1. Introduction

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2. Relationship between societies during the Middle and Late Neolithic in Transdanubia, Hungary

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This paper examines the relationship between Middle and Late Neolithic communities in Transdanubia, Hungary, in particular a relationship between Transdanubian Linear Pottery, Sopot and Malo Korenovo communities is assessed. Recent large-scale rescue excavations in Hungary made it possible to survey extensive areas that previously has not been possible. In southwest Hungary, within Zala county, large-scale excavations revealed four Middle and Late Neolithic settlements with particularly rich material culture. One of these settlements is Becsehely-Bükkaljai dűlő (5260-4800 BC, 5040-4610 BC). Becsehely was inhabited by the Linear Pottery culture followed by the Sopot culture. Becsehely also exhibits the most Malo Korenovo type pottery found in Hungary.

Through a case study of Becsehely it is aimed to assess how these communities interacted with each other. The nature and extent of their relationship is examined within the settlement of Becsehely and their relationship is also outlined within a larger geographical area. An overview of local Transdanubian Linear Pottery groups is provided together with the emergence of Malo Korenovo type pottery between the rivers of Drava and Sava and its relationship with Transdanubia. The characteristics of Sopot settlements within the examined region are also outlined. The nature and extent of the relationship between the examined communities is assessed through settlement structures and ceramic technological investigations.

3. The Late Neolithic site of Sopot, Vinkovci: Results of the site stratigraphy, C14 dates, and the preliminary analysis of archaeobotanical and osteological remains

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Kelly Reed – London, UK

Damir Mihelić – Zagreb, Croatia

First systematic excavations of eponymous Sopot site started in 1996. Excavations to date reveal over 35 meters of the site in cross section, starting from furthest southwest point where the ditch was discovered, along with canals and postholes. One phase of the settlement, dating to c.5000 B.C, revealed a series of five houses covering the ditch. On the inner
side of the ditch canal remains were found of a fortification wall. For 15 meters no house remains were found, just pits, postholes and canals travelling in the same direction as the ditch. Once the highest point of settlement was reached a series of nine houses were found in one living horizon. The distance between these nine houses was smaller and repairs occurred more frequently. Following the destruction layers of these houses a series of pits, postholes and canals were dug into the remains. The dating of these nine houses produced the youngest phase of the site, the IVth phase of Sopot culture.

This paper will present the results of a series of C14 dates from the site, the analysis of the animal bones and a preliminary report on the archaeobotanical remains. The analysis of the animal bones was conducted by Prof. Dr. Damir Mihelić, chairman of Department of anatomy on Veterinary faculty of Zagreb University. Kelly Reed from the Institute of Archaeology at University College London conducted the analysis on the plant remains.

4. Archaeological site Slavča-Nova Gradiška

Marija Mihaljević – Nova Gradiška, Croatia

Ongoing archaeological excavations of Slavča-Nova Gradiška began in 1997. The systematic excavations of Slavča-Nova Gradiška revealed the following living horizons: Sopot, Lasinja, Kostolac and Vučedol culture. This paper will present excavation results of the Sopot living horizon. Excavations so far determined the existence of several types of pit features (house pits, working pits and waste pits), with major amounts of archaeological material. The material has been preliminarily dated to the end of I. - B/II. (Brezovljani type of Sopot culture), III., and possibly phase IV. Along with the stratigraphy and settlement features the paper will present results of a series of C14 dates and the analysis of animal bone remains (bone remains were analysed by Kazimir Miculinić Department of paleontology and geology of kvartar in Croatian academy of arts and sciences (HAZU)).

5. Figurines in the transitional period from the Middle to the Late Neolithic in Transdanubia, Hungary

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Figurines form a characteristic part of the material culture of both the Middle and the Late Neolithic in Hungary. These periods in south-west Hungary are represented by the Sopot and Lengyel (first third of the 5th millennium BC) cultural groups. In recent years extensive excavations provided considerable material culture and also figurines of these cultural groups. These well documented excavations allow us to assess the precise context of figurines and compare their characteristics through the Middle and Late Neolithic. The Sopot and Lengyel cultural groups show cultural relationships with each other in terms of their material culture. The figurines of the two periods, however, show distinct features. In the Sopot culture
figurines are mainly seated without decoration or representation of cloths. Lengyel figurines, on the other hand, represent standing, always steatopygic females with painting and elaborate decoration that represent costumes, jewellery and hair style. In this paper the characteristics of Sopot and Lengyel figurines are assessed, that help us to better understand their meanings and the way they may have been used.

