

## SUMMARY

The first chapter of this work summarizes basic data about late-Neolithic (in Czech terminology 4900/4800 – 4500 BC) rondels and the problems related to their excavation and interpretation (*Daim – Neubauer Hrsg. 2005*). It also provides information on the structure of settlement areas with rondels based on sources published to date (*Podborský 1988; Petrasch 1990; Trnka 1991; Němejcová-Pavůvková 1995; Pavlů – Rul’ – Zápotocká 1995; etc.*). The introductory part of the work ends in stating three major problems that are dealt with in the following three chapters.

These are then divided into several sections. Firstly, after introducing all rondels in Bohemia known to 2009, basic form and dimension analyses of rondels in the Czech Republic were done. In the following section, the analyses results from Czech Republic are verified with rondels from a larger area, i.e. neighboring countries (Germany, Slovakia, Austria). There are separate chapters focusing on the evaluation of a selected settlement area with a rondel (Horoměřice) and on the analysis of three other late- Neolithic areas (Kněživka, Roztoky, Černý Vůl) in a specific micro-region (Únětický stream basin in Prague - West district).

## II. Rondels in the Czech Republic:

This work aimed, among other things, to give an overview of the state of rondel research in the Czech Republic, which encompasses the summary of latest available data and the comparison of two geographically and culturally different groups of rondels in Bohemia (StK IVa) and Moravia (MMK Ia) (see *fig. II.1*).<sup>14</sup>

To date, the total number of rondels known in the Czech Republic accounts to 34, the majority of which (24<sup>15</sup>) are from Bohemia (see *tab. II.1–2*). The two groups of rondels, i.e. from StK sites in Bohemia and from MMK sites in Moravia, are geographically separated by Bohemian-Moravian Highlands forming a natural boundary during almost the whole prehistoric period (see *fig. II.1*). To date, the largest concentration of sites has been documented in the lowlands, with altitudes lower than 350 m above sea level and in the basins of two main rivers and their tributaries – the Elbe in Bohemia and the Dyje in Moravia.

Preliminary data and sporadic publications on excavations (see *tab. II.1–2*), e.g. from Březno, Bylany, Holohlavý, Vochov, Vchynice, Horoměřice and Praha-Ruzyně make it clear that rondels in Bohemia are mostly situated in the same locations as early Neolithic LnK. Early StK settlements have been identified in several sites (Lochenice; Horoměřice; Poděbrady-Choťanky; Praha-Krč; Praha-Ruzyně). In other localities, further settlement activities in late Neolithic are not identified until later StK period (Bylany; Kolín; Holohlavý).

Settlement areas with one rondel only are prevalent in both, Bohemia and Moravia. In Bohemia, two rondels in one site have been identified in the following localities: Bylany near Kutná Hora (rondels 4/1 and 4/2), two sites near Kolín (Kolín 1, 2 and Kolín 3, 4), Praha – Krč (rondels 1 and 2), and Vochov (Vochov I and II). In Moravia, only one site with two rondels has been identified, namely in Vedrovice (Vedrovice II and III). Neighboring features are situated less than 200 m away from each other, in several localities, namely in Bylany, Kolín (site with rondels 1 and 2), and in Praha – Krč even less than 50 m.

<sup>14</sup> Tables and figures are numbered in the following way: e.g. *fig. II.1*. (II refers to the number of chapter, 1 gives the number of the figure within the given chapter, in numerical order).

<sup>15</sup> Despite being included in this category, the determination of feature marked as rondel 4 in Kolín still remains to be answered by a future detailed analysis of terrain documentation.

Rondels in Bohemia belong to certain settlement areas in smaller regions, so called micro-regions. The shortest distance between settlement areas with rondels has been identified in the following cases: between the two sites in Kolín (5 km) and Bylany near Kutná Hora (7–8 km), between Lochenice and Holohlavý (approx. 6 km), between Praha-Ruzyně and Horoměřice-Chotol (7–8 km), and between Krpy and Benátky nad Jizerou (approx. 10 km). The distances given above correspond with the data gained from other countries (Lower Austria, Lower Bavaria, south-west Slovakia, see *Daim – Neubauer Hrsg. 2005; Eibl et al. 2010; Kuzma 2005a*).

