Anja Behrens, Timothy Darvill

# Barrow cemeteries in the Neolithic of north-west Europe. The case of Western Mecklenburg (Germany)

#### Cmentarzyska kurhanowe w neolicie Europy Północno-Zachodniej. Przykład zachodniej Meklemburgii (Niemcy)

**Abstract:** Neolithic funerary monuments across north-west Europe are considered as cemeteries and here divided into two types: single-mound cemeteries, and multi-mound cemeteries. Their general characteristics are discussed in relation to models of access to the internal chambers, and the distribution of chambers within their cover-mounds. The 238 megalithic tombs recorded in Western Mecklenburg are classified according to whether they are single-mound cemeteries or components of multi-mound cemeteries, and the distributions compared. Examples and case studies are described, and possible understandings of the emergence of multi-mound cemeteries are considered in relation to social organization and connections with the landscape.

**Keywords:** barrows, cemeteries, chambered tombs, dolmens, Funnel Beaker Culture, long barrows, Mecklenburg, megalithic monuments, passage graves

**Abstrakt:** Neolityczne grobowce w Europie Północno-Zachodniej występują w postaci pojedynczych nasypów i skupisk kurhanów. W pracy przedyskutowano ich podstawowe cechy z uwzględnieniem dostępu do głównej komory i jej lokalizacji wewnątrz nasypów. W zachodniej Meklemburgii zarejestrowano 238 grobowców megalitycznych, które sklasyfikowano pod względem liczby konstrukcji na stanowisku oraz porównano pod względem rozprzestrzenienia. Opisano przykłady oraz możliwe przyczyny pojawienia się cmentarzysk z wieloma konstrukcjami, rozważane na tle organizacji społecznej i relacji do elementów krajobrazu.

**Słowa kluczowe:** Meklemburgia, kultura pucharów lejkowatych, cmentarzyska, grobowce megalityczne, kurhany, grobowce komorowe, dolmeny, długie nasypy, grobowce korytarzowe

## Introduction

A recurrent, but poorly explored, dimension of the great funerary monuments made of stone, earth, and timber in north-west Europe built during the late fifth, fourth, and early third millennia BCE is that most were essentially cemeteries: designated burial places for numerous individuals. Undoubtedly, they had other roles as well, and as Magdalena Midgley has pointed out, their emergence has to be situated within the wide range of social and symbolic processes that were taking place during the middle centuries of the fifth millennium BCE (Midgley 2005, 77). In this paper, offered to our friend and colleague Fritz Lüth in recognition of his long interest in early farming communities in north-east Germany, we look first at the concept of a 'cemetery' and at the various forms of expression found across north-west Europe during Neolithic times, before turning to examine the Funnel Beaker Culture (*Trichterrandbecher*/TRB) cemeteries in Western Mecklenburg. We conclude with some thoughts on their use, and the implications for understanding the social organization of the communities that built them.

## Neolithic barrow cemeteries

Across north-western Europe large monumental mounds containing wooden or stone-built chambers as receptacles for the deposition of human burials are known by various local names, come in a range of shapes (round, rectangular, trapezoid and oval), and appear in a wide range of sizes. A few excavated examples demonstrably contain no evidence of a chamber or human burials at all, for example the three sites of South Street, Beckhampton Road, and Horslip west of Avebury, England (Ashbee et al. 1979), and may be considered as 'cenotaphs' memorializing people buried elsewhere (Simpson 1979, 91), or 'fake barrows' built to represent the non-funerary dimensions of meaning communicated by the real thing. Likewise, a few long barrows in Britain, and some simple dolmens in Germany, seem to contain the remains of just one individual, although most are only known through old excavations and need to be treated with caution (Ashbee et al. 1984, 60; Midgley 2008, 110). Preservation environments add complexity to the picture as soil conditions and the acidity of the underlying geology can militate against the survival of bone in many areas, and cultural practices related to the deposition, circulation, and removal of remains play a significant part in what survives as well. However, in general, these monuments contain multiple disarticulated remains, whether as inhumations or cremations, representing dozens if not scores of individuals.

The creation of formal monumentalized cemeteries within the context of early farming societies has been considered by Robert Chapman who sees them as 'formal disposal areas' that emerged in periods of imbalance between society and critical resources (Chapman 1981, 80). Andrew Sherratt took this further by reflecting on the occurrence of early megalithic monuments in areas where hunting and fishing communities had achieved a density of population adjacent to areas rich in agricultural land (Sherratt 1990, 150–162) so that monumentality was an essential element of cultural rhetoric by the builder/user communities (Sherratt 1995, 249–250), a view that has found wide support elsewhere (Müller 2019, 39–40).

Much local variety can be observed across north-west Europe in terms of regional typologies, mound forms, and the use of different (mainly local) building materials. However, cross-cutting this heterogeneity are some broad trends. One, recognized and discussed by Richard Bradley (1998, Fig. 19), relates to a defined grammar in the way that chambers were arranged relative to the mound in terms of their separation or accessibility from the outside world. This can be represented as a gradient with three main styles: fully closed chambers or cists that are usually deeply embedded in their cover-mound and were inaccessible after use; partly accessible chambers that are usually on the edge of their cover-mound and could be entered through the roof, via dismountable sections of wall, or very narrow constricted entrances; and fully accessible chambers within a cover-mound that could easily be reached via a passage perhaps with some kind of a door or temporary blocking. Figure 1 shows this simple grammar in schematic form with examples of drawn from various parts of north-west Europe.

There is a trend for progression over time from closed to more open forms in most regions, well exemplified, for example, by the sequence for western France proposed by Christine Boujot and Serge Cassen (Boujot, Cassen 1993). The trend can also sometimes be seen stratigraphically in the development of multi-phase sites, for example Achnacreebeg, Argyll, Scotland, where a closed cist in the primary monument was replaced by an accessible passage grave within a later addition (Ritchie 1970).

Against this background, monumental cemeteries occur in two main forms: single-mound cemeteries, and multi-mound cemeteries.

## Single-mound cemeteries

These are very widely distributed and comprise isolated individual barrows or cairns that are usually well separated from each other, although occasionally found as a 'pair' with another nearby example. They can be divided into three main types on the basis of how the chambers are arranged (see Kinnes 1975, Fig. 7 and Darvill 2004, Fig. 31 for local schemes) as shown on Figure 1.

1. Barrow or cairn containing a single **nucleated** chamber. These are the most widely distributed and numerous class of cemetery in north-west Europe. Examples include: the closed stone chamber in a round mound at La Castellic, France (Fontes 1881) and the timber box-like chamber in a long mound at Haddenham, Cambridgeshire, England (Evans, Hodder 2006, 67–200); the partly accessible stone chamber in a rectangular mound at Coldrum, Kent (Wysocki *et al.* 2013); and the fully accessible simple passage graves in round mounds at Kercado, France (L'Helgouach 1965, 28), and Broadsands, Devon, England (Sheridan *et al.* 2008).

2. Barrow or cairn containing an **aggregated** arrangement of chambers grouped together in various ways but usually with a linear arrangement. These are fairly widespread but tend to be favoured in geographically restricted areas. Aggregated closed chambers can be seen at Ascott-under-Wychwood, Oxford-shire, England, where two pairs of closed cists lay in a line under a trapezoidal mound built in around 3750 BCE and used for up to five generations (Benson, Whittle 2007). Partly accessible aggregated chambers arranged in a linear pattern are common amongst the Clyde cairns of western Scotland, for example at Carn Ban, Arran, Scotland, with four cells in a line at the eastern end of a long mound (Henshall 1972, 381–383). Open access aggregated arrangements are usually represented by transepted chambers where a series of side-chambers or cells are accessible from a central passage. At West Kennet, Wiltshire, England, five chambers open from the central passage in a long mound (Piggott 1962).

