

## THE LATE NEOLITHIC FLINT EXCHANGE NETWORK IN THE GREAT HUNGARIAN PLAIN

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Hungarian Archaeology Vol. 10 (2021), Issue 3, pp. 53–58.

*The Late Neolithic assemblage of Pusztataskony–Ledence, dated to the 5th millennium BC, provides a unique opportunity for a comparison with already well-known tell settlements in the Great Hungarian Plain. Preliminary results revealed that this settlement, which was in a peripheral position compared to Polgár–Csőszhalom, had similarly intensive contacts with regions beyond the Carpathians. In my present research I aim to map and gain a better understanding of distribution patterns of knapped stone tools.*

**Key words:** Neolithic, Great Hungarian Plain, Polgár–Csőszhalom, Pusztataskony–Ledence, stone tools, long-distance contacts

### BACKGROUND TO THE RESEARCH

The late Neolithic period is generally thought to represent a final phase of a slow transformation in human history, during which previously egalitarian, segmented tribal societies began to show signs of centralisa-

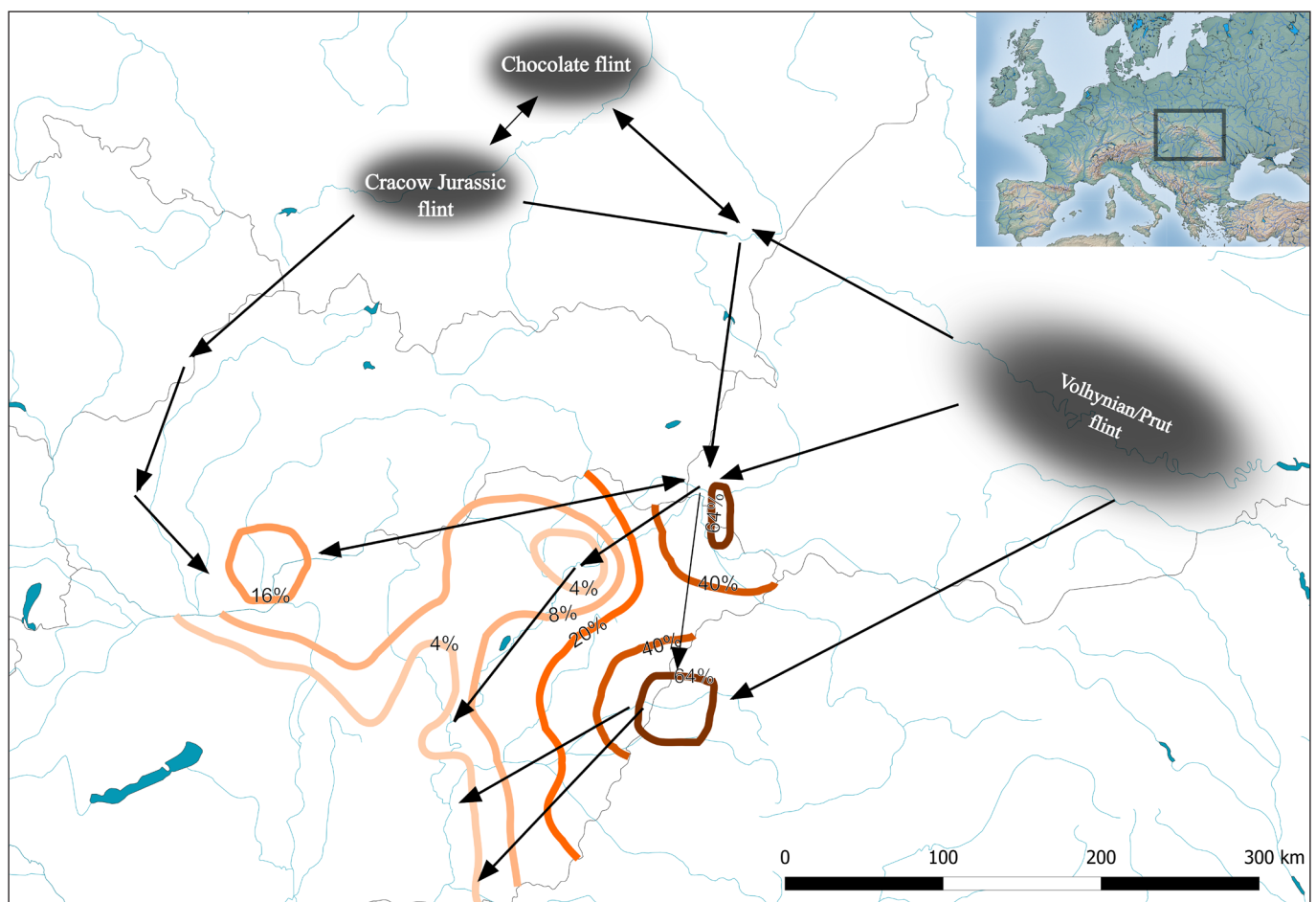


Fig. 1. Percentage occurrence of the so-called “northern flint” (Chocolate flint, Cracow Jurassic flint, Volhynian/Prut flint) in the Great Hungarian Plain in the Late Neolithic, and the direction of the assumed long-distance relationships (Design: Norbert Faragó, after T. BIRÓ 1998, Distribution map series IV/5 and KOVÁCS 2013, Fig.15)

