

# Rural Settlements in Bohemia in the ‘Age of Transition’ (14th–16th century): research concept and preliminary report

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## Introduction

The aim of this research is to integrate archaeological data into a complex study of social, economic and cultural transformation from the medieval to the post-medieval world. Research into changes in the rural milieu and records of various rural settlements’ abandonment represents a valuable contribution of archaeology to the discussion of the ‘Age of Transition’. This problem is often considered in the European context (e.g. Scholkmann *et al.* 2009: 357–533; Dyer and Jones 2010). In recent years, scholars have begun to undertake comparative studies of differing regions alongside work on settlement types across regions (e.g. Klápště and Sommer 2009).

Despite great progress in research on rural settlements in Bohemia, knowledge of the general situation remains imbalanced. In the last three decades the systematic specialist studies have focussed only on localities in specific natural environments and in certain regions. Particular interest was directed at deserted villages in forested areas, generally in uplands (Klír 2009a: 150; Vařeka *et al.* 2008; Vařeka *et al.* 2009). This has led to the neglect of one of the basic phenomenons of European historical development, regionally differentiated socio-economic and settlement development, which is documented at least since the High Middle Ages. Research on the uplands generally dominates work in Bohemia. Paradoxically those parts of land where written records show the most dynamic development remain under-represented in the research, namely (1) mountain regions with non-agrarian production and (2) fertile lowlands tending towards specialized commercial agriculture. This relates not only to research on particular rural settlements in those areas, but also to research on the key historical theme – the interaction of regions differentiated by production and social organisation (e.g. Alfonso 2007).

## Socio-economic regionalisation of Bohemia

In the early modern period (16th and 17th century), written sources seem to show that Bohemia was a heterogeneous country, composed of various regions differentiated socio-economically and demographically, with various development dynamics and with different degree of integration into a market system (Fig. 1; e.g. Petráň 1964; Cerman and Maur 2002; Klír 2009a: 150–153).

It is possible to contrast:

1. areas that developed quickly in socio-economic terms in mountains and lowlands. Mountain and lowland regions were contrasting socio-economically

but connected by significant market exchange. Such regions became more and more specialized in their production and disposed of a more significant amount of surplus products. Growing social stratification and demographic growth led to an increase in the number of non-self-sufficient households; the available work force was quickly absorbed (most often by large peasant farmsteads or seigniorial demesnes in lowlands and by non-agrarian production in mountain areas). In mountain areas agriculture was for subsistence; development was fuelled by proto-industrialization. On the contrary, fertile and suburban areas tended towards market-oriented specialized agriculture.

2. developmentally rather static regions where ‘time stood still’ and where quite a stable and balanced social structure represented by middle-sized self-sufficient farmsteads producing a low measure of surplus remained. The demographic structure stayed quite stable and the number of non-self-sufficient households stayed fairly low.

There is no question that this regionally differentiated development has its roots in the deep socio-economic and cultural transformation of the 14th to 16th century, which is the theme of great historical concepts of the late Medieval Crisis, of the beginnings of the Modern Period, of the transition from feudalism to capitalism, and so on. This provides an entry into one of the most important themes of medieval archaeology.

## The conception of archaeological research

The basic question is how research on deserted villages and settlement changes in the 14th to 16th century can enrich studies of regionally differentiated development in Bohemia. Such changes are not easily detectable in the written records until the second half of the 16th century. The scattered and unfocussed studies of deserted medieval villages undertaken to date do not allow us to address this problem sufficiently. A long-term research project has been established with the aim of studying settlement in the medieval and Early Modern periods in regions exhibiting socio-economic variation in an attempt to bridge the gap between socio-economic history and archaeological studies. The main premises of the project are that:

1. we must not consider the development of particular regions separately, but instead study the whole system (i.e. connections between contrasting regions such as mountains and lowlands linked by complementary production)
2. Considerable variability of rural settlements existed in each region. What connected them was not their similarity, economic or social structure,

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but the socio-economic environment in which they operated.

3. All the surveyed localities and micro-regions can be reviewed within the same theoretical framework.

To address these issues the project is undertaking a detailed study of localities chosen to represent both various types of rural settlements and micro-regions of the main socio-economic regions. Archaeological sources are not expected to provide the same kinds of information as written records. Archaeological research and settlement history are intended: (1) to test through particular cases and at a small scale the validity of widely-accepted concepts in Czech socio-economic history, and (2) to learn about particular rural communities in particular places and in given socio-economic regions. The project also strives to bring together current theoretical perspectives from historical, culture-anthropological and archaeological studies (cf. Mitterauer 1995; Wilfing and Winiwarter 1999; Sonnlechner 2009; Klír 2009a: 156).

### Research questions and study methods

The project has two major elements:

#### *a. Research into abandoned medieval settlement (14th to 15th century)*

The aim of this research module is to learn about abandoned settlements and try to disclose (i) conditions for agrarian and non-agrarian production, (ii) importance of agricultural production, i.e. the degree of its subsistence and market character, (iii) measure of self-sufficiency, (iv) total measure of integration in the market and food distribution and (v) the character of basic economic units – peasant farmsteads. The research into medieval settlements is divided into different units:

1. Archaeological research. The object of this part is detailed research on selected deserted medieval villages and their field-systems, based on non-destructive methods (topographical, geophysical and geochemical survey).
2. Historical research. This part's objectives are to (a) learn about the topography of the whole micro-region in the late Middle Ages; (b) reconstruct changing property relations; (c) use contemporary written records to learn about the process of abandonment; (d) research the relationships between agrarian and non-agrarian production, and acquire a general knowledge of precious metals mining, (e) determine the influence of markets and the scope for production for markets in the micro-region, based on analysis of contemporary written records.

