CUP MARKS ON STONES IN DANISH BRONZE AGE SETTLEMENTS

Introduction

Amongst the variety of motifs in rock art cup marks are the most common and recurring of them all. In number, they appear alone or more commonly several together, even in hundreds and sometimes combined in motifs of linear or circular style and also appearing in combination with human or animal figures, ships and almost any other rock art motive. They are found in a large variety of contexts, in Denmark mostly known from erratic boulders, on exposed bedrock (on the island of Bornholm only), and on megalithic constructions but otherwise associated with many other constructions and features (Felding 2009, 43-44; Glob 1969; Jørgensen 1972: Matthes 2016: Rostholm 2013). Though being the simplest of the rock art motifs this variety of settings have inspired numerous interpretations including depicting star constellations, "negative" imprint of mounds, symbolizing fire, as cups for offering and more mundanely as numeric count of armies or dead interred in grave chambers (overviews in Glob 1969; Goldhahn 2008b; Lidén 1938). Lately it has been suggested that cup marks are heads and thereby representing people, either specific persons or crowds (Horn 2015). A generally acknowledged interpretation throughout time is that of being a symbol of the life cycles through birth, rebirth and fertility (Felding 2015, 66; Glob 1969), while in some recent research the focus has not been on the actual motif, but on the ritual context the cup marks were made in (Goldhahn 2010, 12; Wahlgren 2004; Whitley 2001).

However, when discussing this motif there is a monocausal predisposition which does not take into account the variety of contexts and combination of figures in which it is found. By putting it in stringently in one interpretative frame, how diverse the frames may be, we are disregarding the fact that the motive may be part of many aspects of Bronze Age life and ideology. This article is an attempt to diversify the discussion by presenting cup marks appearing in a somewhat neglected context, namely on stones and erratic boulders found in situ in pits associated with settlements from the Danish Bronze Age. Domestic life on a Bronze Age settlement must have included both mundane and formal actions and as a simple but universal symbol the cup mark may very well have more than one connotation. Although cup mark stones regularly are found in contexts that may be associated with possible houses or culture layers the presented material includes only stones and boulders that are firmly associated with settlements and dated to the Bronze Age. This does however not include the so-called "pocket cup mark stones", which in reality likely covers a large variety of different non-related artefact types deriving from a wide time span. Some of these may likely had some practical function and shall therefore not be understood as rock art, while others possibly should (see further discussion in Rostholm 2013, 79ff). A thorough list and discussion of the pocket cup mark stones would indeed be interesting, but lies beyond the



Fig. 1. The cup marked boulder at Vinderød, North Zealand, lying in the pit during excavation. Photo: P. Foss

scope of the present paper. The period of time in which cup marks are found range from the Neolithic to the Iron Age but the focus is on the later part of the Bronze Age since this is the dating of the presented material. However, there may be references to other motifs or contexts and to finds from another period to stress a point. The material is scarce and amounts to five fairly well documented cases, and most of them have been recorded within the last 15-20 years, possibly because cup mark stones and their contexts in excavations were rarely described in detail.

Presenting the material

At a small-scale excavation at Vinderød in Northern Zealand three pits, a posthole and parts of a cultural layer were excavated on an old beach terrace sloping towards the lake Arresø, which at the

time of the Prehistoric occupation was a fiord. The terrace was most probably forming the eastern periphery of a multiperiod settlement previously excavated (Foss 2001; 2002, 99) (dated to Early and Middle Neolithic, Late Bronze Age, and Pre-Roman and Early Roman Iron Age¹). In the largest pit a boulder of app. 1.0 m length was deposited, lying slightly askew and on the flat surface facing upwards 6-7 cup marks were seen (Fig. 1). In the filling, smaller stones were found, possibly from a kind of underpinning. There was no dating material in the said pit but in the remnants of a cultural layer 7.5 m to the south sherds from the Late Bronze Age were found. In a pit 12 m further to the south numerous sherds from Bronze Age period IV-V were documented. It could be argued that the pit was dug in more recent time in order to rid the field of the large boulder as it would be a nuisance