Rondels are often surrounded by features common for other sites (e.g. storage features). In Bylany near Kutná Hora, an StK burial site was uncovered 700 m away from the rondel 4/1. The authors of the publication believe that the cremation burials are co-existent with the rondel 4/1 (*Pavlů – Rul’ – Zápotocká 1995*). In Bohemia, a similar situation where a rondel, settlement features and a burial site were identified within one settlement area occurred only in Horoměřice-Chotol (Prague - West), nevertheless, in this case, the burial site is likely to be later than the rondel (see below).

Rondels may be classified by several criteria of which some are geographically distinctive. In the Bohemian territory, rondels with one ditch are most common, rondels with two ditches appear less frequently and rondels with three or four ditches have been identified only in rare cases (Bylany 4/2; Kolín 1; see *fig. II.9*). In Moravia, there is equal number of rondels with either one or two ditches and there has been no evidence of rondels with three or four ditches. In Bohemia, it is most common for rondels to have three inner palisade grooves; two palisade grooves appear often as well. In Moravia, the most frequent number of palisade grooves within one feature is two (see *fig. II.11*). StK rondels are usually smaller, which distinguishes them from features dated into MMK<sup>16</sup> (see *fig. II.19*). Rondels uncovered in Bohemia are specific in two aspects: the group contains all rondels with two or three entrances and there is a high frequency of out-turned entrances (types 2 and 5; see *fig. II.15* and *fig. II.17*).

Rondels in the Czech Republic display a number of differences concerning form and size, thus questioning traditional understanding of Moravia being the place from where the knowledge of rondel building and all related religious and cultural aspects were spread to Bohemia (see e.g. *Zápotocká 2004*). However, as the data from Moravia are rather limited, we have decided to extent our study to neighboring countries, i.e. Germany, Austria, and Slovakia (see *fig. III.1–2*).

## III. Rondels in the Czech Republic, Germany, Austria, and Slovakia:

The attempt to classify rondels by their form and size faces several difficulties arising from the fact that all relevant data come from archaeological documentation which records all activities identified in the site. Unfortunately, the limited state of our knowledge does not tell us if all the recorded rondel parts were co-existent (all inner palisade enclosures and all ditches), or if the original buildings were modified later. Archaeological records may have also been affected by terrain erosion. Thus, the excavation results may sometimes be misleading (see e.g. various entrance form types in Vchynice and in Kolín 2 in Bohemia). Nevertheless, despite all the difficulties, *chapter III* shows that, apart from common characteristics mentioned in *chapter I*, there are certain analogies between rondels from different territories, which leads us to the conclusion that knowledge of rondel building and their possible later modification in the 5<sup>th</sup> millennium BC must have

<sup>16</sup> In total, a quarter of rondels from Bohemia known to date have maximum dimensions smaller than 50 m.

had set rules respected throughout all territories with evidence of rondels.

*Chapter III* analyzes the following variables:

- the number of construction elements;
- the number and form of entrances;
- the maximum diameter of the largest and the smallest ditch;
- the maximum diameter of the smallest palisade.

First, a comparison analysis of forms and dimensions of rondels from two culture complexes in central Europe in the first half of the 5<sup>th</sup> millennium BC was done. For the purposes of this study, these two complexes are described as LgK complex and StK complex. Then, the analysis focused on rondels from specific cultures, namely StK and MMK cultures.

There is evidence of rondels with one to four ditches in both complexes (see *fig. III.3–5*). If one concentrates on the individual cultures, rondels with four ditches are most frequent in StK, and rondels with three ditches are mostly recorded in MMK. However, the most frequent type throughout all cultures is a rondel with two ditches, or just one ditch<sup>17</sup>.