#### *b. Settlement in the Early Modern period and the socio-economic situation in the 16th to 18th centuries*

This part of the project rests upon a settlement-historical and socio-economic analysis of the micro-region surrounding the chosen deserted villages (ca 20–25km<sup>2</sup>). The analysis is based on a study of relevant written and cartographic materials.

The following indicators are investigated at particular villages in the micro-region: (i) settlement-geographical

characteristics of the village and its ploughland; (ii) general agricultural potential of the cadastral area in the Early Modern period; (iii) agricultural systems and practices; (iv) general agricultural conditions and production potential of particular farmsteads; (v) subsistence farming at particular farmsteads and (vi) adaptation and innovation potential, spreading risk, and cooperative fallowing among farmsteads (cf. McNetting 1993; Ellis 2003; Beck 2004; Kopsidis 2006). Those indicators are deduced from the analysis of: (a) socio-legal status of particular farmsteads; (b) extent and structure of property; (c) gross and net production; (d) the share and distribution of risky agricultural areas; (e) work demands and (f) work efficiency.

### Project parts

In the following section, some of the deserted medieval villages studied within the first module – research of abandoned medieval settlement – are presented, using the form of a brief summary (Fig. 1).

#### *a. Mountain and highland regions*

The settlement of these areas indisputably shows the limits of the contemporary socio-economic system and, at the same time, enables us to learn about both about the significance of subsistence-based agriculture and the relation of agrarian and non-agrarian production (Klír 2010: 380–381). At present the research on mountainous regions concentrates on Slavkovský les/ Slavkovsky Forest in western Bohemia (collaboration between Charles University in Prague and Otto-Friedrich Universität, Bamberg) and on Krušné hory/Ore Mountains in the north-west of Bohemia (collaboration between Charles University in Prague and the Institute of Conservation of Archaeological Monuments of North-West Bohemia in Most). The results presented below are based on topographical survey complemented by geophysical and geochemical methods. Dating the abandonment of these localities rests upon analysis of surface ceramics finds.

#### *Case study: Slavkovsky les settlement, the deserted medieval hamlet of Herrmannsgrün (see Klír 2010: 382–384)*

The deserted medieval hamlet of Herrmannsgrün (Slavkovsky les, western Bohemia) was situated on the circumference of a shallow basin with a spring in its centre, between three mountain peaks, 750–780 metres above sea level (Fig. 2). It was a dispersed settlement, adjacent to the floodplain of a stream. During the geodetic-topographical survey, the remains of six farmsteads were identified, located c. 100–200m from each other. Various remains of ploughlands in the form of well-preserved flat ridges and agrarian terraces were preserved in the surroundings. Written records from the second half of the 14th and beginning of 15th century indicates a minimum of nine abandoned farmsteads.

In the area within the deserted hamlet chosen for detailed survey, a complex horizontal stratigraphy of anthropogenic surface features was preserved, indicating three different time and functional horizons of human activities typical for mountainous regions during the late Middle Ages to early modern period (Figs 3–4).

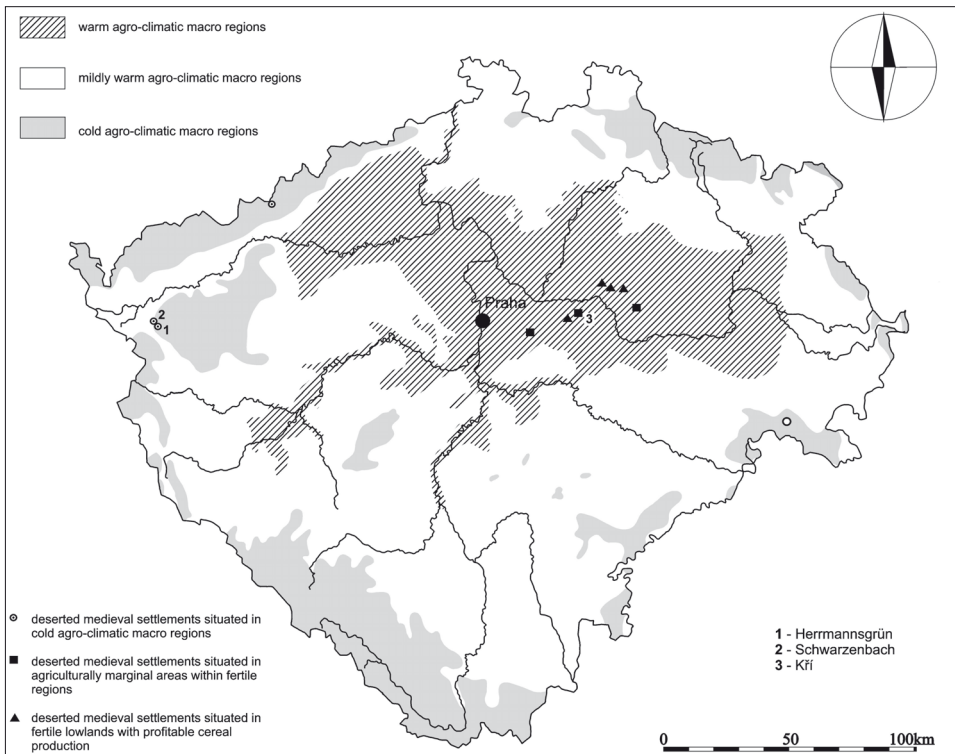


Figure 1 Location of the deserted medieval settlements incorporated into the research.

