

# LIVING AMONG THE DEAD – SETTLEMENT STRUCTURES IN THE NORTH-WESTERN PONTIC REGION IN THE 4<sup>TH</sup> MILLENNIUM BC

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**Received:** 16<sup>th</sup> May 2017, **Accepted:** 15<sup>th</sup> October 2017

## ABSTRACT

The function of the plan-schematic settlements of the so called Cucuteni-Tripolye-Complex in the north-western pontic region remains enigmatic and yet, these structures haven't been approached holistically. The article aims to address basic aspects as the construction plan and the chronology at one of these sites, the settlement Petreni in the Republic of Moldova. Beyond that, it shall be outlined, in how far the settlements served as mnemonic places.

Deliberately burnt houses in these settlements represent a characteristic feature, which do not only resemble the end of a settling stage - they rather mark performative acts and may be associated with the death of a household or a community member. As the burnt house debris has not been removed or levelled, it reflects a visible marker for preceding generations among the living - such structures constitute distinctive mechanisms of commemoration and mirror communities which share a common set of experiences and knowledge.

**Keywords:** Pontic region, 4<sup>th</sup> millennium BC, Tripolye, Cucuteni, settlement plan, mnemonic place, house burning

## INTRODUCTION

Regarding the plan-schematic settlements and the huge occupied space, several sites in the north-western Pontic region reflect remarkable structures in the first half of the 4<sup>th</sup> Millennium BC. The identification of these sites as huge agglomerations of different communities or as (proto-)cities stimulates a vivid dispute among researchers until these days. But despite these terminological issues, here, the research agenda should rather be addressed to different aspects; as how these settlements were used, and which chronological framework can be expected for the entire construction. Petreni, a settlement located in the northern area of the Moldovan Republic shall serve as a case study to evaluate specific characteristics of these settlements. Especially the building plan constitutes a first approach to grasp continuity, constant interactions and performative acts at one of these sites.

## THE CUCUTENI-TRIPOLYE-COMPLEX IN THE NORTH-WESTERN PONTIC REGION

The so-called Cucuteni-Tripolye-Complex (CTC) arises in the middle of the 5<sup>th</sup> Millennium BC and stretches out from the Eastern Carpathian Mountains to the middle Dnepr. Most of the sites are concentrated in the hilly landscape of the forested steppe zone of the north-western pontic region. Especially in the first half of the 4<sup>th</sup> Millennium BC, these sites show the tendency to form out huge agglomerations of houses, which occupy very large spaces of up to 320 ha. The houses were built and deliberately burnt within a rather short period of less than 200-300 years.<sup>1</sup>

Due to a *technological turn*, which was triggered by a set of technological advances and refined scientific investigation tools such as measuring sensors for wide range geophysical prospections, the research of the so called megasites in the western pontic region has been revitalized in the last years. Recent projects in Ukraine, Romania and the Republic of Moldova have brought forth an impressive quantity of new and high quality data, as well as settlement plans in high resolutions. Many of these settlements show similarities, i. e. a large occupied space and schematic settlement plans featuring an empty space in the centre. Some particular aspects of the structure of these settlements shall be explored exemplary by a case study from the settlement Petreni in the northern region of the Moldovan Republic. The evaluation of the settlement development serves as a first approach for the understanding of continuity and questions of constant interactions.

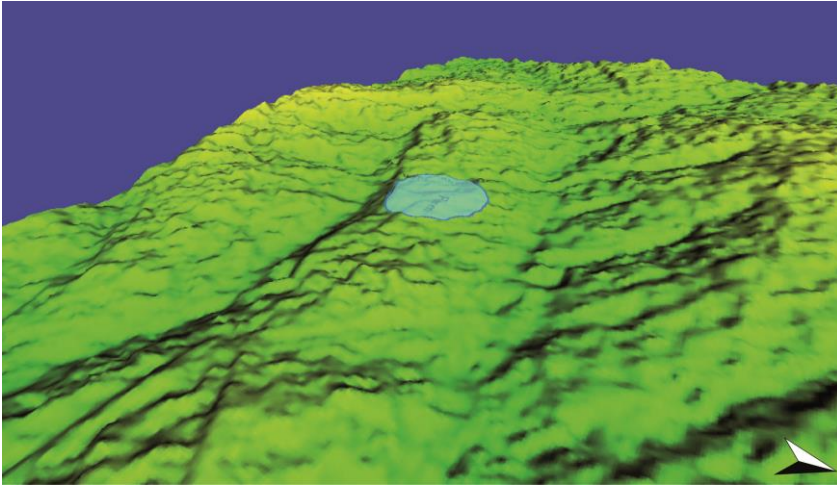
## SETTLEMENTS IN THE 4<sup>TH</sup> MILLENNIUM BC – A CASE STUDY FROM PETRENI