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tion and hierarchy. In Hungarian prehistoric archaeology, this represents the emergence of tells in the first half of the 5th millennium BC, the development of increasingly complex settlement structures and settlement patterns, the establishment of more and more intricate and large-scale cultural customs and rituals, and the growing links between distant communities (TÁLAS 1987). An obvious evidence of the latter is the distribution of flint raw materials in the Great Hungarian Plain in 400-500 km distance. In the last decades, research into this period recorded this phenomenon on the basis of preliminary surveys conducted on a few dozen sites of outstanding importance, and a schematic, large-scale map of the complex and diverse network of contacts was created (Fig. 1; T. BIRÓ 1998; KOVÁCS 2013). The next step was a detailed, in-depth analysis of a well-chosen and sufficiently complex site, which, among other questions, allowed us to investigate what a raw material of remote origins meant to the inhabitants of a settlement in their everyday lives and symbolic activities.

The special importance of the Polgár–Csőszhalom tell, apart from the fact that it is located farthest to the north and from the size of the excavated outer settlement (3.5 hectares), lies in the interrelationship between the finds and the site, reflecting a complex socio-cultural system, making it ideal for such an investigation (Fig. 2; ANDERS & RACZKY 2013; SEBŐK et al. 2013). The major achievement of my PhD thesis, defended in 2019, is the demonstration that the extremely rich assemblage of knapped lithics (about 18,000 pieces) from the site shows differentially wide spatial relationships (FARAGÓ 2020). In the domain of everyday life, raw

