Summary

In: Přichystalová, Renáta; Kalová, Kateřina; Boberová, Kateřina; Nováček, Jan. *Břeclav - Pohansko. IX., Pohřební areály z Jižního předhradí (archeologicko-antropologická studie).* Vydání první Brno: Masarykova univerzita, 2019, pp. 647-657

ISBN 978-80-210-9353-9 (váz.); ISBN 978-80-210-9354-6 (online : pdf)

Stable URL (handle): https://hdl.handle.net/11222.digilib/143761
Access Date: 17. 02. 2024
Version: 20220831

BŘECLAV – POHANSKO IX.
FUNERARY AREAS IN THE SOUTHERN SUBURB
(ARCHAEOLOGICAL AND ANTHROPOLOGICAL STUDY)

SUMMARY

The area of the early medieval settlement agglomeration Břeclav – Pohansko has been continuously explored by archaeologists since 1959. The sixty excavation campaigns on this site uncovered settlement and funerary structures of various types. One of these structures is the *Southern Suburb* of the agglomeration.

Southern Suburb of the Břeclav – Pohansko stronghold

The 9th century *Southern Suburb* was an extensive settlement area, according to archaeological estimations ca. 21–24 ha, which represents about 30–40 % of the total area of the Břeclav – Pohansko settlement agglomeration (*Dresler – Macháček – Přichystalová 2008*, 230, 266; *Dresler 2011*, 32, obr. 47). About 9 ha of the total extent of the *Southern Subur*b were explored by archaeological rescue excavations in 1960–1962 and 1975–1979, and by systematic research excavations in 1991–1994 (*Vignatiová 1979*; †*Vignatiová – Klanicová 2001*). The most recent small-scale test trenching was carried out with the aim to identify the course of fortification in the eastern and western parts of the suburb (*Staeck 2011*).

On the basis of results of archaeological survey and excavations we can suppose that the whole area has been intensively used in the early medieval period. In the *Southern Suburb* we currently know of 205 inhumation graves with 210 individuals (four grave pits were empty and 10 grave pits contained multiple burials), 480 settlement features, 144 pyrotechnological devices of various types placed both inside and outside the settlement features, 254 postholes, and several trenches. Most of these features are dated by pottery and by other non-ceramic finds to the Great Moravian period (9th century – beginnig of the 10th century). This dating is supported by the results of the radiocarbon analysis of the six tested graves (see Chapter 8.1). Evidence of early Slavic occupation of this site (6th–8th centuries) was found in the 1990s (*Vignatiová 1995*, 116; †*Vignatiová – Klanicová 2001*, 24). Inhumation graves generally fall within the Great Moravian period. Settlement features formed three distinct accumulations, which J. Vignatiová (*1992*, 87–91) referred to as Village I and III. Unlike settlement complexes, the funerary areas did not exhibit any clear spatial arrangement. Further research cannot be made until the spatial relations between settlement and funerary components in the suburb are analysed in more detail. Graves were either arranged in small to mid-sized cemeteries within the settlement area, or dispersed isolated or in small groups among settlement features or in the free space in between (Fig. 93).

Funerary areas in the Southern Suburb of the Břeclav – Pohansko stronghold

In the *Southern Suburb* so far 205 graves with 210 buried individuals were explored. Large accumulations of funerary features were found at three places within the excavation area – in the south-western corner of the large area excavated in the second half of the 1970s, in the north-western corner of this large area, and in the middle of the southern edge of this large area (Plan 1, sections A, B, C). These accumulations can be interpreted as small- to mid-sized burial grounds.

Ten graves discovered in 1991–1994 were situated at relatively small distances from each other. However, on the basis of distribution and orientation of grave pits we cannot definitely say whether or not it was a compact funerary area.

Another three groups of graves, on the other hand, can undoubtedly be interpreted as small graveyards: the nine graves in a semi-circular arrangement parallel to the sunken-featured buildings in the western part of the large area, the six graves in a row ending with

the empty grave pit JP/88, and the row of five graves in the eastern part of the large area near the foundation trench from an enclosure (Plan 1, section B, Fig. 30, Plate CXXXI:5, 6).

Burial rites in the Southern Suburb

The excavation of grave pits in the *Southern Suburb* did not prove any special design of their interior or special constructional elements. The pits mostly had a flat bottom and perpendicular or inclined walls. Stepped walls also were detected, but, regarding the research conditions of that time (strong disruption of the ground by heavy machinery, poor distinction of grave fills), these artificial forms most probably arose when the shape and size of a grave pit were made more accurate.

Grave pit JP/42 (male individual with warrior equipment) probably contained a special construction. Near the northern longitudinal wall of the grave pit, about 110 cm from the western transverse wall (approximately at the level of the left knee joint), there was a posthole of 37 cm in diameter. When we regard the posthole as a structure belonging to the grave, it is well possible that the wooden post embedded in this hole may have fixed the primary hollow space or it probably marked the grave on the ground surface.

The existence of wooden containers in graves is not mentioned in the documentation of the field research. Therefore we made an experiment to determine the probability of existence of the primary hollow space in the grave pit. Eight graves with well-preserved skeletal remains were chosen. In the photographic documentation (only oblique images, often with no details) we observed that bones were moved from their original anatomical position due to taphonomical processes under specific conditions. The result of the experiment was that in all of the eight examined graves we determined a lower or higher probability of existence of the primary hollow space (presence of a coffin or stationary wooden case). The hypothetical presence of a stationary or mobile wooden casket was not dependent on specific dimensions of the grave pit, body orientation, presence or absence of grave goods, and sex of the buried individual. On the basis of taphonomical processes, identified from the photographic documentation, we proved a hypothetical use of coffins or stationary wooden cases in the *Southern Suburb*, although archaeological excavations did not detect any traces of wooden constructions or coffins. Therefore we can consider that the usage of wooden coffins might have been far more widespread than the archaeological excavations have detected (*Mazuch – Hladík – Skopal 2017*).

