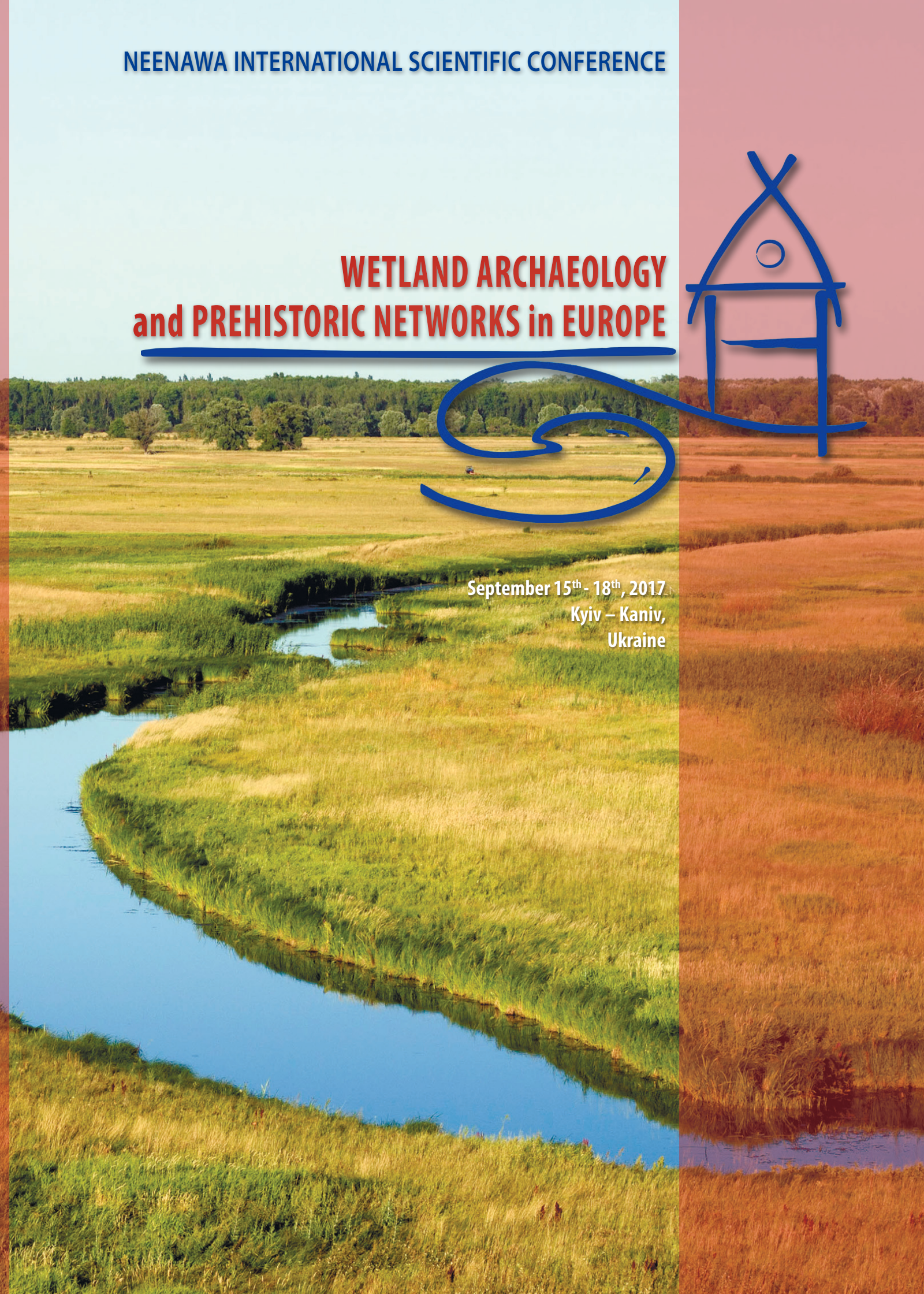
NEENAWA INTERNATIONAL SCIENTIFIC CONFERENCE

WETLAND ARCHAEOLOGY and PREHISTORIC NETWORKS in EUROPE



September 15th - 18th, 2017
Kyiv – Kaniv,
Ukraine

Acknowledgements:

The organizers of the International Scientific Conference „Wetland Archaeology and Prehistoric Networks in Europe“ would like to thank the Swiss National Science Foundation (SNSF), Taras Shevchenko National University of Kyiv, the Kaniv Nature Preserve, the Kyiv Regional Archaeological Museum in Trypillya, and the National Historical and Ethnographic Preserve “Pereyaslav” for their kind help and support.

We want to express our gratitude to our colleagues – the NEENAWA team coordinators: Albert Hafner, (University of Bern), Andrey Mazurkevich and Ekaterina Dolbunova (State Hermitage Museum), Valentina Todoroska (NU. Museum “d-r Nikola Nezlobinski) and Goce Naumov (Centre for Prehistoric Research) for their continued assistance and support, their enthusiasm and dedication that makes the NEENAWA Project successful.

FNSNF
Fonds national suisse
Schweizerischer Nationalfonds
Fondo nazionale svizzero
Swiss National Science Foundation

This INTERNATIONAL SCIENTIFIC CONFERENCE is part of the Institutional Partnership Project (SCOPES) “Network in Eastern European Neolithic and Wetland Archaeology for the improvement of field techniques and dating methods (NEENAWA)” funded by the Swiss National Science Foundation (SNSF).

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КИЇВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ ІМЕНІ ТАРАСА ШЕВЧЕНКА
ШВЕЙЦАРСЬКИЙ НАУКОВИЙ ФОНД

АРХЕОЛОГІЯ РІЧОК ТА ОЗЕР і ПЕРВІСНІ СПІЛЬНОТИ ЄВРОПИ

МІЖНАРОДНА НАУКОВА КОНФЕРЕНЦІЯ НЕЕНАВА

15-18 вересня 2017 р.
Київ – Канів
Україна

VITA ANTIQUA
БІБЛІОТЕКА

TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV
SWISS NATIONAL SCIENCE FOUNDATION

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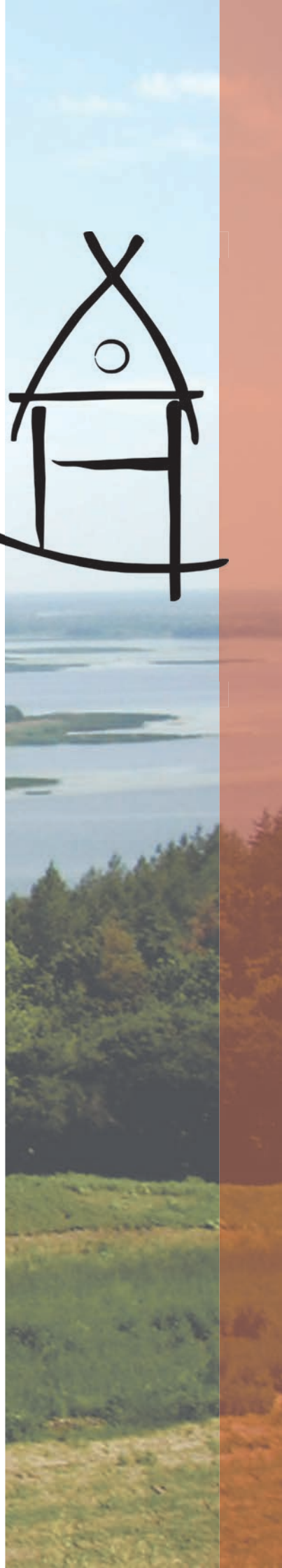

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Editors: ***Y. Morozova, P. Shydlovskyi***

Photos: ***P. Borovets, I. Radomskyi, M. Andriioyvvych, Y. Morozova, L. Samoilenko, Y. Pichkur***
English translations: ***Y. Morozova, P. Shydlovskyi, J. Albertson***
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Conference logo: ***P. Shydlovskyi***

Cover Photo "The Floodplain of Desna". Author ***K. Motsia***

УДК [902.034.4:903'1](4)"634/636"
Археологія річок та озер і первісні спільноти Європи / Міжнародна наукова конференція НЕЕНАВА, 15-18 вересня 2017 року / ред. Я. Морозова, П. Шидловський. — Київ – Канів, 2017. – 78 с. – Іл.

UDC [902.034.4:903'1](4)"634/636"
Wetland Archaeology and Prehistoric Networks in Europe / NEENAWA International Scientific Conference, September 15th-18th, 2017 / eds. Y. Morozova, P. Shydlovskyi. — Kyiv – Kaniv, 2017. – 78 p. – Ill.

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CONTENTS:

PROGRAM

Scope of the Conference:

The International Scientific Conference „Wetland Archaeology and Prehistoric Networks in Europe“ is the final event of the Institutional Partnership Project (SCOPES) “Network in Eastern European Neolithic and Wetland Archaeology for the improvement of field techniques and dating methods (NEENAWA)” funded by the Swiss National Science Foundation (SNSF). The conference brings together researchers working in Holocene European prehistoric archaeology. The discussed topics chronologically cover the period from the Mesolithic up to the Bronze Age.

Conference Venues:

On the 15th of September the NEENAWA Conference will take place at Taras Shevchenko National University of Kyiv, 60, Volodymyrska str., conference room 349.

From the 16th to 18th of September the NEENAWA Conference will take place at the Kaniv Nature Preserve, in the University Campus.

On the 19th of September, 2017 (Tuesday morning) the bus transfer from the Kaniv Nature Preserve to “Boryspil” Airport and Kyiv will be organized.

Web site of the conference: www.neenawa.kiev.ua

Program cover photo: ‘The Desna River Flood Plain’. Photo courtesy of P. Borovets

This page photo: ‘Clay figurine of a woman from the Troyaniv settlement’. Archaeological Museum IA NASU, Kyiv. Photo courtesy of Y. Pichkur

15 September, 2017 (Friday) – Plenary session

VENUE: KYIV, Taras Shevchenko National University of Kyiv
Address: 60, Volodymyrska str., Red Building, room 349

08.00 – 09.00 **Registration and coffee reception**

Opening speeches. Moderator: Sergii Ryzhov

09.00 – 09.15 Welcoming address from the administration of Taras Shevchenko National University of Kyiv

09.15 – 09.30 *Prof. Ivan Patryliak*
Dean of Faculty of History, Taras Shevchenko National University of Kyiv

09.30 – 09.45 Welcome words from the NEENAWA team

09.45 – 10.00 *Dr. Pavlo Shydlovskyi*
Associate Professor, Department of Archaeology and Museum Studies, Taras Shevchenko National University of Kyiv

10.00 – 10.30 **Coffee break**

Keynote presentations. Moderator: Yana Morozova

10.30 – 11.00 *Prof. Albert Hafner,* Bern, Switzerland
Archaeology in Switzerland: Research from Under Water to High-Altitude Mountains

11.00 – 11.30 *Prof. Marzena Szmyt,* Poznań, Poland
Between the Seas: Baltic – Pontic Contact Space in the 3rd Millennium BC

11.30 – 12.00 *Prof. Leonid Zalizniak*, Kyiv, Ukraine
The Process of Neolithisation of Right-Bank Ukraine

12.00 – 12.30 **Coffee break**

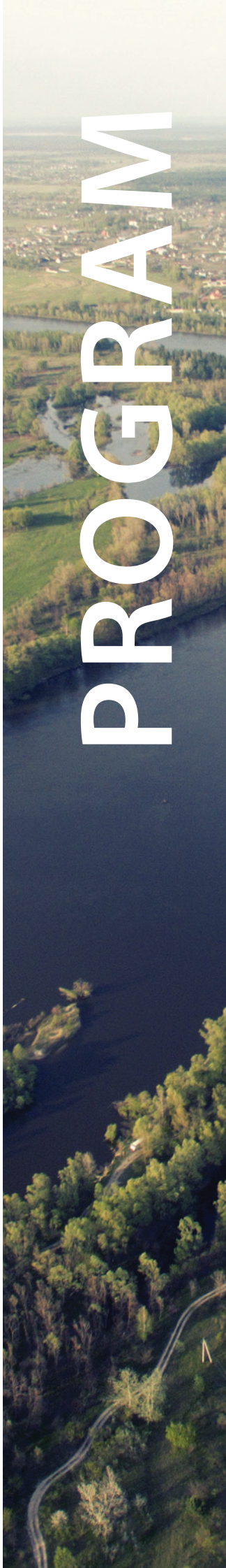
12.30 – 13.00 *Robert Hofmann*, Kiel, Germany
Liudmyla Shatilo, Kiel, Germany
Trypillya – Strategy and Results of an European-Ukrainian Project

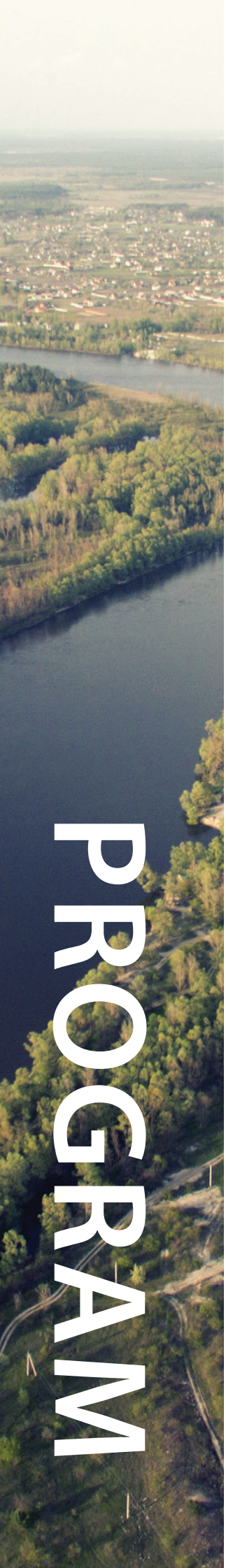
13.00 – 13.30 *Mykhailo Videiko*, Kyiv, Ukraine
Nataliia Burdo, Kyiv, Ukraine
Life on the Eastern Borders of Old Europe

13.30 – 15.00 **Lunch break**

15.00 – 18.00 Excursion in Kyiv: The Museum of Historical Treasures of Ukraine. The National Kyiv-Pechersk Historical and Cultural Preserve

19.30 **Welcome reception**





PROGRAM

16 September, 2017 (Saturday)

08.30 – 14.00	Kyiv – Kaniv trip by bus
08.30	Meeting in front of Taras Shevchenko National University of Kyiv Address: 60, Volodymyrska str., Red Building
08.30 – 10.00	Kyiv – Trypillya
10.00 – 11.00	Visit to Kyiv Regional Archaeological Museum
11.00 – 12.00	**Snack break in a local café**
12.00 – 14.00	Trypillya – Kaniv
14.00 – 15.00	Arrival to the Kaniv Nature Reserve. Check in
15.00 – 16.00	**Late Lunch break**
	Venue: KANIV Nature Reserve
	Moderator: Marta Andriiyovyvh
16.00 – 16.45	*Andrey Mazurkevich*, St. Petersburg, Russia *Ekaterina Dolbunova*, St. Petersburg, Russia **Open Lecture: Lacustrine Sites in North-Western Russia in the 7th-3rd Mill. BC**
16.45 – 17.15	*Prof. Sławomir Kadrow*, Kraków, Poland **Neolithic Settlement Zones in Western Part of Little Poland: a Case of Targowisko**
17.15 – 17.45	*Maxim Charniauski*, Minsk, Belorus **The Peat-bog Settlement of the Middle Neolithic – Middle Bronze Age Asavec 2. The Current State of Research and the Prospects of Further Study**
17.45 – 18.15	*Valentina Todoroska*, Struga, Macedonia *Zlata Blazeska*, Skopje, Macedonia **Prehistoric Tool Kit for Surviving**
18.15 – 18.45	*Christoforos Arampatzis*, Flórina, Greece **First Data About the Osseous Industries of the Prehistoric Lakeside Settlement of Anarghiri IXb, Western Macedonia, Greece**
18.45 – 20.00	**Dinner**
20.00	Presentation of the project: "Airborne Survey: Ancient Landscapes of the Central Ukraine – Kyiv and Cherkasy Regions". Photo Exhibition
20.30	**Posters Session**

17 September, 2017 (Sunday)

Venue: KANIV Nature Reserve

08.00 – 09.00 **Breakfast**

09.00 – 9.30 *Caroline Heitz*, Bern, Switzerland
Mobilities, Entanglements, Transformations. Pottery Practices in Neolithic Wetland Sites of the Swiss Plateau

09.30 – 10.00 *Dmytro Gaskevych*, Kyiv, Ukraine
Pottery with Admixture of Graphite and Exchange Networks in Neolithic of Ukraine: Problem Statement

10.00 – 10.30 **Coffee break**

10.30 – 13.00 **Workshop:**

Lacustrian Dendrochronology in the Context of Pile Dwelling Archaeology at Lake Biel, Switzerland. Focus: Measuring, Chronology – building, Dating. Lead by *Matthias Bolliger* and *John Francuz*