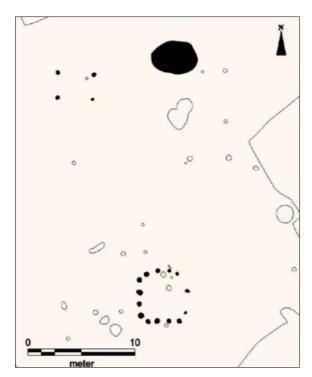


Fig. 2. Map of the Late Bronze Age site from Vinge. The waste pit containing the cup mark stone and the mentioned remains of buildings are highlighted with grey. Photo: Bo Jensen/ROMU.

to cultivation. To this is may be noted that the filling in both the cultural layer and the two pits were of the same colour and texture giving a probable dating to the same period. Being a small-scale excavation there is not very substantial evidence, but all evidence put together the interpretation may be that the cup marked boulder had been standing upright at the periphery of a Late Bronze Age settlement facing the fiord and with an underpinning of smaller stones to support it. When the settlement was abandoned a low pit was dug and the stone tipped

Fig. 3. The cup mark stone from Vinge. The cup mark is highlighted with chalk. Photo: Bo Jensen/ROMU



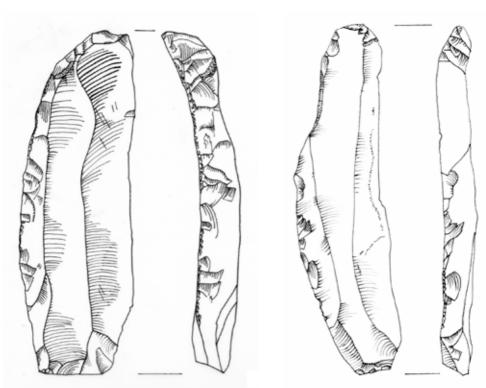


Fig. 4. Two blade sickles found in the Vinge pit. Drawing: Jonas Jæger.

into it, thus taking this marker out of circulation.

Another finding of a cup mark stone in context derives from Vinge, also in Northern Zealand, a good 20 km to the south of Vinderød. Here a cluster of Late Bronze Age structures was excavated at the north-eastern edge of a large plateau. This included a semi-round building approximately 5 metres in diameter and a building of similar size consisting of four postholes in a rectangle (Fig. 3). Both types of buildings are known from other Danish Late Bronze Age sites (Ethelberg 2000, 148ff; Runge 2012, 118ff). Nearby was found a pit measuring 4.4 meter in length, 3.1 meters in width and up to 0.80 m in depth. At the bottom of this six large stones were scattered. One of these, an approximately 100+ kilo stone, included a single cup mark (Fig. 2). The majority of

the stone's surface was corroded with only a narrow area of 20 x 20 cm un-corroded and smooth on which the cup mark was found. The pit contained several flint flakes and two large flint blade sickles (Fig. 4), the latter characteristic of last half of the Late Scandinavian Bronze Age (Högberg 2009, 165ff). The largest group of finds from the pit was pottery sherds, the main part deriving from vessels with smooth neck and rim and rusticated bodies, traits which are also characteristic of last half of the Late Scandinavian Bronze Age (Björhem & Säfvestad 1993, 49ff). The sherds derive from at least six vessels, of which none seem to have been complete, when they ended up in the pit, as only approximately 50 % of the most well-preserved vessel was found. Considering the flint debris and the type and fragmentation of the ceramics the finds from the pit may be interpreted as typical Late Bronze

Age settlement waste. The pit may thus likely have been dug to extract clay from the subsoil and was subsequently, gradually backfilled with various settlement waste. Although no typical Late Bronze Age three-aisled houses were identified, the character of the different structures is common features on Danish Late Bronze Age sites and should likely be interpreted as the remains of a settlement.

A similar find situation derives from the Northernmost part of the island Funen. near the small town Mesinge (Albrechtsen 1966: 180ff). Here a large boulder covered with cup marks was found in situ in a large pit in a field sloping towards Odense Fiord. The well sized boulder (1.00 x 0.9 m) was covered with all together 120-125 cup marks on four sides, and as on the boulder from Vinge the smooth surfaces were chosen for the cup marks. The pit, in which it was found, was filled with ceramic sherds and bones and around the stone a thick layer of shells was packed. The find was interpreted as ritual by the excavator: the shells and bone derive from ritual feasts around the holy stone, while the ceramic are the food containers, which after the feast were ritually crushed. It may however also be interpreted as a clay extraction pit which subsidiary was filled with various settlement waste, as often seen on Danish Late Bronze Age sites. Based on diagnostic traits of the ceramic material the date can be put in the latest part of the Bronze Age, Period VI.