3. Barrow or cairn containing a **dispersed** arrangement of two or more separate chambers. These are widely spread but often reflect regional styles. Some were designed and built as a unity, but others represent incremental growth as multi-phase structures in which new chambers were added and the mound extended from time to time. A series of eight separate closed chambers (dolmens and mortuary chambers) can be seen at Flintbek, Germany, which accumulated in three main phases over a period of about two centuries between 3500 and 3300 BCE (Mischka 2011; Furholt, Mischka 2019, 932, Fig. 12). Partly accessible dispersed chambers can be seen at Meayll Hill on the Isle of Man where six rectangular T-shaped cists were set around the edge of a round cairn each opening from a separate narrow and constricted entrance passage (Lynch, Davey 2017, 51–64). A dispersed pattern of fully accessible open chambers can be seen at Barnenez, Brittany, France, where 11 separate passage graves opened from the south side of a long stepped mound constructed in three or four phases (Giot 1987).

## **Multi-mound cemeteries**

This second form of cemetery is more localised in its distribution and is represented by sites with three or more separate monuments clustered together in a recognizable group (Fig. 2). These typically include examples of the various forms of monument discussed above – closed and open chambers; nucleated, aggregated and dispersed chamber patterns; long and round mound; large and small monuments – spread over an area of landscape rarely more than about 1 km across. Most multi-mound cemeteries probably started as single-mound cemeteries and some individual components developing through several phases. Significantly, these multi-mound cemetery represents the accumulation of structures over several centuries leading eventually to the ensemble we see today.

Less common than the single-mound cemeteries, multi-mound cemeteries seem to have been favoured in certain areas, including western France, Ireland, and northern Germany. At Borgon, Deux-Sèvres, France (Fig. 2:A), five separate structures, four of which had two or more phases of development, were constructed and used over a period of around 2000 years between 4700 and 2500 BCE (Mohen, Scarre 2002). At Knowth, Co Meath, Ireland (Fig. 2:B), at least 17 small simple passage graves in round mounds and one large multi-phase developed passage grave with two chambers (one cruciform with three cells) accumulated between 3500 and about 2500 BCE (Eogan 1984). The Knowth cemetery lies on a low hill at the western end of a concentration of such cemeteries that also includes Newgrange and Dowth in a bend of the River Boyne; they are known collectively as the Brugh na Bónne cemeteries (Stout 2002).

## **Cemetery variability**

At each of these monuments, whether single-mound cemeteries or components of multi-mound cemeteries, the exact design, positioning, and orientation of the chamber(s), the shape and form of the cover-mounds or surrounding platforms, the selection and use of particular materials, the addition of rockart or ornamentation, and the rituals and ceremonies surrounding their use (including the deposition of grave goods), were cultural choices that gave texture and meaning to these structures in the minds of their builders and users. Such variation gives rise to the local and regional classifications and typologies created by modern prehistorians. Regional schemes, such as those for western France (Boujot, Cassen 1993, Fig. 3) and for the Cotswolds area of the midwestern Britain (Darvill 2004, Fig. 31), show how the elements of the basic grammar discussed above lead to an almost infinite range of locally preferred designs. What these might mean, and how they might work, is something we shall return to later. First, we would like to use the basic model outlined above to explore the recorded megalithic monuments in the Mecklenburg region of northern Germany.

## Megalithic cemeteries in Western Mecklenburg – a brief research history

Mecklenburg is located in north-east of Germany and forms the western part of the state of Mecklenburg-Western Pomerania (Fig. 3). In the west of Mecklenburg, an area of about 7000 km<sup>2</sup>, more than 200 megalithic monuments

have been recorded, all seemingly associated with the northern TRB / Funnel Beaker Culture dating to the period from about 4000 BCE through to 2700 BCE (Midgley 1992, 205–221; 2008, 1–11).

Following some limited antiquarian interest, research into the megalithic monuments of Mecklenburg came into sharp focus during the early years of the nineteenth century with the formation in 1835 of the Society of Mecklenburg History and Archaeology (Verein für mecklenburgische Geschichte und Altertumskunde) by G.C. Friedrich Lisch (1837, 7). Over the following decades many sites were excavated by members of the society and new insights gained. Although forbidden by law, the systematic robbing of megalithic monuments for stone was a widespread and deep-rooted tradition with many cases recorded by members of the society and listed in the annual report.

Through this early work over several decades, the variety of monument types became obvious and the sites were discussed, classified, and published by Robert Beltz (1899, 80–82; 1910). More recently, the classification of monuments was developed further by Ernst Sprockhoff (1938, 3–64), and this scheme remains fundamental to modern research in many regions in Germany and beyond (Rassmann, Schafferer 2012, 111). Sprockhoff mentions the wide distribution of monuments in the landscape, whether as single monuments or forming cemeteries with numerous individual mounds (Sprockhoff 1938, 47), and includes numerous maps and plans in his inventory of sites known in the area (Sprockhoff 1967, 3–11, 32–40).

Research by Ewald Schuldt, curator of Schwerin Museum, in the 1960s included the excavation of 104 megalithic monuments in Mecklenburg-Western Pomerania, revealing diverse architecture, a rich material culture, and widespread evidence for secondary burials. Through this work he emphasized the regional architectural variations visible in the five main types of monument, which he classified as:

- Simple dolmens (Urdolmen),
- Extended dolmens (Erweiterter Dolmen),
- Great dolmens (Großdolmen),
- Passage graves (*Ganggrab*),
- Chamberless long barrows (Hünenbett ohne Kammer).

Schuldt's excavations included single monuments such as Nobbin, Rügen (Schuldt 1972a), as well as multi-mound cemeteries such as Everstorf-Naschendorf in northern Mecklenburg (Schuldt 1968) and Lancken-Granitz on Rügen (Schuldt 1972b). He brought the results of more than a decade of research together in an overview published as *Die mecklenburgischen Megalithgräber* (Schuldt 1972c). From 2009 through to 2015 the "Megalithic landscape of Western Mecklenburg" project carried out investigations at a range of megalithic monuments, enclosures, and the flat grave cemetery at Ostorf as a regional case study within the more broadly constituted priority programme SPP1400 "Early monumentality and social differentiation" (Darvill, Lüth 2019). The aim of this work was to reconstruct the developmental history of monument building, expose local architecture styles, and understand the wider role and significance of these early monuments. One target of research was the multi-mound cemetery at Friedrichsruhe, PCH. Four of the recorded barrows here were sampled and a series of radiocarbon dates obtained, the only dates we have so far from the TRB monuments in Western Mecklenburg dating to the forth millennium BCE.

## **Environmental background**

Western Mecklenburg is flanked to the north by the Baltic Sea. To the south it is bordered by the River Elbe, to the west by the state of Schleswig-Holstein, and to the east by the network of rivers created by the Mildenitz, Radebach, and Teppnitzbach. The region corresponds with the modern districts of Nordwestmecklenburg, Wismar, Schwerin, and Ludwigslust-Parchim. The landscape was shaped during the Pleistocene by glacial and periglacial action, including the formation of moraine ridges in the north and east. In the south-west there are fluviatile sandar zones as well as glacial valley systems filled-up with sand, silt, and fen. A high water table feeds numerous lakes, kettle-holes, and springs that in turn provide the source for streams and rivers. Relatively poor gleyed soils are common through the region. From the beginning of the Sub-boreal biostratigraphic phase around 3000 BCE the vegetation was dominated by a mixed oak-beech forest with plentiful hazel, ash, and common hornbeam (Dörfler 2011).

#### Database and the verification of sources

Some 213 certain and probable megalithic tombs have been recorded to date in Western Mecklenburg (Tab. 1). Figure 3 shows the distribution of recorded sites in relation to the topography and drainage system. Clusters can be seen in Parchim (PCH) and in the Baltic coastlands of Nordwestmecklenburg (NWM), mostly on elevated position. Other areas are remarkably poor in known sites, especially the south-western territory of Ludwigslust (LUL).

Sadly, over half (53%) of the recorded sites are so poorly known that their type cannot be determined and accordingly they are listed here as 'unclassified'. Many sites appear to have lost part or all of their cover-mound, although what some of these mounds looked like when the monuments were first built

is something that would repay further research. Robbing accounts for most of the losses, with some types, the extended dolmens, great dolmens and passage graves in particular, seemingly targeted because of their visibility in the land-scape and the large size of the stones used in their construction.