Rondels with more ditches represent a problem that can only be solved with the help of terrain excavations. Only a detailed analysis of finds situation, i.e. stratigraphic relations and an interdisciplinary study of infilling layers can help us to decide whether we are talking about several diachronic features or about several building stages of the same feature. Additional palisade grooves along the inner side of the outer ditches may support the diachronic interpretation of the feature, which is the case in Svodín (Slovakia; *Němejcová-Pavúková* 1995). On the other hand, the same finds situation in Austrian Kamegg (Lower Austria) has been interpreted in a different way. Based on the finds from the infilling of the ditch and surrounding features, the author of the excavation concludes that the two ditches were co-existent within one complex and both ditches had a palisade on the inner side (*Trnka in press*).

Both ways might have been used in the Neolithic, depending on local cultural tradition. Both examples come from the LgK complex. As to StK rondels, it is generally believed that all rondel ditches were part of one feature<sup>18</sup>.

Evidence of unfinished ditches in e.g. Běhařovice in Moravia (unfinished second ditch) and Kolín 4 (unfinished fourth ditch) shows that larger ditches tend to be later and that modification spread from the inner area outwards. What was the reason for making further ditches? There are three possible answers (interpretation models) to the question.

1. The ground-plan of rondels had been given before the building itself began, i.e. the number of construction elements and number, form and direction of entrances was set. Unfinished outer ditches thus give an evidence for a premature termination of the building activities.

2. Making a new ditch meant a kind of “re-start” of the function of the original feature, where the original ditch might have been filled in or its primary function might have been for some reason abandoned. (*Květina – Květinová – Řídký* 2009). This would have led to an extension of the rondel inner area.

3. There were certain rules by which adjoining a new ditch increased the importance or prestige of the feature or it changed the rondel's function. Such change of a rondel ground-plan might have also led to an increased prestige of the local community or of individuals of higher social/religious status (see e.g. *Lewis-Williams – Pearce* 2008).

17 Often also with two inner palisade grooves.

18 Based on observations of excavations in Praha- Ruzyně (M. Kostka and M. Kuchařík pers com Jan. 2010), in Quedlinburg 2 (W. Schier pers com 23. 9.2010), and in Dresden-Nickern (H. Stäuble pers com 23. 9. 2010).

Rondels with more than two ditches belong mostly to the category of larger rondels (see *fig. III.22–23*). However, throughout different cultures, there is a number of rondels having one ditch only that have equally large maximum diameters. It is likely that increasing the rondel's dimensions was not necessarily the main reason for adjoining further ditches<sup>19</sup>. Throughout different cultures, there is a great number of rondels with two ditches the dimensions of which are larger than dimensions of rondels having three or four ditches (see *fig. III.23*). There is a **constant dimension of the rondel inner area** (see *tab. III.11*) which stays identical despite the various numbers of ditches (see *tab. III.13*) and thus suggests a great importance of the inner enclosed area (presuming one rejects interpretation model number 2 above).

Today, it is commonly believed that **the smallest ditch**, which is also the widest and the deepest, is the oldest ditch. It is sometimes even described as the main ditch<sup>20</sup>. This is why preceding chapters of this work focused also on the analysis of the smallest ditch diameter.

The maximum diameters of the smallest ditch display striking analogies in most features having between one to three ditches. Only the values of rondels with four ditches are higher (see *tab. III.13*). Interestingly, all rondels with four ditches identified in StK sites were located near other rondels in the same site (Kolín 1; Dresden-Nickern 4; Kyhna 3). Their distinctive characteristic is not only the number of ditches but also the number of entrances, entrance forms and entrance orientation<sup>21</sup>.

Rondels with three ditches also differ in number, orientation and form of entrances. Half of rondels with three ditches lay near another rondel (Bylany 4/2; Schmiedorf 1; Kyhna 1; Glaubendorf 2; Hornsburg 3). One rondel with three ditches lay near a circular palisade enclosure (Eythra). In one case, the number of entrances differs in individual ditches of the same feature (Schmiedorf 1 in Bavaria<sup>22</sup>).