Also on Funen another boulder with cup marks was found, this at the site of Søndersø app. 12 km northeast of the city Odense. The site is known for its hundreds of cooking pits and ditches in long, parallel lines forming part of a structured, ritual landscape dating to the Late Bronze Age (Prangsgaard 2014). Excavations have been on and off since 2005 in the area of Søndersø and in 2015 a large, oblong erratic boulder was uncovered. Most of the surface was cracked by fire in more recent time, but at the only preserved surface which was flat and smooth one rather

deep cup mark was very conspicuously placed. When uncovered, it was lying on one long side and at what was supposedly the base there was the possible last remnants of the stone's impression. This was almost completely removed by a later pit probably dug to remove the stone but altogether failing. The interpretation of the evidence is that of the stone originally standing upright at the broadest short side and with the flat surface facing east/ northeast. At some point it was tipped over and sought to be removed and/ or cracked by fire (per. comm. J. Bonde, Odense Bys Museer, 15/9-2016). There were no certain house structures or other pits in close vicinity and this is perhaps the most uncertain of the listed cup mark stones. However, the association with the highly ritualized Late Bronze Age landscape seems beyond doubt.

A cup mark stone was found deposited in a pit during a large-scale excavation at Flensted just east of Silkeborg, Jutland at a site comprising occupation from several periods (Bagge 2016). Dating from the Late Bronze Age were two longhouses, a cemetery with eight cremation graves and two fences placed as opposing semicircles and possibly forming the entrance to a sacral area (Bagge 2016, 17-18). The erratic boulder measures 1.25 x 1.65 m and has a prominent flat and smooth side on which 8-9 cup marks are placed in two groups separated by a natural fissure that was enhanced by man. It was found only five metres south of the "entrance" in the fences lying in a pit which also held ceramic waste from the Early Iron Age. A recent pit was dug into the older. According to the excavator the boulder belongs to activity taking place in the Late Bronze Age and was probably placed just inside the entrance in the fence (Bagge 2016, 16ff), while it cannot be completely excluded that the boulder in fact belongs to the same period as the sherds in the pit in which it was found. The convergence between the number of cup marks and the number of cremation graves however seems too obvious to neglect (Bagge 2016, 17). In the Early Iron Age, a pit was dug at the foot of the standing stone and it was turned over either intentionally or by coincidence. The pit may thus have been an attempt to "sink" the stone deeper in the ground.

To the authors prevalent knowledge, the above-mentioned cases are the best documented when it comes to stones with cup marks associated with Bronze Age settlements and pits in Denmark. However, as a supplement to this catalogue, it may be mentioned that in many instances Bronze Age mounds and stone set graves have been constructed on settlements from the same or slightly earlier period, and often stones with cup marks are found to form a part of these grave constructions (Borup 2002; Overgaard 2004). The implication being that the cup marked stones may derive from the settlement.

Although the present paper deals with the Bronze Age, the remarkable but not vet published finds of two cup mark stones in the closed context of a ditch belonging to a Middle Neolithic enclosure excavated at Vasagård on the island Bornholm must be mentioned (Persson 2017). These finds demand that other finds of cup marks associated with Middle/Late Neolithic pits or Late Neolithic houses (i.e. Glob 1969, nos. 233 & 864; Hjermind 1990, 73; Jensen 1996, 96; Vegger 1986, 91), which have been thought to have ended up in Neolithic context by coincidence by activities in the Bronze Age, should be reconsidered. Thus, the use of cup marks in relation to settlement possibly already takes off in the Middle Neolithic, Except for the so-called pocket cup marks stones there is however, no evidence of use of cup marks in relations to Early Bronze Age settlements. But the several finds of cup marks in the burial contexts of the Early Bronze Age (Glob 1969; 123), show that the motif by no means went out of use. The absence may instead be a consequence of the almost complete lack of pits and thereby dateable find contexts on the Danish Early Bronze Age settlements. The most common and most certain evidence

of use of cup marks in relation to settlements thus belong to the Late Bronze Age, with indication of use in all its three periods, Period IV-VI.