Individuals buried in the *Southern Suburb* were laid into graves and oriented in a direction, which is dominant in the whole agglomeration. A total of 66 individuals were buried with their head turned to the southwest, and 60 individuals were oriented to the northwest. Interesting is the frequency of individual sexes in relation to predominant orientations. Women and children were mainly oriented to SW–NE. Men, on the other hand, were preferably buried in NW–SE direction. Different orientations in men and women have been explained by gender-specific roles in the society or in religious symbolism, which proceeded from the Slavic pagan beliefs and philosophy based on Indo-European ideological foundations (*Koperkiewicz 2003*, 316–318; *Ungerman 2007*, 49). Children, whose sex was determined by aDNA analysis, were not buried in the same direction like adults of the same sex. The crucial factor in funerary customs, which determined the orientation of buried individuals, probably was not their sex but age.

Other orientations were detected with 28.5 % of all skeletons (in 27 graves the orientation could not be determined). These remaining orientations create relatively balanced groups: the so-called reversed orientation – NE–SW and SE–NW; orientation in meridian direction – N–S, S–N, and the generally dominant early medieval orientation – deposition of buried individuals with their head towards W and legs towards E. The opposite E–W orientation was detected in a single case. The minority orientations were mostly identified with individuals who were buried in nonstandard body positions, that is slightly or extremely contracted and lying on the right or left side. In fourteen clearly provable nonstandard positions, the meridian or reversed orientation were detected eight times. In buried individuals oriented in W–E direction only the supine position with stretched legs was detected. Unlike the cemeteries at the first or the second church, graves with W–E orientation did not form any distinct clusters but were scattered over the whole area explored. This category of burials included men, women and children, and graves both with and without funerary equipment. However, a group of adult males differed markedly from the other burials (four graves in total – JP/20, 42, 49, 58, ca. 27 % of all graves oriented in W–E direction). All of these graves were equipped with grave goods, graves JP/42 and 49 even contained components of equestrian and warrior equipment. All graves within this group were situated in the western part of the large area excavated in the 1970s, but each of them belonged to a different settlement structure (Plan 1). Their orientation differs from the neighbouring graves, which might be an expression of chronological differences. Grave JP/42 was analysed by the radiocarbon method. The results showed that the grave falls within the plateau of the calibration curve and it can be generally dated to the 9th century (Fig. 86). However,

regarding the funerary equipment from grave JP/42 and the summary result of ^{14}C analysis, we can narrow the interval down to the last third of the 9th century. The W–E orientation in the *Southern Suburb* thus probably cannot be associated with the terminal phase of burial activity, as it is, for example, with the cemetery at the second church (*Macháček et al. 2016*).

In the 9th century *Southern Suburb*, deceased people were predominantly buried in standard manner – in the supine position with stretched extremities (116 individuals, 55.2 %). The arms can be bent at the elbow towards the abdominal or the thoracic region. In 57 individuals, the body position unfortunately could not be determined because of poor preservation or total decomposition of skeletal remains (Plan 4). The graves with nonstandard body positions in the *Southern Suburb* did not create any distinct concentrations. They were scattered over the whole 1960s–1970s excavation area. The 1990s excavations did not uncover any individuals buried in nonstandard positions. A marked concentration was only detected in the central part of the large area, where eight graves with burials in nonstandard positions were situated. However, they are dispersed over an area of about 1 ha (Plan 4), which cannot be regarded as a special district intended for specific burial rituals. More relevant results can be obtained when we display the individuals buried in lateral or prone position in a plan showing the densest concentration of funerary features (Fig. 81). Apart from grave JP/17, which is embedded in the fill of feature No. 6, all the other graves are situated at the periphery or outside the densest concentrations of graves, which are interpreted as small- to mid-sized burial grounds. The same is true of the majority of sites with occurrence of individuals buried in nonstandard position (cf. *Profantová – Kavánová 2003*; *Staňa 2006*, 34; *Ungerman 2007*, 60).

Archaeological excavations in the *Southern Suburb* detected not only graves with skeletons at various stages of decomposition, but also graves with no skeletal remains: graves JP/88, 144, 204 and 210. Empty grave pits JP/144 and 204 had the dimensions of children's graves. The complex JP/88 also is regarded as a possible child's grave. The only grave whose dimensions were suitable for the burial of an adult was JP/210. All of the presumed children's graves contained a ceramic vessel – probably a charitable gift. The existence of empty "children's" graves can be explained by the total decomposition of skeletal remains. This interpretation is also possible with grave JP/210, but in this case also a symbolical grave – the so-called cenotaph – can be considered. It is also possible that skeletal remains from this grave were intentionally transferred to some other place. However, evidence of any secondary intrusion in the grave fill is missing.