In the hilly landscape of the Bălți Steppe, the settlement of Petreni is located on a hill plateau (Fig. 1). The terrain profile shows that the settlement structure corresponds with the landscape, e. g. the largest building in the center of the site is situated on the relatively highest point of the mound. The houses of the inner and partly of the outer house circuit facing their short sides to the centre, follow the contour lines of the terrain. Outside of these two circuits of buildings, individual rows of houses are radially orientated toward the edges of the plateau. But also the unbuilt space requires to be mentioned: Between these described architectural features, nor indications of burnt or unburnt architecture neither deep features could be unveiled. Apart from a huge, single burnt structure, the central space seems to be *empty*. The settlement plan (Fig. 2) indicates two ditches, which follow the round settlement structure. The inner ditch surrounds the house circuits with their short side facing the centre. It is repeatedly overlaid by radially orientated buildings and enclosed by the outer ditch. The outer ditch is interrupted by several passages, which lead towards the centre of the settlements. They guide as well out of the settlement, but do not exceed a radius of more than 2 km around the settlement, which indicates that the settlements activity zone was rather limited. Several pottery kilns are mainly situated outside of the ditch.

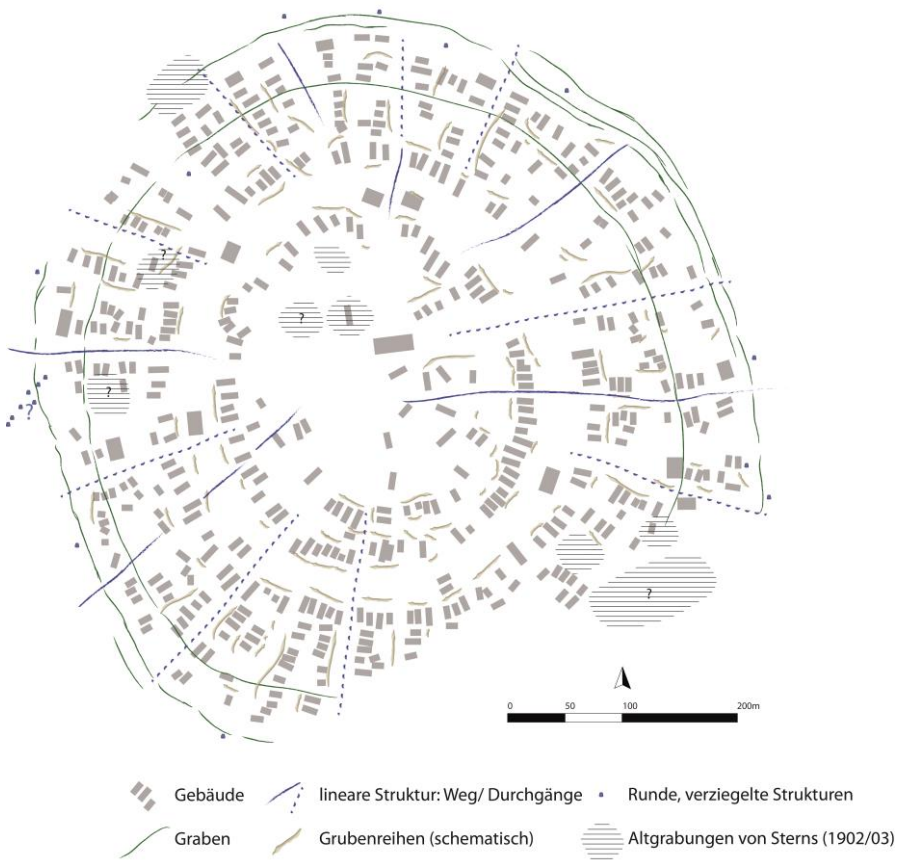
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<sup>1</sup> See: Müller *et al.*, 2016; Chapman/Gaydarska 2016, 81-105; Uhl *et al.*, 2017, 185-205.