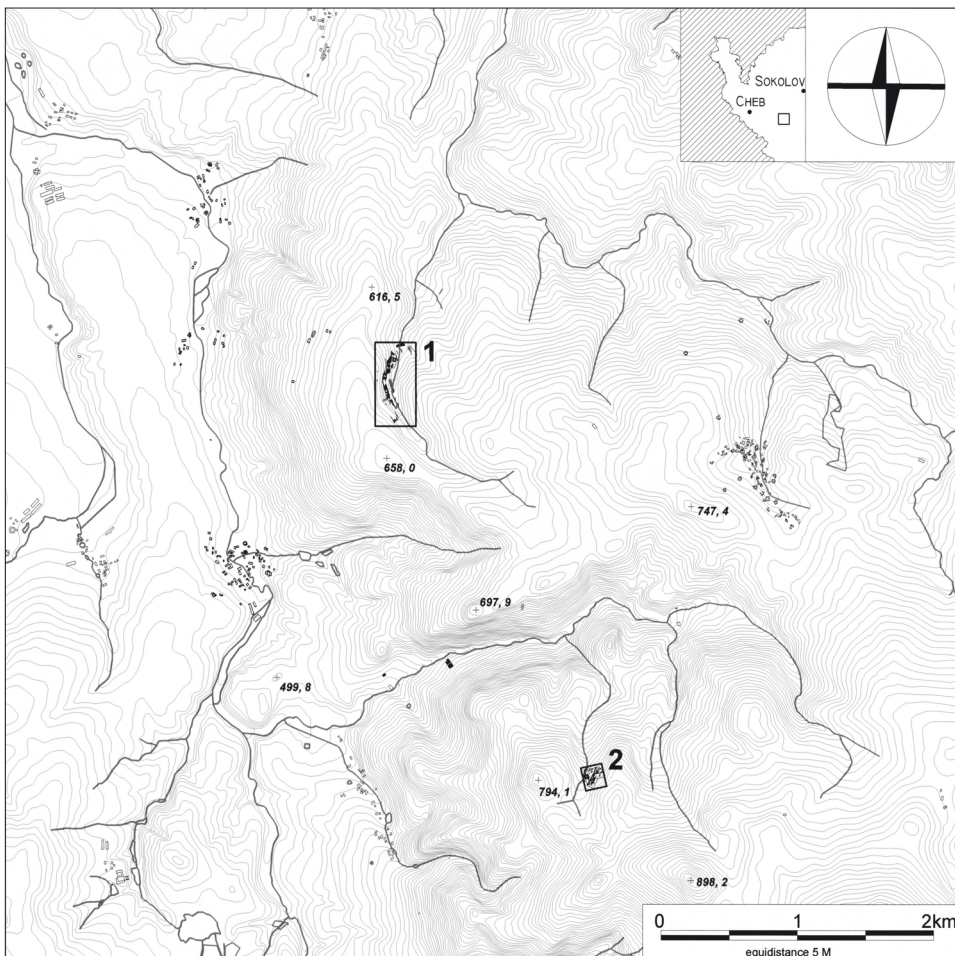


Figure 2 Microregion in the western part of Slavkovský Forest, West Bohemia. The deserted medieval settlements mentioned in the text: 1) Schwarzenbach, Fig. 5, 2) Hermannsgrün, Figs 3–4.



The evidence recorded enables us to observe intense agricultural activities, which seems irrational in such extremely unfavourable conditions. In this case we can detect intense agricultural use of a north-west slope in a rather stony area.

Heavily eroded remains of a moated site in the floodplain of the stream and remains of a house surrounded by two agricultural terraces provide information about the late medieval settlement horizon. In the area of the terraces, stones and boulders were systemically collected or rolled away into piles at their edges. The terraces are situated on an unfavourably situated north-west slope; the initial ploughing would have required considerable investment to break and remove boulders. On the other hand, they provided an accessible area in the immediate vicinity of the farmstead. The agrarian terraces were probably used as gardens since fields were situated further away in more favourable locations (on hillsides and more favourably oriented slopes).

After the medieval hamlet was abandoned, the site was subsequently inhabited by charcoal-burners. Remains of their activities comprise (i) charcoal kilns cut into earlier agrarian terraces, (ii) a pond dam, (iii) channels bringing the water to charcoal kilns (the channels were disturbed by remains of the moated site), (iv) remains of a fenced garden cut into the former agrarian terraces. The most interesting remains of charcoal-burners' activities relate to their agricultural activities – the relics of the fenced garden. If the charcoal-burners had time that

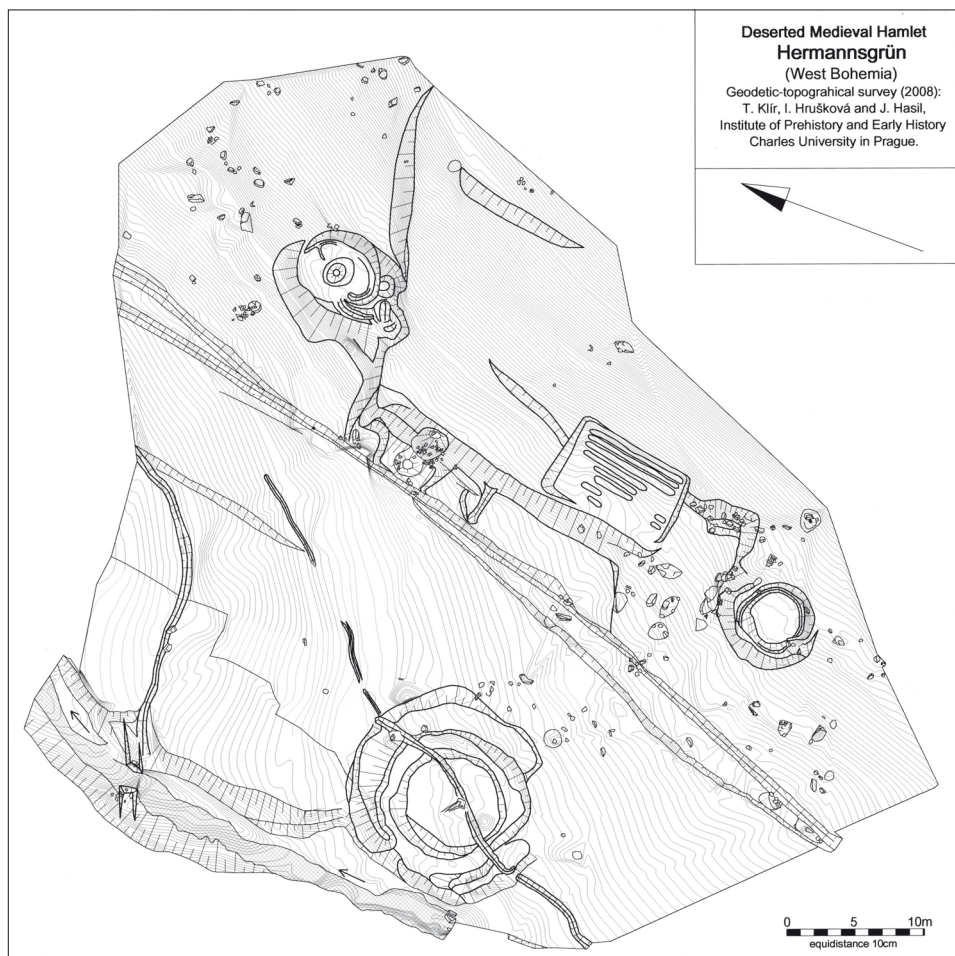
could not be used for charcoal production they might have regarded even minimal agricultural production as worthwhile. Moreover, they could use the area of the medieval agrarian terrace.

