feast (Steinsland 2007: 306).

#### Remains from cooking

Waste from cooking consists largely of fire-cracked stones. These stones were heated in the large cooking pits and hearths, and kept heat for a long time. Once they had cooled down, the stones cracked, sometimes after repeated use; after this, they could no longer be used for cooking. The cracked stones were deposited in the immediate surroundings. They were placed in the running water and along the edge of the stream. The stones were also used for paving the slope down towards the stream; this may have been part of a road. There were also unburnt and burnt bones amongst these cracked stones. Clearly, waste from meals was not transported away from the area around the stream to become building material somewhere else; instead, it was kept in the surroundings of the stream. It seems that particular conceptions were associated with this specific waste material, concerning how it should have been handled

and where it could be deposited. Waste material can be discussed in terms of clean – unclean, as a way to understand boundaries (cf. Paden 1994). Evidently, this waste material was treated in a specific way due to its association with holiness (see below).

## **Deposition of artefacts**

Another occurrence at Hulje consisted in intentional depositions of artefacts. Maybe waste from cooking should also be included in this category. However, I decided to treat it separately because of its uniform origin.

Along the edge of the stream, a blue bead was encountered, as well as part of an iron knife or a sickle. Beads are almost never found on settlement sites, although they are common in burials from this period. They regularly occur, although sparsely, at ritual sites dated to the Early Iron Age (Lindeblad & Petersson 2009). Furthermore, a bone of a dog was discovered close to the stream.

Along the water's edge, beside the remains of a pole, a ceramic pot containing food was deposited. Lipid analysis shows that the pot contained traces of a terrestrial animal, although maybe not a ruminant animal. Moreover, it contained traces of vegetables. The results of the analysis distinctly showed that the substances that are usually formed through heating were not present; this implies that the pot of food had nothing to do with cooking. One interpretation is that this is a small-sized storage jar, set into the side of the stream to keep the food cool. Nonetheless, other ideas are also conceivable. At a neighbouring ritual site, Abbetorp, a similar arrangement occurred (Petersson 2004); a ceramic pot had been placed on the ground next to a pole. Due to the context at Hulje, the pot and the pole are thought to have been part of the ritual setting of the site.

#### The well

In many places, wells appear to have been centres of activity, which cannot be explained in any other way than in ritual terms. There are wells in the region that have been used as a source of water, although they also include indications of sacrifice associated with both the inauguration of the well and its abandonment. They also contain traces of other ritual activities. If we look beyond Östergötland, wells occur that were constructed entirely for ritual and religious reasons, in which a variety of things have been sacrificed (Lindeblad & Petersson 2012; Carlie personal communication). Gunilla Århäll's study shows that there are several similarities between Scandinavian wells and the deep wells with an entirely ceremonial function occurring in the Celtic area, where

both humans and animals were sacrificed along with other offerings (Wait 1985; Århäll 1995).

At Hulje, there were artefacts in the well that may be understood as having been intentionally deposited. These included a wooden drinking vessel, fragments of the rims of a vessel and a plate, a rake head, a carved and painted board, an object that might have been a wooden club, wooden plugs and two handstones for grinding, together with some other wooden objects that could not be identified. The composition of finds combined with similarities to material from ritual sites in Östergötland and adjacent areas supports the interpretation that the finds in the well at Hulje might be ritual depositions.

The drinking vessel could have contained several litres of drink. It is possible that it was passed around and the contents were shared among the assembled company. The drinking vessel may also have been used in libation ceremonies, in which sacred liquid was poured out on the ground – "blood from sacrificial animals, beer or other sacred beverages" (Steinsland 2007: 291).

The rake is a tool used for raking up hay as fodder for domestic animals. The alleged sickle was a small tool for cutting grain crops. Both tools are related to the annual crop growing in meadows and fields.

One of the less well preserved wooden items may have been a club. If it really is a club, we could draw interesting parallels. Often enough, wooden clubs are found at ceremonial sites, frequently together with rope and pegs for tethering cattle. It is thought that wooden clubs were used for killing sacrificial animals. Objects belonging to the animal were then deposited; perhaps they could not be taken back into a secular context again (Carlie 2009: 255).

Handstones used in pairs with quern-stones are a common category of artefacts in Early Iron Age contexts. They can be found in stone paving, but less often as foundation depositions; quern-stones are more common in those cases. Handstones also occur regularly in superstructures covering burials from this period. In this context, the grinding of grain may have a significant symbolic value associated with life-giving, fertility and reproduction (Carlie 2004: 83 and references therein).

The front half of a young dog was also found in the well. No traces of butchering could be seen on the bones, which means that it was not included in the ritual meals. It was a common practice to sacrifice dogs in particular, complete or in parts, in wells and in bogs throughout the entire Iron Age (Nilsson 2009: 89). Erika Räf (2012) points out the connection between dogs and the underworld or the abode of the dead in Celtic and Norse mythology.

Seeds and fibres of flax discovered in the well indicate that bundles of flax had been deposited in the well at an early stage. Linen is complicated to produce, which gives it a higher status; it was thus associated with important festivities.

Religious historian Maths Bertell (2009) considers flax to be a symbol related to religious activity, presumably linked with fertility. In this context Freya, the great goddess of fertility, should be mentioned; she was also the goddess of linen (Viklund 2012: 161f.). Her second name was Härn or Hörn, a word that etymologically can be traced back to another word for linen or flax. Flax and linen were associated with women; seeds of flax were supposed to be sown on a Friday, the women's day (Viklund 2012: 162). Bundles of flax occur at the ritual site by Lake Käringsjön and at Skedemosse (Carlie 2000; Räf 2001; Monikander 2010). Flax seeds have been found in many prehistoric wells; in some cases, these have been interpreted as traces of processing flax for linen (Viklund 2012).