Of the classifiable monuments all five types listed above are fairly equally represented. Five additional sites are thought to comprise more than one monument but details are lacking and references to them are ambiguous. They are listed here as 'necropolis' sites<sup>1</sup>, and in later calculations it is assumed that they represent an average of five barrows each so that the total number of known megalithic tombs is taken to be 238. This is no doubt a significant underestimate of the number of barrows built during the fourth millennium BCE; Rassmann, Schafferer (2012, 110, Fig. 2) postulate an original population of around 700 megalithic tombs across Western Mecklenburg.

Most of the classifiable sites can be assigned to a particular type because of the detailed descriptions given as a result of surveys and excavations. Members of the Society of Mecklenburg History and Archaeology undertook 43 excavations and published around 100 reports. Schuldt's research programme investigated 27 sites (illustrated in Schafferer 2014, 92, Fig. 1), and five more sites have been excavated in recent years by the Heritage Office (Hanstorf 5) and the SPP1400 project (Friedrichsruhe 7–9 and 51). In total about 132 megalithic tombs have been described and/or investigated in some way.

Of course, ideas about the monuments, the significance of recorded features, and the range of finds recovered were different in the nineteenth century compared to what they were when Schuldt was excavating and what would be expected now. Early records of architectural details are rudimentary and may only allow a basic classification of the chamber and an indication of whether a barrow was present or not. Likewise, Sprockhoff's interpretations are sometimes questionable because of poor data about disturbed sites when he visited in the 1930s; some of his suggested reconstructions need modifying in the light of later investigations.

Overall, the data set is shrinking when it comes to the reliable classification and quantification of monuments. Further fieldwork is needed in order to generate high quality data, as recent surveys and excavations within the SPP1400 show. Disturbingly, many megalithic tombs have been destroyed in recent centuries, and less than half were recorded in advance (Fig. 4). Many other sites show traces of disturbance that range from slight intrusions through to the removed kerbstones or capstones, digging holes, and animal burrowing.

<sup>&</sup>lt;sup>1</sup> Necropolises with recorded number of megaliths: Goldenbow 7002 – seven; Maßlow (without no.) – "several megaliths"; Mestlin (without no.) – "several megaliths"; Weitendorf 2 – five; Zaschendorf 7002 – 6.

Perhaps a fifth of recorded sites might already have been destroyed, something that urgently needs documenting with condition surveys and spot-checks. Across the region only four sites seem to remain intact.

## Types and accessibility

Looking at the five main types of megalithic tomb listed above there are clear differences in the degree to which the chambers were accessible (see Fig. 1).

*Simple dolmens (Urdolmen)* are small, their chambers generally fully closed on all sides, and nearly two-thirds of recorded examples are partly or wholly covered by a round, square, or rectangular mound. The chambers are usually nucleated within the mound (Fig. 5:A,B,D; 6:D). Most if not all probably had the capstone exposed and standing proud of the surrounding mound, which in some cases might be little more than a platform as commonly seen in British (Darvill 2004, 47–52) and Irish (Mercer 2015, 114–117) examples.

The so-called chamberless long barrows (Hünenbett ohne Kammer) can also be considered amongst the monuments with closed or inaccessible burial zones, usually with nucleated or dispersed chamber arrangements (Fig. 5:F). However, caution is needed as the terminology is ambiguous and perpetuates a misunderstanding that can be traced back to the mid-nineteenth century (Piggott 1966). Although there are a few long barrows in north-west Europe that genuinely do not seem to contain a chamber or other form of burial they are incredibly rare (see above). Where extensive high quality excavation has examined long barrows of the kind sometimes misleadingly referred to as 'chamberless' they are found to contain timber chambers (also known as timber mortuary houses; see (Madsen 1979 and Ashbee et al. 1984, 49-54) whose vestigial remains might well have eluded earlier investigators. Importantly, and in keeping with the general picture across north-west Europe, these closed chambers whether of stone or wood represent the earliest monumental graves in northern Germany, with a construction period starting around 3800 BCE for timber chambers and 3650 BCE for simple dolmens (Mischka 2011).

*Extended dolmens (Erweiterter Dolmen)* had closed (Fig. 5:C) or partly accessible chambers (Fig. 6:A–C), and probably developed from the simple dolmens. Most have short passages linking the chamber to the outside of the covering mound with the transition from the passage to the chamber typically marked by a high lintel (Schwellenstein) and a removable stone closing slab (Fig. 6:B,C,E).

*Great dolmens (Großdolmen)* and *passage graves (Ganggrab)* represent fully accessible monuments (Fig. 7). More complicated burial traditions are represented with the interior area segmented into plots or compartments with an aisle down the middle, and far more burials represented than other types of tomb

(Furholt, Mischka 2019, 934). Whether in long or rectangular mounds, the chambers could be accessed via a passage with a removable closing slab.

In Western Mecklenburg most megaliths have chambers in a nucleated arrangement, buried by round or long barrows (Tab. 2). Examples of aggregated arrangements are absent, and dispersed chamber arrangements are very few in numbers and include the closed compartments of the chamberless long barrows of Helm 2 and Siggelkow 7006 discussed further below. Although not in Western Mecklenburg, two monuments a little further east have partly accessible chambers in a dispersed arrangement showing that the form is represented in the region. At Moltzow, Mecklenburgische Seenplatte, a long barrow with four dolmens was recorded (Sprockhoff 1967, 42), and at Nobbin, Rügen, two extended dolmens were identified (Schuldt 1972a).

## Distribution

The overall distribution of monument types within the landscape is fairly clear, even when unclassified sites are taken into account (Fig. 8). Although the proportion of classified tombs is quite low for the area of Western Mecklenburg, regional variations can be seen (Schuldt 1972c, 4, Fig. 1). Thus in the south-west chamberless long barrows (*Hünenbett ohne Kammer*) are dominant, while in the north-west simple dolmens (*Urdolmen*) and extended dolmens (*Erweiterter Dolmen*) were much more common. In the eastern part of Western Mecklenburg, a mixture of all types can be found with an emphasis on passage graves (*Ganggrab*).

Looking at the different kinds of cemetery represented the database is stretched to its limits. Because of the widespread destruction of megalithic tombs in the past the distinction between single- and multi-mound cemeteries is sometimes hard to establish and careful attention needs to be given as to how the two categories are recognized.

## Recognizing single- and multi-mound cemeteries

In order to effectively differentiate between single- and multi-mound cemeteries attention is directed to the degree of clustering. Single-mound cemeteries are widely spread across the landscape, although not necessarily at regular intervals, while multi-mound cemeteries are clusters of barrows within a tight geographical area. To investigate this, the nearest-neighbour distances between recorded examples were calculated within a GIS model. Table 3 summarizes the pattern of nearest-neighbour distances while Figure 9 shows the patterns geographically. Nearly 60% of all recorded monuments lie within 500 m of another example, although they tend to be pairs or groups of three (Fig. 9:A). Barrows group better within 1 km catchments (Fig. 9:B), and the picture is stronger still at 2 km and 3 km (Fig. 9:C,D). Overall, nearly 80% of recorded barrows lie within 3 km of another example.

To set the Mecklenburg pattern in perspective it is appropriate to consider the wider picture of multi-mound cemeteries across the TRB region. In Schleswig-Holstein, for example, 12 megaliths were recorded at Borgstedt, Rendsburg-Eckernförde, within an area about 600 m across (Hage 2016, 65, Fig. 77). At Flintbek, Rendsburg-Eckernförde, the cemetery was more compact with 15 graves recorded in an area about 350 m across (Furholt and Mischka 2019, 933, Fig. 13). The cemetery of eight monuments at Lüdelsen, Altmarkkreis Salzwedel in Sachsen-Anhalt, extends over an area about 800 m across (Diers 2018, 27, Fig. 2.10). On the island of Rügen, cemeteries such as Lancken-Granitz (Schuldt 1972b) and Nadelitz (Baier 1904, 14; Schuldt 1972d) are also very compact with nine and eleven monuments respectively. Further afield in Poland and Denmark the densities are similar. At Łupawa, East Pomerania, Poland, 15 long barrows were built within an area 450 m across (Zych 2019, 169, Fig. 2) and in Damsbo, Funen, Denmark, at least nine dolmens are situated in an area only 160 m across (Andersen 2019, 238, Fig. 8). In some large multi-mound cemeteries, the densities are lower, at Ahlen-Falkenberg, Cuxhaven in Lower Saxony, for example, 12 recorded passage graves are spread over an area 3 km across (Behrens et al. 2019, 12, Fig. 2).