In the area of the *Southern Suburb* we also recorded the occurrence of multiple burials. According to archaeological documentation and anthropological assessments, 10 or maybe 11 double graves were identified. Six of them belong to this group without reservation. In five cases, on the other hand, the existence of a multiple burial is not entirely clear. Generally speaking, it is a very variegated group of funerary complexes, which comprises five combinations of individual anthropological categories (Table 5). Most frequently, five or maybe six times in total, the burial of a child with an adult female was identified (the identification of graves JP/47 and JP/48 as double graves is probable, but not certain). In two cases, two children were buried in the same grave. The following combinations were detected in one case each: undetermined adult individual / female; two subadult individuals; subadult male / adult male. In the case of double graves we generally suppose that the individuals buried in these graves were related by family relationship or some other social tie. This is particularly true of graves where a female and a child are buried together. In the Břeclav – Pohansko stronghold, besides the above-mentioned double graves and burials from the *Southern Suburb*, we know another 22 graves with multiple individuals of various types. Sixteen such graves were found in church cemeteries (the secondary burials, also called bone deposits, from the cemetery at the rotunda were not included in the list). Seven graves of this group are documented in the cemetery at the first church and nine graves in the cemetery at the second church. In dispersed cemeteries outside the church grounds at Pohansko, six graves with multiple individuals were detected so far. Among the 1 034 numbered inhumation graves from this site, multiple burials represent 3.13 %. For the cemeteries in Southwest Slovakia, M. Hanuliak (*2004*, 115) reports 1.3 % occurrence of multiple burials (43 cases from 21 sites). Burials of multiple individuals in the same grave pit represent a phenomenon, which occurs in many different cultural milieus over the whole early medieval period. In particular communities, these graves always reflected a special event, which is indicated by the proportion of their occurrence to regular burials (regular burial – grave pit containing one individual in extended supine position).

Superposition of graves in the Southern Suburb

To this day, an area of about 9.2 ha was excavated in the *Southern Suburb*. In this immense area, more than 1 000 features of various types (graves, houses, pyrotechnological devices, utilitarian features, fragments of constructional elements, enclosure relics, etc.) were

archaeologically explored. The concentration of settlement features was relatively high in some places, for example in the north-western or south-western sectors of the large area of 1970s excavations (Plan 1). Although the settlement density was indeed high in some places, mutual superpositions were not that frequent. In the area of the suburb we know a total of 28 evident superpositions with graves, and another four stratigraphic contexts cannot be clearly interpreted. These unclear contexts involve graves JP/130, 143, 147 and 154 – more details on the uncertain stratigraphic relations are given in the text catalogue (see Chapter 13). The most frequently documented context represented a settlement feature intruded by a grave – twenty cases in total. The situation where a settlement feature intruded an older grave was identified four times, and the same was the number of mutual superpositions between two graves (Table. 6, Fig. 32).

In several parts of the suburb, superpositions of graves with other features give evidence of an alternating sequence of activities in the area; settlement activity was replaced by burials or vice versa, and this sequence may have been repeated within the same area. An example thereof can be the north-western corner of the large area excavated in the 1970s. The activities alternated here relatively quickly (burials → settlement → burials). There was a distinct accumulation of graves among settlement features (*Vignatiová 1977–1978*). Grave JP/21 (Fig. 33) was situated in the central part of this area with high density of graves and features. The child's grave (about 10 years old) JP/21, oriented in NE–SW direction, was heavily damaged by the sunken-featured building No. 6. When the settlement feature ceased to function and its underground part was filled with sediment, a crouched burial JP/17 was embedded in the fill and the north-western wall of former pit-house was intruded by another grave JP/20, containing an individual in extended position with the head oriented in western direction. The feature is dated by pottery to the Late Great Moravian period. The pottery assemblage included an increased proportion of well-fired ceramic ware, also graphite pottery, and the vessels were decorated with relief elements and comb-strokes (*Pokorná 2011*, 99, Abb. 10). The above-mentioned facts let us suppose that in the 9th century (most probably in its second half) the area was used as a burial ground. During the Late Great Moravian period there was a settlement and after the decline of this settlement (or one of its parts) the area again served as a burial ground, whose existence can be dated to the turn between the 9th and 10th centuries and to the beginning of the 10th century. Analogous sequence was recorded several times. From the information mentioned above follows that people from the *Southern Suburb* of the Pohansko stronghold may have buried here their dead since the mid-9th century, but certainly in the second to last third of the 9th century, and the burial activity probably ended at the beginning of the 10th century. This chronology is supported by the results of radiocarbon analysis of six graves scattered over the whole excavated area in the suburb (see Chapter 8).

Grave furnishing

The grave inventory was found in 88 graves, which are 43 % of the total of 205 graves from the *Southern Suburb* (Fig. 48). Among the most important grave goods are partsof equestrian equipment and weapons, among whichan iron sword of the Frankish type from thegrave JP/118 (Plate XXXVI) stands out. These finds were previouslypublished by J. Vignatiová (*1980; 1993*) and the latestanalysis of the sword find is just ready to print (*Košta – Hošek et al. 2019*, in print). The finds of kniveswere treated in the bachelor thesis by A. Balcárková (2006). Glass beads and buttons with metal loops werepart of a study focused on the analysis of the chemicalcomposition of the glass substance from which the beadsand buttons were made (*Přichystalová – Štelcl – Vávra 2011; 2014*).

The funerary equipment most often appeared in children'sgraves, 35 times in total. Female burials with grave goods were detected in 24 cases and male burials with equipment wererecorded 22 times. In four cases the grave inventorywas recorded in graves with undetermined individualsand the presence of grave goods in the form of a ceramicvessel in an empty grave pit (perhaps a symbolic grave) was noticed three times. However, according to the individual categories of male – female – child, the best and most frequently furnished graves belong to the male burials. The grave goods were found in 36 % of all recorded children's graves, in more than 45 % of the graves with female individual, and in 73 % of male graves. 20 % of these furnished male burials were equipped with weapons or spurs. On the basis of this simple statistics it can be concluded that the male individuals buried in the *Southern Suburb,* or males in general, occupied a higher rank in the early medieval society than the females or children, independently from a particular social group.