A system of ditches and walls represents the last settlement horizon in the surveyed area. It is a new cadastral limit. According to 18th and 19th century records, the area between the ditch and the stream was extensively used for agriculture by people from surrounding villages (for meadows and grazing wood). The medieval hamlet is special because:

1. the dispersed settlement form had not previously been recorded in mountainous regions of the Czech lands in the high Middle Ages
2. the location of the farmsteads in extremely unfavourable conditions in a mountain gap with a low sunshine level per year
3. the arable land is in an ecologically unstable area, poorly accessible and with low production potential
4. very unfavourable north-facing mountain slopes were put to agricultural use.

*Case study: Slavkovský les Settlement, deserted medieval village Schwarzenbach (see Klír and Kenzler 2009)*

The deserted medieval village of Schwarzenbach was situated in the valley of a small stream, 600–630 metres above sea level (Fig. 2). It once had a linear settlement form, connected to a stream floodplain.



*Figure 3 The deserted medieval hamlet of Herrmannsgrün. Plan of the chosen area where the detailed geodetic-topographical survey has been undertaken.*



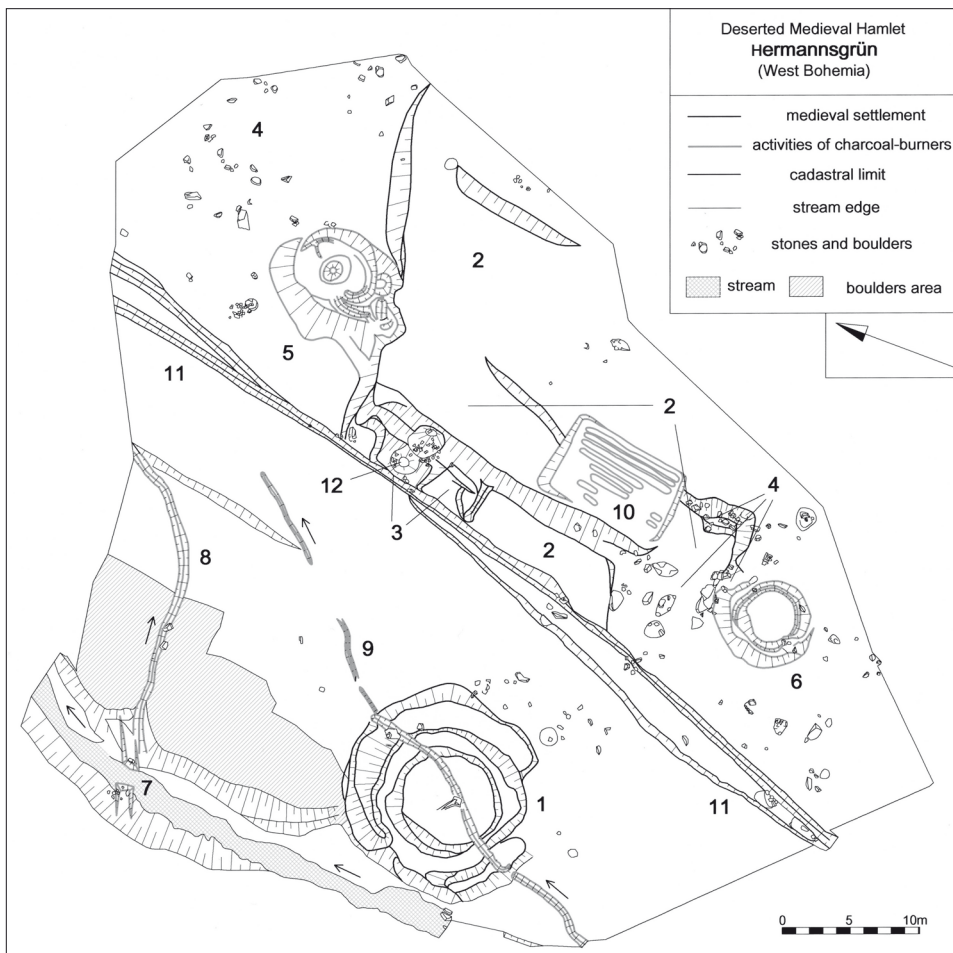


Figure 4 The deserted medieval hamlet of Herrmannsgrün. Interpretation of Fig. 3. Remains of the medieval settlement: 1) 'motte', 2) agrarian terraces, 3) relics of the house/farmstead, 4) stones and boulders collected or rolled away into piles at terraces edges. Remains of the activities of charcoal-burners (post-medieval): 5–6) charcoal kilns, 7) a pond lock, 8–9) channels bringing the water to charcoal kilns, 10) garden earthworks. Remains of a new cadastral limit: 11) a ditch.