Differences in size, in the number of construction elements and in the orientation and form of entrances may be explained diachronically, i. e. simpler forms evolved into more complicated ones. It is quite common for the Neolithic that an original feature was abandoned and a new feature was built near it, which may be explained by cultural tradition. A similar situation is common in the Neolithic for other features as well – namely long houses (e.g. *Midgley* 2006). However, in interpreting this phenomenon one has to take into account the fact that more features might have co-existed in one site (see e.g. *Barna* 2007, 370). The differences in forms and dimensions, then, suggest functional or social reasons rather than anything else (*Květina – Květinová – Řídký* 2009).

The analyses led to the conclusion that classifying rondels by the smallest ditch diameter is equally important to their classification by the maximum diameter. Based on the used methods, rondels can be classified into four size groups: *group 1* – diameter smaller than 55 m, *group 2* - diameter between 55 and 65 m, and *group 3* – diameter between 65 and 100 m; *group 4* – diameter between 100 – 150 m.

19 Adjoining new ditches increases the total size of a rondel, however, the total dimensions of rondels in groups with two, three and four ditches vary considerably (see *fig. III.23*).

20 There is often evidence of multiple reparations in the profiles of inner ditches.

21 Rondels with four or three ditches need not necessarily be the largest rondels within a rondel group in one site. (see e.g. Dresden-Nickern; *tab. III.2*). The size of the smallest ditch does not necessarily reach the highest values (see. e.g. Kyhna; *tab. III.2*). Based on data from well analyzed features, rondels with four ditches display a variety of entrance forms.

22 Two smaller ditches are interconnected at the two opposite entrances and form the Lochenice-Unternberg type. The largest ditch is simply interrupted in four places oriented roughly towards the cardinal points. (*Petrash* 1990, *abb. 22*).

The first group, i.e. the smallest rondels, consists of a high number of rondels with two entrances (Praha-Krč 2; Praha-Ruzyně; Gneiding; Meisterthal; Schmiedorf 2; Friebritz 1; Hornsburg 3; Rosenburg; Schletz; Strögen; Alešince; Dolné Trhoviště; Komjatice; Nové Sady; Zemianské Sady; see *fig. III.34*), of which 80 % have entrance formed by a simple interruption of the smallest ditch<sup>23</sup>. The rest of the rondels belonging to group 1 have an out-turned entrance. All rondels with two ditches have entrances oriented, with some deviation, towards the West and the East.

Rondel Schmiedorf 1 with three ditches represents an interesting case that supports the type standardization of rondels by size and form. If all three ditches were co-existent, then the fourth ditch adjoined later meant that a certain size limit or a number of ditches was exceeded and the number of entrances changed as well. Thus, the rondel with originally two entrances was turned into a rondel with four entrances.

Group 1 encompasses half of StK rondels with three entrances (Horoměřice; Praha-Vinoř; Dresden-Nickern 1; see *fig. III.34*). However, there is no standard orientation of entrances in this category. There is a group of rondels with entrances oriented North-West, North-East, and South (Horoměřice; Dresden-Nickern 1), the second group of rondels has entrances towards the South-West, the South-East, and the North (Praha-Vinoř; Goseck).

Size groups 3 and 4 encompass the majority of rondels with four entrances, the number of rondels with two and three ditches in these two groups is insignificant (see *fig. III.34* and *fig. III.33*).

Rondels from groups 3 and 4 (with diameter over 65 m) are often identified in sites with more rondels (Bylany; Kolín 1, 2; Kolín 3, 4; Vochoz; Vedrovce; Dresden-Nickern; Kyhna; Schmiedorf; Friebritz; Pranhartsberg; Wilhelmsdorf; Glaubendorf; Hornsburg). In well documented territories (Lower Bavaria, Slovakia, see *fig. III.31*), rondels with the inner area bigger than 65 m are distributed in almost a regular pattern about 50–100 km away from each other.

There are two possible ways of reasoning as to why there are several groups of rondels with various sizes of the smallest ditch:

- 1) Larger rondels were built for more participants of a specific activity and served to larger communities. In the case of more rondels within one settlement area, growing number of inhabitants might have led to the necessity of enlarging the feature or building a new, bigger one.
- 2) There were standard rondel types and individual types were used for different purposes or by different groups of people. Ethnology classifies society into clans, social groups, age groups, groups by sex etc. There is some evidence of such stratification of late Neolithic society gained from graves and burial sites analyses and from finds of imported pottery vessels and raw materials for stone industry (*Daim – Nebauer Hrs. 2005*)<sup>24</sup>.