Context and discussion

The presented cup mark stones give us a rare glimpse of the use of this specific motif in the 1st Millennium BC. As briefly touched on in the introduction the cup marks appear in many different contexts. In her comprehensive study on Danish rock art Felding (2009, 43-44) formulates 50 different contexts and out of these cup marks appear in 45. This indicates that ".. the cup mark as the most frequently appearing motif is not restricted to a sole purpose but has been used in many settings and fulfilling many purposes" (Felding 2009, 43). The cup mark stones presented here conform to Feldings context id 4 (i.e. in pits dating from the Late Bronze Age to Pre Roman Iron Age) but can be subdivided into two different types of contexts:

- 1) The stones from Vinderød, Flensted and Søndersø seem to have been found in the location in which they were set and knapped on the settlements; only have they been tipped over and buried in pits, either in the Late Bronze Age or in a subsidiary period. This indicates that they were no longer considered significant at that point.
- 2) The deposition of cup mark stones from Mesinge and Vinge in waste pits along with other boulders and various settlement waste indicate that these were considered waste at point of deposition.

The idea that a symbol of so many contexts and combinations as formulated by Felding may only be produced during sacral or ceremonial acts is simplistic and do not reflect the manifold and varied actions of man in the Bronze Age. Furthermore, as Bradley (2005, 19ff) points out there is a tendency among archaeological interpretation to distinguish strictly between sacral sites and settlements, a distinction that may not exist. This distinc-

tion also applies to the actions of man. To perceive sacral and profane activities as separated by religious rules and confined to specific physical spheres is a modern perception. According to the Sociologist of Religion Morten Warmind rituals may be recognized in the archaeological record as the physical manifestations of repeated actions and that rituals guide the way of thinking (Warmind 2015, 258). He goes on to say: "The rituals do not per se reflect an idea of the world and man, but ideas and the world and man are (also) founded in the rituals" (ibid., authors' translation). Repeated actions such as carving cup marks may hence be perceived as a ritual but it does not follow that it is sacral. This is also in line with Bradley's concept of practice in Prehistoric societies: "Once it is accepted that ritual is a kind of practice a performance which is defined by its own conventions - it becomes easier to understand how it can occur in so many settings and why it may be attached to so many different concerns" (Bradley 2005, 33). For the individual in the Bronze Age rituals may be a way of putting order into the world. In domestic life, many events happened repeatedly: the seasons, harvest, births of both animals and humans, deaths

etc. and not all of them were within control.

In Sweden, where rock art is much more common than in Denmark, cup marks are often found on exposed bedrock in the vicinity of Bronze Age settlements, while figural motifs seem to have been made in more isolated areas in relation to graves and possibly at gathering point (Goldhahn 2008a, 94ff). Along with the cases presented here, this indicates that cup marks were a more integrated part of the daily life on the settlement in the Late Bronze Age than other motifs. One interesting exception from this is the carving of a fish and other motifs on a three-ton erratic boulder associated with the Early Bronze Age settlement at Vadgård at Løgstør Bredning in Northern Jutland (Lomborg 1973). At the settlement five or six small houses and storage buildings were excavated and centrally placed among the houses was a structure consisting of numerous closely placed poles forming a semicircle around the erratic boulder. The boulder was found in a pit with the carvings facing down, but was originally placed a little further to the east and with the carvings facing up. Later a pit was dug and the boulder tipped into

Fig. 5. The boulder at Vadgård settlement after it had been extracted from the pit. The photo on the left shows a close up of the carved fish and on the right the boulder with the carving highlighted in chalk. In the background some of the closely placed postholes forming a semicircle can be seen. After: Lomborg 1973, 13.





it. The excavator interpreted the arrangement as a cultic area and the carvings as a fish, a hook and a harpoon (Fig. 5) and that the boulder was intentionally "hidden" when the settlement was abandoned (Lomborg 1973, 12). If indeed it is a fish both the motif and the palisade are rare exceptions but may have a parallel in the structures excavated at Flensted. As mentioned above two fences here formed opposite semi-circles leading to a sacral area as interpreted by the excavator (Bagge 2016, 15ff). So, although the motifs may vary the connection between daily life and ritual seems settled in both cases. In the case of the fish and hook motifs associated with a settlement close to the coast of the fiord, it may be a question of both practicality and ritual: the motifs mirroring and strengthening the daily life of an economy based on fishing. However, it is only fair to mention that there is no record of fish bones in the excavation report, probably because the soil was never sieved.