Besides depositions of artefacts, there were traces of another type of activity. Sharpened sticks of alder, hazel and unspecified Salix (willow) had been thrust into the well. According to folklore, hazel was associated with magical and religious ideas related to death, ghosts and rebirth. Hazel sticks were found in early Christian graves in Lund, dated to the 11th and 12th centuries (Östnäs n.d.: 24ff.). In Mörtlösa in Östergötland, a number of hazel switches, several metres in length, had been thrust into a well where a still standing ceramic pot had also been deposited (Lindeblad & Petersson 2012). The results of pollen analysis of the material from the well in Hulje indicate that no trees grew in the immediate surroundings of the well; the closest tree had stood about fifty metres away (Bergman 2012). This means that it was not a case of clearance of bushes around the edge of the well, which might subsequently have fallen into the well. It seems more likely that the sticks are traces of ritual activity.

Finally, a complete skeleton of a 2-3-months-old ram was found in the well; it lay *on top of* the layer that had accumulated during the period of use. In other words, it may have been associated with the events at the time when the well was abandoned. A feasible interpretation is that it was part of a sacrifice performed to seal the well. This kind of sacrifice is common in various prehistoric contexts, for instance, to mark the end of use of houses (Gerritsen 1999). At the neighbouring settlement site at Hulje, there was also a well, sealed with an offering. It had been placed on top of the well, which had been filled with fire-cracked stones (Kaliff 1999). The well at Mörtlösa had been sealed with an enormous round boulder (Lindeblad & Petersson 2012).

An analysis of parasite eggs from domestic animals, conducted on the contents of the well, implies that there could have been an enclosure around the well during the time of use (Bergman 2012). Since there are so few parasite eggs in the well, the only explanation is that the domestic animals that usually grazed in the area were not allowed near the well. Preservation conditions were excellent; if domestic animals had been allowed to graze around the well, a considerable amount of parasite eggs would have been present.

## The platform

Several boulders were encountered in the stream bed, which might have formed the foundation of a platform. Platforms occur at a number of sacrificial sites dated to the Early Iron Age and the Migration Period; they have been found at sites at Käringsjön, Frösvi, and at Hassle in the Äverstaån stream (Arbman 1945; Lindqvist 1910; Annuswer 2007). These platforms are built of wooden poles. At Käringsjön and at Hassle, they follow the shore, but at Frösvi, there is a footbridge leading out to the platform. The distribution of recovered artefacts at these three sites indicates that sacrifice has been performed from the platforms. At Hulje, the platform was built along the southern shore on the same side of the stream as the well. No artefacts have been discovered that might have been thrown or deposited from the possible platform. Despite this, the most likely interpretation is that it was a platform.

# THE CHARACTER OF THE CEREMONIES AND THEIR PURPOSE

Ceremonies associated with a certain time of the year are sometimes termed calendrical rites (Paden 1994). Paden describes the purpose of these rites, saying: "They are points where a community renews and acts out what it holds most sacred, and these times are as central and definitive in world construction as myths" (ibid.: 100). Religious historian Gro Steinsland mentions three annual blóts (sacrifices) described in ancient Norse sources; these are the autumn blót, midwinter blót and spring blót (Steinsland 2007: 290). The spring blót was meant to benefit a good year's crop and peace, the old prayer saying "til árs ok fríðar" (for a good year and firth (peace)). Another religious historian, Britt-Mari Näsström, also mentions the midsummer blót (Näsström 2002: 222).

There are several indications of the rites at Hulje, which were performed during spring and early summer. Switches used in the basketwork for the well were collected during spring or summer, most likely before July, and the basketwork was made shortly afterwards. The young ram that was used as a possible closing sacrifice in the well was two to three months old. The lambing season in the region normally occurs in April or May (Insulander 1956: 88f.), which implies that the lamb was killed during early summer. There are two separate indications pointing towards two occasions when the ceremonies at the well were performed during early summer. One possibility is that they took place at midsummer.

Ritual meals constitute a ritual activity that is most often mentioned in Norse sources. These ritual meals were prepared in cooking pits (Näsström 2002: 225). According to Näsström, they can be understood as communion sacrifice, in which the human participants receive one share and the deity receives the other. As a rule, the deities were given the blood and entrails while the humans ate the meat. The purpose of this sacrifice was to influence the gods. Näsström maintains that communion sacrifice, a meal eaten together with the deity, was a common type of sacrifice in Scandinavia during the pre-Christian era and was associated with calendrical rites (ibid.: 251f.).

The sacrificed material at Hulje is quite unassuming and is related to every-day life. There are no weapons, no precious metals or imported goods. The deposited artefacts of the site originate from the everyday sphere of life. Several of the artefacts might be seen as expressive of a female aspect – the bead and the alleged sickle and maybe the ceramic pot for food. The possible deposition of bundles of flax might also represent female presence. In the past farming tradition, the rake was a tool that was strictly reserved for women. Men cut the hay or the grain crops with a scythe, while women followed behind and did the raking. Sickles often occur in women's graves from the Early Roman Iron Age, but are seldom found in men's graves (Björk 2005). If the find by the stream was part of a sickle, this presents yet another connection with the female sphere.

Other aspects manifested among the assemblage of finds concern domestic animals, grain and harvesting. The rake is a find related to domestic animals (cf. Arbman 1945), which was used to rake up hay for winter fodder. Moreover, it would imply early summer: the first harvest of hay usually occurs around midsummer. Besides the connection to the female sphere, the sickle is associated with grain, the annual crop and late summer or early autumn. Handstones for grinding would be related to the same sphere. In addition, Norse sources mention the idea of grinding for happiness (Carlie 2004).

Bringing the results of observations, comparisons and analysis together, it all points towards the interpretation of Hulje as a site where calendrical rites were performed during the early part of summer or possibly around midsummer. There are connections with both domestic animals and grain. It is close to hand to interpret this as indications of ceremonies that were part of a fertility cult. A female aspect is also manifested on the site. Maybe a female deity, possibly the prominent goddess Freyja, was in the centre of attention in the ceremonies. Britt-Marie Näsström claims Freyja to have been the great goddess in Scandinavia; the cult of Freyja had the characteristics of fertility rites (Näsström 2002: 143f.). The ritual meals that constituted a significant part of the activities at the site might be understood as communion sacrifice, when people tried to influence the great goddess to bring them a good year's crop and fertility.

## The location and arrangement of the site

A number of prominent characteristics could be observed concerning the location in the landscape and arrangement of the ritual site at Hulje.