6. Changes Of Lake Balaton Using Environmental Historical Data

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Sándor Gulyás - University of Szeged, Department of Geology and Paleontology - Hungary
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This paper presents the findings of a complex environmental historical analysis implemented on samples taken from the Szigliget embayment of Lake Balaton. (Borehole Balatonederics I.). Based on complex sedimentological, paleoecological investigations, the following evolutionary history could have been drawn for the studied area: sediment accumulation initiated in the Szigliget Basin as early as 16790-16390 cal BP years starting with the deposition of coarse grained sequences of gravel, and pebbly coarse sands and yielding a continuous uninterrupted sequence from the Late Glacial to the Early Holocene. This is highly unique for this part of Lake Balaton. At the opening of the Late Glacial, following the birth of the neotectonic basin around 16,000 BP years, a vegetation characteristic of the taiga tundra interface appeared in the area as a result of a cold-wave, whose climatic conditions were preserved locally in the basin. During the second half of the Late Glacial, a marshland of brown mosses developed in the basin mingled with mixed taiga arboreal elements and pines. Both vegetation types were characterized by cold-loving and cold-resistant mollusk faunas. The lowest water levels for the lake were found at 14000 cal BP (Bølling interstadial), with the highest levels recorded at 12000 cal BP (Dryas III. chronozone) during the Late Glacial. The warmer interstadials enjoying more precipitation were all characterized by a low stand.

The presence of mollusks preferring moving water conditions at the Pleistocene/Holocene boundary indicate some changes in the energy conditions, either as a result of the development of a wave zone, or the discharge of a larger creek to the area of the basin. This also poses some taphonomic problems in the interpretation of plant materials for this interval. Several cyclical water level fluctuations could have been interpreted for the Holocene as well. High stands were characterized by Chara fields dwelling at the basin’s bottom, while low stands were generally marked by a reed vegetation. Several high and lowstands were recorded for the studied period of the Holocene. However, the younger Holocene deposits are
completely missing from the sequence. The morphological conditions of the
discharge area, reflected in such components as the span of the permafrost,
plus the vegetation cover, and the rate of evaporation must have been the
most important components influencing water level fluctuations in the basin
in contrast to the annual amount of rainfall. The lowest water levels during
the Holocene were interpreted for the opening of the period (10400 cal BP
years), and for the second half of the Atlantic (7000 cal BP). The highest
water levels must have emerged only after 5100 cal BP in the basin.
(Subboreal). The interpreted fluctuation of the water level for Lake Balaton
were congruent with those characteristic of the lakes of the Balkans for the
Late Glacial and the Early Holocene. Conversely, it followed a pathway
somewhat similar to the lakes of Northern Europe from the Middle Holocene
onwards, with one exception. The Holocene history of Lake Balaton is
characterized by the development of several low stands, which must be
attributed to the emergence of a Continental (Boreal) and later on a
Submediterranean (Atlantic) climatic influence in the area. Changes
observed in the pollen material are suitable for the characterization of the
vegetation changes for a larger area only. However, the findings were
comparable with those observed in the Slovenian and Western European
profiles of similar age.

7. Bátaszék – Settlement and graves of the Lengyel Culture at Alsónyék
   Anett Osztás – University of Szeged, Department of Geology and
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   Alsónyék is located about 100 kilometres south-east of Lake Balaton, in
   County Tolna. The rescue excavation was necessary because of the
   construction of the M6 motorway (our exploration area is 38000 m² at
   present, and the survey is still going on). Since last May some graves and a
   large settlement of late neolithic Lengyel Culture came to light. The
   settlement lies at the fringes of a hilly landscape, on a plain, close to the
   Danube.