The remains of approximately 12–15 homesteads have been identified during topographical survey, scattered for c. 400m (Fig. 5). The area is delimited to the south by an steep east-west valley, running perpendicular to the stream. To the northern side the area is bounded by a valley pass, where very eroded relics of agrarian terraces were detected. Based on an analysis of written documents, the site can be identified as the medieval village of Schwarzenbach, which appears in records in the second half of the 14th and beginning of 15th century. Up to 17 house plots have been recorded, some of which were abandoned. High medieval ceramics of the of 13th to 15th century have been collected by surface sampling.

Typical remains of buildings were virtually absent at the site – significant upstanding earthworks or hollows are missing (Fig. 6). Settlement activities resulted only in eroded platforms, which were used for working and buildings in significantly uneven terrain. The platforms are cut into the slope on one side, with an upstanding earthwork on the other. The medieval village here is special because:

1. it lies in an extremely unfavourable position which has no analogies in present villages in the region (at the foot of steep slope in the valley, with a low sunshine level per year).
2. it comprises slight earthworks which were long unrecognised even though they are well preserved

in woodland. To interpret the earthworks as house platforms phosphate analysis was used.

3. it has arable land in an ecologically unstable area, despite being relatively inaccessible and having low production potential.

#### *Agriculturally marginal areas in fertile regions*

Research on settlements in small, agriculturally unfavourable enclaves within large fertile regions provides valuable data. The intensive use of agriculturally, climatically and pedologically unfavourable regions reflects the character of the contemporary socio-economic system. Enclaves of agriculturally unfavourable soils can be contrasted with mountainous and upland regions because (1) conditions for the development of non-agrarian production did not exist; (2) settlement forms and agricultural strategies more suitable for surrounding fertile areas were used; (3) they contrasted significantly with more successful neighbouring areas. As part of this project a later settlement enclave on aeolian sands in central Bohemia was studied. It dates to the latest period of colonisation in medieval central Europe (the 14th century).

#### *Case Study: settlement on aeolian sands near Sadská, central Bohemia (cf. Klír 2008; Klír 2009b)*

Aeolian sand deposits near Sadská occupy a flat band, c. 18km long and 6–8 km wide, surrounded by the

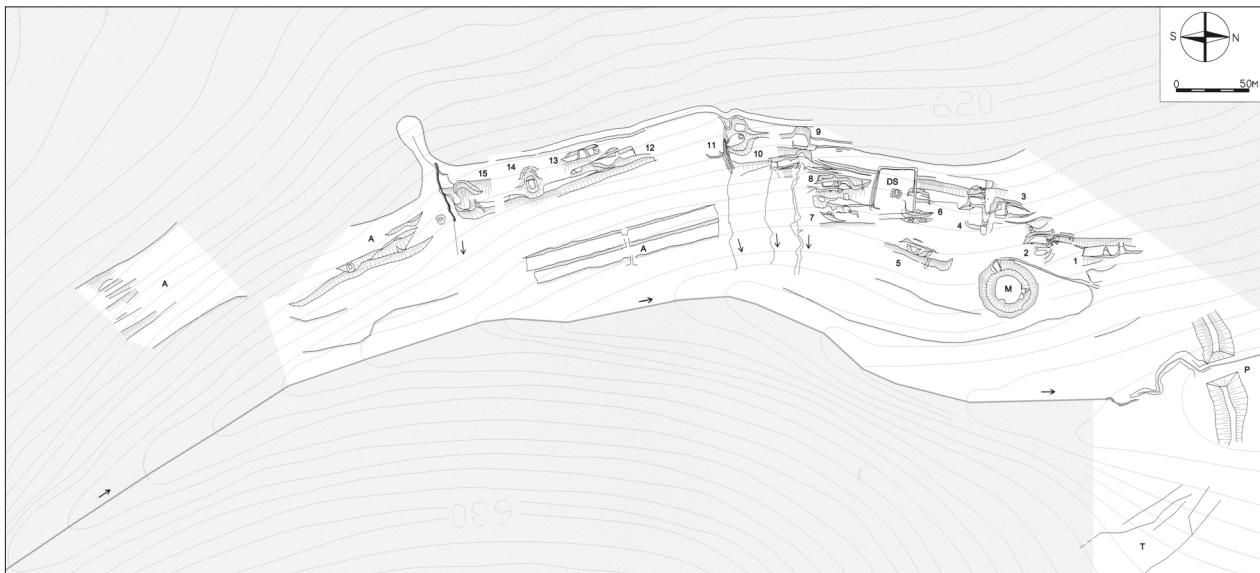


Figure 5 The deserted medieval village Schwarzenbach. Plan of remains: 1–15) degraded slope offcuts – remains of particular medieval farmsteads, A) agrarian terraces, DS) devastated surface, M) 'motte', P) relics of pond, T) tracks. Geodetic-topographical survey has been undertaken in cooperation between Charles University in Prague and Otto-Friedrich Universität Bamberg.

