TOBIAS L. KIENLIN / PAWEŁ VALDE-NOWAK / MARTA KORCZYŃSKA / KLAUS CAPPENBERG / JAKOB ОСІЕРКА (eds), Settlement, Communication and Exchange around the Western Carpathians. International workshop held at the Institute of Archaeology, Jagiellonian University, Kraków October 27–28, 2012. Archaeopress, Oxford 2014. Printed edition £ 47.00; e-publication £ 19.00. Printed ISBN 9781784910365; e-publication ISBN 9781784910372. vi + 403 pages, with numerous figures.

This volume is the publication of papers presented during the international workshop under the same title in Cracow in October 2012. It was inspired by the joint Polish-German archaeological project on the Neolithic and Bronze Age (further BA) settlement patterns in the middle part of the Dunajec River Valley. The study area lies outside the well-studied, fertile settlement centres of Lesser Poland, in the highland region which has only recently become a target of archaeological research. On the one hand it is an area of potential intensive contacts connecting different regions; on the other hand it could have been used in various ways for subsistence. This volume focuses on settlement and contacts, communication and exchange around the Western Carpathians mainly in the Neolithic and the BA as the main interest of the Dunajec Valley Project lies in these periods.

The volume consists of 24 papers of very diverse length and quality. They are ordered in main thematic sections, but within these sections the sequence seems sometimes chaotic. The book opens with a very short preface by the editors with a brief presentation of the background of the publication (Cracow workshop and the Dunajec Valley Project).

The opening section of papers is connected with the Neolithic. The first two are of a more general character. P. Bogucki presents a grand narrative of the European Prehistory in the Neolithic, based mainly on the "luminous areas", as an opposition to the always marginalised highlands. The author demonstrates, however, the internal diversity of the latter and the variety of their possible use in the Neolithic.

In the next contribution S. Kadrow highlights theoretical backgrounds to the discussion of Transcarpathian contacts in the Neolithic and the Early BA. According to him, inspired by Bourdieu, theory influences the interpretation, even if, as is especially often the case in the study area, its application was unreflected. Kadrow summarises the research history of the region and discusses selected case studies, which illustrate the thesis that not alone sources influence the results of studies.

The two following papers are connected with the Dunajec Valley Project and present more detailed studies. P. Valde-Nowak demonstrates how many of the models created for "old centres of the Early Neolithic" are not comprehensive. On the one hand the Linearbandkeramik (Linear Pottery culture, LBK) occupation on the Wiśnicz foothills with its large, stable settlement of long houses and common material culture is typical for the Early Neolithic. On the other hand, for example the location of sites at a summit and the fact that one village consisted of hamlets established at some such hilltops is unusual. Atypical are also pits, probably graves, located within houses. The settlement on the Wiśnicz foothills is connected with the Poprad-Dunajec route through the Carpathians. Along this route Early Neolithic polished tools indicating small camp sites have been discovered as well. They were located in lower parts of the valley than both the large LBK settlements and the Late Neolithic stray finds.

K. Cappenberg draws on Valde-Nowak's chapter and compares two campsites at the River Skawa with three permanent settlements from the Dunajec River Valley. Using site catchment and cluster analysis, he looks for environmental differences between them, which are visible especially in the elevation.

The three following papers of the Neolithic section are more or less exotic from the Carpathian perspective. H. Stäuble takes us to Saxony, where many large-scale rescue excavations of LBK sites have been conducted recently which provoke discussion on many terms and definitions applied in settlement and landscape archaeology. His main criticisms are the settlement and site terms themselves – their boundaries, overlappings and contemporaneity. He also discusses the questions of apparent settlement gaps and the overestimated importance of the closeness of sites to water sources.

Transcarpathian contacts are again the subject of the paper by A. Czekaj-Zastawny and A. Rauba-Bukowska on the technology of imported pottery of the Eastern Linear Pottery culture found on the Lesser Poland sites of the LBK key settlement areas near Cracow. They present this issue for one specific site, Brzezie 17, where 31 samples have been examined. Mineralogical-petrographic and physical-chemical analysis demonstrated that the pottery decorated in a foreign tradition had indeed been imported, probably from two separate regions in Slovakia.