Position and characteristics of funerary areas within the Southern Suburb in the context of the whole agglomeration

The detailed study of funerary assemblages from the *Southern Suburb* yielded remarkable results. In the studied area we distinguished a specific group of

richly furnished male graves oriented in W–E direction, among them also notable graves of horsemen and warriors. These graves were mainly concentrated in the western and eastern parts of the large area. However, it can be generally said that richly furnished graves were mostly found in the western part of the explored area. In the central part of the large area, on the other hand, we found graves containing a ceramic vessel and graves containing burials in nonstandard body position, which might refer to pagan burial rites. The analysis also revealed differences between funerary customs in adults and children.

In the dispersed cemeteries from the suburb we can follow up three main tendencies: 1) social stratification of the buried community; 2) different types of burial practices used with adults: richly furnished male graves oriented in western direction, graves with funerary equipment oriented in a direction other than W–E, graves with no grave goods and with extended burials where the arms are bent towards the pelvic or thoracic region, nonstandard burials in grave pits – these tendencies can involve not only a ritual but also a chronological factor; 3) different burial practices used with adults and children. Similar spectrum of phenomena is also identifiable in standard church cemeteries or the so-called rural cemeteries. The theory by M. Hanuliak (*2004*, 39), claiming that burial areas within settlements were predominantly used for children with negative social credit, has no foundation in the case of the *Southern Suburb*.

The comparison of graves from the *Southern Suburb* with those from the inner ward of the stronghold, more specifically from the *Forest Nursery* site (LŠ), has shown that the grave pits from the suburban area were larger in volume, which might indicate a higher (better) social status of people who were living in the *Southern Suburb*, compared to those living inside the fortified area as well as outside the area of the *Magnate's Manor*. It could be either an evidence of different burial practices, or a chronological factor. Graves from later phases of the early medieval period usually are shallower. The arguments in favour of different social status are also supported by the fact that the graves from the suburb contained funerary equipment more often than the graves from the *Forest Nursery*, and the grave goods in the suburb were more luxurious and more valuable from a present-day perspective.

Differences were also recorded in the preferred orientation of buried individuals. The graves from the *Forest Nursery* were predominantly oriented in W–E direction. From among 80 graves in this area, almost 49 % contained individuals buried in this manner. In the *Southern Suburb*, on the other hand, the group of graves with W–E orientation represents only 9 % out of 210 individuals. The solstitial orientations towards SW–NE and NW–SE are clearly predominant. These differences were probably again caused by the factor of different burial practices (simplified: Christian vs. pagan).

It can be generally supposed that the community burying their dead in the *Southern Suburb* probably was socially (and maybe also religiously) more stratified, whereas the graves from the *Forest Nursery* appear to be quite uniform (Graph 13, 14).

The spatial arrangement of funerary areas in both of the above-mentioned locations exhibits several common traits. In the *Forest Nursery*, the groups of equally oriented graves with small distances from one another were mostly placed at the perimeter or in the corner parts of manufacturing-residential structures of rectangular ground-plan. The occurrence of isolated graves or heterogeneous groups of graves with different orientations and a wider dispersal within the settlement structure can be connected with a different chronological level of these two activities. This assumption is sometimes confirmed by superpositions, where a grave intrudes an older settlement feature.

The graves from the *Southern Suburb* were dispersed over the whole area explored, but their largest accumulations in the west-southern, north-western and central-southern parts of the large area were in no spatial contact with the concentrations of sunken-featured buildings. The graves were situated either outside the settlement structures or at the periphery of the so-called Villages (*Dresler – Macháček – Přichystalová 2008*, 262–263, Abb. 27). The same conclusions as with the *Forest Nursery* (see Chapter 7.3) are also drawn with the occurrence of isolated graves or heterogeneous groups of graves with different orientation and larger distances from one another.

Despite different characteristics and spatial arrangement of dominant settlement features inside the fortified area and in the *Southern Suburb* of the stronghold, an accordance can be observed in the basic structure of settlement activities – spatial arrangement in the form of small settlement structures with indicated distinction of a special area for funerary activities.

An accordance can also be seen in the organisation of funeral ceremonies and the burial space. In church cemeteries we suppose that the burials in a delimited *locus sacer* were most probably organised centrally (maybe by members of clergy belonging to the church) and were planned, whereas in dispersed cemeteries this system could not function. The burials within the settlement area were most probably organised and controlled by persons who were approved and authorised by the community. The selection of the last resting place for deceased community members probably was done by these selected persons: the Elders, representatives of a family or an economic unit (so-called

pater familias) and maybe also pagan priests or people endowed with extraordinary, magical skills (in more recent written sources, these persons are mentioned in connection with undesirable, heretical practices, inconsistent with Christianity: *sortileges*, *carios*, *divinos*, *incantatores* etc.) (*Dynda 2017*; *Štefan – Wihoda 2018*; *Přichystalová 2018*).