Taking account of both the local picture and the wider context, using a maximum separation between barrows of 1 km and a minimum of three monuments to form a multi-mound cemetery, the pattern in Western Mecklenburg is summarized on Table 4. Almost 40% of barrows are isolated single-mound cemeteries and a further 19% are essentially single-mound cemeteries doubled up as a pair. Around 40% of mounds occur within 21 multi-mound cemeteries and these range in scale from ten examples with three recorded barrows in each through to one example in which twelve barrows have been recorded. In all cases, it is important to emphasize that these numbers relate to recorded barrows. Many cemeteries might originally have been more extensive than documented because elements have been destroyed without record or detailed surveys have not been carried out to map the full extent of the site. At Friedrichsruhe, there were three barrows recorded by Sprockhoff (1968, 36, Nr. 406-408) all of which were investigated by Schuldt (1973), but research, surveys, and further investigations during the SPP1400 work suggest that originally there were at least five and possibly as many as seven barrows in the cemetery (Darvill, Lüth 2019, 256–263).

Figure 10 shows the distribution of recorded single-mound and multimound cemeteries, the former sub-divided between those in round mounds and those in long mounds. From this it is clear that while long mounds appear across the region, round mounds are more localized.

#### Single-mound cemeteries in Western Mecklenburg

Isolated barrows and close-set pairs of barrows represent the single-mound cemeteries and account for 58% of recorded megalithic tombs in Western Mecklenburg. They are spread throughout the region (Fig. 10). Within this group all five types of megalithic grave are represented, and both round and rectangular cover-mounds are known. All known examples comprise single nucleated chambers; aggregated arrangements are not known, dispersed arrangements are only suspected in the case of chamberless long barrows, and complex multiphase monuments like at Flintbek are missing from the picture.

So-called chamberless barrows are certainly represented amongst the singlemound cemeteries. Antiquarian descriptions and observations by the Society of Mecklenburg History and Archaeology provide tantalizing glimpses of this type of monument. Johann Ritter, for example, mentioned that at the site of Helm 2 there were two transversal walls of small slabs and erratic stones dividing the eastern part of the monument into three compartments. In each space he recovered ceramic vessels while in the easternmost compartment he also found fragments of bone and two flint axes (Ritter 1840). Similarly, at the site of Siggelkow 2 two compartments within the long barrow are described as being defined by "a double lateral course of stones" (Lisch 1837, 74). The same was reported for the neighbouring mound of Siggelkow 7006 (ibidem).

The only professionally excavated chamberless barrow is the extraordinarily long and heavily disturbed mound at Stralendorf (Zülow 1; see Fig. 5:F). Here Schuldt located one wall-edged construction in the southern part of the long barrow but says little about its interpretation. At least two phases of construction were recognized, a southern part built edged with large stones and a secondary northern part bounded by a kerb of smaller stones (Schuldt 1966). Within the southern extension Schuldt recovered several sherds of Funnel Beaker pottery and distinguished two burials with grave goods of the Funnel Beaker and Single Grave Culture (Schuldt 1966, 19).

Taking the antiquarian evidence and the results of Schuldt's work at Zülow 1 together it seems fairly certain that these 'chamberless' long barrows in fact contained dispersed non-megalithic chambers or zones architecturally demarcated for the reception of burials.

## Multi-mound cemeteries in Western Mecklenburg

Twenty-one multi-mound cemeteries can be recognized in Western Mecklenburg collectively containing 42% of all recorded barrows. The scale of the multi-mound cemeteries ranges from three barrows up to twelve barrows, but the large cemeteries are now relatively few in number. The erosion of the resource over recent centuries means that there might originally have been more large cemeteries than are currently known. The distribution of examples can be seen on Figure 10 with marked clusters at fairly regular intervals.

Very few of the multi-mound cemeteries have been the subject of intensive investigation to modern standards that allow insights on the nature of the mounds, the composition of the burial deposits, or what was going on in the areas between the barrows. The key sites where investigations have taken place are: Friedrichsruhe; Wittenburg/ Klein Wolde / Helm, and two separate cemeteries in the forest of Everstorf. Because the full results of work at Friedrichsruhe are still in preparation (see Darvill, Lüth 2019 for an interim account), we will focus here on three short case studies from other parts of the region: Everstorf; Naschendorf; and Wittenburg / Klein Wolde / Helm.

## Case Study A: Forest of Everstorf (Everstorfer Forst), Kreis Schönberg

This is the northern of two multi-mound cemeteries that stand 2 km apart in the heavily wooden landscape of Everstorf Forest north-west of Barendorf (Sprockhoff 1967, 304-310; Schuldt 1968 (Nordgruppe); Schuldt 1970a; Schuldt 1972c, Fig. 1). The cemetery lies on top of a low glacial moraine with a small stream to the north. A total of eight mounds are set in a fairly tight linear arrangement, orientated roughly NE to SW, over a distance of 300 m (Fig. 11). Almost 600 m further SW there are two more megaliths but their connection to the cemetery is unclear. Further components of the cemetery might be revealed by a detailed survey. The recorded barrows are remarkably consistent in their type with six simple dolmens and two extended dolmens suggesting an early date for the site. The two detached monuments comprise a simple dolmen and an extended dolmen. Four of the simple dolmens lie in the centre of round mounds typically 5-6 m across, while one simple dolmen and two extended dolmens lie within long rectangular mounds, the largest of which is 45 m long by 5.5 m wide. An additional rectangular mound has no visible chamber. Thus, overall, the majority of the burial areas in this cemetery are closed or only partly accessible, all of them in nucleated form.

# Case Study B: Forest of Everstorf – Naschendorf, Kreis Schönberg

Approximately 2 km south of the cemetery discussed as Case Study A, but still within the Forest of Everstorf, is a second multi-mound cemetery with completely different characteristics (Sprockhoff 1967, 311-315; Schuldt 1968 (Südgruppe); Schuldt 1970b-e). A total of eight mounds are set in a cluster roughly orientated NW to SE, over a distance of nearly 600 m along a low ridge with a springhead to the south (Fig. 11). At the south-eastern end of the cemetery the monuments are fairly small with a simple dolmen (Urdolmen) surrounded by a round platform mound and an extended dolmen in a rectangular mound both now visible in a small clearing. At the north-western end the monuments are larger, dominated by a great dolmen and two passage graves, one in a rectangular mound 43 m long by 11 m wide (Fig. 12). No details of the chamber arrangements in the other two mounds are known. The simple dolmen at the south-eastern end of the cemetery has about 10 cup-marks on the upper surface of the capstones (Sprockhoff 1967, 4, site 312; Atlasblatt 9). In contrast to the cemetery described as Case Study A, this group is dominated by putatively later barrows, the burial chambers of which are mostly partly or wholly accessible and, like the northern group, were all nucleated.

# Case Study C: Wittenburg / Klein Wolde / Helm, Kreis Hagenow

In the south-west of Mecklenburg, located on a low moraine ridge enclosed by glacial fluviatile sands, is a cluster of at least five long barrows, four of which do not appear to have megalithic chambers (Fig. 13). They probably date to the early Neolithic. At Klein Wolde/Helm, four barrows were investigated and described by Johann Ritter in 1839-40 (Ritter 1840; Sprockhoff 1967, 33, Helm I-IV). As mentioned above, at Helm 2 at least three burial compartments were found below a rectangular mound, probably an inaccessible closed burial zone. Around 300 m away were two more long barrows seemingly without chambers, as well as one long barrow including a megalith chamber. 1.5 km further east a fifth long barrow without recognizable chamber is present. Although there is no information about the possible segmentation of these mounds, variations in mound construction were noticed. Uniform in orientation (E-W), the shape varied from trapezoidal to roughly square as the lengths range from 16 m to 60 m. As for the barrow with a central megalithic chamber the type is unknown, but the recorded evidence of segmentation suggests it was a great dolmen or passage grave. Considering this, as at Naschendorf, this multimound cemetery includes both closed and accessible monuments suggesting a long period of development. Furthermore, the long barrow of Helm 2 shows a dispersed arrangement of the chambers which might be the standard form for these monuments.