The following contribution again by A. Czekaj-Zastawny (with J. Kabaciński and Th. Terberger) takes us much farther to the north, to the southern Baltic coast, where at the local Late Mesolithic hunter-gatherer site Dąbki 9 fragments of Bodrogkeresztúr culture (BC) vessels have been found. This initiated the more general analysis of BC influences to the north of the Carpathian Basin, divided into stylistic impacts, stylistic influences and imports. The bold conclusion that imports indicate a direct penetration of the BC people on the southern Baltic coast seems very controversial.

The last two articles from the Neolithic section are more general. M. Nowak addresses important changes that took place in Western Lesser Poland between 3500 and 2500 BC based on J. Kruk's settlement studies that concentrated mainly on the fertile loess regions. He compares them with ¹⁴C datings, archaeozoological and palynological data on subsistence and discusses different scenarios of social and economic changes.

The same period is taken up by A. Pelisiak, who focuses on Podkarpackie Voivodeship in a more detailed case study. He correlates survey data with palynology as an indication of plant cultivation with herding or herding without traces of cultivation. This enables him to distinguish different stages of exploitation for various environments. He discusses different trajectories and scenarios of development.

The following papers concern later periods of prehistory, mainly the BA. The first seven of them are connected with the Dunajec River Project. The contribution by T. Kienlin, M. Korczyńska and K. Cappenberg is of a quite general character. Their GIS-based analysis of the agricultural potential of BA sites in the middle Dunajec Valley demonstrates variability in subsistence strategies and at the same time generates a criticism of the common BA narrative dominated by narrowly interpreted strongholds. They favour different possible strategies against one general model for the BA societies.

The following chapters present more detailed case studies. J. Ociepka compares the results of geomagnetic prospection and excavations at the site Janowice 61. It is a first step in the more detailed investigation of factors influencing the visibility of features in the magnetic data. For 37 pits the author analysed their depth, volume and the colour of their infill and examined their impact on the magnetic results.

M. Lityńska-Zając, M. Moskal-del Hoyo and K. Cywa present the results of the analysis of botanical macro-remains from four sites located on the Carpathian Foothills: two dated to the LBK and two to the Lusatian Culture. These are the first studies of this kind for both cultures in

this region; they clearly demonstrate the use of a large variety of different plant categories in prehistoric times, supplying interesting information on the subsistence strategies and the local environment. For both periods the obtained data were consistent with data from other regions of the cultures in question.

M. Wasilewski summarises macroscopic petrographic analysis of stone items from Janowice site 61. Altogether 1459 pieces have been studied, all of local raw materials. A quite obvious correlation between the kind of rock and tool types could be observed. Most of the analysed items were eco- and not artefacts and the paper includes also practical hints for field archaeologists as to what kind of stone items to collect during the fieldwork. What is perplexing is the lack of any information concerning the chronology of the site, and thus the analysed stone items as well as their context.

The following contribution by M. Korczyńska is an excellent example of a meticulous analysis of the pottery from two apparent settlement pits unearthed in a Lusatian Culture cemetery at Janowice site 44. Pottery dated both to the Lusatian Culture and the Middle Ages has been found there; the first one underwent detailed analysis of its distribution within the pit, erosion degree, size of pieces, vessel types and ornaments' functional diversification using various methods. The observed homogeneity of vessel types and uniformity of technology within them, indicating the funerary character of pottery, led to the surprising interpretation of feature 1 B as a tree windthrow hollow within a graveyard, and feature 1 A as a pit dug in the Middle Ages.

A. Szczepanek presents preliminary results of anthropological analysis of human bones from 17 Lusatian Culture cremation graves from the same site (Janowice 44). The small number of graves did not allow far-reaching conclusions to be drawn, but rather general remarks on the potential of anthropological estimations of burnt bones are presented instead.