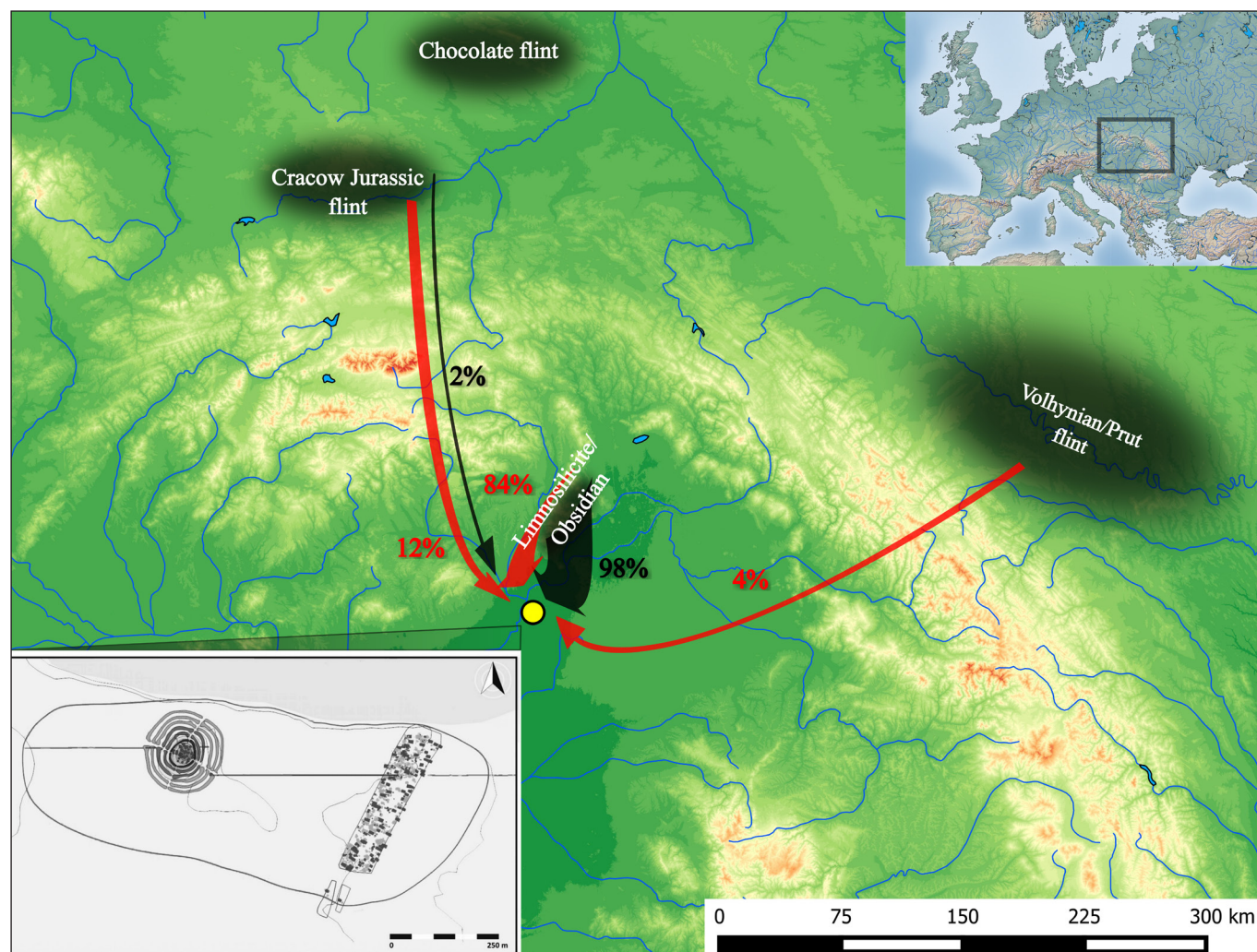


Fig. 2. Geographical location and spatial extent of Polgár–Csőszhalom, the nature of settlement structures and percentage distribution of “northern flint” within the artefacts. The tell, i.e. the settlement mound surrounded by the circular ditches, is shown on the left side of the excavation map of the site, the excavated part of the outer settlement on the right. Data related to the tell are shown with red arrows and percentages, while data related to the outer settlement are shown with black arrows and percentages (Design: Norbert Faragó, after RACZKY et al. 2015, Fig. 1)

