



# LUND UNIVERSITY

## The proper way of dwelling at the Early Neolithic gathering site of Almhov in Scania, Sweden

Rudebeck, Elisabeth; Macheridis, Stella

*Published in:*  
Neolithic Diversities/Acta Archaeologica Lundensia, Series In 8°

2015

[Link to publication](#)

*Citation for published version (APA):*

Rudebeck, E., & Macheridis, S. (2015). The proper way of dwelling at the Early Neolithic gathering site of Almhov in Scania, Sweden. In K. Brink, S. Hydén, K. Jennbert, L. Larsson, & D. Olausson (Eds.), *Neolithic Diversities/Acta Archaeologica Lundensia, Series In 8°* (Vol. 65, pp. 173-187). Department of Archaeology and Ancient History, Lund University.

*Total number of authors:*  
2

### General rights

Unless other specific re-use rights are stated the following general rights apply:  
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117  
221 00 Lund  
+46 46-222 00 00

The background of the cover is a photograph of a large, weathered rock formation. The rocks are covered in patches of yellow and green moss. In the background, there is a clear blue sky, some trees, and a small building with a red roof. The overall scene is a rural landscape.

# **NEOLITHIC DIVERSITIES**

**Perspectives from  
a conference in  
Lund, Sweden**

**Edited by**

**Kristian Brink**

**Susan Hydén**

**Kristina Jennbert**

**Lars Larsson**

**Deborah Olausson**





The members of the conference “What’s New in the Neolithic”, May 2013. Photo by Kristina Jennbert.

ACTA ARCHAEOLOGICA LUNDENSIA  
SERIES IN 8°, No. 65

# Neolithic Diversities

Perspectives from a conference in Lund, Sweden

Editors:

Kristian Brink, Susan Hydén,  
Kristina Jennbert, Lars Larsson & Deborah Olausson

Published with grants from The Royal Swedish Academy of Letters,  
History and Antiquities and Stiftelsen Elisabeth Rausings minnesfond.

Cover photo: The dolmen at Hofterup, western Scania. Photo by Kristina Jennbert 2012

© Department of Archaeology and Ancient History, and the authors 2015

Layout: Stilbildarna i Mölle/Frederic Täckström

Printed by: Elanders Fälth & Hässler, Värnamo 2015

Distribution: HT-skriftserier, [www.ht.lu.se/skriftserier](http://www.ht.lu.se/skriftserier). Email: [skriftserier@ht.lu.se](mailto:skriftserier@ht.lu.se)

ISBN 978-91-89578-60-9

ISSN 0065-0994

# Contents

Preface	7
<b>I. PERSPECTIVES ON PEOPLE, IDENTITY AND PRACTICE</b>	
Paleodemography of maritime hunter-gatherers and the quest for forager baseline demography	11
<i>Torbjörn Ahlström</i>	
Neolithic depositional practices at Dösemarken – a discussion of categorization	21
<i>Åsa Berggren</i>	
New insights into early farming practice and diet from stable isotope analysis of crop assemblages	33
<i>Amy Bogaard</i>	
Growth and decline?	43
Population dynamics of Funnel Beaker societies in the 4th millennium BC	
<i>Martin Hinz</i>	
The cultural encounters of neolithization processes	52
A discussion of different ways to understand plurality	
<i>Anders Högberg</i>	
Creolization processes in the later south Scandinavian Neolithic	58
An approach to cultural heterogeneity	
<i>Rune Iversen</i>	
Cultural identity?	66
The Middle Neolithic Pitted Ware complex in southern Scandinavia	
<i>Kristina Jennbert</i>	
Agency, creolization and the transformation of tradition in the constitution of the earliest Neolithic in southern Scandinavia	75
<i>Mats Larsson</i>	
Animal husbandry and social identities during the Neolithic in southern Sweden	80
<i>Ola Magnell</i>	
The Neolithic house as a procurement, production and consumption unit	89
The case of the Late Neolithic at Çatalhöyük	
<i>Arkadiusz Marciniak</i>	
Burial in the Swedish-Norwegian Battle Axe Culture: questioning the myth of homogeneity	98
<i>Deborah Olausson</i>	
A tale of the tall	107
A short report on stature in Late Neolithic–Early Bronze Age southern Scandinavia	
<i>Anna Tornberg</i>	

## II. PERSPECTIVES ON MONUMENTS

Frydenlund – Early Neolithic settlement and “barkae” structures in the Sarup area <i>Niels H. Andersen</i>	117
Megaliths and timber structures in northeast Scania, Sweden <i>Anders Edring</i>	128
The Hamremoens enclosure in southeastern Norway An exotic glimpse into the process of Neolithization <i>Håkon Glørstad and Steinar Solheim</i>	139
Occupy time! The construction of design and monuments in Tiefstich central Europe <i>Johannes Müller</i>	153
Transforming place and architecture through cremation Cremation traditions at the third millennium BC monument complex at Forteviot, central Scotland <i>Gordon Noble and Kenneth Brophy</i>	164
The proper way of dwelling at the Early Neolithic gathering site of Almhov in Scania, Sweden <i>Elisabeth Rudebeck and Stella Macheridis</i>	173
The diversity of settings Ritual and social aspects of tradition and innovation in megalithic landscapes <i>Almut Schülke</i>	188
News from Frälsegården Aspects of Neolithic burial practices <i>Karl-Göran Sjögren</i>	200

## III. PERSPECTIVES ON MATERIAL CULTURE

An ABC of lithic arrowheads A case study from southeastern France <i>Kevan Edinborough, Enrico R. Crema, Tim Kerig and Stephen Shennan</i>	213
The scent of sandstone – exploring a TRB material <i>Susan Hydén</i>	224
Fragmentation during the Neolithic Transformation and enchainment from a south Swedish perspective <i>Lars Larsson</i>	233
Michelsberg and Oxie in contact next to the Baltic Sea <i>Doris Mischka, Georg Roth and Katrin Struckmeyer</i>	241

# Preface

In the study of the distant human past, certain events and periods have come to represent decisive passages from one human state to another. From a global perspective, the characteristic feature of the last ten thousand years is that people in different parts of the world, and at different points in time, started to grow plants and domesticate animals. The rise and dissemination of agriculture were crucial factors for the continued existence of humankind on earth. The incipient agriculture is often regarded as the very beginning of human *culture*, as it has traditionally been perceived in western historiography, that is, as control over nature and the “cultivation” of intellectual abilities.

As a result of the increasing national and international interest in the northern European Neolithic (4000–2000 BC), combined with large-scale archaeological excavations which helped to nuance and modify the picture of the period, senior researchers and research students formed a Neolithic group in 2010. The Department of Archaeology and Ancient History at Lund University served as the base, but the group also included collaborators from Linnaeus University and Södertörn University, and from the Southern Contract Archaeology Division of the National Heritage Board in Lund and Sydsvensk Arkeologi in Malmö and Kristianstad.

Meetings and excursions in the following two years resulted in the holding of an interna-

tional conference in Lund in May 2013 entitled “What’s New in the Neolithic”. Invitations to this conference were sent to two dozen prominent Neolithic scholars from northern and central Europe.

The conference was a great success, with presentations and discussions of different aspects of innovative research on the Neolithic. The members of the Neolithic group took an active part in the discussions following the presentations.

It was decided before the conference that the papers would be published. The members of the Neolithic group also had the opportunity to contribute current research to this publication.

After the conference an editorial group was set up, consisting of Dr Kristian Brink, PhD student Susan Hydén, Professor Kristina Jennbert, Professor Lars Larsson and Professor Deborah Olausson.