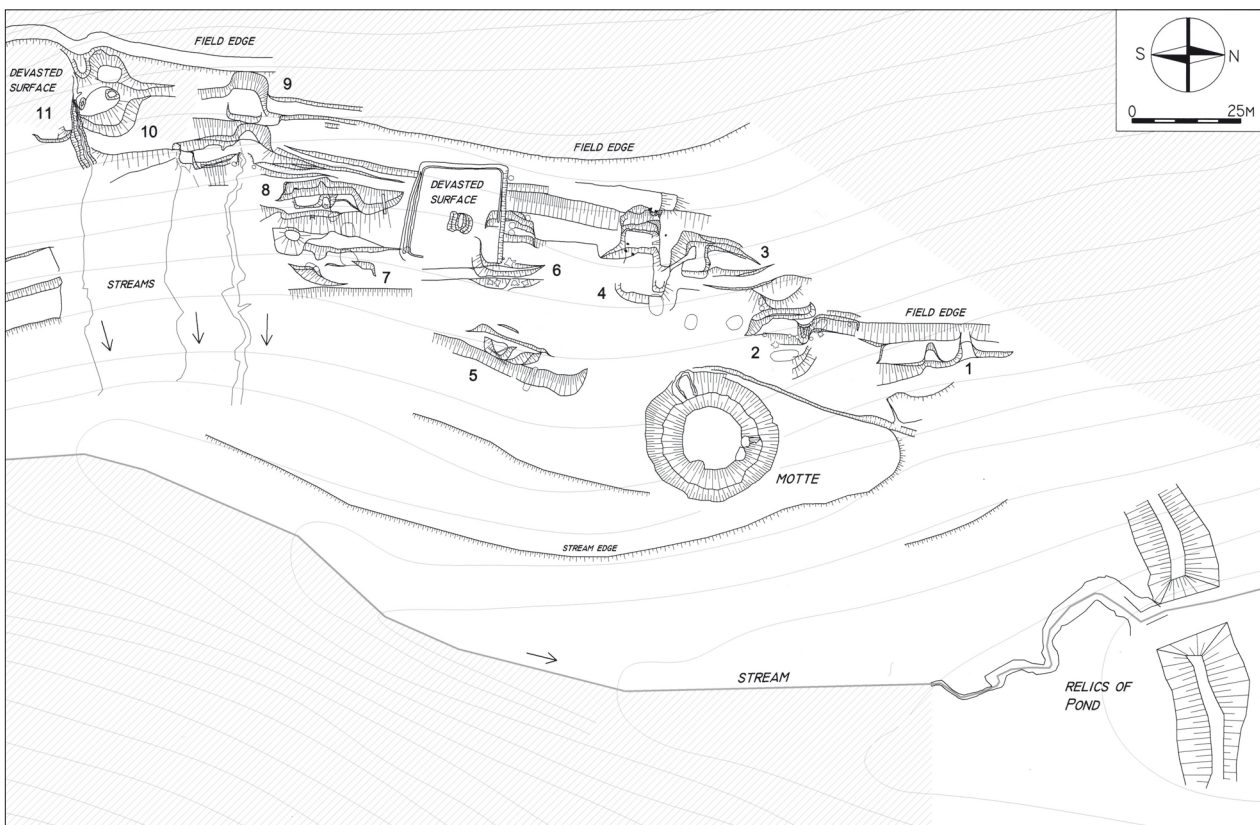


Figure 6 The deserted medieval village Schwarzenbach. Plan of remains in the north part of the area.

Labe river and its floodplain on the north and east and quite fertile czernoziem soils on the higher Labe terraces on the south and west (Fig. 7; 183 – 189 metres above sea level). Prehistoric and medieval agricultural settlement was long prevented by the concurrence of several unfavourable factors. The biggest problem was the combination of (1) minerally poor, easily drying

soils susceptible to damage by erosion; (2) flat terrain with poor drainage; (3) unpredictable seasonal floods and standing water after winter thaw; and (4) variable rainfall (extremely dry years followed by wet ones). Written sources of the early modern period also confirm that agricultural production in the whole area was risky and unstable, with low levels of productivity. It was not