#### Discussion

Building a megalithic tomb was a considerable undertaking that involved the investment of time and energy. It also involved translating social and cosmological meanings into physical form through the selection and deployment of architectural features. Although it is tempting to see these monuments through modern eyes as a project that is conceived, designed, executed, and completed as a continuous and purposeful series of events, there are other ways of looking at them. One is to see the whole endeavour as a process of 'becoming' in which the iterative modification and use of a special place incrementally creates the structure that has come down to us in the archaeological record. The process of creation is more important than the product that is created. Certainly, this would fit with the evidence for successive phases that can be seen in the development of a complex structure such as that represented at Flintbek (Mischka 2011). In this way, each generation adds another element to an ancestral structure, building identity into a solid form.

Considering the barrows as cemeteries provides another dimension. Defined chambers or burial zones within a barrow might have been linked to individual families, lineages, or cohorts of some kind. Understanding the biological relationships between the people buried in the various elements of a barrow, and in different adjacent barrows, is one of the most pressing research questions that needs to be tackled by DNA studies. In the case of closed and relatively inaccessible chambers the number of burials tends to be low and gives the impression of fairly short-term usage. The replication of chambers within a single mound, or the development of a multi-mound cemetery becomes the way by which successive generations maintain ancestral links to their past. Later monuments, which tend to be more open and more easily accessible, allow additional burials to be placed in the chamber over several generations. The greater number of burials found in such chambers might suggest either a rising population, or a longer duration of use, or both. Equally, the adaptation of chamber forms towards more accessible structures might be a response to increased use-needs and practicality as population rises and more frequent visits are needed.

Given the present level of evidence from excavated sites it is hard to gauge the relationship between the cemeteries and the builder/user communities. None can be associated with known settlements, and relationships with enclosures are highly speculative. However, it is tempting to suggest that the scale of the community is somehow reflected in the size of the barrows and the cemeteries.

In this sense small monuments might be the cemeteries of small communities while large cemeteries, whether as single-mound or multi-mound types, were made by large communities. But how should we define these 'communities' and what other factors might be at play?

The placing of a cemetery in the landscape might have been significant, with certain places favoured over others. Some of the multi-mound cemeteries might in fact be the result of a series of communities sharing a significant place; viewed in this way, multi-mound cemeteries would be seen as communal spaces. There is more work to be done on this, but it is notable, for example, that both of the multi-mound cemeteries in Everstorf Forest cluster around the headwaters of a small river (Sprockhoff 1967, Beilage 1). The same applies to the cemetery at Friedrichsruhe (Darvill, Lüth 2019), and on a far wider canvass mention may again be made of the largest passage grave cemeteries in north-west Europe clustered around the three great mounds of Newgrange, Knowth, and Dowth in a bend of the River Boyne in eastern Ireland (Stout 2002). Water in the form of springs, rivers, and lakes is a theme that repeats time and again in the location of many cemeteries. As such they could perhaps be seen as occupying liminal zones between the world of the living and the watery underworld of the dead.

Diachronic considerations may also play a part. Over the course of time some communities may be more successful than others, become larger, and inevitably needing more space in which to bury their dead. Growth could be a result of prosperity through having access to better land, better resources, more skill in managing plants and animals, or a genetically more reproductive population. Growth could also arise through power differentials and the emergence of a more hierarchical social organization. Such changes have been used to understand changing patterns of barrow distributions in Ireland where the emergence of passage grave cemeteries from the late fourth millennium BCE can be linked to the replacement of segmentary societies by simple chiefdoms (Darvill 1979). A similar pattern was noted by Johannes Müller in relation to changing social organization in northern TRB communities (Müller 2019). The pyramidal ordering of multi-mound cemeteries in Western Mecklenburg with one very large cemetery (case study A & B), a handful of middle-sized examples (case study C), and a lot of smaller examples might suggest a similar pattern of change here too.

Looking in detail at the monuments and their distribution in Western Mecklenburg five key points arise:

1. Regardless of the type and size of cemetery monuments, closed and open forms were erected throughout the region implying the existence of persistent places known to communities during the fourth millennium BCE;

- 2. Some regional variation in terms of the monument types is visible, for example the prominence of chamberless long barrows in the southeast of the region;
- 3. Natural water sources seem to play a distinctive role in the choice of location for monument construction;
- Multi-mound cemeteries show nearest neighbour distances of 10 4. -20 km between each group (except of the chamberless long barrow region of LUL) which suggest a degree of territorial patterning;

and

5. Regions with multi-mound cemeteries that include accessible chambers seem to go along with areas of higher population and perhaps hierarchical social organization.

In all of these points it is clear that connections between barrow cemeteries and the land on which they stand must be considered important. As Colin Renfrew pointed out many years ago, the construction of megalithic monuments was fundamentally about engraving identity onto the land (Renfrew 1976). It involved the creation of a fixed permanent place within a changing impermanent world. Perhaps barrow cemeteries of all kinds should be seen as territorial markers, perhaps as arenas for ceremonies and rituals, perhaps as the houses and settlements of the ancestors, perhaps as all these and more. What is becoming clear, and which we hope we have illustrated in this paper, is that many questions still need answers and that there is an urgent need for further systematic surveys, excavations, and studies of these important nodal places in the lives of early farming communities.

Table 1. Recorded megaliths of Western Mecklenburg by type and presence of cover-mounds (Sources: denkmalGis of the Heritage Department Mecklenburg-Vorpommern and reports and article in Jahrbücher für Bodendenkmalpflege Mecklenburg)

Tabela 1. Megality zachodniej Meklemburgii według typu oraz obecności nasypu (źródła danych: denkmalGis Heritage Department Mecklenburg-Vorpommern oraz raporty i artykuł w Jahrbücher für Bodendenkmalpflege Mecklenburg)

Туре Тур	Certain Pewne	Probable Możliwe	Totals Łącznie	Recorded cover- mound Odsetek zarejestrowanych nasypów
Simple dolmens (Urdolmen) Dolmeny pierwotne	15	7	22	63%
Extended dolmens (Erweiterter Dolmen) Dolmeny powiększone	12	6	18	33%
Great dolmens (Großdolmen) Wielkie dolmeny	5	7	12	25%
Passage graves (Ganggrab) Grobowce korytarzowe	12	5	17	76%
Chamberless long barrows (Hünenbett ohne Kammer) Kurhany bezkomorowe	18	0	18	100%
Unclassified megalithic tombs Niesklasyfikowane grobowce megalityczne	103	23	126	32%
Necropolis Cmentarzyska	5	20	25	NA
Totals Suma	170	68	238	40%

Table 2. Distribution of chamber forms vs. chamber arrangements. Only classified megaliths with outside constructions were considered

Tabela 2. Porównanie otwarcia oraz rozmieszczenia komór w grobowcu. Pod uwagę wzięto jedynie sklasyfikowane grobowce z zachowanymi konstrukcjami zewnętrznymi

		Chamber form Stopień otwarcia komory			
		Closed / Inaccessible Zamkniete / Niedostępne	Partly accessible Częściowo dostępne	Open / Accessible Otwarte / Dostępne	
ement komór u	Nucleated Skupione wokół konstrukcji głównej	16	3	13	
Chamber arrangement Rozmieszczenie komór w grobowcu	Aggregated Zgrupowane	0	0	0	
	Dispersed Rozproszone	4	0	0	

Table 3. Nearest neighbour distance calculated for monuments in Western Mecklenburg Tabela 3. Odległość do najbliższego sąsiada obliczona dla grobowców z zachodniej Meklemburgii

Max. distance between monuments Maksymalny dystans między grobowcami	Number of monuments Liczba grobowców	Mapping Mapa
<0.5 km	136 (57%)	Figure 9:A
1.0 km	149 (63%)	Figure 9:B
2.0 km	172 (72%)	Figure 9:C
3.0 km	185 (78%)	Figure 9:D
>3.0 km	238 (100%)	