13.00 – 14.00 **Lunch break**

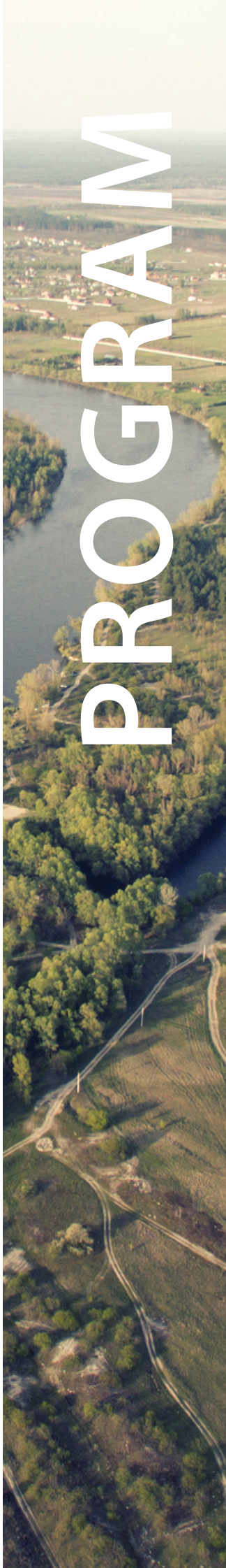
14.00 – 18.00 Trip to the National Historical and Ethnographic Preserve "Pereyaslav", Pereyaslav-Khmelnytskyi. Excursions. Museums: Archaeological Museum, Trypillya Museum and Open-air Ethnographic Museum

18.00 – 19.00 Trip back to Kaniv

19.00 – 20.00 **Dinner**

20.00 **Workshop:**

Underwater Exploration of Wetland and Peat-bog Sites. Perspectives and Problems. Lead by *Ekaterina Dolbunova, Johannes Reich* and *Sergii Zelenko*



18 September, 2017 (Monday)

VENUE: KANIV Nature Reserve

08.00 – 09.00 **Breakfast**

Presentations. Moderator: Mariia Tymoshenko

09.00 – 09.30 *Prof. Nikos Chausidis*, Skopje, Macedonia
"River People" of the Northern Black Sea and Macedonia

09.30 – 10.00 *Goce Naumov*, Skopje, Macedonia
With or Without You: the Formation of Identities in the Neolithic Balkans

10.00 – 10.30 *Valerii Manko*, Kyiv, Ukraine
Ukraine and Balkans Before the Neolithic: Culture Network or Convergent Development

10.30 – 11.00 *Dmytro Kiosak*, Odessa, Ukraine
Anzhelika Kolesnychenko, Odessa, Ukraine
Neolithic of Southern Bug: Culture or Economic Entity?

11.00 – 11.30 **Coffee break**

11.30 – 12.00 *Alina Veiber*, Kyiv, Ukraine
Overview of the Osteological Mammal Material from the Surska Culture in the Context of Its Development and Adaptation of Its Communities to the Natural Environment

12.00 – 12.30 *Yevgen Nohin*, Chernihiv, Ukraine
Preliminary Results of New Studies at the Neolithic Settlement Serikovy Sosny in the Seim River Basin

12.30 – 13.00 *Sergei Telizhenko*, Kyiv, Ukraine
Køkkenmødding of Eastern Ukraine

13.00 – 13.30 *Oleh Tuboltsev*, Zaporizhia, Ukraine
Obsidian Track

13.30 – 15.00 **Lunch break**

Presentations. Moderator: Ivan Radomskyi

15.00 – 15.30 *Aleksandr Diachenko*, Kyiv, Ukraine
Geographic Determinism and Trypillya Contact Networks, 4200 – 3000/2900 BCE

15.30 – 16.00 *Dmytro Chernovol*, Kyiv, Ukraine
Trypillian Outbuildings

16.00 – 16.30 *Yevhen Sliesarev*, Kyiv, Ukraine
Hunting Economy of Trypillian Tribes and Their Neighbours at the C I stage

16.30 – 17.00 **Coffee break**

17.00 – 17.30 *Marcis Kalniņš*, Riga, Latvia
Silurian Flint as Raw Material in the Neolithic (5400 – 1800 BC) in Present-day Latvia

17.30 – 18.00 *Yevhen Pichkur*, Kyiv, Ukraine
Mining and Transportation of Flintstone by Cucuteni-Trypillian Tribes

18.00 – 18.30 *Pavlo Shydlovskyi, Ivan Radomskyi, Dmytro Zhelaga,* Kyiv, Ukraine
Lithic assemblages of Early Agricultural Communities in Western Ukraine

18.30 – 19.00 Closing Remarks

19.00 – 21.00 **Closing Dinner**

FOREWORD

Foreword cover photo: 'Geomagnetic survey of Maydanets'ke site, Cherkasy Region'. Photo courtesy of State Historical and Cultural Reserve «Tripollian culture» at the village Lehedzyne.

This page photo: 'Fragment of a painted Trypillian vessel'. Photo courtesy of State Historical and Cultural Reserve «Tripollian culture» at the village Lehedzyne.

Dear Colleagues,

Welcome to Ukraine, welcome to Taras Shevchenko National University of Kyiv, to the international conference "Wetland Archaeology and Prehistoric Networks in Europe" that will be held in Kyiv and Kaniv from the 15th to the 18th of September 2017. This conference is the final event of the Institutional Partnership Programme (SCOPES) "Network in Eastern European Neolithic and Wetland Archaeology for the improvement of field techniques and dating methods (NEENAWA)", funded by the Swiss National Science Foundation (SNSF). 2017 is the last year of the NEENAWA Project and we are delighted to present some concluding remarks on the scope and achievements of our project:

Our University is one of the four partners in the NEENAWA Project's consortium and plays a significant role in fulfilling its goals and tasks, since the SCOPES programme aims at the development and modernization of institutional aspects of research and teaching institutions in Eastern Europe. All efforts and events of the project are directly linked to teaching activities and pursuing its educational objectives. University teachers and students have thus become the main beneficiaries of the project.

Transformations are taking place in Ukraine in all spheres of life, including science. We are settling down to a course of the innovation and development, increasing information streams and expanding areas of knowledge. All these challenges demand changes in approaches to Higher Education and training specialists-to-be, including researchers. Consequently, today as never before, this scientific and engineering progress and the rapid implementation of science into daily life demand from a young researcher not only good academic training but also practical skills.

The acquisition of knowledge, broadening of outlook and progression of creative thinking are achieved not only by means of generated curriculums and traditional instruction, but also by the active implementation of academic mobility for students and tutors throughout the educational process. For this foundation, a modern student must have the possibility not only take part in research activities in their home country, but also adopt experience and knowledge abroad, using instruments such as Institutional Partnership and Academic Mobility Programs. The NEENAWA Project is precisely this kind of instrument; it gave Ukrainian students opportunities to visit the University of Bern in Switzerland and to take part in scientific workshops and training that were organized in the Countries-Participants of the Project.

The participation of Ukrainian students in the training events organized through the SCOPES project, is targeted at learning new research methods in order to apply them in Ukraine, for their own research projects as well as to set up new professional contacts with their European colleagues. In May 2017 the faculty's PhD students and teachers went on a study trip to Switzerland. From the 24th to 27th of May 2017 an education seminar "Neolithic Archaeology in Eastern Europe" was organized at the Institute of Archaeological Sciences of the University of Bern. Students and teachers from Macedonia, Ukraine and Switzerland took part in the seminar. Its purpose was to familiarize and interest the students of the University of Bern in the history of the primitive societies of the Neolithic-Eneolithic period of Southeast Europe, which resulted in their reports. The photo-report about the events of the NEENAWA Project with the Ukrainian participants or held in Ukraine is presented below.

Broadly, our project "Network in Eastern European Neolithic and Wetland Archaeology for the improvement of field techniques and dating methods (NEENAWA)" aims at fulfilling the following tasks which meet the goals and objectives of our University, helping to shape a young European researcher-archaeologist and elicit her/his potential. These objectives are to increase mobility, international socialization and scientific cooperation for students and faculty members; to involve Ukrainian students in Neolithic-Bronze Age Archaeology and Underwater Archaeology research; to increase the role of practical skills for archaeology students; to improve existing curricula through the creation of the new module "Wetland Archaeology"; to update and improve the laboratory research facilities of the Department of Archaeology and Museum Studies; and to facilitate access for Ukrainian researchers and students to European scientific information – digital resources.

We wish that young scientists, using acquired skills and knowledge, will broaden their circle of professional contacts, put their creative ideas in to practice for developing a liberal society, and become the most valuable resource for positive changes in the contemporary world.

Changes that occur in the modern world certainly influence the world of scientific thinking. Conversely, the scientific community creates modern approaches to these changes, and attempts to comprehend from a scientific point of view those global processes that are happening on the planet at the moment. The most significant transformations that we are able to place on record are the integration processes which became possible as a result of the dynamic development of the techno – and info-spheres. The transformation of mankind into a single integrated system with universal and common properties is a consequence of this development.

The most pronounced integration processes arise in the fields of technology and science, because the rapid and productive exchange of innovative ideas allows the application of new approaches in various spheres of human life, and indeed is often the key to the quality of this life. Recently, there has been a qualitative leap in all human societies, connected with cardinal changes in the economic sphere, society, science and culture. Traditional hierarchical structures and elites are rapidly losing their monopoly on the means of production, information flow, and energy sources, while in the community, network connections are gaining more weight than administrative subordination. Modern society as an interaction of different-level networks becomes more characteristic in modern science. The concept of the network has become a brand of science, characterizing both the object of research and methodological approaches to the study of specific phenomena. In the modern world, when humanity, as never before feels the scale of global changes in the scientific and technological spheres, the search for examples of global transformations in mankind's past is of considerable interest.

Humankind is on the eve of significant changes both in the way of life-sustaining activity and in the ideological paradigm. Society naturally focuses its attention on similar transitional periods in History that mark a sharp break with previous traditions, are characterized by technological inventions and demonstrate discreteness in the historical continuity. That is why in contemporary anthropology and archaeology there is a significant revival in the studies of the initial stages of the anthroposociogenesis process, in the issues of the formation of the human mode of behaviour and the emergence of the

first civilizational structures in the anthroposphere. The study of these points of bifurcation, qualitative leaps in the development of nature and society is impossible without a system analysis of processes and phenomena, without the holistic and ecological approaches that characterises modern science.

The process of Neolithization that in some regions of the Oecumene took the character of a "Neolithic revolution" was one of such global processes that influenced the development of all mankind. The Neolithic era should be considered as a significant increase in the capacity to conduct various forms of societies' life-sustaining activity as a result of the liberation from natural determinism in behaviour after the fundamental changes in the natural environment at the end of the Pleistocene. If the formation of human society and culture took place in the conditions of the last Würm glaciation which stipulated strict dependence on the ways of husbandry of the environment, then a significant climate mitigation in the northern hemisphere, almost immediately led to development fanning out in all sectors of life. A vital point in the transformation of human culture, resulting in the formation of modern industrial relations and the active involvement of humanity in the transformational processes of the geosphere and biosphere of the planet is the transition to reproductive forms of economy. The "triggers" to the explosive changes in human life, however, were catastrophic events in the environment at the end of the last glacial period.

The Neolithic is an important archaeological period, belonging to the final stages of the Stone Age. It is a transitional epoch from the early and middle Stone Age – the Palaeolithic and Mesolithic – with an exclusively appropriating form of obtaining means of subsistence compared to the era of early metals. In this period reproduction forms of farming got their widespread distribution, crafts began to be segregated and structurally complex societies formed. The process of Neolithization is understood as the spreading of innovations in the economic, technological and cultural spheres, among which the domestication of plants and animals play a prominent role. This process is also characterized by early forms of farming and cattle breeding, the hereto linked transition to relative sedentism of prehistoric collectives, the emergence of stationary housing construction, various stone and flint processing techniques, and the spread of pottery. A specificity of life activity was reflected in complex world-view ideas and perceptions, which were materialized in vivid art objects and ornamentations.

At this time the southern regions of Eastern Europe experienced a strong influence from the Middle Eastern and Balkan centres of Neolithic culture. If in the Middle East and the Balkans abrupt changes in the natural conditions quickly caused a reorientation to reproductive economy and related technological inventions, then on the vast plains of Eastern Europe, the process of Neolithization had a wave-like diffusion of innovations in a particular sequence.

The complexity of this process is evidenced by the various concepts and ideas offered by the researchers. The study of the Eastern European Neolithic is impossible without the involvement of data on the territory of Ukraine, since Ukraine occupies a large part of the European continent. Due to a number of famous scientists of the twentieth century it became possible to discover and study Ukrainian Neolithic sites. M.O. Makarenko, M.Ya. Rudinsky, V.M. Danilenko and D.Ya. Telegin should be mentioned among many others who laid the groundwork for the modern periodization scheme of the develop-

ment of culture in the early Holocene and gave a volumetric analysis of the outstanding complexes of the Neolithic period in Eastern Europe.

The development of technological approaches in the analysis of material cultural remains, along with the experimental and traceology methods for the interpretation of artefacts and their functions was a significant contribution to the understanding of Neolithization process in Eastern Europe. The comprehensive application of absolute and relative dating methods became a great impulse to create cultural and chronological schemes of the development of the Neolithic within the territory of Ukraine. Radiocarbon dating is still the most important method among others, both for archaeology and for the application of related disciplines such as paleobotany and archeozoology. Application of the geomagnetic survey methods allowed to understand the patterns of settlement strictures belonged to ancient farmers. The possibility of access to information from neighbouring regions also has great value.

In recent years, a number of sites which belong to different agricultural communities of Neo-Chalcolithic time have been investigated in the south-western part of Ukraine and in Moldova. They all are located in the basins of the Bug, Dniester and Prut Rivers and demonstrate different variants of economic and cultural development in a particular region. Neolithic settlements include Sakarovka in Moldova, Yosypivka I (the Upper Dniester), Dobrianka I-III, Pugach and Gard (Pobuzhye), Romankiv (the Middle Dnieper), etc. Important conclusions were drawn from the studies of Trypillya settlements of Taliyanky, Maidanets'ke, Bernashivka I, Ozheve-Ostriv, etc. The peculiarity of studying these sites is the high methodological level of research, resulting in obtaining considerable series of various categories of material culture, including pottery, lithic, bone and antler products. It makes possible to conduct a comparative analysis of the flint assemblages from the mentioned and other sites and to trace similar and distinctive features in the processing technology for such important Stone Age material. Studying Neolithic sites using up-to-date techniques has largely shed light on the features of each specific cultural phenomenon and raised questions about the polivariant development of the Early Holocene communities, and about the necessity of taking into account environmental, economic, social, migration and ideological factors in the development of cultural complexes. Most of the modern research of Neo-Chalcolithic sites is the result of international cooperation between Ukrainian and European scientists.

Theodore Vovk (Volkov) (1847-1918), a Ukrainian scholar of anthropology and archaeology, deeply understood the importance of scientific integration. His work as an anthropologist and pre-historian linked the centres of Ukraine, the Balkans, Western Europe and Russia. Representing national archaeology in the academic societies in European countries, he established the school of paleoethnology on the territory of the former Russian Empire, initiating schools for the study of prehistory in St. Petersburg and Kiev. He understood the paleoethnological direction itself as a multidisciplinary approach to the study of the monuments of the past. This approach was characterized by the application of a number of natural and humanitarian disciplines in order to reproduce the ways of life of the earliest epochs.

The current state of Ukrainian archaeology should be described as an integration stage, which is characterized by the representation of the achievements of national science in the world on the one hand and the adaptation of world experience for a more

complete coverage of past phenomena on the other hand. In the context of the crisis of traditional scientific institutions and outdated approaches, modern research increasingly acquires a networked character, which manifests itself in the cooperation of specialists from different scientific fields and institutions when investigating a specific scientific problem. The consequence of these changes, which one can see in our country during the last several years, is a process of cultural integration of Ukraine into the European space, which is maintained by varied programs of scientific and cultural cooperation. For the modern Ukrainian humanitarian sphere, we have issues which are connected with the unification of methodology, modernization of approaches and the inclusion of the scientific achievements of our country into European scientific heritage.

Our Project "Network in Eastern European Neolithic and Wetland Archaeology for the Improvement of Field Methods and Dating Methods" (NEENAWA) of the SCOPES Institutional Partnership Program, funded by the Swiss Science Foundation, is the first step towards establishing ground for cooperation on the study of the Neolithic in Eastern Europe. The name of our conference "Wetland Archaeology and Prehistoric Networks in Europe" is symbolic within the framework of this project.