**Fig. 1: Petreni. Elevation model. Topography of the settlement Petreni (Uhl)**

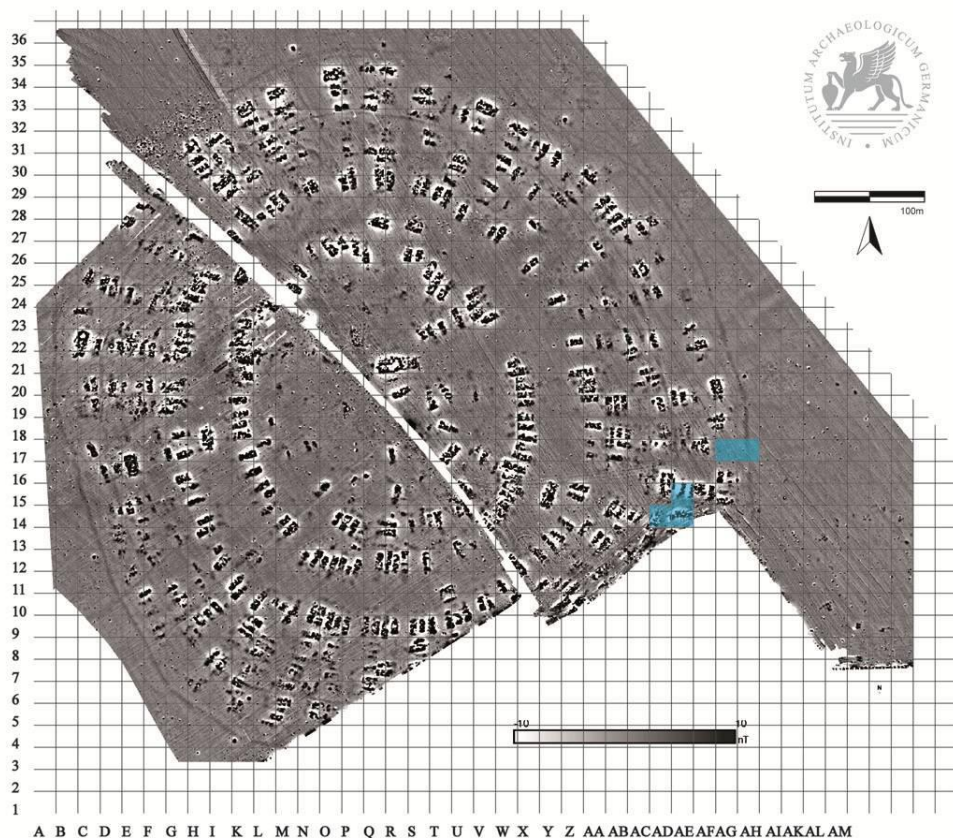


**Fig. 2: Petreni. Settlement plan (Uhl)**



Following the basic structure of the settlement plan (Fig. 3) with the features 1) number of the ditch enclosures and 2) orientation of the houses, it seems plausible to reconstruct two settlement stages. Accordingly an inner, first building stage would be separated by an outer, second stage. Furthermore, it must be considered, in how far the house circuits could be subdivided in further subphases, which are indicated by the arrangement of the pits, the hollow ways and, possibly, the distribution of pottery kilns. Further hints for the organization of the settlement can be deduced by the house and pit clusters, which range from 2 to 19 houses. Similarly, the arrangement of pits resembles such a clustering of house groups.

**Fig. 3: Petreni. Geophysical settlement plan (Uhl *et al.*, 2014)**



A variety of shallow structures could be observed during recent excavations. They are not included in the general plan of the site, but can also allow a more differentiated segmentation of the settlement. The separation of the settlement in house groups, districts or quarters is furthermore indicated by the hollow ways.<sup>2</sup> The aerial photo of the settlement shows unspecified soil discolorations (Fig. 4). In the overlay with the burnt house structures they might as well indicate house groups as already outlined by Šiškin in one of his first sketches

<sup>2</sup> A similar interpretation has been considered on a KDE-based evaluation. See: Rassmann *et al.*, 2016.

of the settlement.<sup>3</sup> To sum it up, the structural outline of the settlement seems very plausible; however, none of the above mentioned characteristics should be regarded as a blueprint for social structures and cannot be applied to a strict segregation of the society.