Table 4. Size of recorded barrow cemeteries in Western Mecklenburg with nearest neighbour distance of max. 1 km

Tabela 4. Rozmiary zarejestrowanych cmentarzysk z zachodniej Meklemburgii położonych w odległości maksymalnie 1 km od najbliższego sąsiada

Cemetery type Rodzaj cmentarzyska	Barrows in cemetery Liczba grobowców na cmentarzysku	Number of recorded examples Liczba przypadków	Total number of barrows represented (n=238) Całkowita liczba grobowców	Percentage of the recorded barrow population Odsetek wśród wszystkich zarejestrowanych grobowców	
Single-mound cemetery Pojedynczy grobowiec	1	94	94	39%	
Pair-mound cemetery Para grobowców	2	23	46	19%	
Multi-mound cemetery Cmentarzysko	3	10	30		
	4	2	8		
	5	4	20		
	6	1	6	42%	
	7	2	14		
	8	1	8		
	9	0	0		
	10	0	0		
	11	0	0		
	12	1	12		



Fig. 1. Structuring principles of single-mound monumental cemeteries in north-west Europe (source: Bradley 1998, Fig. 19 and various)

Ryc. 1. Zasady ustalania struktury dla stanowisk z jednym grobowcem w Europie Północno-Zachodniej (por. Bradley 1998, Fig. 19)



Fig. 2. Multi-mound monument cemeteries in north-west Europe: A - Borgon, Deux-Sèvres, France (Mohen, Scarre 2002, Fig. 21); B – Knowth, Co. Meath, Ireland (Eogan 2017, Fig. 2.1)

Ryc. 2. Przykłady cmentarzysk z wieloma grobowcami w Europie Północno-Zachodniej: A – Borgon, Deux-Sèvres, Francja (Mohen, Scarre 2002, Fig. 21); B - Knowth, Co. Meath, Irlandia (Eogan 2017, Fig. 2.1)



Fig. 3. Map of the research area showing the distribution of recorded megalithic monuments (data from: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; reports in the *Jahrbücher für Bodendenkmalpflege Mecklenburg*)

Ryc. 3. Lokalizacja megalitów zarejestrowanych na obszarze badań (źródła danych: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; raporty w Jahrbücher für Bodendenkmalpflege Mecklenburg)



Fig. 4. State of preservation of megalithic monuments in Western Mecklenburg Ryc. 4. Stan zachowania grobowców megalitycznych w zachodniej Meklemburgii



Fig. 5. Types of megalithic closed monuments of Western Mecklenburg: A – Simple dolmen (Urdolmen) Frauenmark 1 (Schuldt 1972c, 156, Taf. 2); B and D – Urdolmen of Naschendorf 1 (Schuldt 1968, 18; Schuldt 1970b, 40, Fig. 30); C – Extended dolmen of Naschendorf 2 (Schuldt 1972c, 161, Taf. 7); E – Simple dolmen (front) and extended dolmen (back) of Naschendorf 1 and 2 (Schuldt 1972c, 188, Taf. 34); F – Chamberless long barrow of Stralendorf (Zülow 1; Schuldt 1966, Fig. 1)

Ryc. 5. Typy grobowców z zamkniętymi komorami z zachodniej Meklemburgii: A – prosty dolmen (Urdolmen), Frauenmark 1 (Schuldt 1972c, 156, Taf. 2); B i D – Urdolmen z Naschendorf 1 (Schuldt 1968, 18; 1970b, 40, Fig. 30); C – powiększony dolmen z Naschendorf 2 (Schuldt 1972c, 161, Taf. 7); E – prosty (pierwszy plan) i powiększony dolmen (drugi plan) z Naschendorf 1 i 2 (Schuldt 1972c, 188, Taf. 34); F – długi grobowiec bezkomorowy ze Stralendorf (Zülow 1; Schuldt 1966, Fig. 1)



Fig. 6. Types of megalithic partly accessible monuments of Western Mecklenburg: A–C – Urdolmen of Everstorf 2 with detail of the entrance (Schuldt 1972c, 46, Fig. 24, 157, Taf. 3); D – Extended Dolmen of Pustow (Schuldt 1972c, 162, Taf. 8); E – Extended dolmen of Friedrichsruhe 8 (Schuldt 1972c, 72, Fig. 44, 165, Taf. 11)

Ryc. 6. Typy grobowców z częściowo otwartymi komorami z zachodniej Meklemburgii: A–C – Urdolmen z Everstorf 2 z detalami wejścia (Schuldt 1972c, 46, Fig. 24, 157, Taf. 3); D – powiększony dolmen z Pustow (Schuldt 1972c, 162, Taf. 8); E – powiększony dolmen z Friedrichsruhe 8 (Schuldt 1972c, 72, Fig. 44, 165, Taf. 11)



Fig. 7. Types of megalithic fully accessible monuments of Western Mecklenburg: A–C – Passage grave of Naschendorf 4 with details of the entrance and the inside chamber (Schuldt 1968, Fig. 32–34; 1970d, 62, Fig. 44; 1972c, 53, Fig. 30); D – Reconstruction of the great dolmen at Ganzlin 16 (Rennebach 1974, 131, Fig. 9)

Ryc. 7. Typy grobowców z otwartymi komorami z zachodniej Meklemburgii: A–C – grób korytarzowy z Naschendorf 4 z detalami wejścia i widokiem wewnątrz komory (Schuldt 1968, Fig. 32–34; 1970d, 62, Fig. 44; 1972c, 53, Fig. 30); D – rekonstrukcja wielkiego dolmenu z Ganzlin 16 (Rennebach 1974, 131, Fig. 9)



Fig. 8. Distribution of classified grave types in Western Mecklenburg with names of sites mentioned in text and figures (data from: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; reports in the *Jahrbücher für Bodendenkmalpflege Mecklenburg*) Ryc. 8. Rozmieszczenie sklasyfikowanych typów grobowców w zachodniej Meklemburgii, z nazwami stanowisk wspomnianych w tekście i na rycinach (źródła danych: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; raporty w *Jahrbücher für Bodendenkmalpflege Mecklenburg*)



Fig. 9. Distribution of single (black dot), double (grey circle) and multi-mound cemeteries (red circle with number of graves/cemetery) in dependence of maximum distance ratios: A - 0,5 km; B - 1 km; C - 2 km; D - 3 km (data from: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; reports in the *Jahrbücher für Bodendenkmalpflege Mecklenburg*; calculations with QGIS – density)

Ryc. 9. Rozmieszczenie cmentarzysk z pojedynczym grobowcem (czarne punkty), z dwoma grobowcami (szare kółka) i z wieloma grobowcami (czerwone kółka, ze wskazaniem liczby grobowców na cmentarzysku) w zależności od maksymalnych dystansów między nimi: A - 0,5 km; B - 1 km; C - 2 km; D - 3 km (źródła danych: denkmalGIS Heritage Department Mecklenburg-Western Pomerania; Schuldt 1972c; Beltz 1910; raporty w *Jahrbücher für Bodendenkmalpflege Mecklenburg*; obliczenia gęstości wykonane w QGIS)



Fig. 10. Distribution of megalithic graves of Western Mecklenburg including outside constructions. Double-mound cemeteries are marked with black circle, multi-mound cemeteries with red circle

Ryc. 10. Rozmieszczenie grobowców megalitycznych z zachodniej Meklemburgii z uwzględnieniem konstrukcji zewnętrznych. Cmentarzyska z dwoma grobowcami zakreślono czarnym okręgiem, cmentarzyska z wieloma grobowcami – czerwonym



Fig. 11. Distribution of grave and mound types. Case study: A – Everstorf; B – Naschendorf (map: gaia-mv.de)

Ryc. 11. Rozmieszczenie grobowców i nasypów różnych typów. Przykłady: A – Everstorf; B – Naschendorf (mapa: gaia-mv.de)