Due to the initiative of Department of Archaeology and Museum Studies and Centre for Underwater Archaeology of the Faculty of History and the Centre for Paleoethnological Research, the Scientific Committee of the conference was created in which scientists from Switzerland, Macedonia, Russia and Ukraine were included. Specialists from international university centres and scientific establishments (Switzerland, Macedonia, Greece, Poland, Russia, Latvia, Belarus, etc.) and representatives of the Institute of Archaeology of NAS of Ukraine, National University of Kyiv-Mohyla Academy, B. Hrinchenko University of Kyiv, Institute of Zoology of NAS of Ukraine, National Natural History Museum of NAS of Ukraine, universities of Odesa, Kharkiv, Chernihiv, etc. were invited to take part in the conference. The conference will highlight the results of archaeological investigations of national and foreign scientists, including the results of international cooperation based on archaeological localities within Ukraine.

The conference itself will be an exceptional opportunity to create a system of information and experience exchange, in research about European prehistoric sites, to introduce up-to-date methodologies of fixation and description of archaeological material and to promote Ukrainian archaeological heritage in the European system of research. An important value is the participation of Ukrainian students in this event that will help to develop their knowledge about current theoretical and practical European scientific research and promote their international mobility during their academic experience. In terms of public benefit, the conference will help to represent the Ukrainian cultural and natural heritage at a European level.

Pavlo Shydlovskyi and Yana Morozova

NEENAWA

Network in Eastern European Neolithic and wetland archaeology for the improvement of field techniques and dating methods

Neolithic and Bronze Age wetland sites around the Alps (so called pile-dwellings, Pfahlbauten or palafittes in German/French) are of outstanding universal value (UNESCO-world heritage since 2011). Typical sites are in lakes, rivers and bogs, dating between 5300 and 800 BC. Of common character is the perfect conservation of wood, textiles from plant fabrics and many other organic materials. Larger quantities of sub-fossilized as in the peri-Alpine sites offer the possibility of high-precision dating by dendrochronology. Research in these wetland sites started in the mid-19th century. Large scale rescue excavations since the 1970s and the evolution of underwater archaeology in the same period accumulated a thorough Swiss experience with these specific sites. Research in wetland sites is shared between cantonal institutions and universities and led to a worldwide unique accumulation of knowledge. Comparable sites exist outside of the Alpine area, but in much smaller quantities. Regions like Russia (small lakes in NW-Russia) and Macedonia (medium size lakes in the broader zone of Republic of Macedonia, Albania and Greece) have a high scientific potential; rivers in Ukraine are supposed to have the same type of sites.

This SCOPES Institutional partnership (IP), funded by Swiss National Science Foundation (SNF), was established in order to build up a scientific network in Neolithic and wetland archaeology and to transfer knowledge from Switzerland, as one of the worldwide leading countries in this field, to the participating Eastern European countries. The further aims of IP are to concentrate on an improvement of archaeological field techniques (mainly underwater archaeology / documentation under water/diving security) and dating methods, including dendrochronology. All Easten European sites have the potential to give new insights on the process of the Neolithisation of Europe. A major outcome would be to establish close ties between a gender and age mix consortium that is willing to develop further research projects. This international collaboration will help to develop methods of investigation for sites located under water and in peat bog, bring together different specialists and help to develop different research themes and teams in Eastern European countries.

Albert Hafner

At Rector's office in Kyiv: from left: prof. R.V. Terpylovskyi – Head of the Department of Archaeology and Museum Studies, Dr. P.S. Shydlovskyi – Associate Professor of the Department of Archaeology and Museum Studies, prof. I.K. Patryliak – Head of Faculty of History, prof. L.V. Hubersky – Rector of Taras Shevchenko University of Kyiv, prof. A. Hafner – Head of Department of Prehistoric Archaeology of the Institute of Archaeological Sciences, Bern University, Switzerland, prof. P.O. Bekh – Pro-Rector (International Relations) of Taras Shevchenko University of Kyiv

G. Naumov gives a lecture at Taras Shevchenko National University of Kyiv

I. Radomskyi gives a presentation at Bern University in Switzerland

P. Shydlovskyi gives a lecture at Museum of the City of Skopje in Macedonia

Ready for diving. Participants of the workshop at the Ohrid Lake in Macedonia

I'll give you a hand! Diving in the Ohrid Lake in Macedonia

In the Bern Historical Museum in Switzerland

In the Archaeological Library at Bern University in Switzerland

On the excursion in Ohird in Macedonia

P. Shydlovskyi gives a lecture at Bern University in Switzerland

Taras Shevchenko National University of Kyiv

Taras Shevchenko National University of Kyiv is today a classic university with a distinct research profile, and the leading contemporary academic and educational hub of Ukraine. On 21 April 1994, Kyiv University was granted the status of "National" by Leonid Kravchuk, the President of Ukraine by Decree № 176/94. On 29 July 2009 the Cabinet of Ministers of Ukraine with Regulation № 795 granted the University the status of being a self-governing and autonomous national research university, while providing increased funding for the future development of the university.

The high status of a classical research University is underpinned by the numerous academic achievements of its staff recognized with various high national and international prizes and awards.

There are 13 Faculties within the University: Geography, Economics, History, Cybernetics, Mathematics and Mechanics, Sociology, Information Technology, Radio Physics, Electronics and Computer Systems, Psychology, Physics, Philosophy, Chemistry, Law. There are 8 Institutes (the Military Academy, the High Technology Centre, the Institute of Journalism, the Institute of Geology, the Institute of International Relations, the Postgraduate Education Centre, the Institute of Linguistics, and the State Security Department) and 1 Training and Research Center (the Institute of Biology), 2 Colleges (Optical and Mechanical College, Geological Exploring College), Ukrainian Physical and Mathematical Lyceum. Kyiv University has a number of other facilities, including: a Ukrainian Studies Centre, a Archaeological, Geological and Zoological Museum, a Museum of the University History, an Interfaculty Museum of Linguistics, an Informatics Centre, an Astronomical Observatory, a publishing and reprographics unit called "Kyiv University", and the Maksymovych Academic Library.

The University awards Junior Specialist's, Bachelor's, Specialist's and Master's degrees, Higher Qualification Post-graduate and Doctoral degrees. More than 26 thousand students study at the University. Courses are provided by 193 Departments.

Today the University has bilateral partnership agreements with 214 foreign educational and scientific institutions from 57 countries. The University of a member of the European Higher Education Area.

Department of Archaeology and Museum Studies

The Department belongs to the Faculty of History of Taras Shevchenko National University of Kyiv. It is one of the oldest education institutions of the archaeological profile in Ukraine. The annually the Department enrols students in a BA, MA, and PhD programmes. As well as theoretical knowledge students obtain also practical skills during archaeological field schools on the basis of ongoing excavations.

The Department has strong professional contacts with the Institute of Archaeology of the National Academy of Sci-

ences of Ukraine, with leading universities and research centers in Ukraine and abroad. Conferences and other education and scientific events are organized on the basis of the Department. The Centre for Underwater Archaeology, NGO "Th. Vovk Center for Paleoetnological Research" and the Society of Archaeology and Anthropology are actively work at the Department bringing together researchers, lecturers, student and all who is enthusiastic about archaeology and anthropology.

Centre for Underwater Archaeology

The Centre for Underwater Archaeology is a research and educational unit of the Department of Archaeology and Museum Studies. The Centre focuses mainly on nautical archaeology throughout the Black Sea region and underwater archaeology in Ukraine in particular. These days its team conduct various underwater archaeological surveys in Ukrainian Rivers and in the Kyiv and Kaniv Reservoirs.

The main aim of the Centre is to involve students, amateurs, sport divers and members of the general public in maritime archaeological field excavations and surveys, in the preservation of underwater resources as well as educate them regarding this fascinating field. Students study theory, methods and the techniques of underwater archaeology, and acquire practical experience during summer excavations.

The Centre carries out learning and training programmes for first year MA students, as well as develops a master's curriculum, which is a part of the general master's course in archaeology at the Department. Expeditions are a very important part of the educational programme. Students of all years can take part in Centre's expeditions as volunteers. Later, while gaining some field experience and attending the theoretical portion of the programme, students can actively participate in underwater archaeological expeditions as archaeological assistants.

"Th. Vovk Center for Paleoethnological Research"

The NGO "Th. Vovk Center for Paleoethnological Research" is a non-governmental organization, founded in 2015. It groups young researchers: students, alumni and young scientists who have gathered together for solving scientific, education and heritage protection problems in the contemporary archaeological, anthropological, ethnological and other adjacent disciplines. Young researchers are engaged in interdisciplinary investigations of human collectives' activities and how they connected to the natural and cultural environment in the Past. The Centre is affiliated with the Department of Archaeology and Museum Studies of Taras Shevchenko National University of Kyiv.

The main tasks of the Centre's activity are archaeological research of prehistoric sites on the territory of Ukraine, popularization of the scientific results, preservation and pro-

tection of the cultural and natural heritage. Also the Centre strives to represent Ukrainian culture and nature, and to integrate Ukrainian humanitarian studies worldwide.

Its members actively participate in field research on archaeological sites and reconstruction of living activities of prehistory societies in their environmental context. The worldwide-known Mezhyrich site, an Upper-Paleolithic settlement of mammoth hunters is one of the most interesting sites which the members of the Centre have been investigating for a long period.

They also investigate archaeological sites of the Neolithic and Trypillya archaeological cultures. Such archaeological sites of the Neolithic - Bronze age of the territory of Eastern Europe are of great interest for scientists in the context of distribution of agriculture and new technologies in the early Holocene. Already amazing discoveries have been made in the Middle Dnieper and Dniester basins, and exploration goes on. Every year the Centre's specialists carry out investigations of prehistoric sites of the Dniester river valley – Bernashivka, Vasylivka, Ozheve. These sites demonstrate different stages of development of the Trypillian-Cucuteni cultural unity.

The Centre is involved in the International cooperation and the exchange of an experience in field and laboratory research. Its members organize exhibitions, take part in the international conferences with presentations, and work with their colleagues from abroad on the archaeological collections and data. Archaeologists and students from the Centre participate in international projects and programs, and seek any good opportunity to gain and share knowledge in the field of protection and study cultural heritage in future projects.

ABSTRACTS

Abstracts cover photo: 'Finds in situ. The Talianki site, Cherkasy Region'. Photo courtesy of State Historical and Cultural Reserve «Tripollian culture» at the village Lehedzyne.

This page photo: 'Fragment of the clay artifact with anthropomorphous features from the Luka-Vrublevetska settlement'. Archaeological Museum IA NASU, Kyiv. Photo courtesy of Y. Pichkur

PRESENTATIONS

Albert Hafner
Bern, Switzerland

Archaeology in Switzerland: Research from Under Water to High-altitude Mountains

NEENAWA is the acronym for Network in Eastern European Neolithic and Wetland Archaeology for the improvement of field techniques and dating methods, an Institutional Partnerships project (2015-2018) within the Scientific co-operation between Eastern Europe and Switzerland (SCOPES) program of the Swiss National Science Foundation SNSF. The SCOPES programme was launched in 1990 and ends in 2018 after more than 25 years of scientific collaboration with Eastern Europe. NEENAWA was the only SCOPES Institutional Partnerships project ever funded by SNSF in an archaeological discipline.

Switzerland is a country with highly diversified landscapes: the central part of the country between the Lake of Constance in the north-east and the Lake Geneva in the south-west is formed by slightly hilly lowlands. All major urban agglomerations originated in the Swiss Plateau. To the north-west arise the medium altitude Jurassic mountains (up to 1600 m a.s.l) and in the south-east the Alps form an impressive mountain range culminating at more than 4000 m a.s.l. Archaeology in Switzerland has a long tradition, starting in the mid of the 19th century with two prehistoric topics. Research in Neolithic and Bronze Age lake-dwellings started simultaneously at the Lakes of Zurich and Biel. After more than 150 years of research, the "Prehistoric Pile-dwellings around the Alps" were labelled as UNESCO World Heritage in 2011. Six countries had joined forces to bring this serial nomination forward. By searching for new lake dwellings, the eponymous site of La Tène was discovered, a term used today for the younger Iron Age of Middle Europe. Prehistoric sites from alpine valleys like the megalithic necropolis of Sion, Petit Chasseur or the high-alpine zone like Schnidejoch form another chapter of modern archaeology in Switzerland.

Marzena Szmyt
Poznań, Poland

Between the Seas: Baltic - Pontic Contact Space in the 3rd Millennium BC

The presentation is devoted to some selected questions from the prehistory of areas situated between two seas: the Baltic Sea on the North-West and the Black Sea on the South East. To be precise, the subject-matter are territories between two big rivers, namely the Vistula and Dnieper. There is the so called Dniester-Bug limes, one of the most important ecological and cultural borders of our continent, that runs across the areas in question. Despite many essential differences, in the 3rd millennium BC the territories between the Vistula and Dnieper rivers were covered by the network of multidirectional circulation of people and new ideas. From the given point of view symptoms of presence of the eastern origins patterns on the Vistula, as well as the western origins patterns on the Dnieper are discussed and some proposals of their interpretation are done.

Leonid Zalizniak
Kyiv, Ukraine

Neolithization of Right-Bank Ukraine

There are two main versions of neolithization of the territory of Ukraine – from the south-east and from the south-west, or the Caspian-Caucasian and the Danube-Balkan. If the first theory spread in the post-war time in the form of the concept of "eastern impulse" by V.M. Danylenko, then the second theory became popular since the end of the 20th century. Most of modern scholars tend to think about the Balkan-Danube origins of the Ukrainian Neolithic. The analysis of previously known and newly obtained sources, gives grounds for the author of these lines to made a conclusion about neolithization of the Ukraine's territory by the agricultural population of the Danube in the 6th-5th millennium BC. It was at this time of the Atlantic climate maximum in Central Europe that the warming and humidification of the climate occurred, which created exceptionally favorable conditions for the colonization of the region by the Balkanian early farmers of the through the Danube.

Without excluding completely the possibility of some southeast influences on the Neolithic of Ukraine, one can speak about four main waves of Neolithic innovations from the Balkan-Danube region to Right-Bank Ukraine:

1. Hrebenyky culture - (end of the 7th - beginning of the 6th millennium BC cal)
2. Krish – Bug-Dniester culture (from the middle of the 6th millennium BC)
3. Danube (LBK) (second half of the 6th millennium BC)
4. Cucuteni-Trypillya (5th millennium BC)

Hrebenyky. The first proto-Neolithic wave of migrants from the Balkans was the representatives of Hrebenyky tradition, which left sites in the Odessa region at the end of the 7th - beginning of 6th millennium BC (cal.). The lithic inventory of the latter is characterized by numerous series of regular trapezes at the sections of the pressure blades, which has direct parallels in the Early Neolithic of Thessaly and among the lithic inventory of the Krish-Starchevo culture. The latter points to the genetic connection of Hrebenyky with the ancient Neolithic of Eastern Greece. The lithic inventory of the Hrebenyky sites

has the features that prove contacts with the local Kukrek population of the North-West Black Sea area.

Krish. Moving from Transylvania to the east in the second quarter of the 6th millennium BC, reached the Dniester area, where they are represented by Sakarivka-type sites communities of the Krish culture played particularly notable role in neolithization of Right-Bank Ukraine. The oldest in the Ukraine Neolithic Bug-Dniester culture was formed as a result of the synthesis of the Krish Neolithic traditions with the local Kukrek, about the middle of the 6th millennium BC. Its inventory naturally combines the Krish culture pottery and Hrebenyky lithic assemblage with an expressive flint complex of the local Kukrek culture (Pechera 1, Dobrianka 1, 2, 3).

LBK (Linear Pottery culture). The third wave of Neolithic settlers of Right-Bank Ukraine can be considered LBK population, which moved from the Upper Vistula eastwards to the Volhynian plateau and then south to the Upper Dniester, in Moldova and the Bug-Dniester interfluve in the third quarter of the 6th millennium BC. Pressure from the West of new Neolithic settlers on the Bug-Dniester population led to its movement in the north-eastern direction – to the Kyiv-Cherkasy Dnieper area, and possibly to Nadporizhzhia. These processes of the second half of the 6th millennium BC launched the neolithization of the Middle Dnieper area, including Kyiv Polissia. Therefore, flint tools and pottery from the earliest Neolithic sites of the Kyiv region – settlements of the Lazarivka type (Lazarivka, Prybir 7a, Krushnyky) have direct parallels in Bug-Dniester assemblages of the Middle Bug region.

Cucuteni-Trypillya. The resettlement of the Bug-Dniester population in the Kyiv-Cherkassy Dnieper area was intensified in the end of the 6th millennium BC due to the strong pressure from the fourth wave of the Balkan-Danube colonists – the population of the Cucuteni-Trypillya culture, which at that time began to colonize the forest-steppes of Right-Bank Ukraine from the territory of Moldova. The ultimate victory of the reproductive economy in the forest-steppes of Right-Bank Ukraine is linked with the Trypillyans.

As to the mechanism for the sharing of Neolithic innovations from the Balkan-Danube region in the Right-Bank Ukraine, there is no reason to believe that it was different from the principle of their distribution in the neighboring territories of Central Europe, Danube and the Northern Balkans. The vast majority of researchers believe that the neolithization of the Danube and Central Europe took place in the mode of their "balkanization", that is, the spread of Neolithic innovations from the Balkans through the Danube through the resettlement of Neolithic colonists to the north. It was in the mode of agricultural colonization that the communities of the Danube (LBK) and Cucuteni-Trypillya cultures distributed in Right-Bank Ukraine.