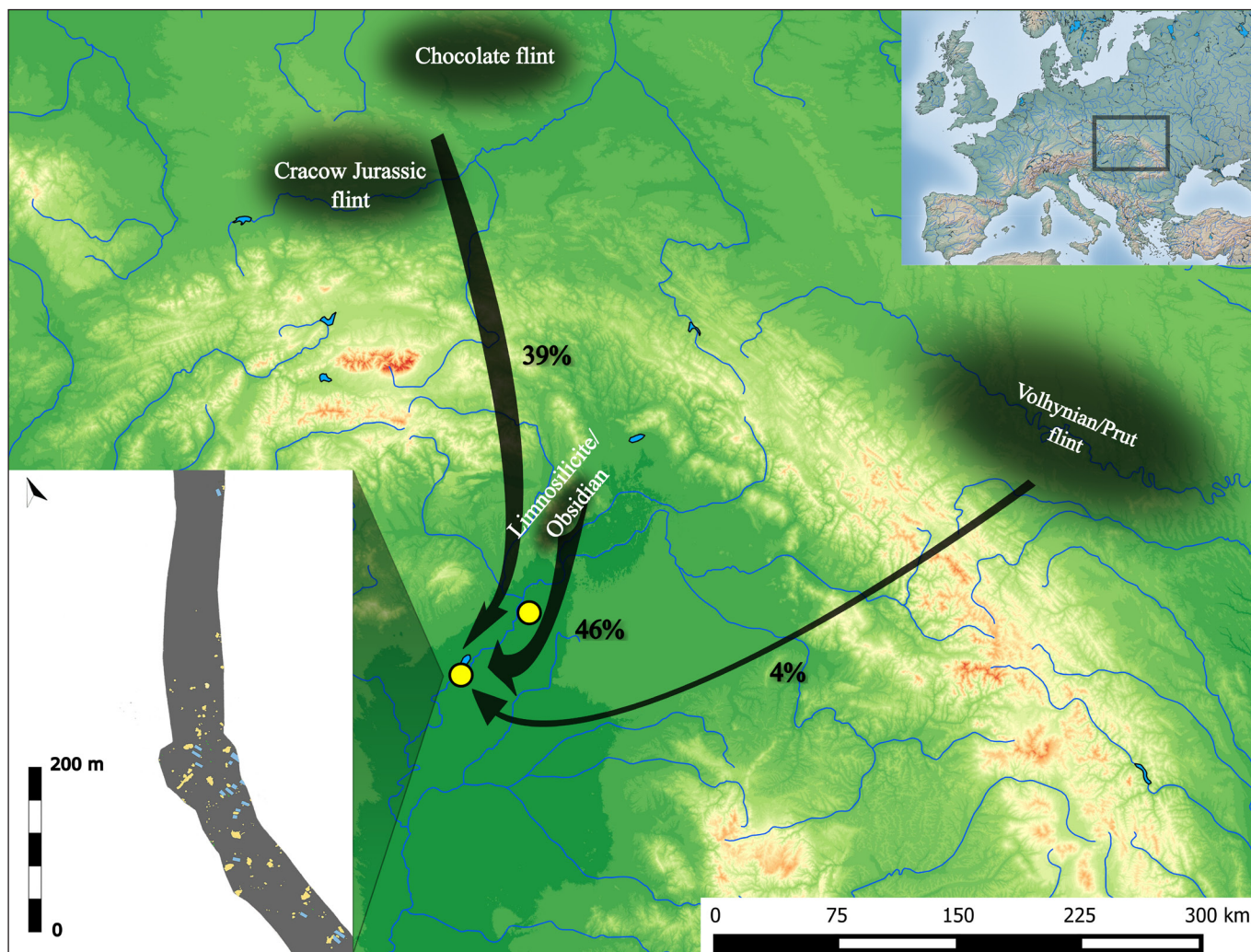


Fig. 3. Geographical location and spatial extent of Puszttataskony–Ledence, the nature of the settlement structures and the percentage distribution of “northern flint” within the flint artefacts (Design: Norbert Faragó, after SEBŐK & FARAGÓ 2018, Fig. 1)

materials from the Carpathian Basin and the associated tool-making tradition defined the assemblage in the outer settlement. However, the tell, as a symbol of the community as a whole, reflected the centuries-long, slow process by which exotic raw materials became indispensable accessories for prominent social events.

Until the late 2000s, no settlement of similar size was known from this period in the Great Hungarian Plain. Between 2009 and 2011, a 5.4-hectare part of a settlement of similar age was excavated at Puszttataskony–Ledence, which provides an exceptional opportunity for comparison (Fig. 3; SEBŐK 2012). In recent years, under the leadership of Katalin Sebők, significant progress has been made in evaluating the 230 settlement features, including the study of the stone tools. The preliminary results have led to the conclusion that the settlement without a tell, which was geographically and culturally marginal compared to Polgár–Csőszhalom, had similarly intensive contacts with the Lengyel culture of Transdanubia, the Tisza–Herpály–Csőszhalom complex in the north, and even with regions outside the Carpathians.

### PROBLEM STATEMENT, OBJECTIVES, AND METHODS

In my research for the Bolyai János Research Fellowship, I investigate three of Colin Renfrew’s commonly held hypotheses based on his “down-the-line” and redistribution models (Fig. 4) (BAHN & RENFREW 2016, 374–381):

- 1) an alien raw material or object type is present in progressively smaller proportions in archaeological assemblages the further we go from its core area of distribution;