Special attention should be drawn to the hollow ways, which indicate that the houses and possible house groups cannot be regarded as rigidly separated units. These paths connect the above described possible units and can be traced as uninterrupted tracks in the settlements. This underlines a continuous use of the tracks during the existence of the settlement, but indicates as well that a variety of quarters, districts, house groups or single houses were part of a communication system. In this respect, the central building could reflect an important reference point. If the majority of districts and/ or house groups were connected via trails, it seems likely that at least parts of these clusters existed synchronously.

**Fig. 4: Petreni. Aerial Photo (Geoportal Moldova)**



## CHRONOLOGICAL ASPECTS

The settlement plan indicates segmentations within the settlement Petreni, which consist of several houses, house groups or districts. Following a possible division of the settlement Petreni in several districts, it must be asked, whether the settlement developed house group by house group and quarter by quarter, or whether polylocally, multiple districts were expanding house by house. The rather symmetric structure of the settlement is tempting to assume a stringent, *logical* construction of the individual compartments and would trigger the interpretation that for instance, radially arranged rows of houses were constructed one by one, following a *logical* development pattern. This would imply a continuous development, where there would hardly be any *vacant lots*. But regarding the <sup>14</sup>C-data from Petreni, this does not seem to be the case. A comparison with settlement systems in southern Germany and Switzerland<sup>4</sup> confirms the assumption that the construction of settlements like Petreni is likely to follow a far more complex development scheme with a *chaotic* pattern.<sup>5</sup>

<sup>3</sup> See: Bichbaev, 2007, 9-26.

<sup>4</sup> Uhl, 2017 (in print).

<sup>5</sup> See: Jones, 2010, 25-46.

The possible structuring of the settlement development in various segments and house groups can still be regarded as valid, however, another utilisation of space and a different communication scheme needs to be assumed. If a chronologically dense clustering of houses can as well not be confirmed in other areas of the settlement, it needs to be scrutinized, how these groupings of houses shall be assessed in a social and functional sense. Beyond the chronological evaluation of such a site, mechanisms of social distinction need also to be regarded as crucial structuring factors, which may be mirrored in the settlement structure.

Due to its size of approximately 30ha and a possible subdivision in several quarters, the settlement plan suggests a longer duration of the settlement that encompasses several generations.<sup>6</sup> In lack of a vertical stratigraphy of the mostly single-layered settlements of the CTC communities in the first half of the 4<sup>th</sup> Millennium BC, a relative-chronological order of the features cannot be determined with certainty and relations in the sense of *post* - or *ante-quem* can only be detected in the field, if e. g. a ditch is overlaid by architectural remains, like in Petreni. Furthermore, several unburnt structures such as the already mentioned soil discoloration, shallow features and unburnt mud-brick structures outside the traditional house features must be regarded as possible markers for the chronological differentiation of individual areas. They recently turned out to be promising for a finer differentiation of house units in the settlements.