It should be noted that with the distance from the Balkan Neolithic Center, the synthesis of the culture of aliens with the autochthons of Europe played an increasingly important role. In particular, the Neolithic colonists of the Krish culture reached the Dniester in their pure form, but the east of the Bug-Dniester area was a synthesis of the Krish with local Kukrek traditions, resulting in the formation of a hybrid of the Krish-Kukrekian and Bug-Dniester cultures. It became a kind of transistor of Neolithic innovations from the Danube to Mesolithic indigenous peoples of the Middle Dnieper and Kyiv-Zhytomyr Polissya. Further to the north, in the forest zone of Eastern Europe, Neolithic innovations (first, the skills of ceramic production, and later the reproduction economy) spread not because of agricultural colonization, but through their borrowing from the south.

Speaking about the chronological frames of the neolithization of Ukraine, one should bear in mind the lack of compelling evidence of Neolithic sites with ceramics that would date back to the 6th millennium BC. Very early dates (the 7th millennium BC) made on BDK ceramics by the Kyiv laboratory need to be checked.

Thus, archaeological data convincingly testify to the neolithization of the Right-Bank Ukraine, the Middle Dnieper and Southern Polissya during the 6th -5th millennium BC due to the powerful influence of the waves of Neolithic migrants from the Balkan-Danube region (Hrebenyky, Krish, LBK, Cucuteni-Trypillya). With the participation of their representatives on the local Mesolithic substrate, the Neolithic cultures of the Right Bank appeared. Synthesis of local Kukrekian traditions and the Neolithic Krish culture gave birth to the Bug-Dniester culture.

Thus, today, in the competition between two versions of neolithization of Ukraine – the south-eastern steppe and the south-western Danube-Balkan wins the latter. V.M. Danilenko's concept of "eastern impulse" has now substantially lost its position and needs additional argumentation. This does not exclude the possibility of new facts and arguments in the future in favor of eastern influences on the formation and development of the Neolithic of Ukraine.

Robert Hofmann, Liudmyla Shatilo
Kiel, Germany

Trypillya – Strategy and Results of an European-Ukrainian Project

In the late 5th and first half of the 4th millennium BCE in the Trypillya-Cucuteni cultural complex there was observed the emergence of the so-called mega-sites represented today by several thousands of burnt houses arranged in a specific spatial layout, with specialized workshops and highly developed material culture. These settlements, which have been the subject of ongoing discussions, in particular about possible urban characteristics (proto-cities), represent a unique phenomenon in European prehistory, and attract the interest of not only Ukrainian researchers but also other European ones scientists. Since 2011, German-Ukrainian cooperation has being conducted with a view to achieving a deeper insight and more comprehensive understanding of this “chapter” in the European prehistory and Trypillian societies in particular. The main goal of this cooperation is to combine the experience and knowledge of Ukrainian colleagues with the natural-science methods and fresh look of the German team. Using an interdisciplinary approach, we are trying to gain a better understanding of the development and transformation of social relations, spatial behaviour, economics and land use in Trypillian communities.

In order to understand better the trigger and processes of formation and decline of Trypillya mega-sites, on the one hand, it is necessary to apply a diachronic approach to the social processes under study. On the other hand the spatial dimension of the phenomenon needs to be investigated at micro, meso-, and macro-scale. For this purpose, within the large area of the Trypillya -Cucuteni cultural complex three test regions with key sites have been chosen. In each of these test regions an attempt is undertaken to reconstruct and interlink demographic processes, technology, the organization of societies and their ideology.

Starting from large scale geomagnetic prospections on several mega-sites of the Bug-Dnieper region, based on works on the mega-site Maidanetske, a strategy has been de-

veloped to combine geophysical and archaeological surveys, target excavations and environmental analyses to gain information on precise chronology, social structures, and environmental developments. This strategy includes systematic sampling in different house rings and segments of mega-sites for 14c-dating, paleo-botanical, zooarchaeological, geochemical and archaeological analysis of find inventories. For Maidanetske, the first analysis of 14c-dates suggest contemporaneity of the different house rings of the settlement. Chronological differences seems to concern rather between houses within the same rings and-or house clusters.

At the current stage of work on the project, new data are collected and analyzed in order to be able to interlink these local results with the settlement development and population dynamics at the meso-and macro-regional spatial scale. This working stage includes geomagnetic surveys, sampling for dating, scientific analysis, and typo-chronological studies in the key regions. In the Bug-Dnieper interfluve chronological differences in the settlement layout can clearly be correlated with stylistic changes in pottery which are visible on a large spatial scale. Comparison of settlement layout of Ukrainian mega-sites makes it possible to suggest that it is the result of a complex development process with contributions from "Western" and "Eastern" Trypillian regional groups. Since, accordingly, the transformations of Trypillian societies in time and space are the result of complex networks of people, the underlying processes of these changes can only be understand through the interlinkage of different spatial scales.

Mykhailo Videiko, Nataliia Burdo
Kyiv, Ukraine

Life on the Eastern Borders of Old Europe

The concept of old Europe defines its boundaries with the proliferation of ancient cultivating crops. Its eastern boundary is designated by the districts of Trypillya culture), the Eastern part of Cucuteni-Trypillya cultural unity, which reached the Dnipro valley at the second half of the 5th Millenium BC. At this time, we see several local types Trypillya, with different material culture, some different features in the economy. Subsequently, this added to the difference in the public organization. These groups were completely autonomous, while there is a tendency for their active interaction, perhaps the subordination of the less powerful groups by stronger ones.

The first Trypillya imports at the Dnipro region, which were found at Neolithic sites belongs to BI stage (near the middle of 5th Mill. BC). But there are any traces of Trypillya sites closer than 150-200 km. So we can speak about some trade or cultural relations at this moment, which preceded the direct migration of Trypillya farmers to the east.

There were two groups of Trypillya BI-II stage farmers which come to Dnipro at the second half of 5th Mill. BC, one to the Krasna river valley, the second – to the lower Ros basin. At this moment both groups practiced farming and livestock and used large settlements as the centers of social formations. For the Krasna river eponimous Trypillya site was the central place (near 100 ha square), for the lower Ros – Myropillia (near 200 ha). Most of archaeologists recognized both sites as the tribal centers. Some finds evidence of the long distance trade to the Carpathian region inclusive. This groups had trade relationship with the West, with other Trypillian groups, from where imported copper and, probably, painted pottery. On the other hand there are some evidences about the local

production of copper tools and painted pottery, but the latter corresponds to western models. It is interesting that new settlers adopted some pottery traditions from the Stog culture – forms and decoration of "kitchen" pottery, processing of the interior surface of the pots (with "true" Trypillya carved decor on other side!) by smoothing. Probably it means that local communities included some part of Stog population. Later, such a multicultural community will become a visiting card of the Trypillian world at the Eastern frontier.

Near 4000 BC new wave of Trypillya communities (with painted-black pottery) reached the Dnipro at the lower Ros region. They probably integrated former population and create a strong system with numerous large (from 20-50 to 100 ha) sites. At the same times tribal centers at the Krasna river disappeared and never been created at this area. Here Trypillya communities returned to archaic model of settling, with small sites (20-100 houses) and the surrounding system of temporary settlements. It was enough for coexistence with the Neolithic population, but not enough to confront the more powerful Trypillian communities in the south. At this time, groups of people come to the Dnipro from the West, which can be linked to a cultural complex of Lublin-Volhynian Painted Pottery. The result was a change in the ceramic complex, which included both traditional local pottery and alien products from the West (undecorated ware) and South (painted pottery from different units!). Such 'multiculturalism" developed around 600-800 years and led to more cultural differentiation inside the area to the North from the Ros river. At the same time a group with painted pottery ("the Kaniv Group") still remained homogeneous. Trade flourished and included metal, flint, painted pottery and Spondilus, some trade routes reached Volhynia. At this period we can observe not only contacts with the local Neolithic (marked by sherds from painted pottery), but integration of some Trypillya representatives to local communities (Pustynka V type).

Thus, for nearly a millennium, we see different strategies of life at the frontiers. From one side here were large groups, resistant to external influences, and small groups of population, aimed at the formation of multicultural communities. At the same time, trade was always an important unifying factor in all periods.

Andrey Mazurkevich, Ekaterina Dolbunova
St. Petersburg, Russia

Lacustrine sites in North-Western Russia in the 7th-3rd mill. BC

This region is located to the west from the interfluve area of three major rivers of Eastern Europe – the Volga, Western Dvina and Dnepr. "The intersection of different routes" led to the formation of syncretic archaeological cultures. Sites with one of the most ancient pottery of Eastern Europe, dated back to the 7th mill BC, were found here. During several millenniums ancient inhabitants interchanged, bearers of various cultural traditions came here from the southern steppes, forest zone of Eastern Europe, from Central Europe, the Balkans, and the Baltics. Not only pottery and ancient tool-kits changed, also prestigious artefacts were brought here – Baltic amber, clay Balkan pintaderas, flint daggers. Ancient inhabitants created a fascinating art world, centred round zoomorphic images and a man – a creator of this ancient world.

Sławomir Kadrow
Kraków, Poland

Neolithic Settlement Zones in Western Part of Little Poland: a Case of Targowisko

A preliminary reconstruction of the range of the settlement complex Targowisko (site 10-16) and Szarów (site 9, 21) allows to determine approximately its size. Latitudinally, from east to west, the complex is spread out over a length of more than 2 km. Due to the lack of a full archaeological recognition, it is difficult to establish how wide was the belt of land occupied by the Neolithic farmers. The analysis of inhabited geomorphological forms indicates that the width of the inhabited zone was less than 1 km wide.

A small, two-phase settlement of the oldest Zofipole phase of LBK at the site 10, 11 has been documented recently in Targowisko. Every settlement phase consisted of at least four post frame houses (inhabited concurrently), whose length exceeds or oscillated around 20 meters. The centre of this settlement shifted over time from west to east. This is the first reconstructed settlement of the oldest, pre-music note phase of LBK not only on the Wieliczka-Bochnia loess areas but also throughout the entire eastern group of the culture.

Approximately three-four kilometres west of the settlement complex Targowisko-Szarów researchers recorded the site17 in Brzezie. They made there almost a complete reconstruction of the settlement and building development of a large LBK settlement with its classical, music-note phase. It consisted of three to six concurrently inhabited long houses, arranged around an empty space in the centre. The houses (within subsequent phases of construction) were built near the already functioning structures within the same house clusters. The discussed settlement is a great illustration of Hofplatzmodell assumptions.

Most of the remains of long post-holes houses coming from the settlement complex Targowisko-Szarów (without including the west edge of the complex – i.e. the site10, 11 in Targowisko) are linked with the period at the turn of the music-note and želiezowce phases and mainly with the youngest LBK phase i.e. želiezowce phase. Researchers hesitate what model of settlement is represented by the houses of the youngest phases: Hofplatzmodell or Zeilensiedlungsmodell? They have posed the question whether the houses of the next settlement phases were built in the space within house clusters or they mainly existed at the same time, and new constructions were added along the extension of the rows that were formed.

The achievement of the last decade is the discovery of unknown so far forms of houses and settlements of the Malice culture in the area of the settlement complex Targowisko-Szarów and several other sites in the Wieliczka-Bochnia loess region, including Zagórze site 2 and Rzeszów-Przemyśl loess area. These discoveries have completely changed the existing views on these aforementioned topics.

The place of trapezoidal houses (mainly typical for the areas of younger Danubian cultures located in the Lowland areas) which had been built within large settlements, was taken by small rectangular (approx. 12 meters long) post-holes structures. They occurred most frequently individually or in systems of two (Targowisko, site 13-14), in rows consisting of 45 buildings (e.g. Zagórze 2) or they formed difficult to reconstruct, larger spatial structures (Targowisko, site 10, 11 and e.g. Rozbórz, site 42).

To some extent, the researchers have already acquired and analyzed palaeobotanical macroremains and the background of environmental and climate changes has been outlined regarding the area of the discussed settlement complex.

In many cases, the rule of placement of individual skeletal graves has been confirmed within the settlements near the houses. Moreover, so far the occurrence of cemeteries neither in the area of the described settlement complex nor in other areas where this culture appeared has been noticed.

It is believed that cultural and settlement hiatus took place at the turn of LBK and younger Danubian cultures. Sometimes the continuation and transformation of internal nature have been emphasized. However, considering southeastern Poland any transformational mechanisms replacing one culture with another one have not been reconstructed so far. It has been done for neither the hiatus model nor the model of cultural continuation.

The possibility of detailed observation and documentation of trends, presenting changes regarding the settlement, economic and cultural situation at the turn of LBK and the Malice culture in the light of the settlement complex Targowisko-Szarów, creates a unique opportunity to reconstruct the mechanisms of cultural change not in range of the whole archaeological culture, but in the microregional dimension. So far we have not had any knowledge considering a crucial stage of assumed changes that is the reconstruction of the direction and determinants of cultural evolution of the želiezowce phase.

Maxim Charniauski
Minsk, Belorus

Peat-Bog Settlement of the Middle Neolithic – Middle Bronze Age Asavec 2. The Current State of Research and the Prospects of Further Study.

The Kryvina peat-bog is an archaeological micro-region of the Neolithic – Bronze Age settlements in the north-eastern part of Belarus, on the border of Bešankovičy and Sianno district, Vitsebsk region. It represents the eastern edge of a large swampy area that was meliorated in the 20th century.

Currently, 10 settlements (Asavec 1-7, Kryvina 1-3) and 4 locations are known at the micro-region. Cultural layer of 9 settlements preserves organic materials, 8 out of them are covered by peat.

The most ancient settlement at the Kryvina peat-bog is Asavec 4. Its materials belong to the Narva culture (the early Neolithic, 5860±50bp (Ki-6213) 4800-4620 cal BC). The basic amount of archaeological materials at the remaining settlements belong to Usviaty (the middle Neolithic) and the Northern Belarusian (the Late Neolithic – the Early Bronze Age) cultures. The most recent materials at the Kryvina peat-bog belong to the Middle Bronze Age. Changes of the climate in the 2nd half of the 2nd millennium BC led to the gradual expansion of the ancient lake surface and flooding of the settlements of the Kryvina peat-bog.

Asaviec 2 is one of the most researched settlements of the Kryvina peat-bog. It was discovered in 1966 by Michal Charniauski and was sporadically researched by him during 29 seasons up to 2012. The author of the report conducts the annual excavations of the settlement from 2008 up to date.

The Asaviec 2 settlement is situated in the northern part of the peat-bog, in a distance of 500 and 600 meters from the nearest shores of the peat-bog, on a small elevation of its mineral bottom. Before the melioration the natural bed of the Kryvina river (left tributary of the Dzvina river) defined the south and south-eastern borders of the settlement. The exact dimensions of the site haven't defined yet. The maximum known length is about 200 m, maximum width is about 90 m.

An excavated area of the settlement comprises almost 400 square meters. Researchers have concentrated on its northern and southern parts, where materials of Usviaty (the Middle Neolithic) and Northern Belarusian (the Late Neolithic – the Bronze Age) cultures are presented in different proportions.

Initially the cultural layer of the settlement was covered by sterile peat layer with its depth up to 2 meters. The present depth of the cultural layer is about 1,3 meter. An upper part of the cultural layer in the southern part of the settlement is damaged due to the peat harvesting.

The Asaviec 2 settlement is known for extraordinary concentration of artifacts in its cultural layer. The main amount composes remains of economic and domestic activities of people: fragments of wooden structures and woodworking, kitchen remains – bones of mammals, birds, amphibians, and fish. The existing bones collection consists of more than 10 thousand fragments excluding fish bones, the collection of which exceeded 60 thousand units.

A collection of artifacts is represented by items made of flint, stone, bone and antler, wood, bark, amber, and rare copper and bronze items. Among them are tools for hunting, fishing and weapon: arrowheads, spearheads, daggers, harpoon heads, hooks, floats and sinkers for the nets, etc. Tools and household items are presented in large number as well: scrapers, cutting tools, punches, drills, axes, adzes, flint processing items, spoons, etc. A ceramic collection includes tens of thousands of vessels' fragments of different degrees of preservation and size. It reflects the presence of the main archeological cultures of the region - Narva, Usviaty and North Belarusian, and the infiltration of outsiders – the Globular Amphora culture, circle of the Corded Ware culture, Middle Bronze Age materials. Numerous collection make out works of art and the cult items – amulets and pendants made of teeth and bones of the animals, more rare amber ornaments occur as well.