Fig. 12. Passage grave at Naschendorf 4, Everstorf Forest (Sprockhoff 1967, Nr. 311). Photograph by T. Darvill Ryc. 12. Grób korytarzowy z Naschendorf 4, puszcza Everstorf (Sprockhoff 1967, Nr. 311). Fot. T. Darvill

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		KI-1- M-14-		
		Klein Wolde		
Long barrow				
Megalith	Helm 2			
Type known (incl. size & shape)				
Type unknown				
Long barrow with				
compartments		0	1 km	2 km

Fig. 13. Distribution of grave and mound types. Case study C – Wittenburg / Klein Wolde / Helm (map: gaia-mv.de)

Ryc. 13. Rozmieszczenie grobowców i nasypów różnych typów. Przykład C – Wittenburg / Klein Wolde / Helm (mapa: gaia-mv.de)

#### Literature

- Andersen N.H. 2019. The first farmers as monument builders in the Sarup area, Funen, Denmark. In: *Megaliths Societies Landscapes...*, 231–254.
- Ashbee P., Smith I.F., Evans J.G. 1979. Excavation of three long barrows near Avebury, Wiltshire. *Proceedings of the Prehistoric Society* 45, 207–300.
- Ashbee P., Smith I.F., Evans J.G. 1984. *The earthen long barrow in Britain*. Second edition. Norwich.
- Baier R. 1904. Vorgeschichtliche Gräber auf Rügen und in Neuvorpommern. Greifswald.
- Behrens A., Mennenga M., Wolters S., Karle M. 2019. "Relikte im Moor" ein neues Projekt zur Erforschung der mittelneolithischen Landschaftsentwicklung im Ahlen-Falkenberger Moor, Ldkr. Cuxhaven. In: Niedersächsisches Institut für historische Küstenforschung (eds.), Siedlungs- und Küstenforschung im südlichen Nordseegebiet 42, 9–22.
- Beltz R. 1899. Die steinzeitlichen Fundstellen in Meklenburg. Jahrbücher des Vereins für Mecklenburgische Geschichte und Altertumskunde 64, 78–192.
- Beltz R. 1910. Die vorgeschichtlichen Altertümer des Grossherzogtums Mecklenburg-Schwerin. Schwerin.
- Benson D., Whittle A. 2007. Building memories. The Neolithic Cotswold long barrow at Ascott-under-Wychwood, Oxfordshire. Oxford.
- Boujot C., Cassen S. 1993. Neolithic funerary structures of the west of France. *Antiquity* 67, 477–491.
- Bradley R. 1998. The significance of monuments. On the shaping of human experience in Neolithic and Bronze Age Europe. Abingdon.
- Chapman R. 1981. The emergence of formal disposal areas and the 'problem' of megalithic tombs in prehistoric Europe. In: R. Chapman, I. Kinnes, K. Randsborg (eds), *The archaeology of death*. Cambridge, 71–81.
- Darvill T. 1979. Court cairns, passage graves and social change in Ireland. *Man* NS 14/2, 311–327.
- Darvill T. 2004. Long barrows of the Cotswolds and surrounding areas. Stroud.
- Darvill T., Lüth F. 2019. Early monumentality and social differentiation: A case study in Western Mecklenburg, Germany. In: *Megaliths – Societies – Landscapes...*, 255–266.
- Diers S. 2018. Mensch-Umweltbeziehungen zwischen 4000 und 2200 cal BC. Vegetationsgeschichtliche Untersuchungen an Mooren und trichterbecherzeitlichen Fundplätzen der Altmark. Bonn.
- Dörfler W. 2011. Pollenanalytische Untersuchungen zur Vegetations- und Siedlungsgeschichte im Einzugsbereich des Rugensee bei Schwerin. Beiträge zur Ur- und Frühgeschichte Mecklenburg-Vorpommerns. In: A. Schülke (ed.). Landschaften – Eine archäologische Untersuchung der Region zwischen Schweriner See und Stepenitz. Darmstadt, 315–336.
- Eogan G. 1984. Excavations at Knowth I: Smaller passage tombs, Neolithic occupation and Beaker activity. Dublin.

Eogan G. 2017. Excavations at Knowth 6: The passage tomb archaeology of the Great Mound at Knowth. Dublin.

Evans C., Hodder I. 2006. A woodland archaeology. Neolithic sites at Haddenham. Cambridge.

- Fontes, M. 1881. Fouilles à Carnac: tombe circulaire. *Bulletin de la Société Polymatique du Morbihan* 1881, 120–123.
- Furholt M., Mischka D. 2019. The phasing of megalithic construction activities and its implications for the development of social formations in Northern-Central Germany. In: *Megaliths – Societies – Landscapes...*, 921–938.
- Giot P.R. 1987. Barnenez, Carn Guennoc. Rennes.
- Hage F. 2016. Büdelsdorf/Borgstedt. Eine trichterbecherzeitliche Kleinregion. Bonn.
- Henshall A.-S. 1972. The chambered tombf of Scotland 2. Edinburgh.
- Kinnes I. 1975. Monumental function in British Neolithic burial practices. *World* Archaeology 7/1, 16–29.
- Lisch G.C.F. 1837. Friderico-Francisceum. Leipzig.

L'Helgouach J. 1965. Les sépultures mégalithiques en Amorique. Rennes.

- Lynch F., Davey P. 2017. The chambered tombs of the Isle of Man. A study by Audrey Henshall 1969–1978. Oxford.
- Madsen T. 1979. Earthen long barrows and timber structures: aspects of early Neolithic practice in Denmark. *Proceedings of the Prehistoric Society* 45, 301–320.
- Megaliths Societies Landscapes... J. Müller, M. Hinz, M. Wunderlich (eds.) 2019. Megaliths – Societies – Landscapes. Early Monumentality and Social Differentiation in Neolithic Europe. Bonn.
- Mercer P. 2015. Irish portal tombs: A ritual perspective. Oxford. BAR British Series 616.
- Midgley M. 1992. TRB Culture. The first farmers of the north European Plain. Edinburgh.
- Midgley M. 2005. The monumental cemeteries of prehistoric Europe. Stroud.
- Midgley M. 2008. The megaliths of northern Europe. Abingdon.
- Mischka D. 2011. The Neolithic burial sequence at Flintbek LA3, north Germany, and its cart tracks: a precise chronology. *Antiquity* 85, 742–758.
- Mohen J.-P., Scarre C. 2002. Les tumulus de Bougon. Complexe mégalithique du Ve au IIIe millénaire. Paris.
- Müller J. 2019. Boom and bust, hierarchy and balance: From landscape to social meaning – Megaliths and societies in Northern Central Europe. In: *Megaliths – Societies* – *Landscapes...*, 31–77.
- Piggott S. 1962. The West Kennet long barrow. Excavations 1955–56. London. Ministry of Works Archaeological Report 4.
- Piggott S. 1966. 'Unchambered' long barrows in Neolithic Britain. *Palaeohistoria* 12, 381–393.
- Rassmann K., Schafferer G. 2012. Demography, Social Identities, and the Architecture of Megalithic Graves in the South-Western Baltic Area. In: M. Hinz, J. Müller (eds.), *Siedlung, Grabenwerk, Großsteingrab*. Bonn, 107–120.
- Renfrew C. 1976. Megaliths, territories and populations. In: S.-J. de Laet (ed.), Acculturation and continuity in Atlantic Europe. Bruges, 198–220.