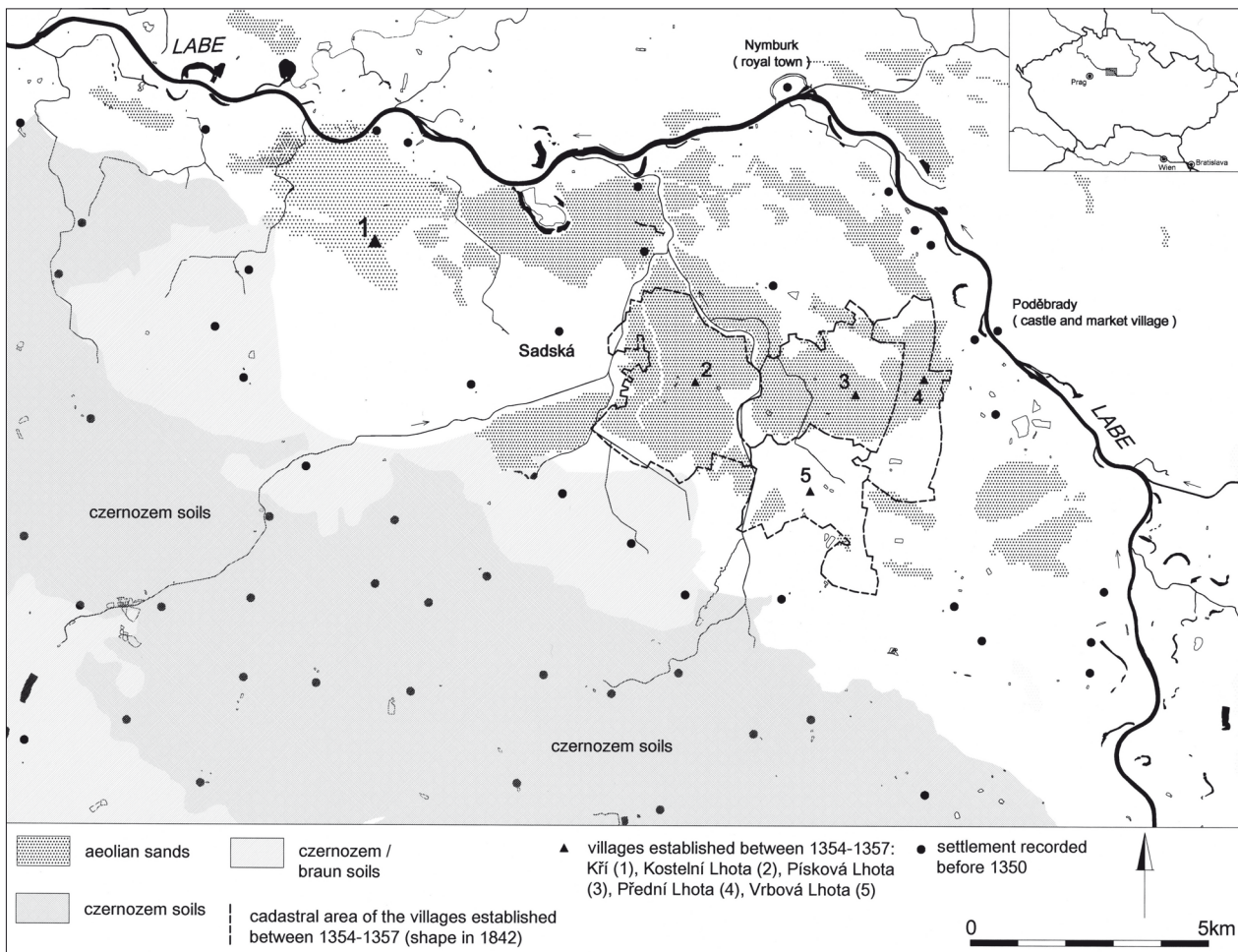


Figure 7 Microregion in aeolian sands near Sadská, central Bohemia. Soils conditions and location of the villages established between 1354 and 1357.

possible to spread risks by planting crops on different soil types owing to the homogeneity of the soils and the relief. A dry year in combination with seasonal floods and long-standing water led to absolute crop failure. Such inconveniences were moderated only by (1) favourable temperatures, which gave enough days favourable for plany growth and (2) sand soils that were easily tilled.

The relatively unfavourable conditions in those enclaves might have been perceived as even worse than they really were in comparison with the successful villages located in immediately adjacent eco-zones and neighbouring czernoziem soils with more heterogeneous terrain. Agricultural failure in the areas with aeolian sands could even have been worsened by constant attempts to use agricultural systems used in the surrounding areas but inadequate under more difficult conditions.

Until the 14th century the whole the region formed the hinterland of the royal demesne in Sadská, which was extensively exploited and also formed as a small hunting forest. The area of aeolian sands lost this function when the royal property became an aristocratic holding. In 1354–7 the new proprietor changed the economic system and divided the whole area among servile farmsteads in five newly located villages. The value of the estate grew but all risks associated with intensive agricultural production fell on the shoulders of local peasants.

The origins of settlement on aeolian sands near Sadská after 1354/7 and the initial form of the newly created villages can be studied using the example of the biggest of them – the village of Kří (Fig. 8). After a short existence (*c.* 60 years) it was abandoned and the settlement remains have been very well preserved in level, forested terrain. Our knowledge of the site derives from the survey of surviving earthworks and geophysical survey, but also from archaeological research dating to the end of the 19th century.

The settlement of the mid-14th century took the form of a large rectangular planned green-village (the green being 800 x 80–100m), formed by farmstead plots of 40m on either side of the green (*Angerdorf*). A minor nobleman's motte and bailey was intentionally incorporated into the plan, and the village green was probably dominated by a wooden parish church. Originally the settlement was probably intended to comprise about 40 farmstead plots, but this was never fulfilled. There is a striking contrast between the initial planned and the rather modest reality: no more than *c.* 32 farmsteads were ever created. Some plots within the settlement were never occupied. At others, settlement lasted only a relatively short time. Some of the farmsteads were vacated before the final abandonment of the village. About 6 to 8 fully developed farmsteads





Figure 8 The deserted medieval village of Kři. Plan of relics and one of several possible interpretations of their distribution among singular medieval farmsteads. Numbers 5 and 25 cf. Fig. 9.

have been identified and recorded with certainty (Figs 9–10). The settlement is characterised by shrinkage, long-term vacancy and temporary constructions.

Whilst the farmsteads had a relatively uniform character, various adaptations to the difficult hydrological conditions were recorded. Where waterlogging of the soil was a problem, the buildings were aligned along one side of the plot rather than the more usual layout, side-by-side towards the front of the plot (Fig. 8, Nr. 21).

The field-system of the deserted village of Kři corresponded to the regular village-plan. The farmsteads and their immediate curtilages were continued as long parcels of strips with access from the farms. Other parcels probably lay in bundles of strips within a pattern of fragmented holdings. The soil conditions suggest the arable land as the whole had low potential productivity, which must have contrasted with other agricultural areas in the neighbouring region.

#### *Research on fertile lowland regions*

This category concerns agriculturally, climatically and pedologically favourable lowlands that tended to specialise in market-oriented production. Development in the later Middle Ages and the early modern period mirrors is reflected in a dense network of abandoned settlements, whose potential is still under-used and neglected by researchers. Hitherto we have lacked a case study of such a locality, documented in a wider settlement-historical context. Although places in areas that are still farmed are significantly disturbed, they can inform us about subjects which localities in forested areas do not. In addition to themes such as (1) chronology, (2) changes in the spatial extent of settlements and (3) relationships to earlier medieval settlement patterns, significant value lies in understanding (4) the possibility

of reconstructing the economic potential arable lands which usually remained in use. This part of the project remains at the early stages.

#### **Discussion of the preliminary results**

This research project is grounded in the perception of the Czech lands not as a homogeneous socio-economic territory but as an area of gradually more and more diversified regions that were linked by reciprocal production systems. In 2006–2010 the project concentrated on (i) mountainous regions and (ii) enclaves of agriculturally unfavourable soils situated within fertile lowland regions. The archaeological remains are enabling us to think about the character of the socio-economic system, with agricultural production indisputably reaching its limits in the high Middle Ages. The mountain settlements of Schwarzenbach and Herrmannsgrün appear to have no direct comparators, particularly in upland terrain. The inhabitants of those settlements probably did not have the possibility of working in non-agrarian production, because mining in the region was not recorded until the second half of the 14th century and at that time both the settlements were wholly or partially abandoned. Similar results came from our research into settlement development on agriculturally marginal soils within fertile regions. To complete the project, we need to undertake (1) an analysis of the early modern period in surrounding micro-regions, and (2) a detailed study of medieval settlements in fertile lowland regions. The lowland regions in particular should provide information about deserted villages whose arable lands had significant production potential and were suitable for agricultural specialization and market production.