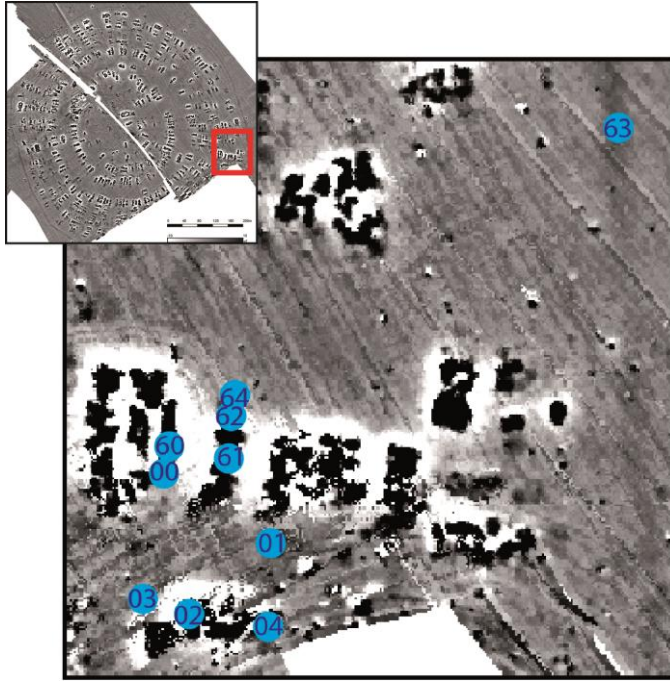
According to the calibrated AMS-data, the construction, as well as the lifetime of the settlement Petreni can be attributed to an approximate frame of 150-200 years.<sup>7</sup> The AMS-data from Petreni are presented from neighbouring buildings, pits and ditch segments in the Southeast area of the settlement (Fig. 5). The calibrated data from Petreni indicate a time span between the 40. and the 38. century (cal. BC) for the stage Tripolye BII/ CI. In terms of absolute chronological indications, the calibrated data provide a reliable framework, which allow comparability with other settlements and events. An obstacle for a fine chronological definition of individual fix points, which are determined by AMS-data, is reflected though in the distribution of probabilities of datings for individual features. For a fine, chronological resolution of features within the settlement, the calibrated data seem not very suitable, as they *lost their symmetry* due to the calibration.<sup>8</sup> Thus uncalibrated values, whose probability is expressed in a standard deviation, shall be presented here, in order to achieve comparability of the investigated features in the southeastern area of the settlement. With this different perspective, it turns out, that the features in described area did not all coexist at the same time (Fig 6-7).

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<sup>6</sup> Uhl, 2017 (in print).

<sup>7</sup> Uhl *et al.*, 2016.

<sup>8</sup> See: László, 2015. The calibrated values from Petreni are very close to each other, but since no peak or plateau of the calibration can be attributed clearly as more reliable (neither 1- $\sigma$  nor 2- $\sigma$ ), it is not possible to dissolve these calibrated data more precisely (Uhl 2017, in print).

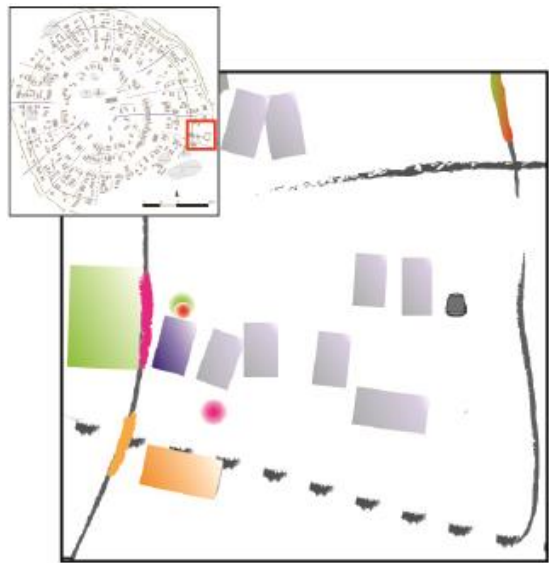
**Fig. 5: Petreni. Dated features in the SE-area of the settlement (Uhl)**

In the sequence of uncalibrated data the pit (01) represents the oldest feature of the relative-chronological sequence. Furthermore, according to overlays, a wall foundation (00) in the inner ditch could be distinguished from the filling of the inner ditch (03). The relative dating of these two features indicates a rather simultaneous or slight posterior development of the structures. They are among the upper, calibrated datings, which means that they existed before the outer circuit of houses was constructed. The BP-dating of adjacent features, which are conventionally estimated as being contemporary, in two cases indicate posterior constructions without any chronological overlapping with other, surrounding features. The data for the lower (62) and upper (64) part of the pit, suggests a relatively consequent use of this complex. The spatial proximity of this pit (62 and 64) to the neighbouring house (61) could correspond only with the use of the upper part of the pit (64). Vice versa, the pit (62, lower filling) could as well have been used in context with activities in the surrounding vicinity, e. g., house (60). Building structure (61) seems completely disconnected from this sequence. In a neighbouring trench south of the described features, samples of the bottom layer of the inner ditch (03), as well as a house structure (02) could be dated. The calibrated as well as the uncalibrated data imply a simultaneous use of both structures. Similarly, the data of the lower filling of the outer ditch (63) points at a simultaneous use of these features.