   The Lengyel Culture is represented by a lot of large-sized long houses
   with posthole structures, with big refuse pits connected to them. On the
   settlement we have found 350 contracted burials, which came to light in
   several groups. The structure of settlement features reveal a high-levelled
   social organization. The measure of the site and the quantity of artifacts
   (varied bone and stone tools, painted pottery, animal bones, cult objects) as
   well as traces of long-distance trade refer to a continuous settled lifestyle
   of a fairly large population for a long time in this region. Beside this new
   phenomenon the other unique discovery are the graves with posthole
   structures.

   Because of the ongoing research work we cannot define the exact
   chronological situation of this site, but we can date it at the onset of the
   Lengyel II phase.

   Marcel Burić – University of Zagreb, Croatia
The Gradac site is located on the edge of the western slopes of the Fruška gora mountain, at the eastern border of Croatia, some 4.5 kms south of the river Danube.

After two test excavations that took place in the last century (1938/39. and 1964.), multilayer Neolithic settlement in Bapska will be object of a new, long-period archaeological project. Due to intense agricultural works on the top of the site and already partly destroyed upper cultural layers, the site will be excavated in segments by 400 m² trenches.

In 2006. Department of archaeology, University of Zagreb performed basic preparations for a large scale field work. This paper will present the methods that are and will be included in the project, plan of archaeological works, “post production” (presentations, in situ reconstructions etc.), present interpretation of the layers, (from old excavations) and maybe the most important, to invite all interested parties to join in.

9. Some aspects of the Late Neolithic – Early Copper Age on Transdanubia, north of Lake Balaton

Judit Regenye – Laczkó Dezső Museum, Veszprém, Hungary

In Transdanubia, the Lengyel culture represents the late Neolithic and the Early Copper Age, that is the period from 4900 to 4200 BC. The date 4500 BC marks a definite boundary within this period. The late Lengyel period after this boundary is significantly different from the early and the classical Lengyel phases. The Lengyel culture offers an excellent opportunity to the observation of the transition from the late Neolithic to the early Copper Age on the research territory north of the Balaton owing to the fact that the changes in the material culture are apparent due to the site concentration found in the region of the Tűzköves hill at Szentgál.

The late Lengyel period, similarly to any transitional period, shows remarkable characteristics of both continuity and change. Dramatic changes took place in the eastern part of the Carpathian Basin and the evolving Copper Age was sharply different from the Neolithic: material culture became uniform, the settlement pattern changed, the number of sites grew, the commercial contacts and the burial rites changed, while cultural and ideological continuity could also be observed. The situation was contrary in Transdanubia: continuity was more conspicuous, while the traces of social changes could be discovered in the background. The listing of the main characteristics of the late Lengyel period helps us to better understand the road that led to the evolution of Copper Age. The main characteristics of the late Lengyel period are as follows: expansive feature, increasing intensity of stone yielding, permanent contact system, standardization of the ceramics, changes in the material culture, changes in the rite, permanence of the structured settlement pattern, survival of the Neolithic lifestyle.

We can divide the listed characteristics in two groups. One group contains the traits that reflect Neolithic features (the unchanged settlement structure and Neolithic lifestyle, contact system), while the other group contains general features that were also valid elsewhere in the early Copper Age (the expansion of the culture, the uniformity of the material culture, the rarity of ceramic ornamentation, the lack of idols). This dichotomy tells us that the processes that led to the appearance of the Copper Age culture in
Transdanubia in the middle Copper Age were present and gradually became dominant in the background of the stable social structure reflected in the stable settlement pattern that indicated the survival of the Neolithic lifestyle.

10. Neolithic – Eneolithic Transition in the northern part of Croatia

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Ana Solter – Zagreb, Croatia

The Late Neolithic and Early Eneolithic periods in the northern Croatia were marked by the Sopot and Lasinja Cultures. The aim of this paper is to use recently obtained radiocarbon dates from recent field research to shed some light on the development and the time span of those two cultures in northern Croatia.