The site was situated in a secluded area in comparison with the contemporary settlement site. The area of the ceremonial site was substantial, probably around 25,000 square metres. Included in the ceremonial area is the highest point in the landscape – the small rocky hillock containing around 300 registered cupmarks. The rituals were concentrated in the area alongside the stream, maybe around the point where the stream flowed into marshland. It is possible that different sections of the stream were of significance during different periods.

We also know that the site is one of at least two sites in a ritual ceremony performed in several stages. Animal bones indicate that the animals eaten during ritual meals were not slaughtered on the site, nor were they butchered; this was carried out somewhere else. A common occurrence is that slaughter was included in the rituals. Per Vikstrand (2001), a historian of place names, has studied place names with religious connotations. He has observed indications in the use of place names that several neighbouring places were involved in the religious ceremonies, but has not discerned how this could have occurred. Hulje might represent a small-scale example of this practice (ibid.). It is possible that one stage of the ceremonies was performed at the rock with cup-marks and it was continued by the next stage at the stream.

The ceremonial site at Hulje was divided into different areas according to functions. This is a characteristic in common with the high status farmstead from the same period (cf. Petersson 2006: 37f.).

#### Ceremonies related to society

In my estimation, the ritual site at Hulje was of importance in the neighbour-hood, but hardly outside the local community. The location set apart from the settlement, and the sparse assemblage of finds supports this interpretation. Thus, we should probably regard it as a place where the local inhabitants gathered. During the same period, there were ritual sites with other types of finds of a more manifest character, which would have been of importance for a wider region. Such a place has been discovered in connection with archaeological excavations in Motala, at a distance of around 20 kilometres from Hulje.

Of particular interest is the existence of a paved prehistoric road, which was constructed during the Early Iron Age. There is reason to believe that the road was a status marker when it was built and that it passed close by the leading

farm of the neighbourhood. It is possible that it led to the ceremonial site. In the slope down towards the stream, there is a layer of fire-cracked stones, which could have constituted a part of the road. If this is the case, this might imply that the leading farm in the neighbourhood had a role in the management of the site.

Ceremonies at Hulje were performed during a period of around 1500 years, commencing at the end of the Bronze Age (c. 700 BC). Rituals conducted along-side the stream continued until the 12th century AD, during the same period as Christianity became established in this region. During the Early Roman Iron Age (AD 1–200), the use of the site was intensified and traces indicate a greater variety in the ritual activity. This is the period when the well at Hulje was used for ritual purposes. During the same period archaeologist Anne Carlie has observed a corresponding intensification in the south of Scandinavia. She assumes that it is connected with substantial "social, economic and political changes" in Scandinavian society during this period (Carlie 2009: 258). According to her, the observation of the cult was probably a way for the leading families to strengthen their position in society.

However, it is interesting to note that traces of ceremonies can be found that are dated to a period covering the *entire* Iron Age. Despite considerable changes that occurred at the beginning of the Late Iron Age (AD 400–600), the ceremonies continued, although to a lesser extent. Evidently, the ideas behind the custom of holding ritual meals at the small stream at Hulje stretched well into Christian times.

#### HULJE IN A COMPARATIVE PERSPECTIVE

Many of the major or minor features that characterise the ceremonial site at Hulje are also encountered in various combinations at other ceremonial sites. Per Vikstrand (2001: 189), a historian of place names, claims that place names with religious connotations in the east of Sweden indicate an ideological affinity between communities – people largely belonged to the same religious world. The eastern region of Sweden, where these place names occur, has demonstrated a notable stability over time. These parts also had a similar building tradition during the Early Iron Age. This means that Hulje should primarily be compared with other ceremonial sites within the same region. However, we should keep in mind that there were no normative written sources; therefore, variations in ritual activity and religious ideas would have been considerable. Maths Bertell, a religious historian, states that a fundamental characteristic of pre-Christian religion in Scandinavia was that it changed continually (Bertell 2009: 59).

Below I will provide a brief overview of a few places in western Östergötland that have various characteristic elements in common with Hulje. I will also shortly describe the site at Käringsjön in Halland, on the western coast of Sweden, since there are many similarities between these sites. A significant reason for this selection is the large amount of wooden finds from Käringsjön, which are also well published.

## Väderstad in Östergötland

At Väderstad, around ten kilometres to the west of Hulje, a ceremonial site with many similarities to Hulje was excavated in 2007 (Karlsson 2012). These resemblances concerned both the position in the landscape and the natural features that were included in the site. There were traces of ritual meals and ritual depositions consisting of pottery. The site was dated to the Late Bronze Age and Pre-Roman Iron Age (980–50 BC).

On the site, there was a low rock with quite a number of cup-marks, just a few metres from the former stream bed, which by now has been filled in. In total, a hundred-metre-long stretch of the stream was excavated. Hearths occurred in and around the former stream bed. The hearths were dated to the Late Bronze Age and Pre-Roman Iron Age (760–50 BC) and were interpreted as cooking hearths. Pottery was encountered near the rock with cup-marks; decorated fine ware pottery was among the finds. In one case, a complete vessel had been intentionally placed at the edge of the stream bed.

## Abbetorp in Östergötland

Abbetorp, in the parish of Rinna, is situated about one kilometre to the south of the ritual site at Väderstad and ten kilometres west of Hulje (Petersson 1999; Petersson 2004; Lindeblad & Petersson 2009). A complex ritual site was excavated in 1998. It consisted of a great number of different elements and covered an area of at least 10,000 square metres. Abbetorp included a sacrificial site, dated to the Late Roman Iron Age and the Migration Period, but with traces of occasional rituals continuing until the Early Medieval Period. Chronologically, the site was in use immediately after the ritual site of Väderstad. The site at Abbetorp was located by the side of a marshland and was adjacent to a contemporary burial site. Offerings were centred on two boulders at the edge of the marshland, and consisted of hundreds of ceramic pots, some sherds of glass vessels and a piece for a board game, along with beads of glass, amethyst

and amber. Some of the ceramic vessels appear to have been intentionally smashed against one of the boulders. Around a hundred hearths bear witness to the cooking of ritual meals on the site, even though the farmstead that most likely organised the rituals was situated just a few hundred metres from the spot. Remains from the ceremonial meals, bones and fire-cracked stones, were deposited around the boulders and along the edge of the marshland, indicating that the meals were eaten in the open air. Furthermore, abutting a rocky outcrop, there was an area enclosed by a stone wall. A posthole was encountered on the outer side of this enclosure; immediately beside this, two complete ceramic pots had been placed on the ground during the Roman Iron Age. There were also burnt bones of horses and cattle. The circumstances of this deposition are very similar to the one with a complete pot at Hulje, which might also have been associated with a posthole.