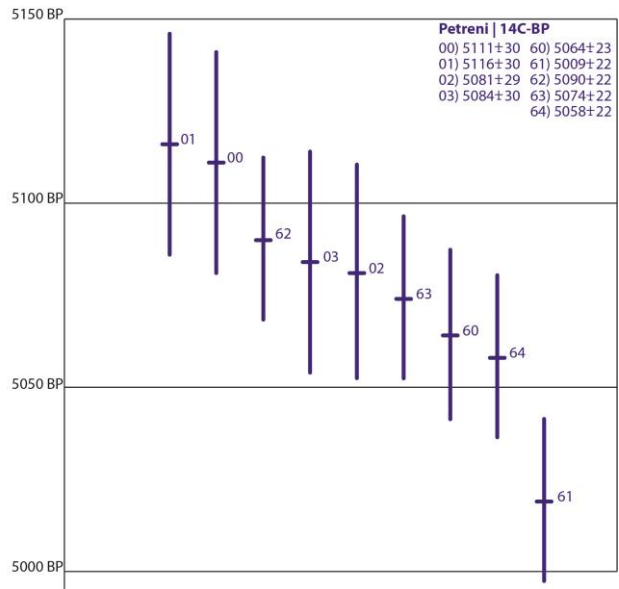
After setting an exemplary a chronological framework for a settlement of the CTC, it can be concluded that not all of the houses were coexisting and synchronously inhabited. Secondly, the development of the settlement did not proceed quarter by quarter or house group by house group. Several buildings and structures of different areas built a communication network, as they are connected through hollow ways. The micro-regional sequence of the nine uncalibrated radiocarbon dates presented here in the SE-area indicates that the features of one so-called *house group* or even bigger units are partly asynchronous

(Fig. 2). As has been stated elsewhere, this result could be interpreted in such a way, that the construction plan of this site resembles patterns of shifting and rotating quarters and house groups within the settlement or even a micro-region.<sup>9</sup>

**Fig. 6: Petreni. Dated features, according to uncalibrated data (Uhl)**



**Fig. 7: Petreni. Uncalibrated sequence of AMS-data**  
(laboratory: Mannheim, graph: Uhl)



<sup>9</sup> Uhl, 2017 (in print).

## MNEMONIC PLACES

In CTC settlements, intramural, regular burials appear very rarely, but disarticulated human bones are found scattered over the settlements in unspecific, shallow features, in houses, hearth constructions and deep structures. In some cases, skulls have been buried or deposited in houses and under house floors.<sup>10</sup> Also in Petreni, human bones have been unveiled in unspecified, shallow features and the inner ditch.<sup>11</sup> Together with the practice of house burning, intramural burials (and depositions) are regarded as second aspect of a *dual mortuary practice*,<sup>12</sup> which is already known from Neolithic tells in the Balkans or the large-scaled CTC settlements – places, which have been constantly occupied over several generations. As no extramural cemeteries are known for the CTC, the burnt houses within the settlements may indicate commemorative acts in a sense of *alternative burials*. Although the deliberate burning of clay architecture cannot directly be linked to the burial or cremation rituals of the deceased, as has less convincingly been stated elsewhere in the early history of research,<sup>13</sup> this practice of house burning, still, may be strongly associated with the dead of the household and/ or a community member.<sup>14</sup>

In these regards, the house burning reflects a conscious, performative act and a culturally intrinsic decision. Especially for the sphere of the CTC and further Neolithic and Chalcolithic groups, this topic has been discussed from different perspectives and has either been linked to accidental fires, cleansing rituals, architectural reasons, warfare or ritual burning.<sup>15</sup> Although in single cases, extrinsic causes cannot be completely excluded, the burning of houses reflects two spheres: it is most likely ritually motivated and can be regarded as an *alternative form of mortuary ritual*,<sup>16</sup> but seems also to be performed due to *practical* reasons, as people still continued to live next to the abandoned houses. The cleansing and purifying of the house seems to have followed a set of strict rules, as they are described e. g. for the Mesopotamian sphere.<sup>17</sup> In a practical sense, the *cleaning with fire* can reduce the risk of diseases, caused for instance by mildew or bacterias. Fire as a purifying element can play a very important role in order to avoid mischief or harm by *invisible powers* etc. Although there is no written record for the demand of burning habitations in the sphere of CTC, the Mesopotamian appliance of fire in these contexts could be a further, approximate explanation for the deliberate burning of houses in the communities of CTC. There, the burning of houses might be understood in a close context to the dispose of malediction or malady and must be performed, if *invisible powers* would occupy a human body and/ or the house. Also, several stages in the life of a settlement and/ or its inhabitants can be marked by ritual fires.