Current research of the Asaviec 2 settlement meets a number of problems. One of them is penetration of the oxygen into the cultural layer and active organic' decay processes in southern part of the site due to the bareness of the cultural layer in its southern part. As a result, wooden structures and artifacts already disappeared in upper layer of 40 cm of this part of the settlement. Draining of the peat-bog, caused by the melioration led to its overall compression, which deformed wooden structures and the ceramic material. All these factors make annual excavation in the southern part of the settlement necessary as some kind of rescue works. In addition, the works on specification of paleogeography of the Kryvina peat-bog microregion, specification of topography of the Asaviec 2 settlement are not finished, as well as re-check of a surrounding area of the peat-bog for possible unknown location of archaeological material.

Valentina Todoroska*, Zlata Blazeska**
*Struga, Macedonia, **Skopje, Macedonia

Prehistoric Tool Kit for Surviving

This presentation is concentrated in more than ten pile dwelling settlements located on the shores of the Ohrid Lake or rivers in the Ohrid region. Chronologically, these prehistoric sites are not from the same period, and they are dated from the Neolithic to the Iron Age. Remains form these settlement offer more detailed insight into the prehistoric lifestyle. The focus will be given on tools used by people who lived in these regions and help them to survive and live traces of their existence. Their function and meaning, however, is not always clear but...

Why did people choose the northern part of Ohrid lake? Did they have textile production and what tools help them to survive?

Christoforos Arampatzis
Flórina, Greece

First Data About the Osseous Industries of the Prehistoric Lakeside Settlement of Anarghiri IXb, Western Macedonia, Greece

In the last decade the intensive rescue excavations of the Archaeological Service of Flórina unearthed a great number of prehistoric settlements close to the four lakes of the Amindeon basin that date back from Greek Early Neolithic (c.6800-5800 BC) to Greek Middle Bronze Age (c.2200/2100-1600/1500). The excavation of the Anarghiri IXb settlement yielded an impressive and diverse assemblage (more than 5000) of bone and antler artefacts which shows that, as in the prehistoric lakeside settlements of Central Europe, the osseous artefacts played an important role in the everyday activities of the inhabitants of the wetland sites of the region. In this presentation, there will be an attempt to present some of the most important osseous artefact categories of the settlement.

Caroline Heitz
Bern, Switzerland

Mobilities, Entanglements, Transformations. Pottery Practices in Neolithic Wetland Sites of the Swiss Plateau

Pottery is one of the most commonly used sources in prehistoric archaeology to construct notions of 'cultures' and identities in the past. But with no access to emic perspective of Neolithic societies, questions on cultural and social belongings are rather difficult to answer. By contrast, pottery production practices left a range of traces on the vessels that can be studied archaeologically and archaeometrically (thin section-, (p) XRF-analyses). The material features of pottery vessels thus comprise histories of their making that not only happens in a material landscape but a social context too. Thus, in the process of making pottery, the itineraries of the used materials (geology) and those of the potters (biographies) become intertwined. With that, pottery offers us an entry point to approach entanglements and transformations in past societies which unfolded in contexts of movement and mobility.

In my empirical case studies – the pottery of Neolithic wetland sites at Lake Constance and Lake Zurich (3900–3800 BC) – it can be shown that the commonly made presupposition of 'one settlement-one pottery style' is not tenable. On the contrary, with regularly occurring combinations of different styles at one place –like e.g. 'Hornstaad', 'Cortaillod' and 'Schussenried' or 'Cortaillod', 'NMB', 'Pfyn' and 'Michelsberg' – stylistic plurality was not the exception but the rule. While some vessels were made and used at the same place adopting locally available materials and typical local production practices ('local vessels'), others were made at other places in different styles and then transported to the sites ('translocal vessels'). Some vessels even show how the mobility of pots and potters led to creative transformations like stylistic appropriations ('inbetween vessels') and thus the (re)negotiation and transformation of temporarily stable cultural forms.

Dmytro Gaskevych
Kyiv, Ukraine

Pottery With Admixture of Graphite and Exchange Networks in Neolithic of Ukraine: Problem Statement

Graphite is used in pottery production and decoration in different parts of earth for a long time. For example, in the Balkans making of clay vessels with graphitized surface emerged in the Struma river basin in the Neolithic (Sapareva Banja, Sitagroi I, Acropotamos-Topolnitsa, etc.). Later such ceramic widely spread in the areas of Chalcolithic cultures in the Lower Danube area. Pottery with graphite has been found at some Austrian, Moravian and Bavarian sites of the Linear Band Ceramic culture in the Upper Danube area. Relatively numerous vessels, made from paste with admixture of graphite, are also known in materials of Neolithic sites of Ukraine.

As long ago as 1960s Valentyn Danylenko noted that the vast majority of «graphite ceramic» in Ukraine was found in the Southern Buh river basin. He interpreted it as a pottery of so called «Samchyntsi» type of the Buh-Dnister culture and clearly connected its origin with largest in the country graphite deposit near the village of Zavallia, Haivoron district, Kirovohrad region. But such finds also are known in other areas, in particular on the middle Dnipro (Uspenka, Buz'ky I), in the Dnipro rapids region (Vovchok, Sobachky, Stril'cha Skelia, Kizlevy V, Mykil'sky cemetery) and the Northern Azov Sea area (Kamiana Mogyla-1). Mentioned sites are related to the Kyiv-Cherkasy, Surska and Azov-Dnipro Neolithic cultures. Their graphite ceramic has never been the subject of special study. It often has regarded as an import from the Southern Buh area. However, ornamentation of many of these vessels is different from the traditions of the Southern Buh Neolithic. Thus, these vessels may be made by local potters with other graphite raw materials, because there are known three major graphite-bearing zones: Buh-Teterev, Ingul, and Azov within the Ukrainian Shield. Also it can be assumed graphite from the Buh area, spreading through the exchange networks, was added in their clay. For example, in the Upper Danubian Neolithic and the Bulgarian Chalcolithic such networks have been recorded by the finds of graphite artifacts in particular with holes for stringing. However, finds of graphite row material and articles of it still unknown on Neolithic sites of Ukraine.

Also there needs to solve a problem of time and origin of using graphite in pottery making in Neolithic of Ukraine – its independent emergence or rise under external influence. People of the Buh-Dnister culture had close relations with population of the Lower

Danube in the Early Neolithic. But expansion of settlers with linear band pottery along the Prut and Dnister rivers separated them in about 5300 cal BC. Finding of graphite ceramic on local sites of these new people are yet not mentioned, with the exception of settlement of the Kamyane-Zavallia, excavating by Dmytro Kiosak. It is noteworthy that this so far only site of LBK on banks of the Southern Buh is situated in the immediate vicinity of the Zavallia graphite deposit. It is possible that inhabitants of the settlement came here directly from Central Europe and they had preserved traditional Upper Danubian treatment of graphite as a prestigious goods. In this regard, attention is drawn to shoe-last adze found close by the site whose raw material originated from the Iser Mountains of Northern Bohemia.

Verification of the adduced assumptions requires more detailed study and comparison of graphite ceramics from Ukraine and neighbouring territories, including apply of methods of natural science.

Nikos Chausidis
Skopje, Macedonia

'River People' of the Northern Black Sea and Macedonia

Based on archaeological, linguistic and other facts, contemporary science finds the nucleus of Indo-Aryans in the Northern Black Sea and the North Caspian area. It was from these areas, that their culture and population spread to south in the 2nd millennium BC and established the culture of Iranians in Iran and that of the Indian Aryans in India. There are indications for expansion of this complex towards the Balkans, in the historical sources witnessed as 'Cymmerian overrun'. Referred to as the oldest name of Thrace in the sources, the toponym Aria (*Ἀρία*) furthermore relates to it. Late Bronze and Early Iron Age Thraco-Cimmerian finds could be considered as archaeological indicators of this expansion.

We believe that in addition to these arguments, ethnonyms and toponyms with the root *sind-* should also be considered. In the Northern Black Sea they could be found under the ethonym Sindi (*Σίνδοι*), referred to as Indi (*Ἰνδοι*) by Herodotus and as 'Indian people' by other ancient sources. Following the theories of P. Kretschmer, O.N. Trubachyov associates the Indo-Aryan *sindu* – river/great river, referring to the Kuban River, once probably called **Σίνδος*, of which **sinda(va)* signifying river people was derived, which in Indo-Aryan would sound like *sindhu* and as *hindu* in Iranian. Analogously, as *Sinu* (reduced of *Sindhu*), also sounded the Scythian (i.e. Pre-Scythian) name of Tanais River (Don). In the Kuban region, ancient authors located 'Sindian Scythia', referred to as 'old, i.e. primordial Scythia' by Herodotus. A tomb stone found at Taman Peninsula with an inscription 'India' (*Ἰνδίη*) contributes towards these analyses, denoting the name of the deceased. According to Trubachyov, some sources also mention Sindi along Danube. In Macedonia, Sindi as ethnonym can be found through several ethnonyms and toponyms containing *sinth-* i.e. *sith-* given in the ancient written sources: 'Land of Sitonia' (*Σιθωνία*) in the middle of the Chalkidiki Peninsula; Sithones tribe, along with Mygdonians being part of Edoni kingdom; town of Sindos (*Σινδός*) in Mygdonia in Thermaic Gulf; Sindonaioi tribe with no clearly determined location, which some researchers associate with Sindos and its inhabitants; toponym and ethnonym *Sinti/Sintia/Σιντική* in the lower Strymon; Sintians who populated the island of Lemnos; town of Sintia in Dar-

dania (near the northern borders of Macedonia).We suggest interpretation of evident resemblance of toponymes and ethnonymes of both areas in three manners: (a) as migrations of the Sindi from the Northern Black Sea to Central Balkans (in the context of the aforementioned processes); (b) as movement of some other Indo-Aryan ethnicities who, settling in Macedonia, would call themselves Sindi due to the location of a nearby river or region rich in rivers; (c) as migration of peoples containing *sind-* in their names in the region surrounding the Black Sea and Macedonia from some other common point of origin, perhaps on the Danube shore. In favor of these interpretations are the Indo-Aryan parallels of some other Macedonian hydronymes: Axios (from *akši* – black), its contemporary name Vardar (from *vari* – water; **kali-vardi* – black water) which coincide the most frequent epithet of this river nowadays 'muddy Vardar' and its greatest tributary Crna Reka (literally Black River).

These parallels and hypotheses have an archaeological background via the similar elements found in Late Bronze Age and Early Iron Age cultures in both regions. This mainly refers to the bronze jewelry with an emphasized cult purpose which in the Northern Black Sea can be found within Coban culture and in the so-called Macedonian bronzes from the Early Iron Age in Macedonia. Many researchers have pointed to the resemblance of these objects, interpreting it with the sprees and migrations of the aforementioned Thraco-Cimmerian population. Cultural relations between the Northern Black Sea and Macedonia could also be traced in the previous periods through similar burial rites: (a) decedents buried in contorted position, males placed on their right hips, while females on their left hips; (b) killing the widow during her husband's burial and thus burying her in the same grave. Furthermore, we refer to the similar stone stellae from the Northern Black Sea (Nataljevka, Belogrudovka, Pervomaevka…), Romania (Dobruja), Bulgaria (Kalishte, Ezerovo, Plachidol) and Macedonia (Ulanci).

The association of these populations and the river is also given in terms of religion. In the Iliad, Paeonians, predominant inhabitants of Macedonia in the 1st millennium BC, are led by Pyraechmes, the grandson of Axios, mythical character who is a personification of the biggest river in Macedonia by the same name (today Vardar). Axios will also try to help the other Paeonian leader, Asteropaeus, in his duel with Achilles. Paeonians, but not only them, presented the fertile power of the rivers through an anthropomorphized water bull which would be incarnated as Dionysus Tauros in later ancient traditions. His presence in Macedonia could be traced via two ancient toponyms: (1) Tauriana, the ancient name of Lake Dojran and (2) Tauresion, an ancient settlement, most probably located in the vicinity of Skopje near the village of Taor, on the banks of Vardar River. The great significance of the mythical character from the Northern Black Sea by the same name could be traced both through the ethnonym Tauri and the toponym Taurica/Tauris which originally referred to the southern shores of Crimea.

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With or Without You: the Formation of Identities in the Neolithic Balkans

The so called 'Neolithic Package' in the Balkans did not introduced only economic advantages and novelties, but also had a significant social impact onto the communities that inhabited this region. The interaction between indigenous population and migrants

in the Early Neolithic initiated new notion of identity established on trade, exchange, labor, ideology and especially on the production of material culture. Consequently the first farming communities were socially modified and many new were created as the agriculture, domestication, clay objects, human representations and intramural burials progressed in various areas of the Balkans. Thus the identity was subsequently incorporated in various aspects of Neolithic life, but it could be archaeologically observed only on material culture and decorated pottery, house models, stamps and human representations in particular.

It is evident that various Early Neolithic societies dispersed in different wetland regions were producing pottery with distinct patterns common only for isolated geographical areas and the same was practiced in the domain of anthropomorphic and house representations. Such diverse societies apparently maintained economic networks, but deliberately accented its discrete identity throughout painted vessels, house models, stamps and figurines. Some of them bear reminiscences of Neolithic visual culture from Anatolia, but many developed novel designs and concepts. Nevertheless, this was significantly changed in the Middle Neolithic when the issue of identity witnessed apparent transformation manifested mainly on pottery. Thus, many Neolithic communities in various regions of the Republic of Macedonia, Bulgaria, Albania, Serbia and Croatia initiated entirely new painted pottery patterns, drastically different than those at the early stages of the Neolithic. While many societies accepted and extended this changes within spheres of visual identity others restrained the Early Neolithic traditions and persisted with white painted vessels.

This paper will mainly consider the Neolithic networking in the Balkans and discuss its complex character and inconsistency as apparently the networking was not a total social process, but mainly regarded merely particular spheres of the societies. Therefore various identities were constructed as the communities interacted in the domain of economy and exchange of goods, but the major social and symbolic distinctiveness was reflected onto material culture. In this context the painted pottery, house models, figurines and stamps from the Republic of Macedonia, Bulgaria, Greece, Albania, Serbia and Croatia will be mainly concerned as it gives a broad overview of units and clusters of societies which shared similar identities or established entirely different visual references. Consequently this paper will discuss the problem of networking and formation of identities, as well as the tendencies towards belonging to particular societies or the persistent maintenance of visual traditions during social transformations in the Neolithic Balkans.

Valerii Manko
Kyiv, Ukraine

Ukraine and the Balkans Before the Neolithic: Culture Network or Convergent Development

On the eve of the beginning of the Neolithic in the Mediterranean basin and on the Northern coast of the Black Sea, we observe several archaeological industries with trapezes, which were made on the blades obtained by pressing detachment. These industries were: Castelnovien in Italy and the South of France, Paracastelnovienin Montenegro and Serbia, the Pre-Pottery Neolithic of Greece, Romanian Tardenuazian, Mesolithic industries in the area of Iron Gates. Agakli industry in coastal areas of the Sea of Marmara,

the Odishi culture in the Eastern Black Sea coast, Murzakkobien in Crimean Mountains, Grebeniki and Matviyiv Kurgan industries in the Northern Black Sea region.

District of distribution of trapezes made on pressed blades corresponds to areas of primary Neolithization of Southern and Eastern Europe. Moreover, all of these industries continue to exist on a ceramic stage of development, and are known in the Neolithic under the names Krish, Starčevo, the Bug-Dniester culture, the Tuba culture. The list can be continued.

Taking to consideration the importance of these flint industries for the Neolithization of Europe, we are obliged to find out the reasons why most of the early Neolithic cultures arise precisely on the basis of such industries. Theoretically, there might be several solutions to the problem.

1. The area of distribution of trapezes on the pressing blades is connected by common origin, and the appearance of such a region is associated with the migration of the population from the territory of primary Neolithization (the Near and Middle East).
2. The region is associated with the spread of convergent developing industries, whose participation in the neolithization of Europe is an accident.
3. The development of industries with trapezes on pressing blades is the result of a process that is larger in content than the actual distribution of a certain type of product.

The analysis of the chronology and process of development of certain parts of the giant area of distribution of this type of trapezes shows that some industries of this region arose at different times under the influence of completely different cultural traditions of the Near and Middle East, and also of North Africa.

The Castelnovien industry arises at the beginning of the Atlantic and is associated with the diffusion of the Cape population of North-West Africa into the territory of Sicily and the Apennine peninsula. From other industries with trapezes on the pressing blades Castelnovien is distinguished by the tradition of using microburing techniques for the production of geometric microlithes. It is possible that the formation of the Precucuteni – Trypillya A industry took place under the influence of Castelnovien. In the Mediterranean Castelnovien was the forerunner of the cultural area of the Impresso Neolithic.

Paracastelnovien appeared much earlier. Judging by the dates of the Odmut Cave, it could have happened in Boreal or even in Preboreal. The carriers of this industry very early mastered the technique of manual pressing of blades and used end cores with narrow surfaces for the production of such blades. Trapezes were made without the use of microburing technique.

In Boreal Paracastelnovien complexes appear on the banks of the Danube (Zemun loess). Contacts with Paracastelnovien carriers caused the appearance of trapezes on the pressing blades in the Sheila Kladovei (Klisuryen) culture complexes. The Starchevo culture is being formed on the base of Paracastelnovien.