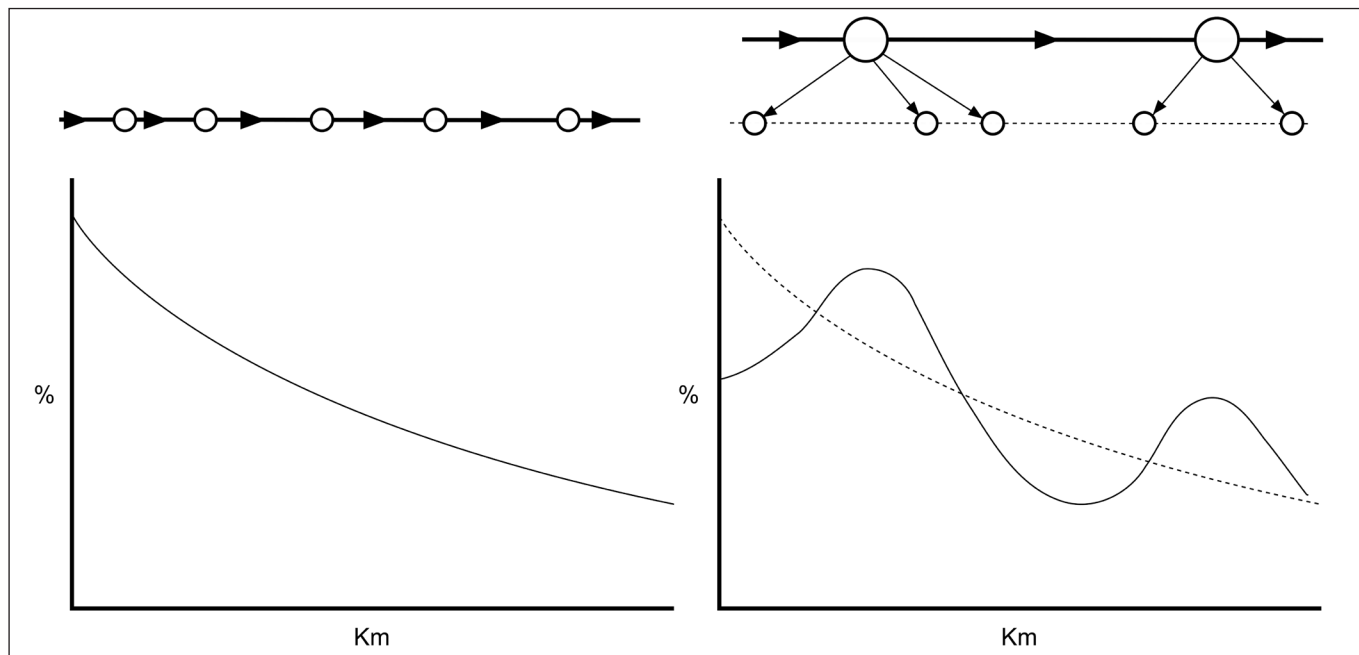


Fig. 4. Two theoretical models showing the percentage distribution of foreign raw materials in relation to the distance from the source at each site. On the left, the so-called “down the line” model, i.e. a linear distribution model is shown, in which each locality is considered to be of equal importance. In this case, the proportion of the relevant resource decreases correspondingly with increasing distance. On the right, the redistribution model can be seen, in which it is assumed that there are central priority locations where the raw material is locally accumulated and from there distributed to the surrounding municipalities. In this case, some smaller settlements have only limited contacts to each other. (Design: Norbert Faragó, after RENFREW & BAHN 2016, Fig. 9.28).

- 2) as one moves away from the core area of dispersal, the chances of the exotic object being locally made or manipulated become smaller, and it becomes more likely that it arrived at the site in a particular form and in a ready-made state;
- 3.) assuming a certain level of settlement hierarchy, exotic objects are more likely to be present in central locations than in peripheral settlements.

Compared to the finds of Polgár–Csőszhalom, the knapped stones of foreign origin found at Pusztataskony–Ledence seem to refute all the three above hypotheses. I would like to shed light on the relationship between the two sites through the following research questions.

To what extent can Pusztataskony–Ledence be interpreted as a more distant site from Lesser Poland or Western Ukraine than Polgár–Csőszhalom? Could a well-constructed supply route bypassing the Upper Tisza region bring the Central Tisza region culturally closer to the Transcarpathian region?

What technological and typological differences can be observed in the objects of foreign origin from the two sites? Does Pusztataskony–Ledence reflect more intensive stone working in terms of distant raw materials than Polgár–Csőszhalom?

In what sense does Polgár–Csőszhalom represent a central site in the Late Neolithic period and for which area was it a centre? Is it possible that the special characteristics of the site are due to its location in the intercultural border zone? Can Polgár–Csőszhalom and Pusztataskony–Ledence be interpreted as part of the same network in terms of raw material-related long-distance contacts?

The aim of my research is to gain a better understanding of Late Neolithic social relations through the analysis of knapped stone tools. These artefacts stand out from other groups of artefacts because they are not only presented as finished objects, but the marks on them also reveal the process of their production (INIZAN et al. 1999). By mapping their distribution according to their place in the production chain – raw material, prepared raw material, semi-finished product, finished product, by-product – it is possible to get an idea of the division of labour and bartering practices in the period, as well as the economic background and social organisation of the communities.

## EXPECTED RESULTS AND THEIR UTILISATION

The immediate result is a systematic evaluation of the stone material from two Late Neolithic settlements. This is invaluable in itself because no complete site processing of the period and the area, of any archaeological source material, has yet been carried out in this form. In recent decades, colleagues in Poland with a research focus on prehistoric flint mines have also been intensively engaged in mapping the relationships associated with the raw material in question. Therefore, the expected results will also make a significant contribution on an international level. Moreover, the research has the potential to shed new light on the general understanding of long-distance relationships. Neolithic research, through the analysis of long-distance trade in raw materials, pays particular attention to the secondary roles of stone materials and their possible incorporation in the everyday representation of social roles that were slowly becoming established in this period. The expected results are likely to reveal general social trends independent of the period; they may thus be useful for researchers of other periods as well.

## ACKNOWLEDGEMENTS

This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences.

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