A grant was received from Riksbankens Jubileumsfond for the meetings and excursions of the Neolithic group 2010–2013. We would like to thank The Royal Swedish Academy of Letters, History and Antiquities and Berit Wallenbergs Stiftelse for grants which enabled us to hold the conference “What’s New in the Neolithic”. Grants from The Royal Swedish Academy of Letters, History and Antiquities, and Stiftelsen Elisabeth Rausing’s Minnesfond financed the layout and printing of this publication.



## II. PERSPECTIVES ON MONUMENTS

# The proper way of dwelling at the Early Neolithic gathering site of Almhov in Scania, Sweden

*Elisabeth Rudebeck and Stella Macheridis*

## Abstract

The Early Neolithic (*c.* 4000–3500 BC) site of Almhov, located in southwestern Scania, Sweden, is interpreted as a gathering and feasting site, subsequently transformed into a burial site with ancestral monuments. The focus of the article is on the pit pairs and pit clusters at the site, and on the differential distribution of artefacts and animal bones within them, thereby touching upon more general topics such as material culture patterning, structured deposition and the categorization of animals during the Early Neolithic.

Sydsvensk Arkeologi AB, Erlandsrovägen 5, SE-218 45 Vintrie, Sweden. [elisabeth.rudebeck@sydsvenskarkeologi.se](mailto:elisabeth.rudebeck@sydsvenskarkeologi.se)

Department of Archaeology and Ancient History, LUX, Lund University, Box 192, SE-221 00 Lund. [stella.macheridis@ark.lu.se](mailto:stella.macheridis@ark.lu.se)

## Introduction

THE ALMHOV SITE in southwestern Scania was excavated by Malmö Heritage in 2001–2002, as part of the City Tunnel Project, which cleared the ground for the new railway around the city of Malmö (Figs. 1 & 2). Ten hectares of topsoil were cleared by excavators, revealing pits and burials from the Early to the Middle Neolithic and longhouses from the Late Neolithic–Early Bronze Age and the Early Iron Age (Gidlöf 2006, 2009; Gidlöf *et al.* 2006; Brink 2009). The features were located on a low hillock, about 14 metres AMSL. From this level the terrain sloped gently towards the west and east. To the east of the site there was once a bog which was artificially drained in modern times. The distance from Almhov to the coast during the Early Neolithic was about 1.5 kilometres.

Of the roughly 320 Early and Middle Neolithic features on the site, the majority were

dated to the earliest phase of the Early Neolithic (EN I), *c.* 4000–3500 BC. Among the features were about 200 pits as well as traces of four façade structures with adjacent burials and two dolmens (Gidlöf *et al.* 2006). Of the pits, around 190 were dated to the earliest phase of the Early Neolithic. One façade structure had traces of a ploughed-out long barrow to the west of the façade. The Early Neolithic artefacts, which were mainly found in the pits, include approximately 700 kilos of worked flint and flint tools, 390 kilos of pottery, 160 kilos of used and worked stone and 41 kilos of animal bones.

The abundance of pits and the large amount of artefacts and animal bones distinguishes Almhov from other known sites from the earliest Early Neolithic (*cf.* Fig. 3). Most known sites from this period in Scania and adjacent areas appear to have been much smaller (Larsson 1984; Malmer 2002; Andersson 2004;



Fig. 1. Map of Almhov with all features from the Early Neolithic and early Middle Neolithic. The longhouse northeast of the pit concentration was dated to the Early Neolithic II – Middle Neolithic A.

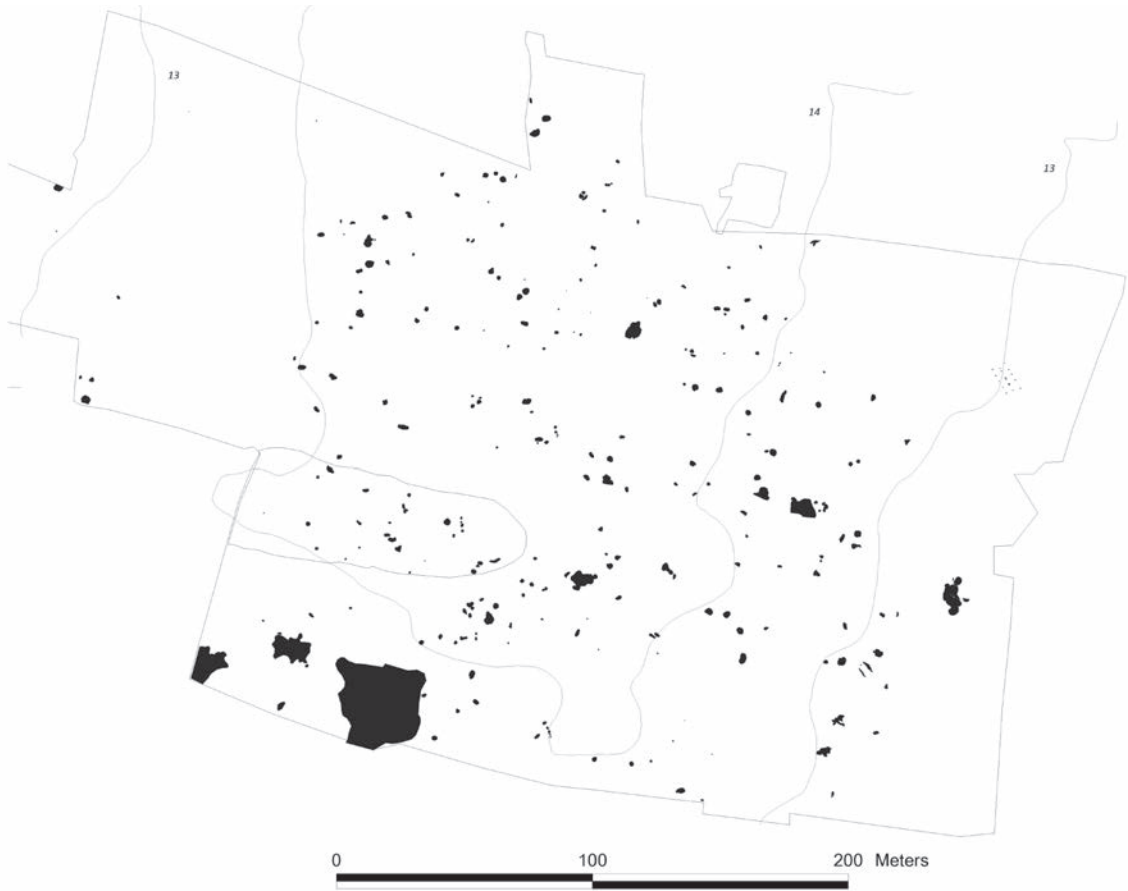




Fig. 2. Aerial photo of Almhov during the excavation in 2001. Photo: Perry Nordeng.