The practice of house burning is followed by a multitude of mortuary practices and rituals, which ties the living generation to the people that previously inhabited the place. For the concept of *living* in a settlement like Petreni, the above described building pattern implies that people built houses next to the burnt debris of houses. This means, that living at a site like Petreni within the remains of preceding generations, creates references to the ancestors. So far secondary, whether these sites have been constantly occupied or inhabited seasonally,

<sup>10</sup> Summarizing: Lazarovici & Lazarovici, 2003, 297-306. Similar examples are widely dispersed and well known for several sites in Anatolia, Eastern Europe and the Levant from the Neolithic to the Bronze Age. (See: Lichter, 2001, 269-274; Kaiser, 2010, 97-108).

<sup>11</sup> Uhl *et al.*, 2016, 167-168.

<sup>12</sup> See: Chapman 2015.

<sup>13</sup> e. g. von Stern, 1906, 45-88.

<sup>14</sup> Tringham, 2005, 105.

<sup>15</sup> Chapman (Chapman, 2015, 259-278) with further literature.

<sup>16</sup> Chapman, 2015, 269-270.

<sup>17</sup> See: Maul, 1994, 94-100.

the place, where the burnt debris of the clay or wattle-and-daub constructions of the forefathers remains visible, it represents a visible manifestation of the recent past and can be regarded as a mnemonic point for the living generation. It seems, as if the settlement itself functions as a marker within the landscape – a place (and people!) to remember and a place to return to. A shift in this spectrum shall be briefly noted, according to which the large scale settlements come to an end around the mid 4<sup>th</sup> mil. BC, while cemeteries and burial mounds do reflect different types and places of commemorative acts.

The circular outline of the settlement shows parallels to several round structures like e. g. ditch enclosures, which are widely spread in Europe.<sup>18</sup> But as many of these structures rarely do show traces of settlement activities, they are regarded differently and are rather put in a sphere of early calendars or performative acts in a wider sense. Possible similarities in the functionality of places like Petreni can be observed at the site Rujm el Hiri and further Chalcolithic sites in its close vicinity in the Golan.<sup>19</sup> Latter sites feature very large buildings and monumental burial architecture and might as well have been integrated to a similar system, as mentioned above for the CTC sites. Although the chronological framework does not allow a direct correlation of these two spheres, it can be scrutinized whether a similar functional approach could be applied to them. Rujm el Hiri also shows a circular structure while exceeding several hectares. Moreover, in the context of commemorative acts, the *empty* space in the centre could offer similar (so far unknown) functionalities to those of the CTC-settlements. By contrast to the example from the Levant, there is no evidence of funerary architecture within the settlements in the wider region between the Carpathians and the Caucasus, which could indicate direct connections to the phenomenon of the large settlement structures of the CTC in the first half of the 4<sup>th</sup> mil. BC. Neither are there traces for monumental stone architecture in the close (geographic and chronological) vicinity of the settlements or extramural cemeteries.<sup>20</sup>

## CONCLUSION

With regards to the model of shifting settlement patterns on a micro-regional scale, the large-scale settlements of the CTC might be regarded as mnemonic places for successive generations, who continuously occupied the settlement within groups of various sizes. Although the total duration of these sites may not have exceeded 200 years, the occupation of the settlements would encompass several generations of oral history. The back reference to preceding generations creates an anchoring point for group identity and thus, stimulates mechanisms of knowledge transfer. In order to grasp these *mechanisms* more precisely, it is necessary to focus on material culture and to outline e. g. technological skills by tracing the habitualization processes of several key technologies or cross-crafting techniques.

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<sup>18</sup> See: Faßbinder *et al.*, 2013, 71-75; Bertemes & Meller, 2012.

<sup>19</sup> Freikman, 2012, 1007-1037.

<sup>20</sup> Kruts suggests that the deceased were cremated and that the human remains were not kept separately (Kruts, 2003).

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