Romanian Tardenoise occurs at the beginning of the Atlanticum. The addition of this cultural phenomenon was a complex process. The culture, it seems, was formed as a result of the interaction of the traditions of Paracastelnovien and the Sheila Kladovei culture. Monuments of the Romanian Tardenoise extend to the east to the Prut basin, where the sites Sakarovka and Bilicheni Noi are known. In the complexes of these sites there are cores with narrow surfaces and trapezes on pressing blades, like those in the Paracastelnovien complexes. With the culture of Sheila Kladovei there are associated finds of spikes with arched backs. The Krish culture is formed on the base of Romanian Tardenoise.

On the territory of Moldova, the area of spread of the Romanian Tardenoise is in contact with the area of distribution of the Grebeniki culture, which arose in this region not later than the second half of the 7th millennium BC. The early Grebeniki complexes are distinguished by the use of prismatic and cylindrical cores for pressing plates. At the ceramic stage of the development of culture, two-platform flat cores are distributed. Grebeniki culture is the forerunner of the Bug-Dniester culture of the Neolithic.

The Murzak-Koba culture of the Mountainous Crimea arises in the second half of Boreal. In fact, now the term "Murzak-Koba culture" is understood to mean at least two different stone industries, the typology of complexes of which is very different. One of these industries is associated with the manufacture of trapezes, while other complexes are also associated with the production of asymmetric triangles and crescents. It is possible that the trapeze "Murzak-Cuban culture" is the precursor of the Grebeniki and Matviyiv Kurgan cultures. Very likely that the origin of these two cultures on the eve of the beginning of the Neolithic period was associated with the migration of a part of the Crimean population. It is also possible that on the territory of Crimea the trapeze "Murzak-Cuban culture" became the forerunner of the Neolithic culture of Tash-Ayir.

The Matviyiv Kurgan culture occurs at the turn of the Boreal-Atlantic, is a copy of the Grebeniki culture. Only tradition prevents the unification of these phenomena into one. At the ceramic stage of development, the Matviyiv Kurgan culture becomes an integral part of the Dnipro-Donets cultural and historical region of Neolithic Ukraine.

As we see, the area of distribution of industries with trapezes before and during the beginning of the Neolithic period consists of three large regions: the Castelnovienian zone, the Paracastelnovienian zone and its derivatives, the zones of the Grebeniki tradition (Crimea, Northern Black Sea Coast, Azov Sea). These zones come from completely unrelated cultural traditions, arise at different times. Thus, the development of these three zones should be considered as a convergence process. At the same time, we can determine the cause of such a process. The reason is the spread of the pressing technique of blades production among the population associated with the production of geometric microlithes. It was the spread of the squeezing technique that was the feature, which connects Pre-Neolithic industries with trapezes with the Near and Middle East. Initial contacts in the area where Neolithic originated, led to the spread of innovative technologies. The first of these technologies was the pressing technique. In the future, established cultural ties will have allowed to assimilate and innovate more complex, including ceramic production, and elements of farming.

At the beginning of the Neolithic the zone of spreading of the pressing technique retained elements of unity, which led to some unification of the material culture. In particular, the microburing technique, which developed in the area of Castelnovien penetrates to the East. At the same time, the decay processes of the region determine the divergent development of individual parts of the region. In the Danube basin, the Krish and Starchevo ceramics are distributed, in the basin of the Dniester and the Southern Bug - ceramics of the Pechersk and Samchintsy type, in the Dnieper and Seversky Donets basins – Dnepro-Donets ceramics.

Thus, on the eve of the Neolithic we see the spread of the first innovation package in the regions associated with the sea coasts or in regions close to the sea coasts. The development of the Neolithic is connected to the assimilation of the second innovation package and the distribution of its carriers in the valleys of large rivers.

Thus, the Neolithization is a complex process which is not connected with the instantaneous distribution of the "Neolithic package". A similar scenario could also take place, but it is connected not with the very beginning of the Neolithic period. In the case with the region of use of trapezes made on the pressing blades, we observe several stages.

1. Creation of an information space within the framework of which individual innovations are disseminated.
2. Expansion of such information space, creation of information continuity.
3. Establishment of broad ties with the regions associated with the primary Neolithization.
4. Resumption of the discreteness of the information space associated with the spread of the population along the major river arteries.

Dmytro Kiosak, Anzhelika Kolesnychenko
Odessa, Ukraine

Neolithic of the Southern Bug: Culture or Economic Entity?

The Bug-Dniester culture (BDC) was characterized by space limits and time interval. It was the Neolithic of Southern Bug and Dniester valleys prior to Trypillya A – Precucuteni spread here. Now we know it is not true. There were also Linearbandkeramik (LBK) settlements in the region.

Bug-Dniester is composed of six very different ceramic phases or styles according to V.M. Danilenko, five – to V.I. Markevich, three – to D.Ja. Telegin and R. Tringham. Some of them have their own range of spread which only partly corresponds with the area of the Bug-Dniester culture. Lithic inventory is also undergone at least one radical change. The Kukrek tradition components disappeared at the transition between Early and Recent periods. D.L. Gaskevych suggested separating the Samchynsi culture out of Bug-Dniester entity. N.S. Kotova hypothesized that Bug-Dniester culture is in fact two different cultural aspects: Early (Pechera) and Late (Savran).

This mixed character leaves little space for interpretation of the Bug-Dniester culture as material traces of a certain homogenous socio-economic unit (tribe, group of tribes or group of communities) like it is common in the Soviet and Post-Soviet tradition. It is more likely an entity of mode of life. The “Bug-Dniestrians” shared the common way of life despite differences in the pottery ornamentation. V.M. Danilenko often referred to features of the way of life when he argued that a certain site belonged to BDK. According to him such features are location of sites by the good places for communal fishing, similar structures and intra-site spatial patterning, similarities in the lithic tool-kits, etc. He draws a picture of a riverine way of life.

An additional evidence can be driven out of a settlement pattern of “Bug-Dniester culture” sites compared with some typical agricultural settlement pattern. In this case the LBK sites of Moldova are taken for a reference sample.

The LBK settlement pattern for the zone to the east of Carpathians is described by O. Larina in an exemplary way. She studied a sample of 53 settlements situated between rivers Prut and Dniester. There are only 6 settlements are situated directly on the shore of the river in the floodplain. Forty three sites (81%) were found at some distance from the watercourse (100-700 m). They were situated on terraces (65%), slopes of the ter-

races (35%). Four settlements were revealed out of river valleys on the plateau of Codri highland or on its slope. The valleys of large rivers (Dniester, Reut, Prut) hosted only 8 (15%) settlements. Other sites were placed along medium and small rivers, creeks and gullies. There are no settlements on islands. The LBK population tended to choose locations where a large flat space was available immediately in the vicinity of the settlement. Probably, this fact can be explained by their need in a space for agricultural activities. There are no numerical data of this type on the settlements of LBK in Western Ukraine. However, all reports describe the similar spatial structure.

Three LBK settlements that are known between Bug and Dniester, comply with this pattern. Mainova Balka sites are situated on elevations of a creek flowing into the Tiligul river. Kamyane-Zavallia lies on the first valley terrace, 120 m away from the river course.

The Bug-Dniester settlement pattern was characterized by V.M. Danilenko, V.I. Markevich and M.T. Tovkajlo. We gathered information about sites from the Southern Bug valley and its tributaries. Among 50 recorded sites two thirds (33) are situated in the floodplain elevations, meadows, or terraces. Five settlements were excavated on river islands. Several others lie on such promontories that could be islands in the Neolithic period (Sokoltsy II, Melnychna Krucha). Two sites occupy the edge of the first valley terrace (10-20 m above the water-level). Five sites are revealed in a high position (40-50 m above the river) at the edge of the valley. There are 30 (60%) sites situated close to the rapids and 37 sites that lie directly on riverbanks or less than in 50 m from the watercourse. They are often found by studying a cliff of river-shore. Only 6 sites were discovered on the medium and small rivers. Others (44 sites – 88%) occupy banks of large rivers (the Southern Bug and Ingul).

Thus, LBK and Bug-Dniester demonstrate strikingly different settlement patterns. LBK settlements are mostly situated along small rivers and creeks, on the terraces. Bug-Dniester sites lie directly on the banks of major rivers, they are found close to the water, on meadows, elevations and terraces of floodplain or even on river-islands. There are no settlements of LBK on river islands in Ukraine and Moldova. It seems that LBK farmers searched places where the large flat surfaces are available for fields, while rapids, narrow river channels, river crossings were important for Bug-Dniester population.

Thus, we can hypothesis that the LBK and Bug-Dniester cultures had a different organization of space. The former looked for arable fields, the latter did for good fishing places. The revealed differences could be an evidence of different mobility cycles when the same space was utilized in various economic ways. The same area had no single carrying capacity. It was different for each specific human group. Their economic needs intersected only partially and thus, there was a limited competition for the spatially distributed resources.

According to our highly hypothetical interpretation of the available data, "Bug-Dniesterians" were people of different origin who settled the sites which provided an access and control over rivers and their inexhaustible resources. They were acquainted with agriculture and herding but had chosen to exploit fisheries and animals or plants of river valleys and were united rather by economic cycle and subsistence systems than by cultural attributes.

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Overview of the Osteological Mammal Material from the Surska Culture in the Context of Its Development and Adaptation of Its Communities to the Natural Environment

The paper considers the osteological mammal material belonging to the Sursk culture, which existed from the beginning of the 5th-4th to the 3rd millennium BC. It occupied territories of the Dnieper Rapids, the modern territories of Dnipro and Zaporizhia regions. The osteological mammal material was selected and described on sites of Vovniga (1929-31), Sursk Islands I and II (1946) and Shulayev Island (1931). Today, chronological limits of the Sursk culture have been clarified and supplemented, so the middle stage of the culture development accounts for 6150 - 5650 BC and the later stage for 5650 - 5200 BC. Archaeological research was carried out in the mid 20th century in connection with construction of the hydroelectric power plant and its post-war recovery. Today, the archaeological sites are completely flooded. The osteological material of the Sursk Island I and II was partially described by the researcher, archaeologist V.M. Danilenko. In more details, osteological materials of the Sursk Island I and II and the Shulayev Island were described by the zoologist I.G. Pidoplichko. The scientist focused on determination of species composition and calculation of the minimal number of individuals in each site.

The present study shall review the descriptive material from the archeological standpoint, clarify the species composition of mammal bones of and analyze traces on it.

All the osteological mammal material being examined is kitchen scraps from the consumed meat, bones of fur animals, animal bones with traces of processing and tools made of bones.

Poor preservation of the bone material, namely the high degree of fragmentation, rounding and cracks on a bone surface, significantly reduced the number of methods applied in the course of examination. They identified species, where possible, age and gender structure of animals, described the ratio of domesticated and wild species in selected sites.

The species composition in all sites differs by the percentage ratio of wild and domestic animals. The degree of domestication of pigs from the Sursk Island is still to be determined. Most of domesticated animal bones in presented in the Vovnigy site, the least number on the Shulayev Island. We may attribute these results to a different arrangement of selected cultural sites in the chronological period, different ways of adaptation to natural and geographical conditions and the possible incompleteness of samples.

Assessment of the bone chopping patterns allows us to conclude on the role of certain animal species in the cooking traditions of a society, the hunting strategy and the role of cattle breeding. The most important animals were wild deer, bison, roe, rabbit, domestic cow, goat or sheep. In sites of the early cultural development – the Shulayev Island and the Sursk Island – they found bones of dogs and wolves with traces of cooking.

A smaller percentage of bone was attributed to waste. In this case, processing signs were fragments, having a large number of chips concentrated in one place, retouching, and traces of bone cutting, polishing and others. Processing traces were found on deer horns, on long bones of hoofed animals, having the suitable size and strength. Bone products are harpoons, piercing tools of bone and a pendant made of a deer tooth.

The material examined allows us to conclude on existing of the developed cattle breeding in the culture communities and define the basic problems of adapting the economy to natural climatic conditions. It should be noted that the role of bone as a material for making tools significantly increased in that period. This may be explained by remoteness of flintstone deposits and availability of bone material. Revised materials and change in the ratio of domesticated and wild species from selected sites clearly shows how the economic strategy of communities of the Sursk culture evolved in the process of development.

Yevgen Nohin
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Preliminary Results of New Studies at the Neolithic Settlement Serikovy Sosny in the Seim River Basin

The settlement in the area Serikovy Sosny (village Krasne of the Bakhmatsky district, Chernihiv region) was found by the author in 2006. It occupies a large farewell rock, a butte of the terrace on the left bank of the Seim river, covered with pine forest. In order to define the thickness of the cultural layer of the site evaluation survey and pitting was carried out in 2007. In summer of 2017 it was decided to dig more test pits in order to evaluate the perspective areas for investigation of the large territory.

Two test pits of 2 x 2 m each were dug in the eastern part of the butte (site I). The thickness of the cultural layer was 0,8-0,9 m. In the pit 2 the corner of a construction was localized. It was deepened about 0,9 m into the natural. An inverted intact pot filled with soil was uncovered on the floor at the extreme corner of the construction. The pot in a funnel shape with the straight rim and rounded bottom was made in the molding strip technique. It was fully decorated with horizontal stripes of pseudo combed ornamentation made with a smooth stamp. Its height is15 cm, diameter on top is 13 cm, diameter on the shoulders is 15 cm. Its fabric has inclusions of fine sand, the inner surface of the vessel was smoothed with a combed stamp. The vessel is attributed to the Dniepro-Donetskaya ethno-cultural community.

A soil analysis from the inside of the pot carried out by the candidate of geographical sciences N. P. Gerasimenko suggested that found palynological spectrum can be classified as the forest-meadow type, prevailed on this territory in the first half of the early Atlantic period, approximately 7000-6000 years ago. An extremely high saturation of micro fragments of herbaceous plant tissues in the macerate is a distinctive feature of analyzed soil. Normally their high content in a natural deposit is not observed. Thus one can conclude about intentional fillin the pot with herbs.

Two more test pits of 2 x 2 m each were excavated in the western part of the farewell rock - a butte (site II). In one of them 5 fragments of a clay object were found. They laid in buried soil on an area of about 1 m^2. After a preliminary restoration it became possible to partially restore the shape of the object, and then, after a complete restoration with plaster, to fully reconstruct the object. This is a "monocle", with height – 9 cm, and diameter of the lower part – 7,5 cm, upper part – 5,8 cm. The color of the fabric is gray-brown. The fabric has an admixture of fine sand and a small amount of organic, uneven firing. The candidate of historical sciences O.G. Korvin-Piotrovskij has defined that similar “monocles” were made by the Trypillian population during stage CI (3600-3400 BC).

However the "monocle" in question is an imitation of the Trypillian "monocle", as poor quality of the manufacturing technique, color and firing of its fabric indicated.

Sergei Telizhenko
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Køkkenmødding of Eastern Ukraine

A kitchen heap (also kitchen midden or shell heap) or køkkenmødding is an archaeological site that contains domestic waste which may consist of animal bone, mollusc shells, ceramics, and other artefacts. Although historically the term køkkenmødding is associated with the Ertetbel culture, however, it became more extensive over the time. Here it is used to denote accumulations of saltwater and freshwater mussels utilized by man. For the territory of Ukraine marked out three types of køkkenmødding: sea, river and lake. In Eastern parts of Ukraine within the middle of the Siverskyi Donets basin, river and lake køkkenmødding are known. They are dated with a transitional period from the Mesolithic to the Neolithic or if to be more specific from the middle of the 7th until the end of the 6th millennium BC.

Sites of the transitional period located on the banks of rivers (Pavlograd) as well as on the high sand terrace above the lake (Tuba-V and Tuba Vb). Those sites are dated by the second half of the 7th millennium BC. Considering the specific features of the artefacts, they should be connected with the Matveyevo-Kurgansk culture circle.

Nowadays only one early Palaeolithic site with køkkenmødding – Starobilsk-I, that on the left bank of the Aidar River (left tributary of the Siverskyi Donets) is known. According to the carbon dating, obtained from fragments of ceramic tableware, bone and charcoal, the Starobilsk-I site can be synchronized with 15-11th layers of the Rakushechnyiy Yar (the Lower Don).

Finally, Late Palaeolithic sites that dated within the limits of the second half – end of the 6th millennium BC are presented by a wider circle of sites and settlements that located on lake terraces and on the banks of the rivers. Most of the settlements with køkkenmødding studied on the right bank of the Aidar River – Novoselivka-I, -II, -III. Another site – Tuba-I is situated on the sandy fluvial terrace of the left bank of the Siverskyi Donets, nearby the Lake Matkino. The pit filled with the flaps of bivalve mussels was here localized. According to V.O. Manko Tuba-I belongs to the 3rd stage of the Tubian culture. In its turn, complexes of Aidar, conforming to the features of material culture considered as mixed – Tuba-Mariupol.