Southern Suburb of the Břeclav – Pohansko stronghold as a military settlement

In a study on the settlement in the *Southern Suburb* of the stronghold, J. Vignatiová (*1992*, 94–99) based herself on her empirical experience and comparative knowledge and presented a theory, claiming that this area within the stronghold might have been a settlement of members of a Great Moravian military squad /armed retinue with their families and their whole economic background. This theory stemmed from two fundamental detections – different structure of settlement features compared to the situation in the inner ward of the stronghold, and evident occurrence of numerous artefacts associated with warriors and horsemen. These objects, such as axes, spurs and stirrups, according to the existing knowledge about Pohansko, were only found in the area of the *Magnate's Manor* and in the two church cemeteries (the new excavation of a settlement area, which may have belonged to the second church and the surrounding cemetery, is omitted) (*Kalousek 1971*; *Dostál 1975*; *Macháček et al. 2016*).

The characteristic which distinguishes the community buried in the *Southern Suburb* from the individuals buried in dispersed cemeteries inside the stronghold area is the occurrence of components of equestrian and warrior equipment among grave goods. This factor, on the other hand, interlinks the *Southern Suburb* with populations buried in both of the church cemeteries. The percentage comparison between the total number of explored graves and the number of male graves containing weaponry and equestrian equipment shows a distinct predominance of the cemetery around the first church over the *Southern Suburb* (Table. 26). However, when we substitute the number of graves with adult male individuals for the total number of graves from the explored locations, and compare this number again with the number of graves of adult horsemen and warriors from these locations, then we obtain a completely different picture. In the cemetery at the first church as well as in that in the *Southern Suburb*, the warrior/equestrian component of the buried male population represents about 20–22 %. In the cemetery at the second church it is 16 %.

The components of warrior or equestrian equipment in both of the above-mentioned locations were found not only in graves but also in the fills of settlement features and in the occupation layer. In the *Magnate's Manor* such non-funerary finds comprised spurs, axes and arrowheads; settlement contexts in the *Southern Suburb* contained axes, spurs, stirrups, projectile points and spears (Table. 27, 28). In the manor area, artefacts of this type were mostly found in graves, whereas in the suburban area they predominantly occurred in settlement features and in the occupation layer.

From the study of archaeological evidence, supported by modern computer-operated analytical methods, follows that the settlement in the *Southern Suburb* had a different structure than the settlement in the inner ward of the stronghold (*Dresler – Macháček – Přichystalová 2008*, 265–268). Unlike the stronghold, houses in the suburban area had the form of sunken-featured buildings with heating device in one of the corners. As the analysis of shape, construction and finds from the fills of features in the suburb has shown, settlement units in this area were not primarily oriented on any specialised production activity (*Vignatiová 1992*; *Švecová 2000*).

From the residential and funerary complexes in the *Southern Suburb* we know a representative assemblage of artefacts attesting to the presence of a warrior/equestrian component of early medieval society. Within the whole settlement agglomeration of Břeclav – Pohansko, similar collection of artefacts is only known from the *Magnate's Manor* and the *North-Eastern Suburb* – cemetery at the second church (*Kalousek 1971*; *Dostál 1975*; *Macháček et al. 2014*; *Macháček et al. 2016*). In the other locations explored inside the fortified area, artefacts like spurs and weapons are found only sporadically. Graves from dispersed cemeteries in the *Southern Suburb* contained grave goods in higher amount and quality than the graves from settlement burial grounds in the inner ward of the stronghold (see Chapter 7.3.3).

All recent conclusions are in accordance with the model suggested by J. Vignatiová (*1992*), in which she interpreted the *Southern Suburb* of the Pohansko stronghold as a settlement area and economic background of members of an armed retinue of second rank and their families.

Population buried in the Southern Suburb of Břeclav – Pohansko

In the *Southern Suburb*, a total of 205 inhumation graves with 210 individuals were found. 190 skeletons are preserved to this day. The sex estimation based on anthropological methods was carried out by E. Drozdová (*2005*). Twenty-seven skeletons were determined as male (14.2 %) and another 40 as female (21.0 %). Aside from that, among the identified skeletons also were 87

(45.8%) children and 36 (19.0%) undetermined individuals, including the skeletons JP/11 and JP/115, rediscovered by later research (*Boberová 2012*). The sex determination in children and undeterminable individuals was based on the molecular genetic analysis of aDNA with the help of SRY and amelogenin genetic markers. The modern molecular genetic analyses are well suitable for examination of fragmentary skeletal remains or skeletons of children and juvenile individuals, where the usage of standard anthropological methods for sex determination is quite problematic.

Skeletal remains from the *Southern Suburb* are very poorly preserved and heavily fragmented. The poor preservation of osteological material affected the quality and amount of authentic aDNA in skeletal remains. Even though the acquired aDNA was for the most part fragmentary and degraded, sex determination based on the analysis was successful with more than one half of the examined samples.

The analysis was made with a total of 120, out of 123, samples from skeletons of children and undeterminable adult individuals. Three skeletons could not be sampled for the analysis. Sex determination was carried out with the help of two most commonly used sex markers, namely the SRY marker and the amelogenin marker. The SRY marker proved suitable for sex determination in fragmentary skeletal remains; the success rate was 98.3%. The disadvantage of SRY, however, consisted in the fact that female individuals can be determined only indirectly by the absence of the amplification product. When we would evaluate only identified males, the success rate in sex determination would be 52.5%. The sex determination on the basis of the amelogenin marker proved problematic, particularly in the case of amplification of the Y amelogenin allele. It was necessary to change the evaluation criterion for results of the amelogenin marker analysis. A strategy was chosen, where even a single successful detection of both amelogenin alleles is sufficient for the determination of male sex. With regard to this evaluation, the success rate in sex determinations based on the amelogenin marker was 87.5%.