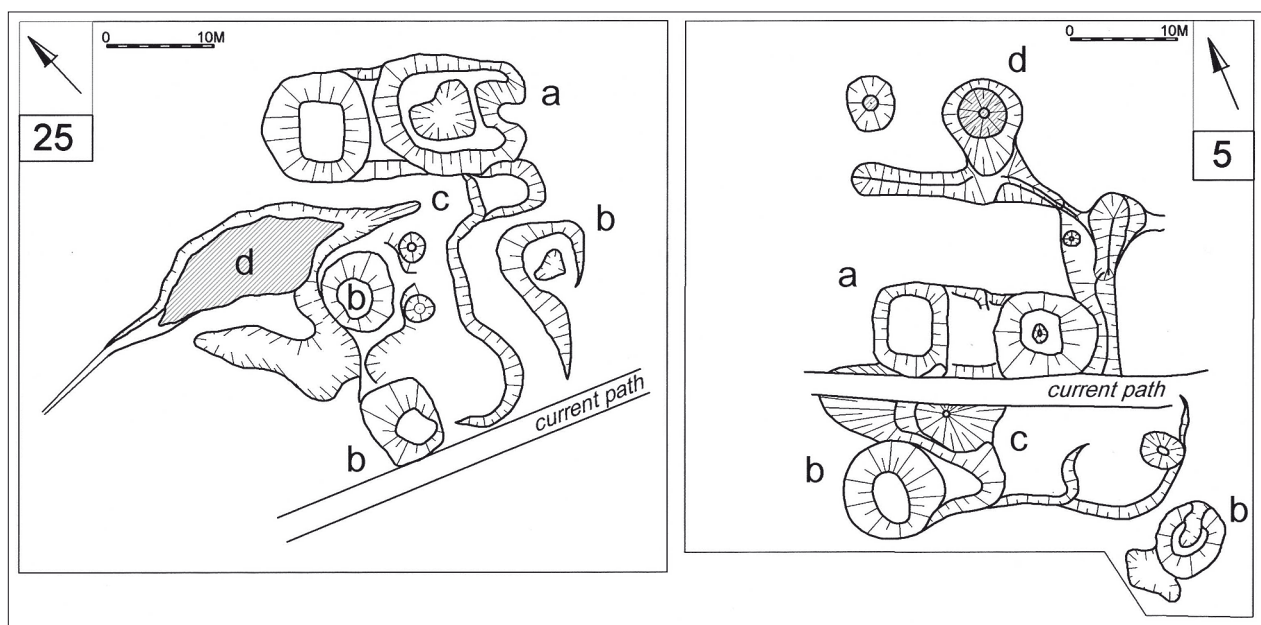


Figure 9 The deserted medieval village of Kři. Two typical groups of relics interpreted as remains of fully developed farmsteads (nos 5 and 25, Fig. 8). Buildings were situated in parallel form. Functional interpretation of relics: a) three-part house consisting of a chamber, hall and storage room, b) agricultural buildings, c) yard, d) water tank.



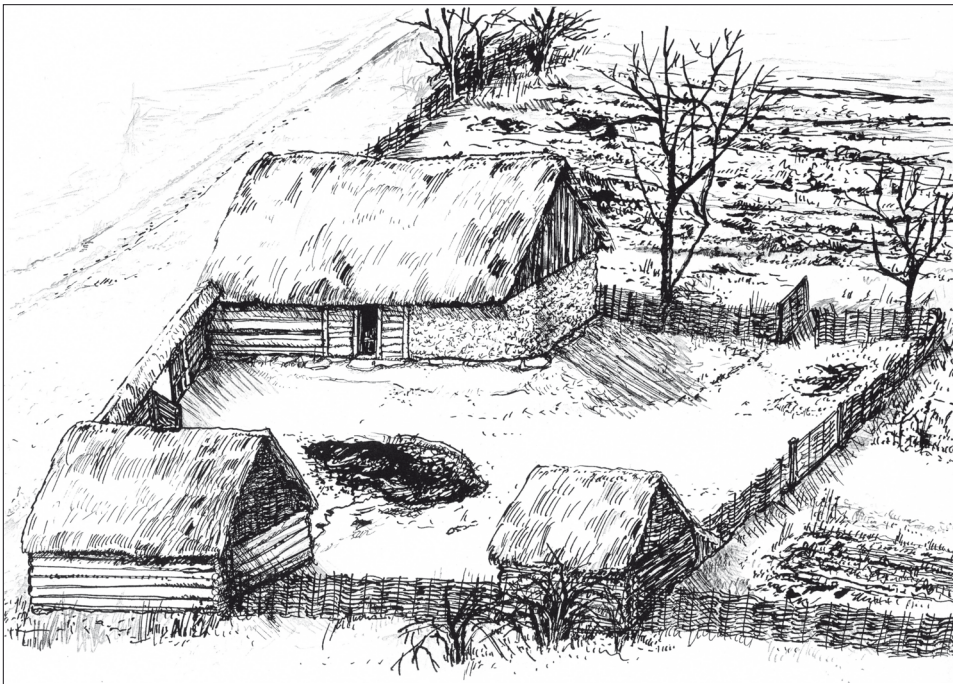


Figure 10 Example of a model reconstruction of farmstead no. 5 in the deserted medieval village of Kří (cf. Fig. 9). (Illustration by D. Vodáková)

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