- Rennebach G. 1974. Untersuchungen an Großsteingräbern und Hügelgräbern im Ganzliner Holz, Forstrevier Twietfort, Kreis Lübz. *Jahrbuch für Bodendenkmalpflege in Mecklenburg* 1973, 121–156.
- Ritchie J.N.G. 1970. Excavation of the chambered cairn at Achnacreebeag. Proceedings of the Society of Antiquaries of Scotland 10 (1969–1970), 31–55.
- Ritter J. 1840. Hünengrab von Helm No. 2. Jahrbücher des Vereins für Mecklenburgische Geschichte und Altertumskunde 5, 21–22.
- Schafferer G. 2014. Megaliths and landscapes Grave architecture as spatial manifestations of tradition and social identities in northern Germany. In: M. Furholt, M. Hinz, D. Mischka, G. Noble, D. Olausson (eds.), *Landscapes, Histories and Societies in the northern European Neolithic*. Bonn, 91–100.
- Schuldt E. 1966. Ein kammerloses Hünenbett von Stralendorf, Kreis Schwerin. Jahrbuch für Bodendenkmalpflege in Mecklenburg 1965, 9–23.
- Schuldt E. 1968. 4000 jährige Gräber im Everstorfer Forst. Ludwigslust.
- Schuldt E. 1970a. Die Dolmengruppe im Nordteil des Everstorfer Forstes bei Barendorf, Kreis Grevesmühlen. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 1968, 7–38.
- Schuldt E. 1970b. Der Urdolmen im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 1968, 39–44.
- Schuldt E. 1970c. Ein zerstörter Großdolmen im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 1968, 45–48.
- Schuldt E. 1970d. Das große Ganggrab im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 1968, 61–87.
- Schuldt E. 1970e. Ein Ganggrab mit trapezförmiger Einfassung im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. Jahrbuch für Bodendenkmalpflege Mecklenburg--Vorpommern 1968, 49–59.
- Schuldt E. 1972a. Der Riesenberg von Nobbin, Kreis Rügen. Jahrbuch f
  ür Bodendenkmalpflege Mecklenburg-Vorpommern 1971, 153–160.
- Schuldt E. 1972b. Die Großsteingräber von Lancken-Granitz auf der Insel Rügen. *Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern* 1971, 9–84.
- Schuldt E. 1972c. Die mecklenburgischen Megalithgräber. Untersuchungen zu ihrer Architektur und Funktion. Berlin.
- Schuldt E. 1972d. Die Großdolmen von Nadelitz, Kreis Rügen. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 1971, 179–212.
- Schuldt E. 1973. Die Großsteingräber von Friedrichsruhe, Kreis Parchim. Jahrbuch für Bodendenkmalpflege Mecklenburg-Vorpommern 197, 7–16.
- Sheridan A., Schulting R.J., Quinnell H., Taylor R.T. 2008. Revisiting a small passage tomb at Broadsands, Devon. *Devon Archaeological Society Proceedings* 66, 1–26.
- Sherratt A. 1990. The genesis of megaliths: Monumentality, ethnicity and social complexity in Neolithic northwest Europe. World Archaeology 22, 147–67.
- Sherratt A. 1995. Instruments of conversion? The role of megaliths in the Mesolithic/

Neolithic transition in north-west Europe. Oxford Journal of Archaeology 14, 245–60.

Simpson D.D.A. 1979. The first agricultuiral communities. In: J.V.S. Megaw, D.D.A. Simpson (eds.), *Introduction to British prehistory*. Leicester, 78–129.

Sprockhoff E. 1938. Die Nordische Megalithkultur. Berlin.

- Sprockhoff E. 1967. Atlas der Megalithgräber Deutschlands 2: Mecklenburg Brandenburg Pommern. Bonn.
- Stout G. 2002. Newgrange and the Bend of the Boyne. Cork.
- Wysocki M., Griffiths S., Hedges R., Bayliss A., Higham T., Fernandez-Jalvo Y., Whittle A. 2013. Dates, diet and dismemberment: evidence from the Coldrum megalithic monument. Kent, 1–30. Proceedings of the Prehistoric Society 79
- Zych R. 2019. Phenomenology of spatial organisation of Kujavian long barrows. In: J. Müller, M. Hinz, M. Wunderlich (eds.), *Megaliths – Societies – Landscapes...*, 167–176.

## Barrow cemeteries in the Neolithic of north-west Europe. The case of Western Mecklenburg (Germany)

#### Summary

In Western Mecklenburg, Germany, in an area of about 7000 km<sup>2</sup>, 238 megalithic monuments of the Funnel Beaker Culture (TRB) have been recorded, although many of them have already been destroyed with little known about the original structure. From what is known, over 40% are part of multi-mound cemeteries, while the most common form involved a closed chamber as a nucleated feature within the barrow and then the ur-dolmen and extended dolmen, which have also partly open chambers, and finally the fully accessible chambers of great dolmen and passage graves. So-called 'chamberless' long barrows, probably with closed wooden chambers and dispersed arrangements, complete the picture. In the west and north of the research area all the main types of monument with closed, partly closed and accessible chambers are prominent, either as single-mound cemeteries, pairs, or multi-mound cemeteries are present. The south-east is dominated by chamberless long barrows with only a few megalithic chambers represented as single-mound and small multi-mound cemeteries.

A closer look at three multi-mound cemeteries at Everstorfer Forst, Naschendorf, and Wittenburg/Klein Wolde/Helm shows something of the scale and composition of these impressive sites. Great heterogeneity is visible with rather uniform cemeteries in terms of the range of monument types represented as well as very diverse cemeteries with a wide range of types alongside one another. The diverse multi-mound cemeteries tend to feature a higher proportion of partly open and fully accessible chambers, which in turn suggests longer periods of active use. In the final discussion a possible correlation between easy access and rising population levels is postulated. Furthermore, it is suggested that the emergence and distribution of multi-mound cemeteries might be linked with changing patterns of social organization as segmentary societies become more hierarchical. In all cases there seems to be a strong connection with natural water sources in the landscape.

#### Cmentarzyska kurhanów w neolicie Europy Północno-Zachodniej. Przykład zachodniej Meklemburgii (Niemcy)

#### Streszczenie

W zachodniej Meklemburgii w Niemczech, z obszaru ok. 7000 km² znanych jest co najmniej 238 grobowców megalitycznych łaczonych z kultura pucharów lejkowatych, jednakże wiele z nich zostało zniszczonych i trudno coś powiedzieć na temat ich oryginalnej budowy. Na podstawie dotychczasowych badań ustalono. że ok. 40% grobowców znajduje się na stanowiskach z wieloma grobowcami, zaś najpowszechniej występującą formą jest zamknieta komora stanowiąca jądro nasypu, a następnie dolmeny pierwotne, dolmeny powiększone, również z częściowo otwartymi komorami oraz wielkie dolmeny i grobowce korytarzowe z w pełni otwartymi komorami. Obecne są również długie grobowce, tzw. bezkomorowe, prawdopodobnie z drewnianymi, w pełni zamknietymi komorami, wystepujące w luźnych skupiskach. Na północy i zachodzie obszaru badań występują wszystkie główne typy grobowców, mianowicie z zamkniętymi, częściowo zamkniętymi i otwartymi komorami. Są one obecne zarówno na cmentarzyskach z jednym grobowcem, jak i z parą czy też z wieloma grobowcami. Na południowym wschodzie dominuja długie konstrukcje bezkomorowe, natomiast nieliczne groby z kamiennymi komorami występują jako pojedyncze grobowce lub niewielkie cmentarzyska.

Przykład trzech cmentarzysk z wieloma grobowcami – Everstorfer Forst, Naschendorf i Wittenburg / Klein Wolde / Helm – pokazuje skalę i rozplanowanie przestrzenne tego typu stanowisk. Widoczne jest także wyraźne zróżnicowanie na stanowiska z jednolitą konstrukcją grobowców oraz z wieloma różnymi typami występującymi obok siebie. Na dużych stanowiskach z wieloma rodzajami grobowców częściej występują komory częściowo lub całkowicie otwarte, co sugeruje dłuższe okresy aktywnego użytkowania. W dyskusji wskazano na możliwość korelacji łatwej dostępności oraz wzrostu populacji. Zasugerowano także, że pojawienie się i rozprzestrzanienie cmentarzysk z wieloma grobowcami mogło się wiązać ze zmianami w organizacji społecznej, w tym z pogłębiającą się stratyfikacją i hierarchizacją społeczności. We wszystkich przypadkach widoczna jest także tendencja do lokowania stanowisk w pobliżu naturalnych źródeł wody.

> Anja Behrens Deutsches Archäologisches Institut, Kulturgüterschutz anja.behrens@dainst.de; behrens@nihk.de orcid: 0000-0002-5815-5828

Timothy Darvill Department of Archaeology and Anthropology, Bournemouth University tdarvill@bournemouth.ac.uk orcid: 0000-0002-2887-9622