The identical results of analyses of sex-specific markers helped to determine the sex in 66 individuals, more precisely in 31 males and 35 females (55 % success rate). The genetically determined sex in these skeletons was confirmed by two different markers (SRY marker, amelogenin marker) and this result can be regarded as conclusive.

Demographic structure

The basic demographic analysis of population from the *Southern Suburb* was carried out by E. Drozdová (*2005*), who anthropologically examined 189 individuals. She identified 27 male and 40 female skeletons. Children's skeletons were 88 in number and in the remaining 34 skeletons the sex could not be identified. Drozdová (*2005*) in her examinations did not work with 27 numbered funerary assemblages, which were anthropologically evaluated by Anna Lorencová. The determination of these individuals is recorded in written field documentation, kept by Jana Vignatiová (*Vignatiová undated*). Most of these skeletons were poorly preserved. Because of this reason, or because they were or still are missing, these skeletal remains were not examined by another anthropological analyses during the following research. An exception is represented by skeletal remains from graves JP/011 and JP/115, which were rediscovered by further research. The child's skeletal remains JP/7b, on the other hand, were not found.

During later research, sex was redetermined with the help of molecular genetic methods in skeletal remains of 66 children or anthropologically undeterminable individuals, 31 males and 35 females (*Boberová 2012*). On the basis of the genetic sex determination it was possible to update the sex structure in the *Southern Suburb*. The number of identified males increased from 27 to 30, the number of females increased from 40 to 55. The number of undeterminable skeletons of adult individuals decreased from 36 to 18. The number of children's skeletons with unidentified sex decreased from 87 to 39. 28 boys and 20 girls were newly identified.

People from the *Southern Suburb* mostly died as children in the age of six months to 13 years (infans II and III) and in the age category adultus II (30–39 years). The average life expectancy in males from the *Southern Suburb* was 28 years, in females 30 years.

Population health, stress and strain factors on the basis of palaeopathological research

Skeletal remains of individuals from dispersed cemeteries in the *Southern Suburb* of Pohansko, despite their poor preservation and fragmentariness, provide a relatively wide spectrum of pathological changes. Statistic evaluation of general indicators of biological stress and traumas yielded some interesting results. However, it is necessary to take into consideration that the poor preservation state and therefore a small number of individuals may have affected some of these results. The interpretation of results of palaeopathological analysis in the context of archaeological theories concerning the function of the *Southern Suburb* was therefore anything but easy.

General indicators of biological stress, *cribra orbitalia* and linear enamel hypoplasia, when compared to

selected Slavic populations, classify the population from the *Southern Suburb* somewhere between the upper social circles and the lowest social groups of the population from Pohansko. It is true that we cannot exclude the presence of high-ranked individuals, but anyway, the *Southern Suburb* was not inhabited by the social elite of that time. The incidence of both of the indicators mentioned above was higher than with the elite of early medieval population (Mikulčice-acropolis); however, the frequency of these two indicators in other rural and urban populations is very variable. The comparison with the cemetery around the first church at Pohansko mostly refers to the same or to slightly worse living conditions. These small and often statistically insignificant differences could be also explained by a higher degree of social diversification in the *Southern Suburb*. However, the interpretation of these differences is being complicated by the non-uniform (unclear) etiology of both indicators, which rather represent general indicators of biological stress.

Simultaneous incidence of both of the general indicators of biological stress (CO and LEH) in the same individual was more frequent in the *Southern Suburb*, which might indicate worse living conditions in this population. People who buried their dead in the church cemetery, in comparison with the population from the *Southern Suburb*, may have enjoyed the advantages, for example, of better nutrition or of a lower degree of involvement of children in working activities. Children thus had the possibility to recover and the only reminiscence of stress in childhood was a hypoplastic line (lines) in dental enamel. Nevertheless, it is necessary to draw attention to the so-called osteological paradox (*Wood et al. 1992*), which changes the perspective of looking at the whole problem. Living conditions in the *Southern Suburb*, on the contrary, might have been better and the individuals might have died later than the changes became evident on bones (teeth).

Traumatic changes represent an important indicator which helps us to reveal the way of life of historical populations. In the *Southern Suburb*, as well as in the cemetery around the first church, we detected an increased incidence of traumatic changes in males. This situation, on the other hand, is typically identified with many populations, because men are mostly occupied with activities with higher accident hazard. No significant differences were detected between populations, not even when we concentrated our attention only on head injuries which are usually connected with some form of interpersonal violence.

The analysis of long bone fracture typology in the *Southern Suburb*, in comparison with the cemetery around the first church, did not prove any significant differences between populations, either. The comparison with nearby early medieval site of Mikulčice (*Likovský et al. 2008*) did not show any significant differences, either. In both populations we rather find accidental injuries, even though their origin in interpersonal conflicts cannot be fully excluded. The occurrence of interpersonal armed conflicts in both of the examined populations from Pohansko is evidenced by a few sharp injuries. From the *Southern Suburb* we know a sharp injury on the lower jaw (JP/132 – male grave with battle axe) and probably also a foot amputation in metatarsal region (JP/32, male grave with no grave goods). However, in the cemetery around the first church, which presumably served for burials of members of an armed retinue, the number of sharp injuries was higher; nine males, one female and one juvenile individual exhibited at least one sharp injury each. The number of sharp injuries in the cemetery around the first church was also higher when compared with Mikulčice, but the same was not true of the population from the *Southern Suburb*.