Rondel building might have been influenced by two independent aspects – the function of the feature and the social status of the owners of the feature – an individual or a larger group. The first had an impact on the size of the inner area and, apparently, on the number of entrances and the latter influenced the modifications of the feature. Rondel building as such might have also been affected by other impacts, e.g. local cultural/building tradition<sup>25</sup>.

23 More than 70 % of these rondels have one ditch only, 20 % have two ditches.

24 It is interesting that 4 out of 9 known late Neolithic burial sites in Bohemia have been identified near rondels (Bylany; Horoměřice) or near other ditch (Květnice) or palisade (Plotiště nad Labem) enclosures. .

25 The question to be asked is: How did the “rondel ideology” spread? Standard types of rondels suggest that they were spreading from a common centre and for a similar purpose

The hypothesis of standard rondel types is supported by smaller features (with two or three entrances). These are distributed in a large area throughout several archaeological cultures (see *fig. III.34* and *fig. III.11*). In all these cultures, also further two groups have been identified by the smallest ditch diameter and in all the studied territories, entrances of the smaller features are variants on the two basic entrance form types (entrance formed by a simple interruption of the ditch and an out-turned entrance; see *fig. III.12–13*).

Rondels from the LgK complex in general have larger maximum diameters and larger diameters of the smallest ditch and the smallest palisade groove (see *tab. III.7*; *tab. III.11*; *tab. III.16*). This phenomenon was already observed in the comparison of rondels from both cultures in the Czech Republic and was further supported by finds from neighboring areas. The lack of some entrance form types in Moravia may be explained by the scarcity of sources. Unfortunately, the form and dimension analysis did not bring any new information on the origin of rondels and on the way they spread across territories. These two questions may only be answered by more exact dating of individual rondels.

#### IV. Micro-regional study – Late Neolithic settlement areas in the micro-region in the Únětický stream basin:

The study of late Neolithic settlement areas is faced with difficulties arising from the lack of comparison analysis on a regional level. For this reason, the micro-region of Únětický stream basin was selected for the analysis as there is evidence of a settlement area with a rondel and a burial site in Horoměřice, and of more settlement areas in Kněživka, Roztoky, and Černý Vůl (all in Prague-West district; see *fig. IV.1*).

The micro-region of Únětický stream basin has been continuously studied since the end of the nineteenth century and therefore, the data on local Neolithic settlement areas are heterogeneous in both - quality and quantity. The evaluation focused on the morphology of features, their spatial distribution and on chronology based on pottery re-joins from the infilling of features.

In the past, a large part of the late Neolithic settlement area with a rondel and a burial site in Horoměřice was destroyed by building activities and thus, all we have at hand are rather separate surveyed parts from different areas of the site. At present, we know that the rondel was situated inside the settlement area, namely in its southern part (see *fig. IV.51: 1*). The data from several salvage excavations make it clear that the rondel was surrounded by settlement features in the East, West and North. The closest water source (the Horoměřický stream) is about 150 m away from the site and makes a natural border in the southern part of the area. The total size of the excavated settlement area in the StK IV period was approximately 10 ha.

LnK features were damaged by activities related to rondel building (see *fig. IV.3: 1*). In the rondel ditch, there was a high frequency of LnK pottery fragments, including bigger pieces, from

(*Květnina – Květinová – Řídký 2009*). Sometimes, spreading of rondels is linked to spreading of new pottery shapes from the region in Lower Austria, west Hungary, southwest Slovakia and south Moravia (*Zápotocká 2004*). However, there is no evidence of other impacts on material culture. Did only ideas spread? Or were these spread by individuals (shamans, priests – privileged class) who used these monumental features to communicate with the supra - natural (see *Lewis-Williams – Pearce 2008*; *Květnina – Květinová – Řídký 2009*, 25) and thus had a great influence upon the whole society. The existence of such privileged class and its influence is often discussed in connection with the enlargement of unique circular stone buildings in south-east Turkey in the very beginning (PPNA-PPNB) of the Neolithic (*Schmidt 2007*, 247). Assembling a larger number of people for building monumental features was a manifestation of power of an individual or a group (*Parkinson – Duffy 2007*, 124).