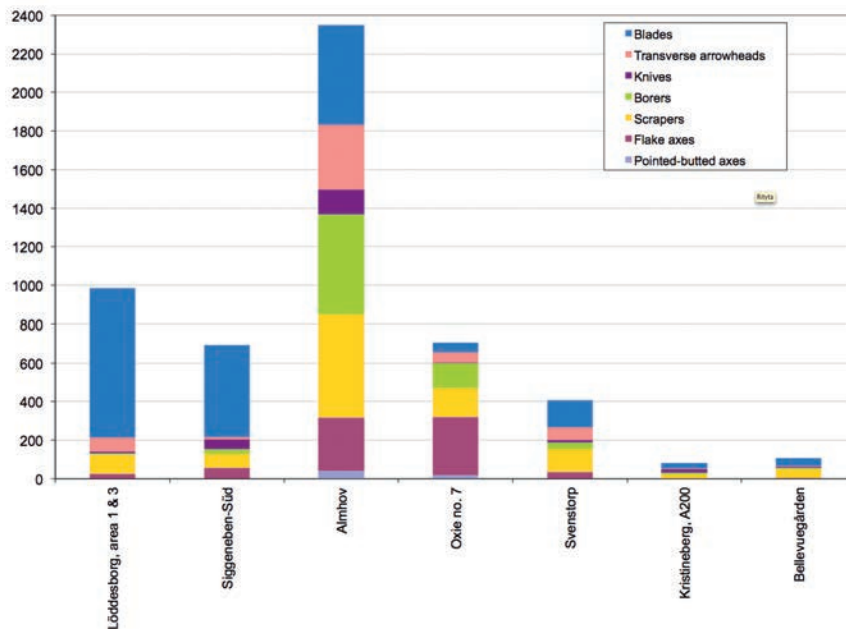


Fig. 3. Diagram showing the amount of various categories of flint tools from Almhov and other well-known sites from the Late Mesolithic (Löddesborg area 1 & 3) and Early Neolithic in western Scania and from the early TRB site Siggeneben-Süd in Schleswig-Holstein. Sources: Löddesborg, Jennbert 1984; Oxie no. 7 (surface collection), Svenstorp, Skabersjö 26:20, Stolpalösa and Bellevuegården, Larsson 1984; Siggeneben-Süd, Meuers-Balke 1983; Kristineberg feature A200 (occupation deposit below two long barrows), Rudebeck & Ödman 2000.

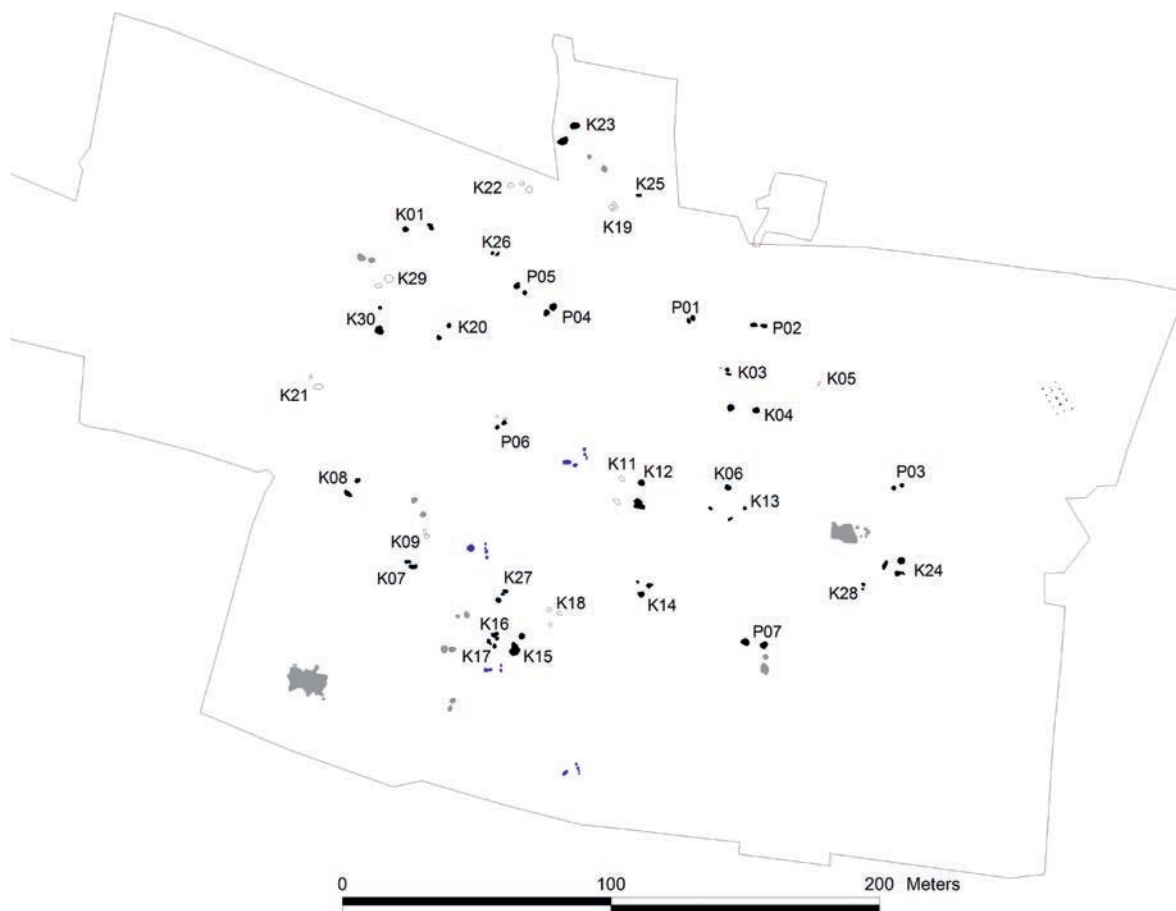


Fig. 4. Pit pairs and pit clusters at Almhov. Black: pits analysed as to contents and shown in fig. 6; grey: probable pit pairs/clusters, not excavated; unfilled: partly excavated pits, not included in the analysis. The façade structures with burials are shown in blue and the two dolmens are shown in grey.

Rudebeck 2006, with cited references). This may partly be due to the delimitation of the excavated areas, and in the case of Oxie no. 7 the finds were collected from the surface, but it is clear that Almhov-type sites were not common. Based on analogies with anthropologically and archaeologically ascertained feasting sites from different parts of the world (Dietler & Hayden 2001; Twiss 2008), Rudebeck (2010) has interpreted Almhov as a gathering and feasting site.

In this paper we discuss the possible significance of patterns in the distribution of artefacts

and animal bones in the pit pairs and pit clusters at Almhov. The main purpose is to consider the structure of the dwelling, waste management and possible categorizations of animals and animal body parts during the earliest phase of the Early Neolithic.

### Pit patterns

Although not all pits at Almhov were excavated, it was estimated that roughly 190 pits were from the Early Neolithic (Gidlöf *et al.* 2006; Gidlöf 2009). At least 78 were placed in pairs





Fig. 5. Photo of the excavated pit pair P05 (pits 3868 and 3869). Photo: Karina Hammarstrand Dehman, Malmö museer.

and occasionally in clusters with three pits. The pairs and clusters were dispersed across the site, but with a concentration on the perimeter of a roughly circular area, measuring about 200 metres across. The following analysis is based on 58 excavated pits, making up 23 pairs and four clusters with three pits in each (Fig. 4). The remaining 20 pits were either not excavated or only partly excavated, and were therefore not included in the analysis.

The pits varied in size and depth, from one to roughly three metres across, and from 0.15 to 0.70 metres in depth (Fig. 5). Most of them contained two or three layers, and the artefacts and bones were mainly found in the top layer, thus reflecting activities adjacent to the pits. Radiocarbon analyses of organic material from 12 pits and the type of pottery and worked flint from the pits indicate that most of them were backfilled 3900–3700 cal. BC.

The first basic analysis of the 27 pairs and

clusters reveals that one pit in each pair/cluster contained the vast majority of pottery, flint flakes, flint tools and animal bones, while the other (or the other two) was either devoid of finds or contained considerably less (Fig. 6). On average, the pit with the majority of artefacts within each pair/cluster contained 72% of the animal bones (weight), 69% of the pottery (weight), 73% of the flint flakes (number) and 73% of the flint tools (number) (Rudebeck 2010).