As regards the injuries in children, only one unhealed fracture of the right fifth metacarpal bone was identified with a nine-year-old boy. In this individual we also identified an inflammation on the shinbone, which was active some weeks or months before death. Both of these pathologies may have been caused by the same traumatic event.

The comparison of the incidence of Schmorl's nodes between the populations from Pohansko showed that these features were more frequent in the population buried around the first church. Although the etiology of Schmorl's nodes is still unclear, these structures are generally associated with an increased physical strain, mostly in juvenile individuals. Sometimes they are also associated with horseback riding (*Wentz – De Grummond 2009*) or carrying of heavy loads (*Wilczak – Kennedy 1998*). Higher incidence in individuals from the cemetery at the first church would thus make sense, because in the context of individuals buried in this cemetery, equestrian equipment in the form of spurs was detected with 33 male individuals (*Kalousek 1971*).

The analysis of skeletal remains of several individuals from the cemetery at the first church indicates that the warriors buried on this site were lightly clad horsemen, who were trained for close combat (*Fikar 2016*).

The collection of inflammatory changes is relatively small. The incidence of non-specific inflammatory changes was detected with only five individuals. The group of individuals with inflammatory changes in the jaw cavity also is very small (only 3 individuals). The suspicion for tuberculosis was declared in three individuals. The TBC diagnosis was histologically supported in only one female rib sample from grave number JP/106. The life story of this female is also interesting due to other palaeopathological lesions. In this

young female we also identified a mandibular trauma, which she probably suffered during adolescence. Another trauma was identified on the spine – probably a displacement of the intervertebral joint between vertebrae C6 and C7, or a fracture of the transverse process. Aside from that, maybe due to the above-mentioned trauma, the spinal canal was affected by pathological growth which caused a deformation of the seventh cervical vertebra.

Judging from the archaeological findings, this young female counted among the upper social classes. This might be the reason why she lived so long that the disease left pathological changes on bones and all traumas were healed. With regard to the finding in the spinal canal, it is possible that the female was dependent on the help of others at the end of her life, because the process which enlarged the spinal canal probably exerted pressure on the spinal cord. On the bones of this female we cannot observe any distinct lateral asymmetry, but the bones are generally gracile, without any distinct muscle attachments, and the X-ray image shows a visible extension of the medullary cavity and thinning of corticalis. The mobility of the female before her death seems to have been considerably hindered.

The changes on *lamina interna* of cranial bones were identified with 33 individuals. In eight of them, histological analysis proved a haemorrhagic origin, which refers to possible trauma or a haemorrhagic disease such as scurvy. In the remaining individuals we can also suppose inflammatory changes. The changes on the internal surface of cranial bones were mostly identified with children.

The collection of congenital anomalies and tumorous changes also is relatively small, but these displays are identified very rarely, even in well-preserved and large assemblages of skeletal remains. Quite interesting is the total absence of spondylosis in individuals from the *Southern Suburb*. This condition, however, might be caused by the poor preservation of bones. The fourth and the fifth lumbar vertebrae are preserved in only 21 adult individuals.

The analysis of dentition in individuals from the *Southern Suburb* showed a very low caries rate in both values. In males, caries occurred with a smaller number of individuals and afflicted multiple teeth in the same individual. In females, on the contrary, the caries was more frequent. Both values rise with age. The caries rate was also low in comparison with the population from the church cemetery and in comparison with selected contemporaneous early medieval sites. This phenomenon may have been influenced, for example, by a different diet. However, we must take into consideration the size of our sample and its relatively poor state of preservation.

Although the collection of skeletal remains from the *Southern Suburb* is poorly preserved and in some cases very fragmentary, it provides a relatively interesting spectrum of palaeopathological changes. The information acquired by palaeopathological analysis is of course limited, which is mainly caused by the fact that we can study only skeletal remains, whereas the majority of diseases or traumatic changes leave no traces on bones. Therefore it is impossible to say how exactly was the health condition of the studied population. But it does not mean that we should not try.

Who were the people living in the Southern Suburb?

On the basis of research into the population buried in the *Southern Suburb* of the Břeclav – Pohansko settlement agglomeration we can get an idea of the community who lived, worked, fought and died here in the 9th century.

According to the results of strontium isotope analysis, which followed up the presence of non-locals in the population, we can say that the majority of inhabitants probably came from the southern and central Moravian core of Great Moravia. Some probability of non-local origin was detected with only 3 out of 19 individuals – the warrior from grave JP/42, woman from double grave JP/121 and the woman buried in contracted position in grave JP/122. In the case of individuals from graves JP/42 and 121 we can base ourselves on the distinctly high $^{87}Sr/^{86}Sr$ isotope ratio, which makes us suppose that these people came from the crystalline basement area west of Znojmo, or from the mountainous regions of the West Carpathians or the Alps.

The opposite is the case with individual JP/122, whose dental enamel is less radiogenic. We can suppose that the woman came from a distant region of the Pannonian Plain, or from some partial locality with lower $^{87}Sr/^{86}Sr$ ratio (e.g. Pavlov Hills). Dentine in this woman exhibits an isotope value similar to most of the other individuals from the site, which is in no contradiction to her late age that she spent in the area of Pohansko.

Despite the assumed origin homogeneity of population in the suburb we identified here very heterogeneous burial practices, which include religious, social and chronological factors. Funerary areas and rituals were not organised centrally but under the auspices of selected authorized persons from individual discrete settlement units.