A characteristic sign for all sites is dense layers or accumulations that consist of flaps and shells of freshwater mussels – *Unio* and *Viviparus*. The fullness of these layers is different and varies from a 0,05 m. to 0,45 m. In accumulations, except actual remains of mussels, there are other archaeological artefacts, among that wares of flint and bone, ceramic and faunistic complexes, and also wares from other kinds of stone and mussels.

During the Neolithic, the use of river/lake resources had no such value, as in a final Mesolithic-Neolithic. That is why, on this stage of the study, this question does not find a logical explanation yet, except that the wide use of mussels changed into agriculture, cattle breeding and hunt in the first place. It can be stated that flaps and shells of mussels were used to make decorations or adornments or as a grounded addition to ceramic mass as it was before. Nevertheless, it seems that the use of mussels' meat in meal did not have mass character.

Thus, such cultural phenomenon as køkkenmødding on the territory of East Ukraine existed for almost 1500 years. Its origins should be connected with the influence of cultures of the south and south-east directions – the North-eastern Azov region and Lower Don territories.

Oleh Tuboltsev
Zaporizhia, Ukraine

Obsidian Track

While studying ancient trade and exchange, the important role is played by the raw material sourcing. Collections of artefact obsidian are characteristic particularly for regions of Europe and Asia. Mapping and provenance analysis are combined to study not just scale of exchange in ancient societies on the Caucasus. They also indicate directions of exchange – ancient trade routes.

In this paper we gathered data on 52 obsidian finds from the Lower Dnieper valley and the Circum-Azov Sea region. Over half items (29) are found in stratigraphic conditions in the course of excavations. The others came from surfaces of sites.

Stratified sites include:

– Palaeolithic (Telmanovskaya) –1 item;
– Mesolithic (Gvozdovka) – 1 item;
– Neolithic (Rassypna 6 – 6 items, Ust'-Bystraya – 2 items, Semenivka 1 – 1 item, Rassypnaya 1 – 1 item, Frontove-1 – 1 item, Kyrove – 1 item, Novochepshiy – 1 item, Shkhancherenkhabl – over 1 item) – 16 items;
– Eneolithic (Mukhin II burial, m.5, b.9) – 1 item;
– Bronze Age (Liventsivka fortress) – 11 items.

Surface materials include Lysa Gora – 16 items, Kyrpichnoe – 2-3 items, Kamyana Mogyla – 1 item, Zhukovskoe VIII – 1, Novy Egorlyk – 1, Borovske – 1.

Neolithic sites overwhelmingly dominate the pattern. Comparing the archaeological contexts, we can easily demonstrate that obsidian-containing contexts share some common traits (flat-bottomed vessels, ornamented by a short denticulate stamp and incised lines, with separate and stepping imprints of stamp, outer "collar" at a rim, trapezes with flattened dorsal surface, bifacially treated points and probably appearance of the first copper artefacts). They are dated to the final Neolithic mostly.

In 1960-ies obsidian was studied by comparision of light diffraction parameters. The obsidians from Frontove 1 (Crimea) and from several sites in Northern Caucausus (khutor Vesely, Meshoko, Yasnevaya Poliana, Skala) were studied in this way. Since 1980-ies the new method was applied. It consists in comparison of absolute concentrations of chemical elements in a sample. This method was introduced by R.S. Badalyan and others. Today, high-precision data on obsidian composition help to define characteristic traits of different flows of rhyolite lava. Modern LA-ICP-MS analysis is carried out by stationary and portative equipment. Thanks to efforts of P. Biagi and B. Gratuze some samples from the Azov Sea region were studied in the laboratory of Marseille University.

LA-ICP-MS analysis was applied to 7 samples out of 52. The selected samples were from Lysa Gora – 6 items and Semenivka – 1 item.

Semenivka 1. A multi-layered settlement is situated on the terrace under the hill Krucha on the right bank of the Molochna River. The site was excavated in 1991-1992. Ob-

sidian is represented by proximal part of a blade that was found in the layer of the Late Azov-Dnieper culture. LA-ICP-MS analysis showed that raw material had come from Cappadocian outcrop Göllüdağ (compositional group Göllüdağ 5). Radiocarbon dates for this horizon are 6360±70 BP (5351±83 Cal.BC). An upper layer is attributed to the Seredny Stog culture and is dated to 5525±70 BP (4371±69 Cal.BC). Thus obsidian entered the region between 5300-4300 years cal BC.

Lysa Gora. The site is situated on the left bank of the Konski Vody river. This territory was called Velyky Lug prior to flooding by the Kakhovka artificial lake. Today hundreds of sites are destroyed by active erosion. The bank at Lysa Gora is fled by chipped stone finds (there are several thousands of them). In 1988-2015 obsidians were found there. The collection includes 15 fragments of blades and a single flake. The application of GPS helped us to precisely define the location of samples recovery. 6 samples (including flake) were subdued to LA-ICP-MS analysis. The results revealed several sources of raw material: 4 items – Syunik 3, Armenia, 2 – Baksan, Kabardino-Balkaria, 1 flake – from unknown outcrop.

Late Neolithic horizons with obsidians on sites of the Azov region, Crimea and the Circum-Caspian region are attributed to various archaeological cultures: Azov-Dnieper (Semenivka 1), sites of Frontove 1, Rassypnaya 6 type, Donetsk and the Lower Don (Ust'-Bystraya), Dzhangar (Dzhangar, Tu-Buzgu-Khuduk 1). Obsidian finds mark the routes of wide exchange net in the space between the Caucasus, Caspian Sea and the Lower Dnieper valley.

There were two zones of finds: an import zone and a contact zone. The contact zone includes sites where production waste (flakes, chips) were found. The sites along the Egorlyk river (Rassypnaya 6, Zhukovskaya 8) can be placed in this zone. Obsidian entered the import zone in a shape of blades and ready-made tools.

There are some common traits in the topography of the sites with obsidian. Often they are situated close to wide swampy areas – Velyky Lug, Molochny Liman, Manych depression, Sarpinska lowland. Mostly obsidian is found on the sites of multiple frequentations. They are situated on the high younger terraces of the small rivers. The settlement is multi-layered (Mesolithic-Eneolithic). The obsidian is found in the Neolithic-Eneolithic layers.

Synchronously the Shulaveri-Shomutepe and Leyla-Tepe cultures developed in the Caucasus. Their rapid expansion was accompanied by a rise of obsidian utilization. The early sites contained 45-57% of obsidian, developed sites – 84-87%. The main strategy of obsidian exploitation is based on Multiple model - Alikemektepesi (Syunik 3), Mentesh Tepe (Syunik 3, Chikiani, Gutansar, Arteni 3), Leyla-Tepe (Baksan, Syunik 3). That's why, obsidians from various sources are often found together also in the more distant sites.

Aleksandr Diachenko
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Geographic Determinism and Trypillya Contact Networks, 4200-3000/2900 BCE

Network analysis of data from the remote past is intensively developed sets of mathematical tools that have significant potential in reframing the paradigms of prehistoric archaeology in Europe. Related analysis of the distribution of sites in real landscapes, which mostly includes estimation of distances in real physical space and/or elevation of

sites, increases the explanatory capacity of the model results. Consideration of the large-scale geographic determinism, relation of certain settlement clusters to resources of certain quality leads to specification of interaction between populations of the remote past, while related statistical procedures allow contributions to already existent schemes of relative chronology.

This paper deals with the Trypillya contact networks between the Carpathians and the Dnieper, c. 4200 – 3000/2900 BCE. Comparison of the relative chronology of sites expected from the results of application of network analysis to settlement clusters and the absolute dates and/or typo-chronologies lead to the identification of 'cultural incubators' (after E. Crema and M. Lake) within the Cucuteni-Trypillya cultural complex and explanation of their impact on spread of innovations. The obtained results raise the question of re-assessment of the demography related variables in network analysis applied to archaeological data.

Dmytro Chernovol
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Outbuildings of the Trypillya Culture

Outbuildings that were used for different household activities may be separated into two groups. The first group unites the outbuildings, similar to houses. The second group includes the remains of outbuildings that do not have traces of construction.

Outbuildings of the first group:

1) The storage – '*ploshchadka*' of the small size referred to Petrenskaya local group that did not include space, required for a man to live. The entire space was occupied by vessels. Seven pythoi that were not known for the Petrenskaya local group previously were first found in this outbuilding.

2) The outbuilding used for copper smelting. The one-storey dwelling had wattle-and-daub walls and pits in its ground floor that were used for utilization of production waste.

3) Outbuildings reaching 4 x 4 m in size that contained a through of 2 x 2 m in size on the ground floor. Six grinding-stones were found in one of these outbuildings near the through. As of today 4 outbuildings of this kind are known. All of them were built almost being linked to the walls of houses. Maybe, these outbuildings were used by large groups for cooking food related to some celebrations and ceremonies.

Outbuildings of the second group:

1) Installations made of clay are known for all the duration of culture. They were located near the houses. Probably, the installations were used for cooking in summer-time. A square construction made of stones, placed in 3 m from each other in the perimeter of one of the installations, was found in one case. It is not excluded that the stones were used to keep the posts. Hence, the installation and stone construction may be interpreted as remains of the construction above the ground.

2) Since the second half of existence of the Trypillya culture, BII stage, pits contain the traces of flint knapping. The roofs above such pits are assumed. Hence, the constructions are interpreted as flint workshops.

Thus, we assume 5 variations in Trypillya outbuildings which were used for different household activities.

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Economics of Hunting of Trypillian Tribes and Their Neighbours at the C I Stage

Climate change that took place during the Eneolithic period had a fairly significant impact on the population of the forest-steppe and steppe regions of the Dnipro Right Bank. Aridization of the climate forced the steppe population to move north to the forest-steppe zone, which forced them to adapt to the new conditions of economy. Obviously, these changes had an impact on population of the Trypillian culture and their neighbours. The Eneolithic populations had to adapt to the new challenges which were prepared by climate changes. These changes have had an impact on various fields of activity – agriculture, stockbreeding, non-food products, trade, etc. One of these areas is hunting. Thus, despite the main direction of economy in Trypillian population – agriculture, in Seredniy Stog population – stockbreeding, hunting was a significant part of the economy of both communities. Also important is the role of hunting in intercultural exchanges. In this key it is interesting to trace how people with different types of economy adapted to changes in the same or near climatic conditions. There is now no doubt that the communities were in contact with each other. As osteological data show, the hunting of the two cultures has become especially important for the population of both cultures during periods of humidification of the climate, at the same time losing its importance in arid periods, when the first place in obtaining meat was stockbreeding.

Investigation of hunting as an integral part of the economy of the Eneolithic communities is possible through interdisciplinary approaches to the issue. The study of the lithic inventory, along with osteological data, as well as the data of paleogeographic research, allows us to reconstruct the hunting of certain groups of the population, to see the changes that took place in the environment and the adaptation of the Eneolithic communities to environmental conditions in the 4th millennium BC.

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Silurinan Flint as Raw Material in the Neolithic (5400-1800 BC) in Present-day Latvia

"Local" raw material – Silurian flint was used for tool production along with imported Cretaceous and Carboniferous flint starting from the Mesolithic in present-day Latvia. Silurian flint by its physical and knapping characteristics differs from imported ones. It is "softer" and less homogeneous, therefore it has been described by researchers as poor quality raw material. It has been observed that in present-day Latvia pebbles of Silurian flint occur most commonly in the northern part of the country and pebbles of flint thought to be of the same geological age occur on the beaches of the Kurzeme Peninsula.

Neolithic artefacts and production waste showed that in present-day Latvia Silurian flint mainly was used during the Middle Neolithic (4100 – 2900 BC). Small number of artefacts made from Silurian flint was found in the Late Neolithic sites as well. However in the Early Neolithic sites this raw material has not been found yet. Size of Silurian flint

pebbles is rarely greater than 10 cm, therefore it was mainly used for small scale tools, such as scrapers and arrowheads, production.

Geographical distribution of debitage and artefacts produced from Silurian flint pointed out that most widely it was used in sites in the coastal belt of the Kurzeme Peninsula by the users of Comb Ceramic and Early and Late Sārnate Ware. Small count of artefacts produced from this type of flint were found in inland sites in western and eastern Latvia as well, particularly in the environs of Lake Zebrus and Lake Lubāns. In western Latvia artefacts were found in context with already mentioned ceramic types, however in eastern Latvia they were found in context with Comb Ceramic and Piestiņa Ware. Ceramic wares such as Piestiņa in eastern Latvia and Early/Late Sārnate in the west manifest a combination of traits deriving from Comb Ceramics as well as from the Narva Ceramics of the Early Neolithic.

Analysis of debitage and artefacts from Silurian flint revealed differences in knapping techniques used by Comb Ceramic users and Early/Late Sārnate Ware users in the western Latvia. The first difference was the way how Silurian flint pebbles were splitted into flakes, what was main blank type during the Middle Neolithic in present-day Latvia. The Comb Ceramic users reduced pebbles to platform cores, however the Early and Late Sārnate Ware users used pebbles cortex as platform. In that way, Early and Late Sārnate Ware users produced much thicker and in size larger tablets shape flakes. The second difference is that only Comb Ceramic users produced biface arrowheads from Silurian flint. Most of these arrowheads were produced using percussion and pressure flaking together. However Early and Late Sārnate Ware users produced biface arrowheads from Cretaceous flint and mostly only with bifacial perssure flaking along the edges. That the users of Comb Ceramic in western Latvia in particular used Silurian flint for biface production using percussion and pressure flaking most probably can be explained in terms of the fact that this is the periphery of the area of distribution of Comb Ceramics, where was inadequate access to Cretaceous and particularly Carboniferous flint, which related with tradition of biface arrowhead production using percussion and pressure flaking techniques in eastern Latvia.

Silurian flint as raw material is highlighting spatio-temporal pattern of cultural traits, technology transfer inside and between cultures, as well as trading network role for distribution of different flint knapping technologies that were used in present-day Latvia and adjacent areas during the Neolithic.

Yevhen Pichkur
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Mining and Transportation of Flintstone by Cucuteni-Trypillyan Tribes

Well-developed economy of Tripolye culture (hereinafter – TK) during the whole range of its development required the constant usage of numerous tools made of metals, stone and clay. For different reasons, the majority of tools used by the 'Trypillians' in production and, in some cases, rituals were made of flint. The Trypillian populations certainly knew the location of raw materials. In my view, the available sources of flint and clay were also the factors influencing the decision-making in choosing the place for the location of settlements.

Raw material was extracted in different ways. The most simple and, hence, widely spread way of extracting the flint was gathering the raw material from the surface not far from settlements. For instance, the 'Kanev' flint that was gathered from surface in Kanev locations and along the banks of Dnieper was used in craft workshop at the settlement of Pekari II and other sites of this micro-region. This raw material was also known by the earliest prehistoric populations of the area. The Industry of the Late Paleolithic Mezhyrich site is based on 'Kanev' flint. Sources of raw materials of the open type are also known in the region of Goryn river. Population of the settlement of Bodaki located there, hence, might have the related specialization in economic activities. According to N.N. Skakun who conducted research at this site, Bodaki was a settlement-'workshop' producing the tools that were exported to the TK populations in other regions. Six places of extraction of the raw material are noted within a radius of 5 km from the site. Gathering flints from the surface was also an ordinary case in the Dniester region. This may be exemplified by the sources of raw materials near the village of Neporotovo, where one of the well-known Trypillian sites is located. Local sources of raw materials were found in the Revukha river region in the basin of the Southern Bug. Tools made of this flint are counted as a half of collection of the TK site of Apolianka located there. Raw materials were found in ravine, about 5 m from the modern surface. Most probably, these sources were also known to the TK populations. Examples of this kind are numerous.

Extraction of raw materials located in Cretaceous layers and other geological stratums required special equipment and technology. S.N. Bibikov investigated the tunnels in Dniester region (Bila Gora). According the estimations of this scholar, 'several hundred of cubic meters of flint were extracted here'. In the Upper Dniester region significant production complexes were found by B.A. Vasilenko. These included mines, craft workshops and specialized settlements of Trypillian time. We may underline the related production complex near the village of Bukivna, which included 6 sites, 15 craft workshops and mines with tunnel technology of extraction the raw material. 277 tunnels clustered in 8 groups were counted in this area. Workshops were located nearby. The latter are also known at settlements related to production of flint tools. Besides this, B.A. Vasilenko identified the other groups of sites in this complex. These were related to gathering the raw materials from the surface in washings and erosions. The extraction of flint in large volume was not limited to the Dniester region and Volhyn. Production complex related to extraction and processing the flint was investigated by E.V. Tsvek in the Velyka Vys river basin. Mines were located near the village of Korobchino. Craft workshops are noted for the site of Rubanyj Mist located in 1 km from the place, where the flint was extracted. One craft workshop and two mines were investigated there. Of course, numerous objects were also found on surface. The sources of raw materials near Korobchino are so different in quality that attracted populations since the Middle Paleolithic, which is confirmed by the set of related sites in the area.