As for the presented cases, it appears that some effort was invested in taking all five stones out of circulation: neither stone was easy to handle but all were either tipped over or transported to a pit. Interestingly the number of cup marks seems not to have influenced the treating in the stones' "after life" since the boulder from Mesinge had at least 120 cup marks whereas the stone from Vinge had only one but both still ended up in a pit. However, as it has been emphasised in recent research (e.g. Goldhahn 2010, 12ff; Wahlgren 2004, 154ff), their deposition indicate that it was not the end result, the actual motif, but the process of making it, and the short subsidiary period afterwards, where the motifs stood out white, which was the use phase of the rock art. This especially in the cases where the cup mark stones were deposited in waste pits: After the motifs vanished, the cup mark stones were not necessarily considered important or sacred, but were in some cases dumped as waste in the closest pit along with pot sherds and animal bones. The motifs could however also be "switched on" again by renewing them through re-carving.

Through the selection of which motifs to switch on and which not to, the motifs and thereby their inherent symbolism were revived and controlled (Wahlgren 2004, pp. 154ff). This may explain why some cup marks are knapped deeply into the rocks, while others are not and may indeed be observed at the Vinderød boulder where the centrally placed cup mark appears deep set and in mint condition, whereas the remaining are worn down and for some hard to distinguish (fig. 1). In this connection it may possibly be useful to treat the cup marks as two aspects of the same event: the cup mark itself as a sign or symbol and the making of it as an action. The cup mark is in its simple form a universal sign – easy to produce and may symbolize a range of phenomenon: the sun, the full moon, the circle of life, etc. And through it simple form and production it may also be a marker of any number of physical and conceptual things. The repeated action - either by carving a new cup mark or "reviving" an older one – may be the ritual that put order in the world.

Both the location, the treatment and the varying number of cup marks further indicate that the stones were considered a general and communal part of the settlement and that making the cup marks a practical and mundane part of daily life. Even though the carving took place at special occasions these may have been common and often recurring in the private sphere of a settlement in the later part of the Bronze Age. As mentioned above. the cup mark is in its simplicity a universal "language", it is easy to produce and may represent different types of indicators such as counting, marking of special occasions, a personal mark or the conveyor of a meaning lost today. As for the boulder at Vinderød with its position at the edge of the settlement it may have functioned as the "official calendar" where important occasions were marked such as harvesting, births, deaths and the following construction of graves or perhaps when a new family settled. That carving of cup marks were indeed connected to death or graves may be sustained by the detail that



"The cup marked boulder at Vinderød overlain with a section of a map from 1855 with marking of a group of mounds located app. 1 km to the South from the settlement. At the underlying photo of the boulder the most conspicuous cupmarks are highlighted in black. In the second half of the 19th Century the mounds were still visible."

the number of cup marks at the stone at Flensted corresponded with the number of graves. At the stone in Vinderød the number of cup marks corresponds with the number of known mounds situated about 1.0 km south of the site and strangely the pattern of organization of the mounds is almost mirrored in the cup marks on the stone (fig. 6). The mounds were destroyed by ploughing in the beginning of the 20th C. and the position is only known from older maps. However, reports of finds of cremated bones and bronze objects and an excavation in 1999² give an indication of the content and dating.