The amount of pottery in the pits varied between a few grams and almost 30 kilos. The minimum number of pots was estimated for 28 pits and was shown to vary between one and 60. A majority of pits contained sherds from 1–10 vessels. Vessels with a rim diameter of less than 15 centimetres were slightly over-represented at Almhov, possibly indicating a focus on drinking.

Pottery from 56 pits was analysed as to

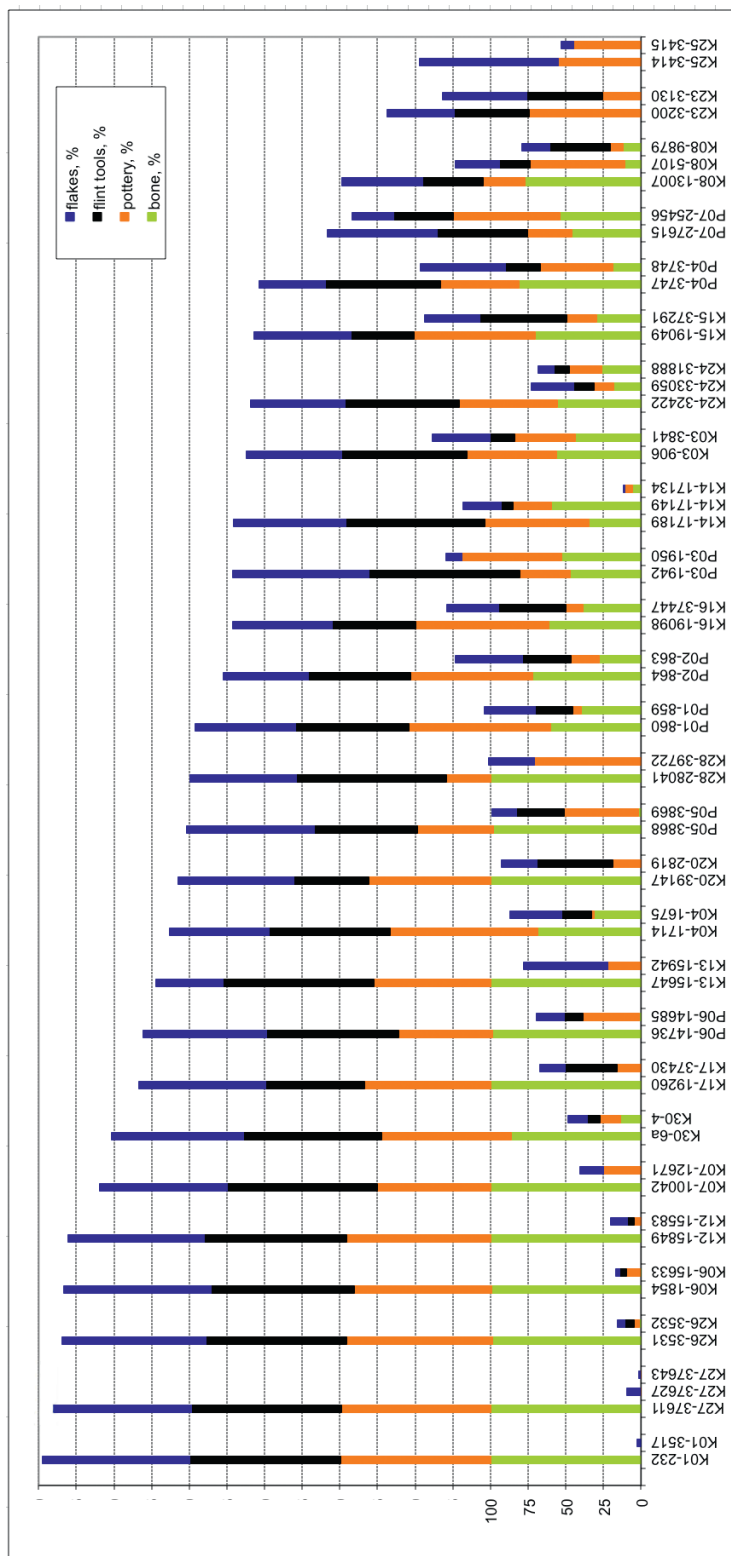


Fig. 6. Diagram of 58 pits in 27 pairs and clusters (Po1, Ko1 etc., cf. fig. 4), grouped together and with each artefact category (number of flint flakes, number of flint tools, pottery weight and weight of animal bones) in per cent for each pit within each pit pair/cluster. In order to facilitate comparison, the bars representing each artefact category have been piled on top of each other, and the pit pairs/clusters have been arranged in the following order: from the most dissimilar pair, to the far left, to increasingly similar pairs/clusters, to the right. Each artefact category is represented by one bar with percentages for each pit. Hence, pit 232 in the pair Ko1, to the far left, contained 100% of the bones, pottery and flint tools and almost all of the flint flakes from the pit pair Ko1.

Table I. Dated Early Neolithic and early Middle Neolithic (MN A) features at Almhov with associated pottery styles and presence (x) / absence (-) of red deer bone and antler. Dates based on charcoal are excluded. \* = burnt bone from cattle, sheep or pig; \*\* = this burial was located to the westernmost part of Almhov, outside of the central area shown in fig. 2. FU = pits excavated during the trial excavation.

Feature no & type	Dated material	Lab no.	BP	Cal. BC (2 $\sigma$ )	Associated pottery style	Red deer bone and antler
A19098, pit	Animal bone*	Ua-21474	5415±110	4460-3980	Oxie	-
A19049, pit	Cereal	Ua-21383	5065±60	3970-3710	Oxie	x
A25594, pit	Hazel nut shell	Ua-21385	5055±70	3980-3690	Oxie	x
A39833, posthole in hut 13	Hazel nut shell	Ua-21384	5045±45	3960-3710	MN A (one sherd)	-
A6b (FU), pit	Cereal	Ua-17156	5000±95	3980-3630	Oxie	x (A6)
A1942, pit	Cereal	Ua-32530	5000±40	3950-3690	Oxie	x
A61 (FU)/A39437, posthole in façade 1	Cereal	Ua-17158	4990±70	3950-3650	-	-
A27048, pit	Pig bone	Ua-22166	4960±50	3940-3640	Oxie?	-
A32422, pit	Cereal	Ua-32532	4940±40	3800-3640	Oxie	x
A3748, pit	Cereal	Ua-23873	4930±45	3800-3640	Oxie	-
A35862, pit below Dolmen 1	Cereal	Ua-32533	4910±45	3790-3630	Oxie	-
A31888, pit	Cereal	Ua-32531	4880±45	3770-3530	Oxie	x
A1854, pit	Cereal	Ua-21382	4780±50	3660-3370	Svenstorp, in top layer	-
A300 (B), façade 5?	Cereal	Ua-33027	4660±40	3630-3350	Svenstorp	-
A437, burial**	Human bone	Ua-18757	4635±70	3650-3100	Svenstorp	-
A13529, a well below Dolmen 2	Cattle bone	Ua-22167	4605±50	3550-3100	Oxie	x
A11772, pit	Cereal	Ua-21380	4575±55	3520-3090	Svenstorp/ Bellevuegård	-
A2210, posthole in house 12	Cereal	Ua-21329	4570±55	3510-3090	Svenstorp – MN A	-
A18958, burial by façade 3	Human bone	Ua-21333	4495±45	3360-3020	Svenstorp?	-

typological traits (pits in K18 and K29 are excluded because they were only partly excavated; cf. Fig. 4). Oxie type pottery, characterized by folded rims with round or simple dragged impressions around the rim, is the most abundant. However, Svenstorp type pottery, characterized by cord impressions, an increasing number of motifs on the rim and

vertical decoration on the belly, is also present. The pottery types were distributed in the following way:

- in ten pairs/clusters both/all pits ( $\Sigma = 21$ ) contained only Oxie type pottery
- in eight pairs one pit ( $\Sigma = 8$ ) contained only Oxie type pottery while the other pit con-

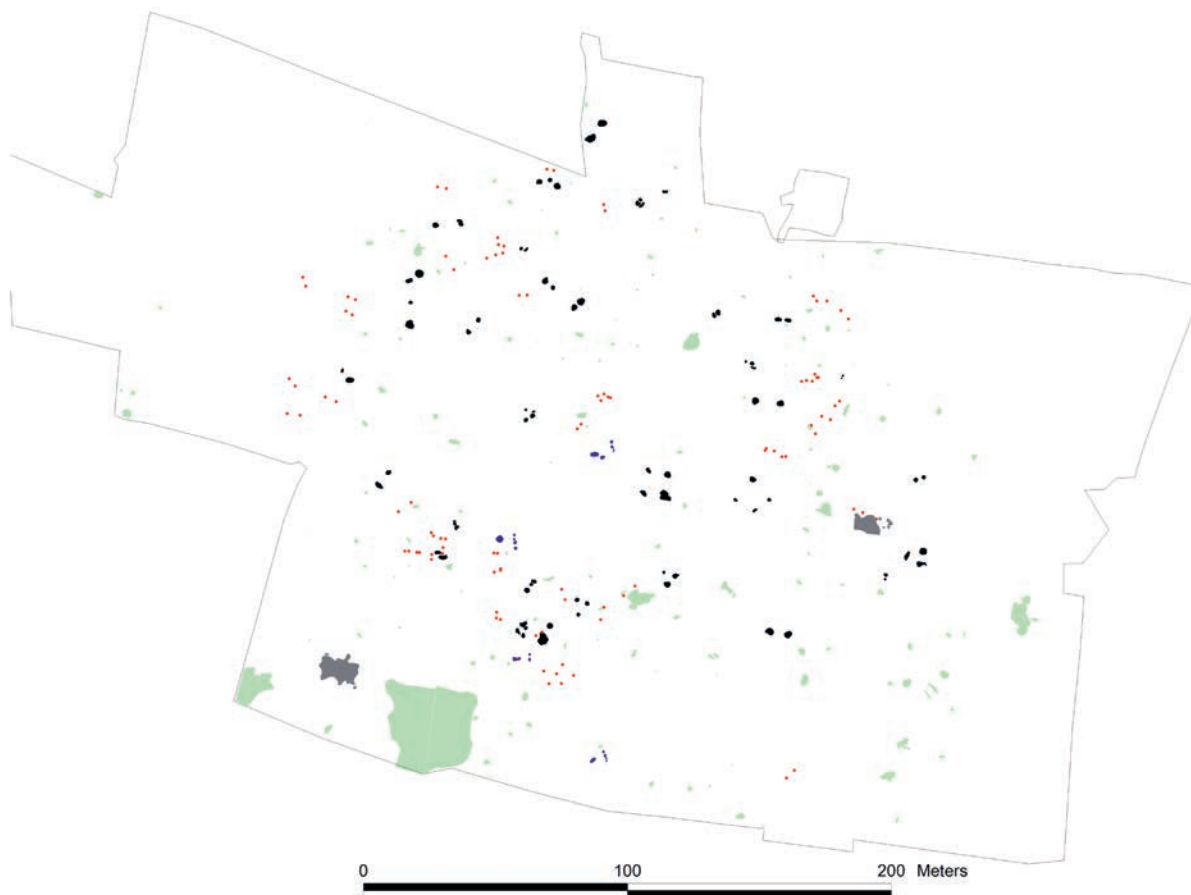


Fig. 7. Map with pit pairs/pit clusters (black), hypothetical post pairs indicating huts or tents (red dots), façade structures with adjacent burials (blue), dolmens (dark grey) and other Early Neolithic or early Middle Neolithic features (light green).

tained pottery that was not typologically identifiable

- in five pairs one pit contained only Oxie type pottery ( $\Sigma = 5$ ) and the other only Svenstorp type pottery ( $\Sigma = 5$ )
- in one pair one pit ( $\Sigma = 1$ ) contained only Svenstorp type pottery and the other pottery that was not typologically identifiable
- in two pairs, both pits ( $\Sigma = 4$ ) contained only Svenstorp type pottery

Traditionally, there are two interpretations concerning the two types of pottery: (1) the two styles signify a possible dual organization dur-

ing the Early Neolithic, although the Svenstorp type pottery may have been slightly later (Larsson 1984), and (2) both pottery styles were produced by the same group of people, but the Svenstorp type pottery was used in, and possibly produced for, ritual contexts (Koch 1998). The evidence from Almhov supports both interpretations: Svenstorp type pottery seems to have appeared later, *c.* 3700 cal. BC, and it was associated with burials to a larger extent than the Oxie type pottery (Table 1).

Moreover, there was a clear association between Oxie type pottery and remains of red deer at the site. Bones and antlers from red deer

occurred in 15 of the 34 pits with Oxie type pottery but only in one of the ten pits with Svenstorp type pottery.

The differences in backfill between the pits in each pair and cluster suggest a functional difference between the pits, one being used for refuse and the other for storage. The pits that were backfilled with the bulk of the waste indicate a spatial association with craft production, butchering, cooking and consumption. Based on identifiable rim sherds, these pits on average contained sherds from 20 pots. We interpret these as refuse pits. The pits with less waste contained on average sherds from 11 pots. Moreover, pots with wider rims, 21–36 centimetres across, were more frequent in these pits. The presence of fewer and larger pots and less waste indicates that these pits were used for storage and that they were backfilled at a later stage than the refuse pits, possibly just before the site was abandoned (Rudebeck 2010).

### Posthole patterns

Traces of dwellings adjacent to the pits were not systematically searched for during the excavation. However, traces of a longhouse from the Early Neolithic II–Middle Neolithic A were found northeast of the pit concentration (Fig. 1; Table I) (Gidlöf *et al.* 2006). Of the roughly 1740 postholes that were documented at Almhov, some 1350 were excavated. Most of them belonged to longhouses from later periods (Gidlöf *et al.* 2006). During the post-excavation analysis it was discovered that many of the unexcavated postholes appeared in pairs, usually 2–4 metres apart, and sometimes up to 6 metres apart. These hypothetical post pairs, in all about 30 pairs, were located on the periphery of the Early Neolithic activity area, often in proximity to the pit pairs and pit clusters (Fig. 7). Rudebeck (2010) has suggested that these postholes may have been traces of small huts or tents, connected to the pit pairs/clusters. Although

it is not possible to verify this interpretation, there is evidence of ten similar posthole pairs at other Early Neolithic sites in the vicinity, and postholes in a pair at the nearby site Elinelund 2B have been dated to the Early–Middle Neolithic (Sarnäs & Nord Paulsson 2001).