The social status of inhabitants in the suburb was quite varied; according to grave finds we can suppose the presence of the lowest social classes, individuals

with exceptional social credit, ordinary people (farmers, occasional craftsmen), and individuals who enjoyed the status of a mounted warrior. Palaeopathological analysis of skeletal remains yielded evidence of interpersonal violence in male individuals. The fact that even a seriously disabled individual has successfully survived in the society shows that the economic power of the given social unit evidently was stable enough to make it possible to care for a community member incapable of working (grave JP/106).

The settlement in the *Southern Suburb* was tightly connected with the rise, development and fall of the central fortified area. In the period of decline of the settlement in the stronghold, the settlement and funerary activities in the suburb also experienced a gradual downfall. According to radiocarbon dates, funerary activities can be dated to the interval from the second half of the 9th century till the beginning of the 10th century.

Břeclav – Pohansko, Southern Suburb, catalogue of graves and finds from dispersed cemeteries – catalogue structure

The catalogue of dispersed cemeteries, small groups of graves and isolated graves from the Southern Suburb of the Great Moravian settlement agglomeration Břeclav – Pohansko contains information on 205 grave units with 210 individuals, which were discovered, identified and documented during archaeological excavation campaigns in 1960–1962, 1975–1979 and 1991–1994 (*Vignatiová 1977–1978*; *1992*; *Přichystalová 2011*).

The catalogue is composed of five basic parts: 1) structured verbal description of grave finds with complete archaeological and anthropological data, supplemented with basic plans of graves in the context of their closest neighbourhood; 2) plates with drawings of skeletons and finds from individual contexts, where the drawings of artefacts are supplemented with photographs in the same scale (Plate I–LXXXIII); 3) plates with drawings of ceramic fragments, which were found in the fills of grave pits (Plate LXXXIV–XCIV); 4) plates with on-site photographs (Plate XCV–CXXXVIII); 5) skeleton record sheets highlighting the preserved parts of the skeleton (Plate CXXXIX–CLXVIII).

The assemblages of finds are described in detail in the structured text. The text always contains information on the position of the grave within the excavation area (square), on the stratigraphic context and on grave pits and their possible special design, the complete anthropological information on the buried individuals and a detailed description of grave goods. Individual records are based on all types of on-site documentation of the excavations and on the database sources of the Department of Archaeology and Museology, Faculty of Arts, Masaryk University. The information on individual funerary assemblages is given in a simple system comprising the basic find context and anthropological data:

Grave number (Plate No.)

Excavation year:

Square:

Stratigraphic relation:

Fill:

Finds from the fill:

Grave pit:

Design of the grave pit / container:

Buried individual – position and orientation:

Grave goods: (position of individual artefacts)

Description of artefacts:

Comment 1:

Anthropological characteristics:

Basic anthropometrical data:

DNA analysis:

Palaeopathology:

Comment 2:

The textual part of the catalogue contains information on various types of archaeological features. First of all, there are graves marked with letter H and with the sequence number, for example H 4, H 85, H 125. The prefix JP/... was omitted because the catalogue only contains the graves from the *Southern Suburb*, so that the confusion with equally numbered graves from other locations within the Břeclav – Pohansko settlement agglomeration is impossible. Graves in the suburb were often situated in the neighbourhood of settlement features or in a superposition with them. In graphic supplements, settlement features are marked with letter O and with the sequence number.

Foundation trenches from various types of enclosures are not numbered and they are shown hatched in graphic supplements.

In plans which are included in the textual part of the catalogue, grave pits are outlined in contours showing the top and bottom edges of the pit. Skeletons are shown without grave goods. Settlement features and graves from the closest neighbourhood of the grave in question are outlined in contours, respecting the stratigraphic sequence when in superposition with the given grave.

The plates with drawings of grave goods also observe certain rules. Graves are ordered by the following key: first the graves containing funerary equipment or small artefacts in the fill (apart from ceramic fragments or animal bones), then the graves with no grave goods but with well-preserved skeletal remains, and at last the burials of small children with poorly preserved skeletal remains, or the heavily damaged and dislocated graves with a minimum of preserved bones.

In plates with on-site photographs and in those with skeleton record sheets, the graves are ordered in ascending order by grave numbers.

In each grave, the skeleton is depicted without the contours of the grave pit, only with identified grave goods. The outline of the grave pit was only used with four so-called cenotaphs. The left upper corner of the plate contains a symbol for sex (♀♂), which was determined on the basis of anthropological and genetic analyses. Children are marked with an empty ring symbol. When the child's sex was determined by aDNA analysis, an internal ring is added to the female or male symbol. Undetermined individuals are marked with a question mark (?).

Artefacts whose exact finding position was not recorded are shown without any direct relation to skeletal remains (their finding position is not marked). Regarding the image scale, small artefacts, such as earrings, glass beads, buttons, globular bells, belt fittings etc., are only represented by a shape or a symbol. Larger artefacts, such as a vessel, axe, sword, spur, entire knife etc., were drawn in the plan in their real proportion to the skeleton. Artefacts resting under the bones, which could not be documented at the level of cleaned skeleton, are marked in a specific way. Small finds are marked with a symbol in grey, larger artefacts are shown hatched.

Symbols for small artefacts:
- isosceles triangle turned up: earring
- ring: glass button
- square: glass bead, other necklace components
- saltire: belt fittings (buckle, strap-end, belt loop)
- annular ring: finger ring, ring in general
- star: globular bell
- rhombus: strike-a-light stone
- pentagon: fragment of an unspecified iron/metal object.