Conclusion

There are almost as many interpretations as there are archaeologists discussing cup marks. The problem shows however, when we eagerly try to extract the meaning of this phenomenon and the dilemma

becomes apparent when trying to fit one interpretation to all. There are always cup marks appearing in another context than proposed or they do not appear in the constellation they were supposed to. By trying to monocausal explain a phenomenon that widespread in both time, space and context we put up a hindrance for trying to understand the social, religious and mundane life of prehistoric societies, in this instance the later part of the Danish Bronze Age. In the presented cases, the number of cup marks vary as well as the size of the stones and they will almost certainly represent different purposes. The boulders at Vinderød and Mesinge may be a "village calendar" with markings of activities or occasions during the year, while the rock at Vinge may represent a certain recurring occasion when a cup mark was knapped and served as a commemoration for a while. The differing methods of discarding the stones in either a waste pit

or a pit dug for the purpose may simply be a matter of size: small stones and rocks can more easily be lifted and discarded whereas large boulders are difficult to handle and were sought to be taken out of circulation by tipping them over at the spot. However, it may also reflect the various meanings of carving cup marks and that one stone did not serve the same purpose as another, thus reflecting various activities in the daily life at Late Bronze Age settlement.

Recently it has been suggested in an article in this journal (Horn 2015) that cup marks have served different purposes depending on the context and combination of motifs. The present article is a contribution to the ongoing debate and is in keeping with the said interpretation. It deals with a limited number of cases of cup marks appearing in a somewhat neglected context that is deposited in pits on what appear to be ordinary Late Bronze Age settlements. Though small in number the material presented here shows variety in handling both at the time of active use and when their time was over. We have suggested that this also reflects variance in meaning and that carving cup marks were a part of the life in the Late Bronze Age with all its aspects of mundane and ritual activity.

Jens Winther Johannsen Archaeologist ROMU +45 46318149 jenswj@romu.dk

Pernille Foss
Teaching Associate Professor
University of Copenhagen
Saxo Institute,
Section of Archaeology
DIR +45 51298816
foss@hum.ku.dk

Notes:

¹Holbo Herreds Kulturhistoriske Centre, Gilleleje Museum, journalnr. 3220. Excavated 1987

²Stednr. 010510-2. Vinderød sogn. The excavation was initiated by the finds of pieces from a bronze sword or dagger. Only the remnants of a stone set grave and a few centimeters of the original mound were registered.

References

Albrechtsen, E. 1966, Nye fund af skålsten. *Fynske Minder*, bd. 5. 1963-65. p. 173.183. Odense.

Bagge, M. Schifter, 2016, *Kulturhistorisk* rapport. *SBM1220 Flensted I Etape I-III*. Unpublished report on excavation at Flensted by Museum Skanderborg.

Björhem, N. & Säfvestad, U., 1993, Fosie IV. Bebyggelsen under brons- och järnålder. Malmöfynd 6. Malmö Museer.

Borup, P., 2002, No. 483. Birkholmvej. 16.05.15 Østbirk, sb. 183. *Arkæologiske Udgravninger i Danmark*. Digital edition, p. 128.

Bradley, R. 2005, *Ritual and domestic life in Prehistoric Europe*. Routledge. The Cromwell Press, Wiltshire.

Ethelberg, P., 2000, Bronzealderen. In Det Sønderjyske Landbrugs Historie. Stenog bronzealder, redigeret af Ethelberg, P., Jørgensen, E., Meier, D. & Robinson, D. Skrifter udgivet af Sønderjysk Historieforening. Haderslev Museum, p. 123-373.

Felding, L., 2009, Helleristninger i kontekst. Studier af danske helleristninger i relation til landskab og samfund i skandinavisk bronzealder. Unpublished Master Thesis at University of Copenhagen, Faculty of Humanities, Saxo Institute, 15/10/09.

Felding, L., 2015, A rock with a view: new perspectives on Danish rock art. In *Picturing the Bronze Age*, edited by Skoglund, P., Ling, J. & Bertilsson, U. Swedish Rock Arts Series: Vol. 3. Oxford, p. 65-78.

Foss, P., 2001, FRM s190. Grønnehavegård. Vinderød sogn, Strø herred, Frederiksborg amt. 01.05.10, sb. 23. Unpublished report on trial excavation at Vinderød by Frederiksværk Museum.

Foss, P., 2002, No. 39. Grønnehavegård. 01.05.10 Vinderød, sb. 23. *Arkæologiske udgravninger i Danmark* 2001, p. 99. Vejle.