various chronological phases (see *fig. IV.3: 2*). There was little evidence of StK pottery. The following gives a brief summary of the inner chronological development of the settlement area in the late Neolithic (see *fig. IV.51*):

- Features from the early StK period were uncovered only in the northern part of the settlement area. Moving towards the South, only features from the late StK period were identified. Two of these, i.e. feature 39 and 34 (supraposition from LnK and StK periods), were located directly in the inner area of the rondel (see *fig. IV.3: 1*).
- The form of feature 39 corresponds with the form of storage features (Šumberová 1996). It is located directly in the place of the presumed rondel inner palisade. Thus, the rondel and feature number 39 were not co-existent. Chronological relation of the rondel and large feature 34 (its later part) presents another difficulty. Although similarly large features have been identified in other sites as well and sometimes are considered to be ritual pits (Daim – Neubauer Hrsg. 2005), they are difficult to prove to be co-existent with the rondel. Pottery finds from the infilling layers suggest both features 39 and 34 (its later part) are likely to be later than the rondel. The pottery collections from both features are dated to StK IVa2 based on the classification by M. Zápotocká (e.g. Zápotocká 2001).
- The shapes and decoration of the latest pottery from the ditch infilling correspond with chronological stage of StK III-IV. There is no evidence of any later pottery decoration or shapes. Thus, the ditch must have been in-filled no later than the beginning of StK IV and is earlier than the cremation burial site.
- In Horoměřice settlement area, there is no evidence of StK living units. There is also no evidence of a StK production features (furnaces). The only storage feature that is likely to be co-existent with the rondel was located in the northern part of the area (feature 63; see *fig. IV.28*). The data gained from Horoměřice settlement area is rather fragmentary, nevertheless, the excavated settlement features and the lack of living units and production features fully correspond to our knowledge of regular late Neolithic settlement areas in Bohemia (see Pavlů – Zápotocká 2007).

Based on our present knowledge, the four studied Neolithic settlement areas in the micro-region of Únětický stream basin developed in various ways. Horoměřice and Roztoky are unique in several aspects. Continuous Neolithic settlement was identified only in these two cases (see *tab. V.1*). StK features in both areas were also distributed on larger space than in the remaining areas (see *tab. V.2*). In Horoměřice, there was not only a number of common settlement features but a rondel as well. Roztoky is the only site near a larger water source (Vltava river) and there was evidence of a larger number of features of „Schlitzgräbchen“ type that appears very rarely in other sites (e.g. Černý Vůl) or is completely absent. Horoměřice and Roztoky meet a number of criteria suggesting their central function within the given micro-region (Petrasch 2003).

The range of later StK pottery shapes from studied settlement areas does not display any distinct differences between the individual sites. Dating of features was based on the presence or absence of determinable pottery shapes and on the evidence of various stroke decoration techniques. The fragmentary material gained from late Neolithic settlement areas consists mainly of ceramic bodies (approx. 60 %), followed by rims and bottoms. The rate of determinable pottery shapes from the Neolithic settlement areas ranges from 10 to 30 % (see *tab. V.3*).<sup>26</sup>

Later StK re-joins are decorated either by double-stroke (codes 23, 24, 26, 27 after Zápotocká 1998, *abb. 30*) or triple-stroke (codes 31, 35, 36), other techniques, i.e. quadruple-stroke (codes 41–42), quintuple-stroke (codes 51–52) and tremolo stroke (codes 61–63) appear only occasionally and their rate is lower than 4 %. There is only rare evidence of “Ritzverzierung” (codes 71, 77) und Rössen type stroke (code 82).

At present, namely the finds collections from Černý Vůl and Roztoky allow comparison of stone material representation (Řídký – Stolz – Kovačiková 2010). In both, Černý Vůl and Roztoky, the most common material for the production of polished stone industry is Jizerské hory – type metabasite (see Přichystal 2009), found in the form of raw material, semi-products, and production waste. In the category of polished stone industry, there is similar representation of final products – tools.