Like at Hulje, the ceremonial site at Abbetorp comprises a large area, which had clearly been divided into different functional sections. The categories of finds encountered at Hulje were also present at Abbetorp; particularly pottery that may indicate offerings of food and drink. Moreover, there was a small but varied assemblage of around twenty beads of different sizes.

The proportions of different species of domestic animals at the ceremonial site at Abbetorp corresponded entirely with the species at the neighbouring settlement site. This was interpreted as an indication of the fact that no special selection had been made for ritual purposes (Lindeblad & Petersson 2009). On this point, Abbetorp differs from the site at Hulje. However, it should be stressed that the settlement site was interpreted as a high status site.

The ritual site at Abbetorp was used during the parts of the year when the ground was not frozen or covered with snow. Despite the nearness to the burial site, there was evidence that the rituals did not have any immediate connection with the burials (Lindeblad & Petersson 2009). The ceremonies appear to have been performed once a year and it is reasonable to believe that these were calendrical rites.

The ritual sites at Väderstad and Abbetorp were probably important in a local perspective. At Abbetorp, there is a clear relation to the local elite, while there is no such link to be observed in the assemblage of finds from Väderstad. The association with pastureland, probably also with fertility, is particularly distinct at Väderstad.

#### Hassle in Närke

The site at Hassle, by the stream of Äverstaån in Närke, is a parallel to Hulje in view of landscape, arrangement of the site and chronology. Minor archaeological excavations were carried out at Hassle during the late 1990s (Annuswer 2007). Ritual activities at the site focused on running water and a cup-mark site was part of the ceremonial area. Votive deposits were encountered in the stream of Äverstaån, with dates spanning the entire period from the Late Bronze Age to the Viking Age (c. 600 BC–AD 800/1050). There is thus a chronological correspondence with Hulje.

The oldest find from the site is the 'Hassle-find' dated to 600 BC, containing, amongst other items, a bronze situla. Along the stream, at a site located around one kilometre from the findspot of the bronze situla, offerings of war booty were discovered, which were dated to the period around the beginning of our era. During the Vendel Period, a platform was built at the side of the stream, from which sacrifice was performed. Around the platform, the bank of the stream had been reinforced with fire-cracked stones, twigs and branches. There was also a layer of fire-cracked stones. The assemblage of finds consisted of loom-weights, a grinding stone, pottery, a piece of flint for fire lighting, two studs for horses and nails (Annuswer 2007). A difference between Hulje and the site at the stream of Äverstaån is that, apart from finds of a peaceful and everyday character, items alluding to warfare were encountered in the stream. In contrast to the fertility-oriented calendrical cult, war booty offerings should be regarded as action related to "changes or crises in one's world" (Paden 1994: 8).

#### Frösvi in Närke

The sacrificial site at Frösvi in Närke, which was excavated at the beginning of the 20th century, seems to have come into use during the Migration Period (Lindqvist 1910). Ritual activities were mainly performed in the marshland, i.e., with a connection to water, but also on dry land. There were traces of depositions of objects and of ritual meals. The site may have covered 10,000 square metres.

At Frösvi, an eighty-metre-long narrow footbridge extended out into the bog: at that time, it was marshland with a small area of open water. At the end of the footbridge, there was a cultural layer, 15 x 7 metres in size, containing charcoal, burnt bones and a great amount of fire-cracked stones. Two pieces of flint were encountered in the cultural layer, which were thought to be fire-striking flint. Further, there was a small rectangular whetstone with a hole

for hanging, as well as two thin potsherds and three small beads of glass flux. An equal-armed bronze bow-shaped brooch was encountered at the bottom of the cultural layer, dated to the end of the 6th century AD. Timber of various types lay on top of the layer. All the longer stakes and planks were oriented in the east-west direction. Most of the bones came from a hearth in the layer; the bones were identified as young individuals of sheep (three animals) and pig (at least two animals). Lindqvist estimates that the three sheep and two pigs originated from one occasion. He states that "there were quite a few participants taking part in this [...] meal" (Lindqvist 1910: 134). Outside the actual cultural layer, two molars belonging to a cow or an ox were found.

Around 50 metres to the north of the cultural layer, an oval boulder was encountered, which was judged to have been transported to the site. Hundreds of pointed sticks had been stuck into the ground around the boulder, but Lindqvist does not mention which species of wood they were. Lindqvist (1910) associates the site with worship of the god Frö.

## Käringsjön in Halland

Käringsjön is a ritual site dated to the Late Roman Iron Age (AD 200–400). This site holds a unique position in Swedish archaeology because of the rich and varied assemblage of finds (Arbman 1945; Carlie 1998; 2000; 2009). Now the area is a bog, but earlier on Käringsjön was a small lake with marshy edges.

The find material is dominated by almost a hundred ceramic vessels containing food and drink, which were deposited in the lake. There was pottery for storage and cooking as well as fine ware pottery in the form of drinking vessels and bowls. Chemical analysis has shown that the food offerings consisted of a mixture of blood and malt or grain, and some may have contained entrails (Carlie 2000: 21). Some of the pots had been intentionally broken.

Around forty wooden items were also recovered. These included two rakes, a pick-axe, a spade, a swivel (Swedish *lekane*), a peg for tethering animals, a turned wooden box, a sliding cover decorated with a geometrical square pattern, a rectangular wooden trough and a wooden board probably used for cooking. Archaeologist Anne Carlie states that many of the items evidently possessed a symbolic significance, and that the items, on the one hand, were associated with cooking and grazing in the spring, and on the other hand with harvest and slaughter (Carlie 2000: 23). Furthermore, there were two bundles of flax and a flax holder. Several white stones of quartz and quartzite were interpreted as offerings thrown into the lake (ibid.: 23f.).