Glob, P. V., 1969, Helleristninger i Danmark. Odense.

Goldhahn, J., 2008a, Hällbildsstudier i norra Europa – trender och tradition under det nya millenniet. Gotarc Serie C. Arkeologiska Skrifter No. 64.

Goldhahn, J., 2008b, Rock Art Studies in Northernmost Europe 2000-2004. In *Rock Art Studies News of the World III*, edited by Bahn, P., Franklin, N. & Strecker, M. Oxbow Books, Oxford, p. 16-36.

Goldhahn, J., 2010, Lofta 309 – en arkeologisk undersökning av ett av Sveriges största skålgropblock. Kalmar Studies in Archaeology VII.

Hjermind, J., 1990, No. 251. Søndervang. 13.07.09 Mammen, sb. 41. *Arkæologiske Udgravninger i Danmark* 1989, p. 73. Skjern.

Horn, C., 2015, Cupmarks. *Adoranten* Vol. 2015, p. 29-43. Tanumshede.

Högberg, A., 2009, Lithics in the Scandinavian Late Bronze Age: sociotechnical change and persistence. *BAR International series* 1932.

Jensen, K. Bjerring, 1996, No. 338. Tvilumgård. 16.01.14 Tvilum, sb. 204. Arkæologiske Udgravninger i Danmark 1995, p. 92. Skjern.

Jørgensen, M. S., 1972., Nye helleristningsfund i Holbæk Amt. Fra Holbæk Amt 1971-72, p. 55-86. Holbæk.

Lidén, O., 1938, Hällgröpningsstudier i Anslutning till nya Sydsvenske Fund. Lund.

Lomborg, E., 1973, En landsby med huse og kultsted fra ældre bronzealder. *Nationalmuseets Arbejdsmark*, p. 5-14. København.

Matthes, L., 2016, Sønderjyske helleristninger og skåltegnssten – et update. *Sønderjysk månedsskrift* 2016, nr. 5, p. 167-173. Åbenrå. Overgaard, K. Glintborg, 2004, No. 289 Glattrup V. 13.01.02 Dommerby, sb. 86. Arkæologiske Udgravninger i Danmark. Digital edition, p. 80.

Persson, C. Price, 2017, Danmarks ældste helleristninger fundet på Bornholm. www.videnskab.dk 20/07/17

Prangsgaard, K., 2014, Rituel ild – kogegrubefelter på Fyn. In Kosmologien i yngre bronzealders lokale kulturlandskab. Seminarrapport fra seminaret "Kosmologien i yngre bronzealders lokale kulturlandskab" afholdt i Holstebro, 7. marts 2013, redigeret af Boddum, S., M. Mikkelsen & N. Terkildsen. Yngre bronzealders kulturlandskab vol. 2, 2012, p. 85-102.

Rostholm, H. 2013, Helleristninger – en sjælden fundgruppe på Herning-egnen. *Midtjyske fortællinger* 2013, p. 59-84. Herning.

Runge, M. 2012, Yngre bronzealders bebyggelse inden for et 350 hektar stort undersøgelsesområde sydøst for Odense. In Bebyggelsen i yngre bronzealders kulturlandskab. Seminarrapport fra seminariet "Bebyggelsen i yngre bronzealders lokale kulturlandskab" afholdt i Holstebro, 10. marts 2011, redigeret af Boddum, S., Mikkelsen, M. & Terkildsen, N. Yngre bronzealders kulturlandskab vol. 2, 2012, p. 113-139.

Vegger, P. Bugge, 1986, No. 152 Horsager. 11.05.04 Hvidbjerg. Bronzealder. *Arkæologiske Udgravninger i Danmark* 1985, p. 91. Herning.

Wahlgren, K. H., 2004, Switching Images On and Off. In *Prehistoric Pictures as Archaeological Source*, edited by Milstreu, G. & Prøhl, H. Gotarc Serie C, Arkeologiska Skrifter 50. Gothenburg.

Warmind, M., 2015, Religionsvidenskaben og det arkæologiske materiale. KUML. Årbog for Jysk Arkæologisk Selskab 2015, p. 253-263.

Whitley, D., 2001, Handbook of rock art research. Walnut Creek.