### Almhov and the flint mines at Södra Sallerup

Evidence from the flint mining site at Södra Sallerup, about 11 kilometres or one hour's walk – northeast of Almhov, reveals various connections between the sites. The earliest flint mines are of the same date as the pits at Almhov, and five excavated posthole pairs adjacent to the mines have been interpreted as traces of huts or tents (Rudebeck 1987; Nielsen & Rudebeck 1991). The association between the sites is evident also from the fact that the majority of the roughly 40 pointed-butted axes from Almhov were made of Senonian flint of the same type as the mined flint. Moreover, blanks for pointed-butted axes were clearly produced in the mining area (Rudebeck 1994, 1998; Jansson 1999; Högberg 2006) and axes of the same type, and of the same type of flint, were also produced at Almhov (Gidlöf *et al.* 2006).

### Dispersal patterns of animal bones in pit pairs and pit clusters

The animal bone assemblage dated to the Early Neolithic from Almhov amounts to some 41 kilos, making it the largest bone collection from the Early Neolithic in south Scandinavia (Rudebeck 2010). About one third of the mammal bones have not been possible to identify as to species and body parts. The 58 pits included in the 27 analysed pairs/clusters (cf. Figs. 4 & 6) contained about 30 kilos, 4760 fragments, of animal bones, thus constituting 73% of the animal bones from Early Neolithic features at the site. The animal bone distribu-



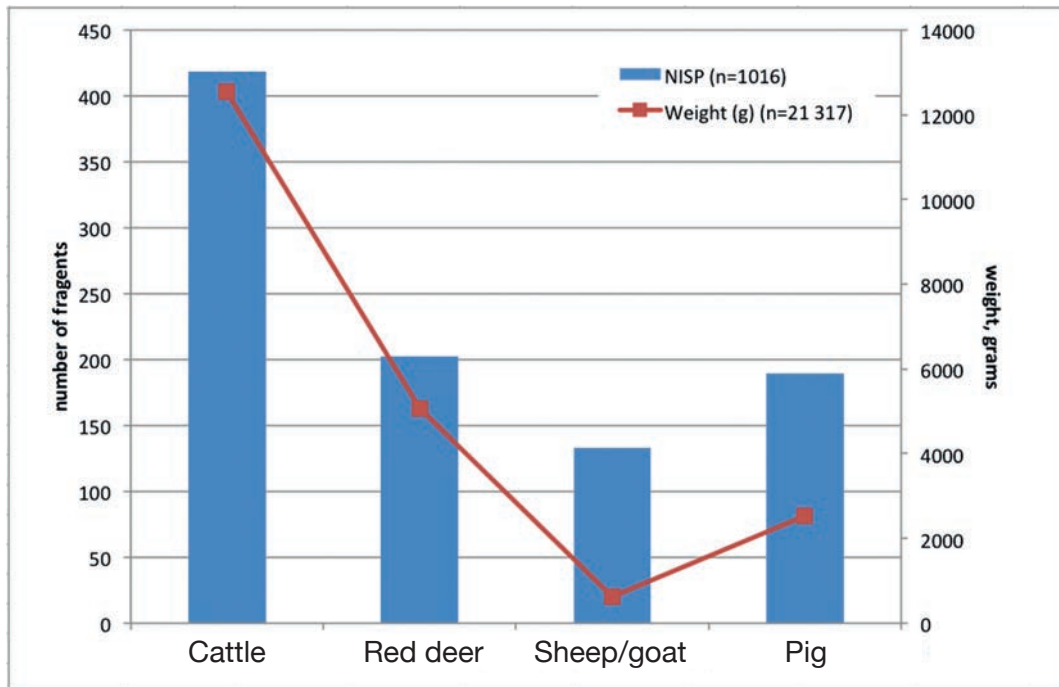


Fig. 8. Distribution of fragments and weight of bones from the most abundant species in 47 pits, making up 22 pit pairs and pit clusters (11 pits in five pairs/clusters shown in fig. 4 are excluded in the diagram, due to the absence of bones or the atypical species representation).

tion in the pit pairs/clusters has been studied in an attempt to discern possible differential treatment of different species and different body parts (Macheridis 2011b).

With the exception of K03, K23 and K25, all pit pairs/clusters contained bones that were identified as to species in at least one of the pits, and the distribution of these showed some general characteristics. The pair K15 and the cluster K24 are excluded from the analysis because of their unusual species representation, differing from the average (Macheridis 2011b:34). Fig. 8 illustrates the distribution of the most abundant species from the pits: cattle, red deer, pig and sheep/goat (including loose teeth, horns and antlers). The following analysis focuses on these species. Among cattle and sheep/goat cranial fragments, especially loose teeth, dominate, due to taphonomic factors. Therefore loose teeth are excluded from the anatomical distribution

illustrated in fig. 9. Also a few fragments of horn and red deer antler, making up some 3.5% of the fragments and 50% of the weight of the bones from this species, have been excluded, since antler counts also included tools. With this in mind, cranial fragments can still be considered a majority, together with long bones, metapodials and phalanges. Cranial fragments of cattle are the most abundant amongst the identified specimens. Fragments from the rib cage and the pelvic region and vertebrae are largely underrepresented in all four species. The underrepresentation of spongy elements is most probably a consequence of taphonomic destruction. Unfortunately, a more thorough taphonomic analysis has only been partly done elsewhere (Jonsson 2005; Macheridis 2011b).

Beside these overall characteristics, the distribution of animal species and body parts (simplified here to cranial/postcranial categories)

Table II. Pit pairs/clusters divided into groups, based on the distribution of bone from cattle, red deer, pig and sheep/goat, and body parts (n=941 fragments).

Group	Characteristics	Cattle	Red deer	Sheep/goat	Pig
A (9 pairs; 19 pits)	One bone-free pit.	Cranial fragments exclusively appear in 6 pit pairs.	In 3 pit pairs. Always together with domestic species, in one case with cattle only.	In 5 pit pairs.	In 3 pit pairs. Never the only species.
B (3 pairs; 6 pits)	Both pits contained the same number of species.	In all 3 pit pairs, 4 pits. Cranial fragments appear exclusively in one of the pits in one pair twice.	In 2 pit pairs. Once opposing cattle and once together with cattle. Only represented by antler or postcranial fragments.	In 2 pit pairs, once in both pits of a pair.	In 2 pit pairs. Never the only species.
C (3 pairs; 6 pits)	One pit with one species, the other with three or more species.	The only species in two cases. Cranial and postcranial fragments.	In 2 pit pairs. Only represented by antler or postcranial fragments.	The only species in one pit.	In 2 pit pairs. Never the only species.
D (7 pairs; 16 pits)	Both pits contained the same species, but in one of the pits one of the species was excluded.	Cranial fragments in all pits; exclusively in 5 pits (including antler and loose teeth).	In 4 pit pairs/clusters. Most commonly the "excluded" species in one or more pits of a cluster.	In 5 pit pairs/clusters, in 7 pits. Never the only species.	In all pairs/clusters, in 7 pits. Never the only species.

in and between the pit pairs and pit clusters shows some general patterns. Based on species representation, the features can be divided into four groups (Table II). The most common distribution is pit pairs within which one pit contained all of the bones (group A). Group D is difficult to interpret, since the pattern seems to be more random, and is not discussed further.

The analysis shows that cattle bones were the most common. In pits with only one identified species, it was almost always cattle (Macheridis 2011b:32). That the bone-free pits often also lacked artefacts of flint and pottery implies a practice in which the way waste was managed reflects cultural behaviour (cf. Fig. 6). The filling of pits clearly followed a certain order concerning different types of waste, and animal bones were assessed according to the categorization of species and body parts (cf. Marciniak 2005, p. 216).