Wooden platforms had been built along the bank of the lake, to improve access for sacrificing in the lake. The finds are concentrated along the side of the marsh, partly in the east and south-east, partly along the western bank.

By treating objects as symbols for various farming activities, Carlie (ibid.: 29) has studied the time of the year when the sacrificial ceremonies were performed. She found that sacrifice had been performed both in spring and autumn and, to some extent, also in midwinter. Carlie also claims that sacrifice on the site was initially performed in the morning, but later on in time, it was shifted to the evening. According to Carlie (ibid.: 33), Käringsjön functioned as a ceremonial site concerned with fertility, for the local community consisting of just a few neighbouring farms.

#### SUMMARISING DISCUSSION

Thematically, Hulje is related to several other sites where peaceful sacrifice was performed. They have much in common in their placing in the landscape. Several of the sites were located either by the side of standing water bodies or alongside running water. In several cases, a rock with cup-marks was included in the site. Ritual sites are often of a considerable size, 10,000-25,000 square metres, and they used to be strictly divided into functional units. This is a characteristic similar to settlement sites of the elite during the Early Iron Age. At all sites, rituals were performed outdoors; this was also the case with the ritual meals.

At many of the sites, the continuity of use stretched over a long period, spanning over prehistoric periods and times of fundamental change. At both Hulje and Hassle, the sites were in continual use throughout a period from the Late Bronze Age to the end of the Iron Age / Early Middle Ages. It is particularly notable that the ceremonial practice was continued throughout the entire Iron Age, despite substantial changes in society at the beginning of the Late Iron Age, as well as changes in burial practices and in religion. This was the case at Abbetorp, at the well-known ceremonial site at Skedemosse, and at the well containing offerings in the Iron Age fort at Eketorp; both of the two latter sites are situated on the island of Öland (Monikander 2010; Århäll 1995).

My interpretation is that Hulje is a site where calendrical ceremonies were performed; the well was taken into service during the early summer and closed for use during the same time of year. According to some researchers (Steinsland 2007: 290; Näsström 2002: 222), during the pre-Christian era, calendrical rites associated with fertility were performed in spring or even midsummer. On such

occasions, matters that were basic for the religious system were renewed, people were reminded about the myths that articulated the foundations of what was sacred, and the gods were invoked (Paden 1994: 8f.). At Abbetorp there were indications that the ceremonies were performed during the time of year when the ground was not frozen or covered with snow. Considering the number of hearths, including signs of reuse in some of the features, we might presume that ceremonies occurred once a year (Lindeblad & Petersson 2009). At Käringsjön, the placing of sacrificial platforms implies that the ceremonies were conducted in spring and autumn (Carlie 2009).

Traces of ceremonial meals were present at all the sites that have been discussed here, and several researchers' considered opinion is that such meals were the most important ritual activity practiced during the pre-Christian period – a meal shared between humans and gods (Näsström 2002; Steinsland 2007). Meat, preferably beef, was cooked in cooking-pits and seems to have been the main ingredient in the meals. This is also indicated in Norse sources. While the practice of sacrifice and offerings has varied over time, it can be seen that ceremonial meals have been carried out during the entire period when the sites were in use.

Refuse from the ritual meals, mainly fire-cracked stones and bones, was one of the occurrences that particularly characterised the ceremonial sites. Usually, there are large amounts of fire-cracked stones that have been deposited in the water, at the side of the water, or gathered into substantial layers. This consistent treatment of the refuse illustrates the fact that it was connected with special conceptions, which meant that the refuse was not permitted to be taken from the sacred site. In such a way, the distinction between pure and profane behaviour at the ritual site was expressed (Paden 1994: 8f.).

The female aspect of the ceremonial site at Hulje is specifically expressed in the finds, through the bead and the alleged sickle. For instance, a brooch was found at Frösvi, which may also be indicative of female presence. Cup-marks have been regarded by many researchers as expressing a female aspect (Hauptman Wahlgren 2002: 58ff.).

Repeated depositions of ceramic pots containing food and drink are one of the main characteristics of Iron Age fertility offerings (Carlie 1998: 21). Moreover, pottery is the most common category of finds at the discussed ceremonial sites. Depositions of complete pots occur regularly and many of these contain remains of food. On one level, it is clear that the pottery represents offerings of food. The assemblages of finds from the ceremonial sites at Abbetorp, Väderstad and Frösvi are constituted in a distinctly similar way and could be understood in the same terms as the site at Hulje.

The arrangement of the ritual site at Hulje, and the fact that the area also includes a rock with cup-marks, gives an indication of a close association with the central parts of the pastureland and, consequently, also with animal husbandry. In the west of Sweden, sites with cup-marks have a clear connection with the grazing land of the Early Iron Age (Bengtsson 2004). Indirectly, this also indicates a fertility theme. In the finds from Hulje, there is also a distinct connection with the fertility of the land and with domestic animals. The rake head is associated with the growth of grass as well as with domestic animals, while the sickle is related to the yield of the cultivated land. The sticks in the well might also be understood in terms of fertility. Handstones for grinding found in the well may have a connection with grain, but could also be associated with the general theme of food and drink in excess.

The connection with domestic animals is most distinctly manifested at Käringsjön. This may depend on the fact that it is the only site, apart from Hulje, among the discussed sites, in which preserved wooden artefacts were found. Artefacts associated with harvest and grain occur at Hassle.

There are indications of strong ties between the farmstead that could have been the dominating farm on a local level and the ceremonial site at Hulje. There are remains of a paved road that may have connected the farm with the ceremonial site. The relatively large amount of beef that was consumed at the ceremonial site implies that people from a high status farmstead may have contributed meat of a particularly appealing kind. This argument is supported by the predominance of choice meaty parts among the bones. Being generous with food and drink was an ideal among the elite and was an indication of a good leader (Steinsland 2007: 306).

The ceremonial sites at Abbetorp, Väderstad and Frösvi are notably similar in their placing in the landscape, the arrangement of the sites and the assemblages of finds. They could be interpreted in a similar way as the site at Hulje. Maybe calendrical rites were performed at all of these sites, dedicated to a female deity for a good year's growth and peace, for "árs ok fríðar". The sites were important on a local level, but not within a wider geographical area. Instead, a number of similar places existed, which had connections with the local community. Perhaps the regular procedure was that the local elite acted as a support for the activities at the site.