M. Wojenka follows up on the interpretations of Korczyńska for the site Janowice 44 and analyses the Middle Age pottery and metal finds from pit 1 A. Pottery fabric groups, rim types and especially ornaments indicate the homogeneity of the assemblage corresponding to a medieval village site dating from the second half of the $13^{\rm th}$ to the mid- $14^{\rm th}$ century.

The succeeding section consists of various, more or less detailed chapters. This part begins with a paper by M. Przybyła and M. Skoneczna on the famous site at Maszkowice. Despite a very complex stratigraphy, two main settlement phases could be distinguished: the Early and Middle BA and the Late BA / Iron Age. With the first phase is connected the spectacular find of a defence structure, a dry stone wall. The analysis of pottery and other finds, building structures and local settlement background revealed substantial differences between both phases. The settlement of the Early and Middle BA was established by a group from the other side of the Carpathians and existed as the only site in the entire area, keeping strong cultural connections with the south alive.

W. Blajer in the following brief chapter addresses the problem of Transcarpathian contact exemplified by bronze finds: hoards and loose items of imports (or local imitations) in the Upper Vistula River. Based on the typological similarities he analysed the intensity of contacts for individual phases and possible communication routes, demonstrating the potential of such studies for other find categories.

I. Miraś and Ł. Oleszczak discuss Transcarpathian influences on the large-scale excavated site Wierzchosławice 15. It is a settlement of the Trzciniec and Lusatian cultures, separated by a hiatus. In both phases very strong connections with the Carpathian zone, presented mainly on the morpho-typological features of the pottery, are visible.

A. Buszek summarises magnetic research at Wielka Wieś site 25 preceding rescue excavation on this and neighbouring site 26, both representing one large settlement. It was a good opportunity to compare the results and to analyse which excavated features were perceptible in the magnetic survey and which were not. Apart from hearths and furnaces also other kinds of objects were visible, for example practically destroyed huts, of which only the bottom parts were still preserved. On the other hand post holes were not perceptible.

The remaining three chapters refer to the settlement on the other side of the Carpathians. The paper of J. Bátora and P. Tóth deals with three Early BA fortified settlements from south-west Slovakia, each located in different natural conditions, providing the starting point for the study of settlement strategies of the whole south-western Slovakia in the Early BA. GIS-based comparison of different social and environmental factors of fortified and open settlements revealed not only social and economically based differences between settlement types but also chronological changes and different strategies between contemporary archaeological cultures.

The contribution by K. Fischl et al. presents a case study based on a survey programme of a tell-like multi-layered settlement of the Hatvan and Füzesabony Cultures at Tard-Tatárdomb in the foothills of the Bükk mountains in Hungary. Bearing in mind the non-destructive character of the research, conducted both on the micro- and macro-level, it enabled impressive results to be obtained not only concerning the spatial organisation and chronology of the site, but also subsistence strategies and social organisation in the BA in the study area.

In the last paper T. Kienlin and L. Marta discuss fortified settlements of the Gáva culture from the lowland area of south-western Romania, which has so far not been thoroughly studied. Two sites, Căuaș-Sighetiu and Andrid-Corlat, have been geographically surveyed. Although the interpretation of magnetic anomalies is very difficult in the case of such sites, it seems that two different models of the organisation of social space could be detected.