Apart from the pattern of one bone-free pit in the pairs (group A), the strongest pattern is the exclusive presence of cranial fragments (also including loose teeth) in many of the pits. This can be seen in group A, where the pit which contained bones almost always contained cranial fragments only. These scattered cranial bones were often very fragmented and few in each pit (Jonsson 2005). A possibility is that these fragments do not represent butchering waste, but swept-down fragments of skulls or crania on display adjacent to the pits, similar to the display of horned cattle skulls on Michelsberg sites in central Europe (Lichter & Weber 2010). That animal skulls had a special significance is supported by other features at Almhov. One example is one pit (A27048; Table I) which contained eleven juvenile pig mandibles (and no other bones), interpreted

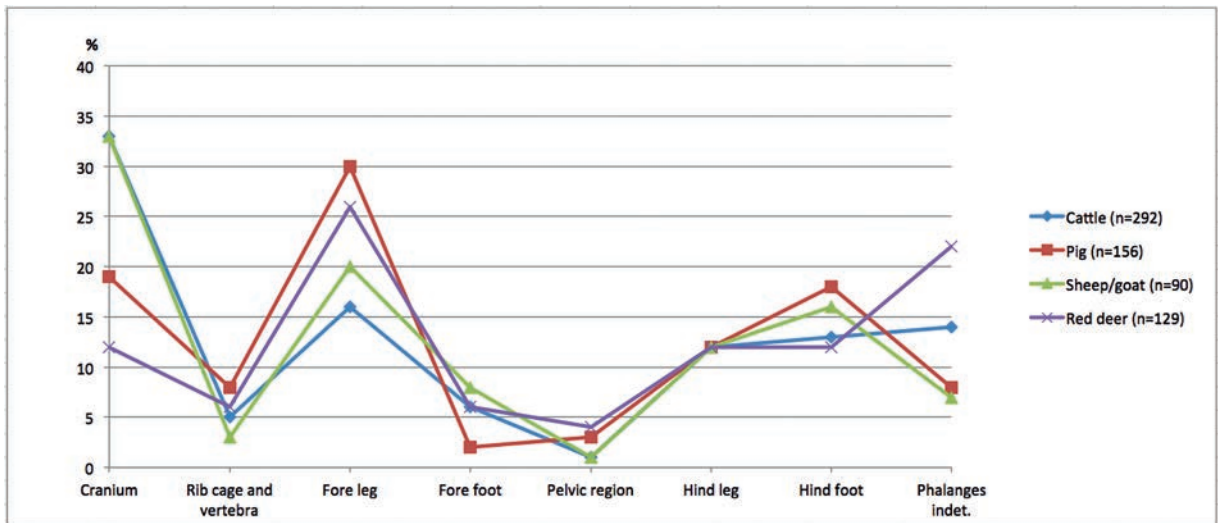


Fig. 9. Anatomical distribution in 52 pits included in 24 pit pairs and pit clusters. Antler and horn fragments as well as loose teeth are excluded. Bones from each body part are shown in percentage of the total number of fragments from the respective species.

as a ritual deposition (Welinder *et al.* 2009, p. 149). Another example is the deposition of a red deer antler in a façade structure below one of the dolmens (Rudebeck 2010; Macheridis 2011a). Both skulls and antlers are regarded as particularly significant and powerful symbols in many cultures (e.g. Larsson 1988; Schulting 1996; Harrod 2000, pp. 113 ff.; Schulting & Richards 2001; Nilsson 2008, p. 88), strengthening these arguments. As mentioned above, a detailed taphonomic analysis with regard to the degree of e.g. weathering and gnawing is lacking. Such an analysis could test this hypothesis further, in terms of handling and exposure of the bones before deposition.

In a correspondence analysis of the distribution of animal species in 83 Early Neolithic pits at Almhov (not only pits in pairs and clusters), one pattern was that bones from red deer did not usually coexist with bones from domestic species (Welinder *et al.* 2009, p. 151). The differential distribution of cattle and red deer in the pits indicates a possible dualism in the categorization of these animals (cf. Welinder

*et al.* 2009, p. 151; Marciniak 2005, p. 205). However, a closer look at the species distribution in the pit pairs/clusters does not fully reaffirm the conclusion. Red deer is the second most abundant species. When red deer bone *did* occur with bones of domestic species, it was always together with cattle bone. Therefore, it is problematic to assume a dualism without recognizing the possibility of a more complex categorization concerning large ungulate species (Macheridis 2011b:39; cf. James 1990). Historical evidence reveals that this may have been the case. In Ireland red deer had a special role during the Early Middle Ages. It was designated as *ag allaid*, i.e. wild cattle, which together with iconographical material show that this animal had a liminal status in the sense that it belonged to both the “wild” and the “domestic” sphere. This also meant that the animal had a social significance as it resembles cattle, which is tame, but was also seen as different, as it is a wild species (Soderbergh 2004, p. 168). Ethnographic examples tell of similar perceptions. Among the Ethiopian Konso, it was permitted

to eat deer, or rather horned animals, because they resembled cattle, sheep and goats (Hallpike 2008, p. 329). Hence, rather than presupposing a mere wild–domestic dichotomy between red deer and cattle during the Early Neolithic, the evidence from Almhov indicates that the categorization of the species may have been more complex and possibly similar to the ones presented in the examples above.

### Concluding remarks concerning pit patterns at Almhov

We interpret Almhov as a gathering and feasting site which was occupied by early farmers who were also exploring the local flint resources. During the gatherings each camping unit raised tents or huts and dug a couple of pits along the fringes of a roughly circular area. One pit was used for dumping waste from butchering, cooking and craft, while the other was used for storage. The camping units probably had animal skulls, preferably skulls of horned animals, on display adjacent to the pits, possibly signifying group identity, available resources, particular skills or other socially significant assets and abilities.

### Discussion

Inspired by the discussion of structured deposition and other related concepts initiated by Duncan Garrow (2012), we would like to reflect briefly on material culture patterning at Almhov. The most evident pattern is that the bulk of the artefacts and bones had been deposited in one of the pits in each pair/cluster. The pits were probably backfilled by deliberate actions as well as by natural processes, overall resulting in a pattern with a high level of structure. However, although the actual filling-in of the pits may be regarded as evidence of “highly formalized, repetitive behaviour”, which, following Colin Richards and Julian Thomas (1984, p.

191), is a characteristic of ritual activities, the argument here is that the “structured deposition” at Almhov did not derive from actions concerned with the filling-in of pits as a ritual practice, but from cultural norms of dwelling. On the other hand, to the extent that social gatherings and feasting *per se* may be considered as rituals, the site may be characterized as a ritual site. Rituals produce waste and things are used for practical purposes also in connection with rituals (Bradley 2005).

Hence, rather than trying to pinpoint sites, pits and depositions as either ritual or quotidian, based on the level of structure among features and artefacts, it is important to assess possible reasons for the observed patterns in each case. Clearly, the pit pattern and the differential distribution of artefacts and animal bones within the pits at Almhov should be seen as evidence of cultural norms at some level. It is unlikely that the intention was to create pits with rubbish and pits without rubbish as a ritualized practice. It may be argued that the different fillings of the pits were simply a result of the pits having had different functions. However, this does not exclude the normative significance of this difference, but only transfers it to the cultural norm of constructing pits with different functions as a proper way of dwelling.

### Acknowledgement

Thanks to Åsa Berggren, Lars Larsson and Deborah Olausson for valuable comments on previous versions of the manuscript.