The ritual sites that I have discussed clearly differ from such sites as Gullborg in Östergötland (Nordén 1938). Topographically, this site consists of a prominent peak of a rock, surrounded by a stone wall, rising sharply above the surrounding plain. Finds at the site consist of weapons, precious metals and imported artefacts. This is associated with a male aspect, in which rituals express warrior ideals, even if artefacts of the same types as those found at

Hulje also occur. Perhaps a site such as Gullborg was devoted to other deities than those of the site at Hulje; maybe this site was mainly oriented towards the elite level of society.

Sites such as the one at Hulje have chiefly been encountered in later years during development-led archaeological excavations. These remains are often found in unexpected locations in the terrain and are only understood when larger areas are stripped of the covering topsoil. This means that development-led archaeology provides a unique opportunity to uncover remains that illuminate ceremonial activities and religious beliefs from a period for which no written sources exist in this northerly area.

Translation by Judith Crawford

## **ABBREVIATIONS**

RAÄ – Riksantikvarieämbetet (Swedish National Heritage Board)

#### REFERENCES

- Annuswer, Bo 2007. De arkeologiska undersökningarna vid Hassle. [Archaeological Excavations at Hassle.] In: L. Karlenby (ed.) *Om makt och offer. Röster om central-maktens utveckling i tiden före historien.* Stockholm: RAÄ, pp. 29–42.
- Arbman, Holger 1945. *Käringsjön. Studier i halländsk järnålder*. [Käringsjön. Studies of Halland's Iron Age.] KVHAA:s handlingar del 59:1. Stockholm: Wahlström & Widstrand.
- Århäll, Gunilla 1995. Myternas brunn. En studie i myternas betydelse för offernedläggelser i källor och brunnar, avseende nordiskt och keltiskt område. [The Well of Myths. A Study of the Significance of Myths of Sacrifice in Springs and Wells, Concerning Scandinavian and Celtic Areas.] Uppsats, påbyggnadskurs i Arkeologi, vt 1995. Stockholm: Stockholms universitet.
- Ashmore, Wendy & Knapp, Bernard A. (eds.) 1999. Archaeologies of Landscape: Contemporary Perspectives. Oxford: Blackwell Publishers.
- Bengtsson, Lasse 2004. Bilder vid vatten. Kring hällristningar i Askums sn, Bohuslän. [Images by the Water. Concerning Rock Carvings in the Parish of Askum, Bohuslän.] Gotarc Series C. Arkeologiska Skrifter No. 51. Göteborg: Göteborgs Universitet.
- Bergman, Jonas 2012. Mikrofossil från offerbrunnen vid Hulje, RAÄ 281, Högby socken, Östergötland. [Microfossils in the Sacrificial Well at Hulje, RAÄ No. 281, Högby Parish, Östergötland.] Teknisk rapport. Stockholm: RAÄ UV Mitt.
- Bertell, Maths 2009. Lin och vit kvarts. Jämförelse som redskap och analogins förföriska lockelse. [Flax and White Quartz. The Use of Comparison as a Tool and the Se-

- ductive Temptation of Analogy.] In: A. Carlie (ed.) *Järnålderns rituella platser*. Femton artiklar om kultutövning och religion från en konferens i Nissaström den 4–5 oktober 2007. Halmstad: Kulturmiljö i Halland, pp. 51–63.
- Björk, Tony 2005. Skäran på bålet. Om den äldre järnålderns gravar i Skåne. [The Sickle on the Pyre. Grave Customs in Scania during the Early Iron Age.] University of Lund, Institute of Archaeology, Report Series No. 92. Lund: University of Lund.
- Brøste, Kurt (ed.) 1984. Prehistoric Man in Denmark: A Study in Physical Anthropology. Vol. 3: Iron Age Man in Denmark. København: Munksgaard.
- Carlie, Anne 1998. Käringsjön: A Fertility Sacrificial Site from the Late Roman Iron Age in South-west Sweden. *Current Swedish Archaeology*, Vol. 6, pp. 17–37. Available at http://www.arkeologiskasamfundet.se/csa/Dokument/Volumes/csa\_vol\_6\_1998/csa\_vol\_6\_1998\_s17-37\_carlie.pdf, last accessed on October 22, 2013.
- Carlie, Anne 2000. I fruktbarhetens tecken. [In the Name of Fertility.] *Utskrift*, No. 6. Halmstad: Stiftelsen Hallands länsmuseer, pp. 4–31.
- Carlie, Anne 2004. Forntida byggnadskult: Tradition och regionalitet i södra Skandinavien. [The Cult of Prehistoric Buildings: Tradition and Regionality in Southern Scandinavia.] Arkeologiska Undersökningar, Skrifter No. 57. Stockholm: RAÄ.
- Carlie, Anne 2009. Käringsjön en gammal fyndplats i ny belysning. [Käringsjön: An Old Findspot Illuminated.] In: A. Carlie (ed.) Järnålderns rituella platser. Femton artiklar om kultutövning och religion från en konferens i Nissaström den 4–5 oktober 2007. Halmstad: Kulturmiljö i Halland, pp. 225–263.
- Carlsson, Tom & Kaliff, Anders & Molin, Fredrik & Sundberg, Karin 1996. *Hulje. Boplats, skärvsten och gravar*. [Hulje. Settlement Site, Fire Cracked Stones and Burials.] E4-syd, RAÄ 89, Högby socken samt RAÄ 234–236 och RAÄ 246, Mjölby socken, Östergötland. RAÄ, Rapport UV Linköping 1996:63.
- Fabech, Charlotte & Ringtved, Jytte (eds.) 1999. Settlement and Landscape. Proceedings of a Conference in Århus, Denmark, May 4–7, 1998. Moesgård: Jutland Archaeological Society.
- Fallgren, Jan-Henrik 2006. Kontinuitet och förändring: bebyggelse och samhälle på Öland 200-1300 e. Kr. [Continuity and Change: Settlement and Society on Öland AD 200–1300.] Uppsala: Uppsala University.
- Gerritsen, Fokke 1999. The cultural biography of Iron Age houses and the long-term transformation of settlement patterns in the southern Netherlands. In: C. Fabech & J. Ringtved (eds.) Settlement and Landscape. Proceedings of a Conference in Århus, Denmark, May 4–7, 1998. Moesgård: Jutland Archaeological Society, pp. 139–148.
- Hagberg, Ulf Erik 1967. *The Archaeology of Skedemosse*, *I–II*. Stockholm: Almqvist & Wiksell.
- Hauptman Wahlgren, Katherine 2002. Bilder av betydelse. Hällristningar och bronsålderslandskap i nordöstra Östergötland. [Images of Significance. Rock-Carvings and Bronze Age Landscape in North-Eastern Östergötland.] Stockholm Studies in Archaeology, Vol. 23. Stockholm: Stockholms universitet.
- Hedeager, Lotte 1990. Danmarks jernalder. Mellem stamme og stat. [Iron-Age Societies: from Tribe to State in Northern Europe, 500 BC to AD 700.] Aarhus: Aarhus Universitetsforlag.