Based on preliminary information, significant part of stone instruments from Horoměřice was retrieved from LnK features and from features with finds from both cultures (D. Stolz pers com). This is supported also by earlier rescue excavations in Horoměřice where the representation of stone industry in StK features was minimal (Nový – Řídký – Šulová 2005). Similarly to other settlement sites in the micro-region, there is evidence of final production of stone perforated tools (see *fig. IV.47: 1*) documented from earlier excavations in Horoměřice.

As to the chipped stone industry, the most common material used is siliceous rocks from glacial sediments and tabular chert of the Abensberg-Arnshofen type (Popelka 1999; Řídký – Stolz – Zápotocká 2009). There is a growing evidence of the latter in Central Bohemia in general during the late Neolithic (Popelka 1999; Šída 2006). Thus, Horoměřice area does not essentially differ from other regular settlement sites.

Throughout the whole Neolithic, there is observable evidence of form modifications of settlement features in the micro-region of Únětický stream basin. Features from LnK period were of irregular ground-plan and of various dimensions. To some extent, these features are represented by so called building pits uncovered along the walls of post-hole buildings. Remains of LnK post-hole houses are documented in Horoměřice, Černý Vůl and Roztoky. On the other hand, in all these areas, there was little evidence of LnK storage features.

Features of irregular ground-plan represent the most numerous category of early StK features (Kněžívka, Roztoky). A very different situation is documented for late StK sunken features in Roztoky, Kněžívka and Černý Vůl. In all these areas, there is documented a higher rate of features with round or oval ground-plan and with specific form of profiles and bottoms. These features are believed to have had primarily storage function (Šumberová 1996).

The highest number of uncovered storage features is in Roztoky, followed by Kněžívka. Storage features are often distributed in regular distances (in Kněžívka approx. 15 -20 m away from each other, see *fig. IV.53: 2*), or in groups (in Roztoky, see *fig. IV.78: 2*). In the storage features in both sites, there was a high density of pottery re-joins per cubic metre and even finds of larger pottery vessel pieces or whole pottery vessels were retrieved from them. Larger pottery vessel pieces were also found in storage features in Černý Vůl. Higher number of pottery fragments and namely larger pieces, gives support to the idea that the storage features were located inside the original living area (possibly directly next to a living unit, see e.g. Zápotocká 1987), rather than near or inside farming area (fields).

There is only rare evidence of **houses** from the late Neolithic gathered from several places in the Czech Republic (Kazdová – Peška – Mateiciucová 1999, 37–40; Brestovanský 2008; Pavlů

be explained by the loss of documentation of smaller pottery fragments from an earlier excavation led by A. Stocký in 1914.

26 Higher rate of determinable shapes in Černý Vůl may

– Zápotocká 2007, 55–56 and further sources). Sporadic finds demonstrate that there was a variety of living unit forms. It is extremely difficult to identify any possible remains of post-hole houses in late StK living areas, as there is no evidence of building pits. The fact that in the studied micro-region, there is no evidence of post-hole houses of StK most decorated period leads us to the conclusion that the living units might have had lighter construction elements that did not need to be supported by deep post holes embedded in the ground and the traces of which were later destroyed by erosion or farming activities.

Based on data gained from Kněžívka and Roztoky, it was possible to compare the location of features of irregular ground-plans, profiles and bottoms, and larger dimensions. In Kněžívka,

the largest features are located near the limits of the uncovered area (see *fig. IV.53: 1*). The chapter focusing on Kněžívka presents the hypothesis that larger features were intentionally located near the edge of the living area as there they did not obstruct settlement activities.

If one can rely on the data gained from only a limited part of the area not affected by terrain depression, larger features in Roztoky were concentrated roughly in the centre of the area (see *fig. IV.75: 2*). As opposed to features in Kněžívka, they contained the largest amount of pottery re-joins, including larger pieces. The lower density of pottery re-joins per cubic metre can be explained by a longer period of their infilling.