### References

- Andersson, M. 2004. *Making Place in the Landscape: Early and Middle Neolithic Societies in two west Scania valleys*. Lund.
- Bradley, R. 2005. *Ritual and Domestic Life in Prehistoric Europe*. London & New York.
- Brink, K. 2009. Gårdarna på Almhov – Senneolitikum och Äldre Bronsålder kring Hyllie Mosse. In Hadevik,

- C. & Steineke, M. (eds.), *Tematisk Rapportering från Citytunnelprojektet*. Rapport 48. Malmö.
- Dietler, M. & Hayden, B. (eds.). 2001. *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Washington & London.
- Garrow, D. 2012. Odd Deposits and Average Practice: A Critical History of the Concept of Structured Deposition. *Archaeological Dialogues*, 19 (2).
- Gidlöf, K. 2006. Långhögarna och det ritualiserade rummet på Almhov – ett unikum? In Anglert, M. Artursson, M. & Svanberg, F. (eds.), *Kulthus och dödsbus: Det ritualiserade rummets teori och praktik*. Stockholm.
- Gidlöf, K. 2009. En tidigneolitisk samlingsplats – fyndrika gropar och långhögar på Almhov. *Tematisk rapportering av Citytunnelprojektet*. Rapport 48. Malmö.
- Gidlöf, K., Hammarstrand Dehman, K. & Johansson, T. 2006. *Almhov – delområde 1. Citytunnelprojektet. Rapport över arkeologisk slutundersökning*. Rapport 39. Malmö.
- Hallpike, C. R. 2008. *The Konso of Ethiopia: A Study of the Values of a Cushitic People*. Revised edition. Central Milton Keynes.
- Harrod, H. L. 2000. *The Animals Came Dancing: Native American Sacred Ecology and Animal Kinship*. Tucson.
- Högberg, A. 2006. A Technological Study of Flake Debitage Attributes from the Production of Neolithic Square-Sectioned Axes from Scania South Sweden. *Stone Age – Mining Age*. Der Anschnitt. Beiheft 19.
- James, W. 1990. Antelope as Self-image among the Uduk. In Willis, R. (ed.), *Signifying Animals: Human Meanings in the Natural World*. One World Archaeology 16. London.
- Jansson, P. 1999. Ängdals gåta – Vad yxade man till vid flintgruvorna? Unpublished seminar paper. Arkeologiska institutionen. Lunds universitet.
- Jennbert, K. 1984. *Den produktiva gåvan: Tradition och innovation i Sydskandinavien för omkring 5300 år sedan*. Acta Archaeologica Lundensia Series in 4°, no. 16. Bonn.
- Jonsson, L. 2005. Osteologisk analys av ben från slutundersökningar inom Citytunnels spårsträckningar i Malmö, delområde 1 och Bunkeflostrand 3:1. Unpublished report, Malmö Kulturmiljö.
- Larsson, L. 1988. *Ett fångstamhälle för 7000 år sedan: Boplatser och gravar i Skateholm*. Lund.
- Larsson, M. 1984. *Tidigneolitikum i Sydvästskåne: Kronologi och boplatzmönster*. Acta Archaeologica Lundensia. Series in 4°, No. 17. Bonn.
- Lichter, C. & Weber, K. (eds.). 2010. *Jungsteinzeit im Umbruch: Die "Michelsberger Kultur" und Mitteleuropa vor 6000 Jahren*. Darmstadt.
- Macheridis, S. 2011a. *Vad vilar under dösen? En analys av tidigneolitiska strukturer under dös 1, Almhov*. Seminar paper in Prehistoric Archaeology. Dept. of Archaeology and Ancient History, Lund University.
- Macheridis, S. 2011b. *Animal i dual: Det osteologiska materialets fördelning i pargrupparna på tidigneolitiska Almhov, Skåne*. Master thesis in Archaeology. Dept. of Archaeology and Ancient History, Lund University.
- Malmer, M. P. 2002. *The Neolithic of South Sweden: TRB, GRK, and STR*. Stockholm.
- Marciniak, A. 2005. *Placing Animals in the Neolithic: Social Zooarchaeology of Prehistoric Farming Communities*. London.
- Meuers-Balke, J. 1983. *Siggeneben-Süd: Ein Fundplatz der frühen Trichterbecherkultur an der holsteinischen Ostseeküste*. Neumünster.
- Nielsen, B. & Rudebeck, E. 1991. Introduktion till arkeologi i Södra Sallerup. *Elbogen, Malmö Fornminnesförenings årsskrift*, årgång 58, Malmö.
- Nilsson, L. 2008. Slaktrester – mer än bara avfall. In Skoglund, P. (ed.), *Fest, slakt, odling: Neolitikum och järnålder i Hyllie*. Malmö.
- Richards, C. & Thomas, J. 1984. Ritual Activity and Structured Deposition in Later Neolithic Wessex. In Bradley, R. & Gardiner, J. (eds.), *Neolithic Studies: A Review of Some Current Research*. BAR British Series 133.
- Rudebeck, E. 1987. Flint Mining in Sweden during the Neolithic Period: New Evidence from the Kvarnby – S. Sallerup Area. In Sieveking, G. de G. & Newcomer, M. (eds.), *The Human Uses of Flint and Chert*, Cambridge.
- Rudebeck, E. 1994. Ängdala och meningen med arkeologin. *Arkeologi i Sverige* (ny ordning), no. 3, Stockholm.
- Rudebeck, E. 1998. Flint Extraction, Axe Offering, and the Value of Cortex. In Edmonds, M. & Richards, C. (eds.), *Understanding the Neolithic of North-western Europe*. Glasgow.
- Rudebeck, E. 2006. Kulthus och huskult – aspekter på de tidigneolitiska långhögarna. In Anglert, M. Artursson, M. & Svanberg, F. (eds.), *Kulthus och dödsbus: Det ritualiserade rummets teori och praktik*. Stockholm.
- Rudebeck, E. 2010. I trästodernas skugga – monumentala möten i neolitiseringsens tid. In Nilsson, B. & Rudebeck, E. (eds.), *Arkeologiska och förhistoriska världar: Fält, erfarenheter och stenåldersplatser i sydvästra Skåne*. Malmö.
- Rudebeck, E. & Ödman, C. 2000. *Kristineberg: En gravplats under 4500 år*. Malmöfynd 7. Malmö.
- Sarnäs, P. & Nord Paulsson, J. 2001. *Skjutbanorna 1B & Elinelund 2A–B. Öresundsförbindelsen. Rapport över arkeologisk slutundersökning*. Rapport 9. Malmö.
- Schulting, R. J. 1996. Antlers, Bone Pins and Flint Blades: The Mesolithic Cemeteries of Téviec and Hoëdic, Brittany. *Antiquity* 70.
- Schulting, R. & Richards, M. P. 2001. Dating Women and Becoming Farmers: New Palaeodietary and AMS Dating Evidence from the Breton Mesolithic Ceme-



- teries of Tévéc and Hoëdic. *Journal of Anthropological Archaeology* 20.
- Soderbergh, J. 2004. Wild Cattle: Red Deer in the Religious Texts, Iconography, and Archaeology of Early Medieval Ireland. *International Journal of Historical Archaeology* 8.
- Twiss, K. C. 2008. Transformations in an Early Agricultural Society: Feasting in the Southern Levantine Pre-Pottery Neolithic. *Journal of Anthropological Archaeology* 27 (2008).
- Welinder, S., Hadevik, C., Gidlöf, K. & Rudebeck, E. 2009. Grismönster i gropkaos – en korrespondensanalys av djurben i tidigneolitiska gropar. In Hadevik, C. & Steineke, M. (eds.), *Tematisk rapportering av Citytunnelprojektet*. Rapport 48. Arkeologienheten, Malmö.