- Heimdahl, Jens 2012. *Makroskopisk analys av jordprover från offerplats Hulje, RAÄ* 281, Högby sn, Östergötland. [Macroscopic Analysis of Soil Samples from the Sacrificial Site at Hulje RAÄ 281, Högby Parish, Östergötland.] Teknisk rapport. Stockholm: RAÄ.
- Holm, Jenny 2009. Förhistoriskt kulturlager och härdområde vid Hulje. Hulje 8:3, RAÄ 281. Mjölby socken, Mjölby kommun. Östergötland. [Prehistoric Cultural Layer and Area with Hearths at Hulje.] Arkeologisk förundersökning. RAÄ UV Öst rapport 2009:51. Linköping: RAÄ.
- Insulander, Nils 1956. Svensk fårskötsel. [Swedish Sheep Farming.] Stockholm: LTs förlag.
- Kaliff, Anders (ed.) 1999. Olika perspektiv på en arkeologisk undersökning i västra Östergötland. [Different Perspectives of an Archaeological Excavation in Western Östergötland.] Arkeologiska Undersökningar, Skrifter, No. 28. Stockholm: RAÄ.
- Kaliff, Anders & Sundqvist, Olof 2004. Oden och Mithraskulten. Religiös ackulturation under romersk järnålder och folkvandringstid. [Oden and the Mithras Cult. Religious Acculturation during the Roman Iron Age and Migration Period.] OPIA 35. Uppsala: Department of Archaeology and Ancient History, Uppsala University.
- Karlsson, Emma 2012. Förhistoriska aktiviteter intill ett vattendrag. [Prehistoric Activities beside a Watercourse.] Arkeologisk undersökning. RAÄ 168, Väderstadverken, Vallsberg 1:34, Väderstads socken, Mjölby kommun, Östergötlands län. Rapport 2012:11. Linköping: Östergötlands museum. Available at http://www.pdfrapporter. se/pdf/2012/2012-011.pdf, last accessed on October 23, 2013.
- Lindeblad, Karin & Petersson, Maria 2008. Landsbygdens vardagsliv under järnålder och historisk tid. Strategi för studier av landskap och bebyggelse. [Country Life during the Iron Age and in Historical Times. Strategies for Studying the Landscape and Settlement.] Arbetshandling, mars 2008. Linköping: RAÄ UV Öst.
- Lindeblad, Karin & Petersson, Maria 2009. Riter kring berg, block och vatten om utgrävningarna vid Abbetorp i västra Östergötland. [Rituals around Rocks, Boulders and Water: Excavations at Abbetorp in Western Östergötland.] In: A. Carlie (ed.) Järnålderns rituella platser. Femton artiklar om kultutövning och religion från en konferens i Nissaström den 4–5 oktober 2007. Halmstad: Kulturmiljö i Halland, pp. 101–137.
- Lindeblad, Karin & Petersson, Maria 2012. Mörtlösa bytomt gårdar från järnålder och historisk tid. [Mörtlösa Village Toft: Farms during the Iron Age and Historical Times.] Östergötland, Linköpings kommun, S:t Lars socken, RAÄ 323 m fl. Dnr 423-00337-2007. RAÄ, UV rapport 2012:50. Stockholm: RAÄ.
- Lindqvist, Sune 1910. Ett "Frös-vi" i Nerike. [A 'Frös-vi' in Nerike.] Fornvännen, Vol. 5, Häfte 3–4. Stockholm, pp. 119–138. Available at http://samla.raa.se/xmlui/bitstream/handle/raa/575/1910\_119.pdf?sequence=1, last accessed on October 23, 2013.
- Molin, Fredrik 1999. Mellan skog och slätt äldre järnålderns bebyggelse och byar i västra Östergötland. [Between Forest and Plain: Settlement and Villages of the Early Iron Age in Western Östergötland.] In: A. Kaliff (ed.) Olika perspektiv på en arkeologisk undersökning i västra Östergötland. Arkeologiska Undersökningar, Skrifter, No. 28. Stockholm: RAÄ, pp. 12–27.