To sum up, this volume is an important contribution to the Transcarpathian archaeology of the Neolithic and the BA, although it cannot be regarded as a general overview of the subject - this was not the intention of the workshop. The weakness of the publication is the lack of a comprehensive introduction or a summary presenting more extensively the actual research problems. Some aspects can be found in separate contributions (Bogucki, Kadrow, Kienlin et al.), but they do not refer to other chapters in this volume, which absolutely deserve a discussion and comment. The great variability of contributions should be pointed out: some of them address very general issues (Bogucki, Kadrow, Nowak, Kienlin et al.) but there is also a series of detailed, substantial case studies. They not only demonstrate the variability of contemporary research subjects but also illustrate the array of possible methods. For example, it is striking that standard excavations are not as important as they used to be (although, as exemplified by Maszkowice, they still have the greatest unforeseen discovery potential). Apart from rescue excavations (Wierzchosławice, Wielka Wieś) we can read about many different applications of non-destructive research: both the field survey, well established in Poland, as well as the magnetic survey, so far much less applied. Many of these studies successfully combine different methods and levels of settlement studies: we have analysis of a single pit (Korczyńska) as well as whole macroregions (Pelisiak). Thus, they provide a significant methodical contribution to settlement studies in prehistory, far beyond the regional, Transcarpathian issues. This aspect is explicitly emphasised by some authors (e. g. Ociepka and Buszek) and here lies the real strength of the publication. In contrast, the innovative input for other main subjects of this volume, i. e. contact and communication, remains limited. Traditional analysis based on typology absolutely prevails; there are only single exceptions of other approaches (e. g. Czekaj-Zastawny and Rauba-Bukowska).

At the end, I would like to make one critical remark concerning the figures. They are not only published in black and white but also in very poor quality, which regrettably has a negative impact on the reception of this valuable volume.

PL-80-851 Gdańsk ul. Bielańska 5 E-Mail: joanna.pyzel@univ.gda.pl Joanna Pyzel Instytut Archeologii i Etnologii Uniwersytet Gdański

ERICH PUCHER / FRITZ ECKART BARTH / ROBERT SEEMANN (†) / FRANZ BRANDSTÄTTER, Bronzezeitliche Fleischverarbeitung im Salzbergtal bei Hallstatt. Mitteilungen der Prähistorischen Kommission, volume 80. Österreichische Akademie der Wissenschaften, Wien 2013. € 62.00. ISBN 978-3-7001-7261-1. 155 pages with 33 figures, 22 tables and 27 plates.

The Late Bronze Age finds presented in this volume illustrate prehistoric meat processing and preservation. They are related to salt mining in Hallstatt – a lakeside village in the Salzkammergut (Austria) – the eponymous site of the Hallstatt culture spanning the Late Bronze and Early Iron Ages in Central Europe. Its renowned salt mines had been regularly exploited from time to time since the Neolithic.

A curious set of findings from the Salzberg may be indicative of specialised meat processing. In this volume the treatment of pork was tested using various lines of evidence. In addition to the Introduction and Summary, the results are presented in four complementary studies. The authors discuss Late Bronze Age animal bones from the 1939 and 1993/1994 excavations, timber structures recovered at the site during the 19th century and the sulphurous substance recently identified on copper and bronze objects from the site.

The volume begins with a high-resolution analysis of animal remains by Erich Pucher, who follows the best tradition of Central European archaeozoology. Archaeology as a "science" has long suffered from the impossibility of reproducing sites that are inevitably destroyed during the course of excavations. Minute descriptive studies of this type are the possibly closest solution to direct, first hand observation. In this chapter every detail is provided to support various aspects of the argument that meat processing must have taken place at the site. Valuable tabulated bone measurements (rarely published in print nowadays) are appended to the study to benefit specialists working with similar problems.

The composition of animal bone material brought to light at the Salzberg markedly differs from bone refuse from contemporaneous Bronze and Iron Age rural settlements characterised by a more agricultural orientation. Several methods of quantification, both direct (number of identifiable specimens, NISP; bone weight) and derived (minimum number of individuals, MNI) point to the unambiguous dominance of pig remains at the site, exceeding 60 % of the ten thousand identifiable fragments. Although taphonomy is not explicitly discussed, the calculations show a commendable effort to estimate the rate of bone loss using the aforementioned three parameters in combination with each other. Under ordinary circumstances I have increasingly resented MNI calculations vastly overexploited in the reconstruction of putative herd management strategies. In this case, however, their more sophisticated use is justified in an effort to reconstruct "dead animal units", the commingled remains of carcasses designated for preservation.

The contribution of bones from bovids, large and small, is far less significant than the share of pig in the find material. Beef and mutton seem to have been of minor importance in comparison with pork at this site. The remains of horse, dog and large game are practically missing: they make