- Monikander, Anne 2010. Våld och vatten. Våtmarkskult vid Skedemosse under järnåldern. [Violence and Water: Wetland Sacrifice at Skedemosse in the Iron Age.] Stockholm Studies in Archaeology, Vol. 52. Stockholm: Stockholms universitet. Available at http://su.diva-portal.org/smash/get/diva2:309712/FULLTEXT02.pdf, last accessed on October 23, 2013.
- Näsström, Britt-Mari 2002. Fornskandinavisk religion: En grundbok. [Religion in Prehistoric Scandinavia: An Elementary Book.] Lund: Studentlitteratur.
- Nilsson, Catharina 1987. Gravundersökningar i Östergötland åren 1967–1984. [Archaeological Excavations of Burials in Östergötland during the Years 1967–1984.] In: T. Andrae & M. Hasselmo & K. Lamm (eds.) 7000 år på 20 år. Arkeologiska undersökningar i Mellansverige. Stockholm: RAÄ, pp. 79–108.
- Nilsson, Lena 2009. Häst och hund i fruktbarhetskult och blot. [Horses and Dogs in Fertility Cult and Blot.] In: A. Carlie (ed.) Järnålderns rituella platser. Femton artiklar om kultutövning och religion från en konferens i Nissaström den 4–5 oktober 2007. Halmstad: Kulturmiljö i Halland, pp. 81–99.
- Nordén, Arthur 1938. Östergötlands järnålder. [The Iron Age of Östergötland.] Monografier. D. 1. Enskilda fyndgrupper och problem. Häfte 2: Kolmården V. Husbydalen Fornborgarna. Stockholm: Författarens förlag.
- Östnäs, Elisabeth n.d. *Gravkäppar i nytt ljus*. [Fresh Light on Burial Rods.] Centrum för Teologi och Religionsvetenskap. Uppsats. Lund: Lunds universitet. Available at http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=2427441& fileOId=2427442, last accessed on October 23, 2013.
- Paden, William E. 1994. Religious Worlds: The Comparative Study of Religion. Boston: Beacon Press.
- Pedersen, Ellen Anne & Widgren, Mats 1998. Järnålder, 500 f. Kr.–1000 e. Kr. [Iron Age, 500 BC–AD 1000.] In: S. Welinder, E.A. Pedersen & M. Widgren. Jordbrukets första femtusen år: 4000 f. Kr.–1000 e. Kr. [The First Five Thousand Years of Farming: 4000 BC–AD 1000.] Det svenska jordbrukets historia. Borås: Natur och Kultur, pp. 237–459.
- Petersson, Maria 1999. Abbetorp: An Initial Presentation. In: C. Fabech & J. Ringtved (eds.) Settlement and Landscape. Proceedings of a Conference in Århus, Denmark, May 4–7, 1998. Århus: Jutland Archaeological Society, pp. 395–404.
- Petersson, Maria 2001. Grazing and Hearths in West Östergötland 1000–1 BC. In: T. Darvill & M. Gojda (eds.) One Land, Many Landscapes. Papers from a session held at the European Association of Archaeologists Fifth Annual Meeting in Bournemouth 1999. Oxford: BAR International Series 987, pp. 125–145.
- Petersson, Maria (ed.) 2004. Abbetorp ett landskapsutsnitt under 6000 år. Arkeologisk undersökning av en boplats, ett gravfält, en offerplats, stensträngar och fossil åkermark. [Abbetorp A Section of the Landscape during 6000 Years. Archaeological Excavation of a Settlement Site, Burial Site, Sacrificial Site and Fossil Fields.] RAÄ 288 m fl, Abbetorp 1:2 och 1:10, Rinna socken, Boxholms kommun. RAÄ 241 m fl, Väderstad 1:2 och 5:1, Väderstads socken, Mjölby kommun, Östergötland. Dnr 421-3277-1997, 421-800-1998. RAÄ. Rapport UV Öst 2002:43. Linköping: RAÄ.
- Petersson, Maria 2006. Djurhållning och betesdrift: Djur, människor och landskap i västra Östergötland under yngre bronsålder och äldre järnålder. [Animal Husbandry

- and Cattle Herding: Animals, Humans and Landscape in Western Östergötland during the Late Bronze Age and Early Iron Age.] Uppsala & Stockholm: Uppsala Universitet & RAÄ.
- Petersson, Maria 2011. The Early Iron Age Landscape: Social Structure and the Organisation of Labour. In: P. Kruse (ed.) *Arkaeologi i Slesvig / Archäologi im Sleswig*. Sonderband "Det 61. Internationale Sachensymposion 2010", Haderslev, Danmark. Neumünster: Wachholtz Verlag, pp. 249–268.
- Petersson, Maria 2013a. *Hulje en rituell plats från yngre bronsålder och järnålder*. [Hulje A Ritual Site from the Late Bronze Age and Iron Age.] Särskild arkeologisk undersökning. Östergötland, Mjölby kommun, Högby socken, Hulje 1:3, RAÄ 251 och 281. Dnr 423-00900-2010. UV Rapport 2013:114. Stockholm: RAÄ.
- Petersson, Maria 2013b. *Hulje bebyggelse från äldre järnålder och tidigneolitikum*. [Hulje Early Iron Age and Early Neolithic Settlement.] Särskild arkeologisk undersökning. Östergötland, Mjölby kommun, Högby socken, Mjölby 40:5 m fl, RAÄ 89. UV Rapport. Stockholm: RAÄ. Unpublished manuscript.
- Räf, Erika 2012. Inte utan min psykopomp. [Not without my Psychopomp.] *Arkeologi i Östergötland 2012*. Linköping: RAÄ & ÖLM, pp. 8–9.
- Steinsland, Gro 2007. Fornnordisk religion. [Old Norse Religion.] Stockholm: Natur & Kultur.
- Strucke, Ulf 2012. *Vedartsanalys av trä från Hulje* [Identification of Species of Wood from Hulje.] RAÄ 281, Högby socken, Östergötland. Protokoll. Stockholm: RAÄ, UV Mitt.
- Svensson, Eva 1998. *Människor i utmark*. [People in the Outland.] Lund Studies in Medieval Archaeology 21. Lund: Almqvist & Wiksell International.
- Viklund, Karin 2012. Linet i Sverige. [Flax Cultivation in Sweden.] *Svensk Botanisk Tidskrift*, Vol. 106, No. 3–4, pp. 156–164.
- Vikstrand, Per 2001. Gudarnas platser: Förkristna sakrala ortnamn i Mälarlandskapen.
  [The Places of the Gods: Pre-Christian Sacral Place-Names in Central Sweden.]
  Uppsala: Uppsala universitet.
- Vretemark, Maria 2012. Osteologisk analys av djurben från Hulje 8:3, RAÄ 281, Mjölby socken, Östergötland. [Osteological Analysis of Animal Bones from Hulje.] Skara: Västergötlands museum.
- Wait, Gerald 1985. *Ritual and Religion in Iron Age Britain*. Oxford: BAR British Series 149.
- Zetterlund, Peter & Helander, Annika 1995. Väg E4 Mjölby Väderstad, Väg 32 och trafikplats Mjölby västra. Mjölby kommun, Östergötland. [E4 Road Mjölby Väderstad, Road 32 and Junction Mjölby Västra.] Rapport, RAÄ UV Linköping 1995:38. Linköping: RAÄ.