Besides their own needs, 'producers' of flint supported other populations with raw materials. Different scholars noted the transportation of flints to relatively long distances. This is confirmed by the finds of tools made of raw materials that are not typical for the particular areas, where the sites are located. This may be exemplified by the TK settlements in the Southern Bug and Dnieper interfluve, well-known by the numerous 'imports'. According to S.V. Gusev, similar situation was typical for the Middle Bug region. Most probably, the flints were imported right from the places of their extraction.

We should not exclude that the blades were exported and imported. This may be confirmed by the related deposits of high-quality raw material.

'Close' and 'far' radius may be identified in spatial distribution of flint. In the first case local population supported themselves with raw materials and its products. I would not exclude the possibility of organization the expeditions that reached short distances to extract raw materials. These were made possible by the knowledge in local resources. In the second case the high-scale production focused on export is meant.

Considering the fact that mines related to extraction of flints required the high amount of work and specialized knowledge, as well as specialized workshops and long-distance transportation of flint I assume the community craft in Trypillian societies. Thus, questions on flint production and distribution, especially taking into account its comprehensive character and scale, should be considered as very important issues in comprehensive studies in Trypillian economy.

Pavlo Shydlovskyi, Ivan Radomskyi, Dmytro Zhelaga
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Lithic Assemblages of Early Agricultural Communities in Western Ukraine

In recent years a number of settlements which belong to different communities of the Neo-Chalcolithic time have been investigated on the territory of the south-western part of Ukraine and Moldova. All of them are located in the basins of the Prut, Dniester and Southern Bug and show different variants of the economy and culture of a particular region. Sakarovka (Krish in Moldova), Pugach, Gard, Dobrianka I-III (the Bug-Dniester culture), Yosypivka (LBK), Bernashivka and Ozheve-Island (Cucuteni-Trypillya) should be noted among these settlements. The peculiarity of these complex investigations is the high methodical level of research, which resulted in obtaining significant series of different categories of material culture, including presentable lithic assemblages, which enables to hold a comparative analysis of producing inventory of these sites, and to follow the common and distinctive features in processing technology for such important for the Stone Age material as flint.

The report presents the materials of lithic industry from such early farmers' settlements as Yosypivka I (LBK), Bernashivka I (Trypillya A) and Ozheve-Island (Trypillya B1), which are situated in one geographical region of the Middle Dniester. These cultural unities are associated with a complete reorientation of the population on extensive agriculture that results in the spread of permanent settlements with clay architecture. In terms of lithic technology, a complete shift to agriculture in the economy is reflected in trying to get the regular blades as blanks for the sickle insets – dissemination of the technology of forced pressure with using simple mechanisms – levers.

The literature has repeatedly expressed the idea of the genetic affinity of these cultures, and therefore the similarity of their flint inventory. Despite advances in methods of excavation and significant expansion of sources of research, understanding the processes of prehistoric cultures development still mostly remains within the unilinear evolutionary approach, where one phenomenon has to "logically" grow in from another with the absence of abrupt change in between.

But detailed analysis of the elements of material culture suggests no single-line development of each archaeological community. Every culture develops its own technological tradition that is more pronounced in lithic inventory than in ceramic complexes. If ceramic systems are often quite colorful phenomenon, lithic assemblages demonstrates a high degree of unification, making it important for the cultural identification of the sites. The peculiarity of every cultural phenomenon seen in technology, which characterized by a focus on a particular type of blank and design of tools primarily associated with the procuring of food resources – arrowheads and attachments for sickles. Comparative analysis of assemblages proves, that there is no intermediate transition traditions between the technological vectors of LBC, Trypillya A and Trypillya B1.

We can indicate two main technology types – microlithic and macrolithic which are associated with two directions of Neolithic economy – a complex economy with large part of appropriating forms (the Bug-Dniester culture, Trypillya A) and economy definitely focused on agriculture (LBK, Trypillya B).

POSTERS

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Spatial Analysis of Marshy Areas: Neolithic Tell-Sites in Pelagonia

Pelagonia has the highest density of Neolithic settlements in Republic of Macedonia, whose spatial distribution and patterns have been rarely explored on bigger scales. One of the main reasons for this density is the soil: highly fertile layers built upon thick alluvium and lake sediment which improved the quality of the soil over time. Even though a reliable chronological classification of the settlements found here is yet to be made, we believe that tools like GIS, packages for spatial analysis based on R, and available digital elevation models with acceptable quality are a good starting point for directing the archaeological discourse towards a more landscape-oriented research.

This poster will review some of the recent spatial analysis and digital methodologies applied in the research of Neolithic tell-sites in Pelagonia by building on seemingly trivial Euclidean geometry, to more complex spatial functions for recognizing significant landscape patterns. Therefore, an initial reconstruction of the interaction between the first agricultural communities in Pelagonia and how they reacted to their, mostly marshy surroundings was produced in order to explore any significance of the tells distribution across the Pelagonian plain.

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Wooden Post Buildings of the Lake Settlement Serteya XIV

The lake settlement Serteya XIV (Velizhskiy district, Smolensk region, Russia), studied during the 1990-s and the beginning 2000-s, was found to contain several different "habitation horizons" with finds and building remains dating from the Mesolithic to the Final Neolithic or the Chalcolithic (the 9th - the first half of the 2nd Mill. cal. BC). Cultural layers of the settlement lie mostly within sandy coastal sediments. There were not sterile layers between different "habitation horizons" and all the findings forms almost single stratigraphical mass. Therefore, we have difficulties of definition of settlement objects cultural attribution and their relative chronology. If the construction of the Mesolithic – Early Neolithic (the 9th-7th Mill. cal BC) detected quite clearly through the depressed floors, and easier to attribute them analyzing the housing spots filled findings, then post ground-based buildings are more complicated. The remains of two suchlike buildings (№ 192 and 280) were allocated in the settlement thanks to the traces of post holes in the layer of grayish-yellow sand, on the second "habitation horizon", consistent with the findings of the mid - late Early Neolithic (the 6th Mill. cal BC).

The oval building of a 6x10 m size oriented east-west № 192 limits were marked with large and deep post holes. Several rows of posts were inside the structure as well. The hearth remains were detected in the eastern part of the building, which was an oval depression about 0,1 m deep of 1,6 x 1 m wide with burned and chopped stones inside. On the perimeter it was limited by a number of pole pits.

Building № 280 of an 8 x 10 m size sub-oval shape was marked by post and pole holes located on its perimeter. One row of post holes held through the middle of the building along the long wall. Post and pole holes forming a ring of max diameter – 1,1 m were concentrated near the West wall facing the entrance. Inside this ring cracked rocks with burned some of them were found. The calcined whitish sandy loam oval lens of a 0,64 x 0,92 m size and of 0,04 m thickness containing small charcoals and burnt cracked stones as well as fragments of calcined bones was also revealed there. It was probably the remains of the ground-based hearth related to the building.

Within the limits of these constructions at the floor level and in filling of the fireplace lenses flint flakes and blades as well as tools: scrapers, points, leaf-shaped arrowheads were found. Pottery is represented by fragments of the Serteyskaya Early Neolithic culture (the 7th - 5.3 Mill. cal BC): not ornamented vessels with large amounts of organic admixture; the pots covered with deep scratches on both sides and decorated with incisions under the rim and thin-walled pottery with poke-style ornamentation and admixture of sand. Fragments of the not decorated Early Neolithic pottery were prevailed so the buildings were related to the final Serteyskaya Early Neolithic culture.

The aim of present research is to analyze the building № 192 and № 280 constructions, to clarify their cultural attribution as well as absolute and relative chronology if it's possible. It is necessary to identify the finds from the buildings floor levels and analyze them, to make a spatial analysis of structures remains and finds to achieve these goals.

The construction of 47 and 63 m^2 size were most likely determined to be built here during the existence of Serteyskaya Early Neolithic culture ceramics phase "c" (approx. the mid. 6th Mill. cal BC), but there are also finds of the Rudnyanskaya culture among the ceramic material (the late 6th – second quarter of the 5th Mill. cal BC), which is the result of the Narva culture (beginning about 5.5/5.2 Mill. cal BC) influence. New shape of large ground-based timber buildings replaced the Early Neolithic beginning structures with the depressed floors. This change of the buildings type may be associated with the influence of the neighboring regions population during the second half of the 6th Mill. cal BC what was reflected in the ceramic material as well. This type of buildings continued to exist in the study area and apparently got the development in pile structures of the end of the 4th-3rd Mill. cal BC revealed in Smolensk and Pskov regions of Russia.

Anna Malyutina
St. Petersburg, Russia

Bone and Antler Items From Peat-Bog Settlements (the 6th – 3rd mill. BC) of North-Western Russia (Dnepr - Dvina Basin). Technological and Functional Features

The systematic research of archaeological heritage on the territory of Lovat'-Dvina interfluve (and in general, the Dnepr-Dvina basin) is connected with activity of Prof. A.M. Miklyaev (1934-1993). Under his management the Nevelskaya expedition of the

State Hermitage (created in 1964; soon renamed into the Northwest expedition of the State Hermitage), for several decades has successfully excavated sites of various cultures and archeological periods and have been studying them in details. Work of the expedition is in process (under the direction of A.N. Mazurkevich). Settlements of the Neolithic – the beginning of the Bronze Age which occupation layers had been preserved in wet peat-bog ground have been found and explored among excavated sites of the Stone Age. Due to that fact not only pottery and stone artefacts have remained, but also products from organic materials – wood, bone and antler.

Bone and antler implements are presented on several settlements of Lovat'-Dvina interfluve: Usviaty IV, Dubokrai I and Dubokrai V, Serteya II, Serteya X, Rudnya Serteyskaya and Naumovo, Udvyaty I, Dyazditsa I, II, it contains more than 300 objects. This category of finds includes: finished products (utilitarian and not utilitarian character), their preforms and production wastes. This circumstance allows to consider the material not only from the point of morphology and analogies, but it lets us study manufacturing techniques with definition of function of tools on the settlements. Preservation degree of items surface is quite good in general, that gives opportunity to analyze it on macro- and microlevel. Bone and antler implements of the settlements belong to the periods from early till the late Neolithic to the beginning of the Bronze Age, have various cultural attribution, based on a complex of distinctive signs of ceramic and flint artefacts altogether with the received absolute dating.

Bones of trade animals (an elk, a red deer, a bear, a boar etc.) served as raw materials for processing. Species diversity of the used bones varied within existence of different archeological cultures of this region.

By results of the technological analysis of bone and antler artefacts of the settlements two stages of processing of raw materials are allocated. Preforms receiving for various categories of items and traces of primary treatment connected with it, are characterized by the following operations: fracture with the help of heavy object, longitudinal or latitudinal knapping using preliminary prepared (in a case with an antler raw materials – notched) grooves, knapping using the cracks, transversal fracture by bending, chopping. Different operations could be made on the preform – scraping, drilling, abrasion and polishing. These operations connected with the secondary treatment of the preform. These traces are overlapping, usually, traces of the preform making, sometimes, partly or entirely destroying them. That is why, existence of not only finished pieces but also items with traces left on different stages of modelling is very important in order to reconstruct the whole "chain of operation sequence". Treatment was made by flint tools. Only at late stages (the layer A, the Bronze Age) of the settlement of Usviaty IV existence traces of treatment by a metallic tool are fixed. In general, material is distinguished by the production care, in some cases it does not let us define either raw materials or the extent of its processing.

On the basis of studying macro- and the microtraces, connected with using, information about function of concrete tools on the settlement has been obtained. The available material, in general, reflects a typical for a Neolithic period picture of using of bone and antler tools: treatment of skins (piercing, cutting and scraping), wood treatment (from removal of bark and piercing of birch bark to works with volume forms), work on wet and dry clay (at production of ceramic pottery). The wide arsenal of the implements was used in hunting and fishing. In addition the analysis of microtraces of using has allowed to reveal specific, not standard, forms of bone and antler tools which purpose wasn't obvious.

The Early Neolithic settlements Serteya X and Rudnya Serteyskaya are generally presented by various types of arrowheads. Available types of arrowheads are typologically close to finds from the Baltic region, to the Narva culture heritage. Here we can see poor toolkit, and its morphological and technological features have no continuation in tradition of treatment of bone and antler on the settlements of the Middle and Late Neolithic periods in this region. Not numerous items of these sites speak, apparently, about their narrow economic and cultural specialization.

Settlements of the Usvyatskaya Middle Neolithic culture (Usviaty IV, Dubokrai V, Dyazditsa I, II) present the formed set of various bone and antler tools. Ways of treatment and receiving items from bone and antler on these sites also coincide, having the identical traditions connected with builders of the pile-dwelling settlements. Material is presented by almost all categories of tools from bone and antler, displaying all range of domestic and trade life. These are knives, polishers and spatules, spoons, chisels, pressure flakers, points, arrowheads, harpoons. A considerable part amounts jewelry and objects of art.

On the basis of addition of various cultural components Late Neolithic traditions have been developed. These processes have found reflection in bone and antler items. Certain categories of products continue to be used (spatules, for example), but also new forms, new categories appear (scraper on a wood, fish knife). Material of the settlements of Naumovo, Dubokrai I, Udvyati I and Serteya II is not numerous, but various.

Yana Morozova, Sergii Zelenko
Kyiv, Ukraine

Perspectives for Wetland Archaeology, Surveys and Underwater Exploration in the Dnieper River, Ukraine

The poster demonstrates the modern state of the arts and perspectives of archaeological research in Ukrainian wetlands and marshes, in the Dnieper River and its water system. Surveys and exploration in the Dnieper valley show a high concentration of archaeological sites of various epochs from the Paleolithic to the Bronze Age in Kiev, Chernigov and Cherkassy regions along the Dnieper River; this evidence gives a strong reason for discovering and investigating Ukrainian wetland sites and interesting underwater findings.

Marta Andriiyovvych
Kyiv, Ukraine

Patterns of Ornaments on the Ceramic from the Lysa Gora Cemetery

From four types of the Neolithic ceramics that were determined for the Dnieper-Donetsk culture region, only the fourth type after D.Y. Telegin typology has been found in the Lysa Gora cemetery. This type is represented by biconical vessels with the flat bottom and straight «collar» rim. Inside of this type, we are able to identify subtypes by their size, type and ornament disposition on the body of a vessel.

The vessels with the flat bottom, straight vertical walls and cut to the middle rim are most common. In the second period biconical vessels with the big flat "collar" rim became more popular. The plot of the composition and ornaments that decorated the body of the vessel in the first and second period also was changed.

The ornament in the first period is the imprints of the comb punches forming the horizontal rows, the fir-tree, the zigzag, the ribbons, limited by the scratched lines, the comb marks.

The ornament in the first period is the imprints of the comb punches forming the horizontal rows, the fir-tree, the zigzag, the ribbons, limited by the scratched lines, the comb marks. In the second period - the ornament of the triangular stroked decoration and the shaded horizontal lines, which form plots: geometric compositions, fir trees, nets, extends.

A linear ornament consists of cut, screwed or flattened lines. Often, it is a straight line, in some cases there are curvilinear compositions, sometimes wavy ornament.

In different periods of culture, there are certain differences in the motifs of patterns, the ways of their placement, the degree of coverage of the ornament of the surface of vessels. In the first period of culture, the pattern on vessels did not adhere to a clear horizontal zonation.

Pots of the second period are ornamented from the rim to bottom. Sometimes the pattern enters the inside of the neck and rim of the vessel, as well as the bottom. The style of geometric rectilinear ornament prevails, which most often includes horizontal rows and stripes. Rows consist of impressions of the comb, the triangular short stroked decoration. Impressions of the comb, the triangular short stroked decoration in individual rows have a slope to the right or to the left, resulting in a pattern having a kind of fir tree.

Less often, the ornamental field consisted of several horizontal stripes, separated by the triangular stroked decoration of the necks or flattened lines. The entire strip is covered with lines from the stroked decoration or impressions of the comb. Sometimes the entire strip filled with "broken" rows, which in general creates a motive of short vertical columns. However, curvilinear pattern of ornament did not common for this period.

The feature of ceramics is its ornamented bottom. Patterns consist of concentric circles, elongated-oval circles, radial lines.

At the end of the second – at the beginning of the third period of the Dnieper-Donetsk culture region a tendency is to create a pattern with a predominance of vertical or oblique columns and stripes, more often there is a pattern of ornament in the form of individual figures (triangles, lozenges, which sparsely cover the surface of the vessel).

The development and change of the disposition of ornament on ceramics is one of the keys to understand socio-cultural connections on the territory of the Dnieper-Donetsk cultural region.

WORKSHOPS

Lacustrian Dendrochronology in the Context Underwater of Pile Dwelling. Archaeology at Lake Biel, Switzerland

Lead by **Matthias Bolliger and John Francuz**
Bern, Switzerland

In the workshop on lacustrian dendrochronology, participants will have the opportunity to visually cross - match and correlate ring - width curves, build mean - curve chronologies and date them in calendar time.

Underwater Exploration of Wetland and Peat-Bog Sites. Perspectives and Problems

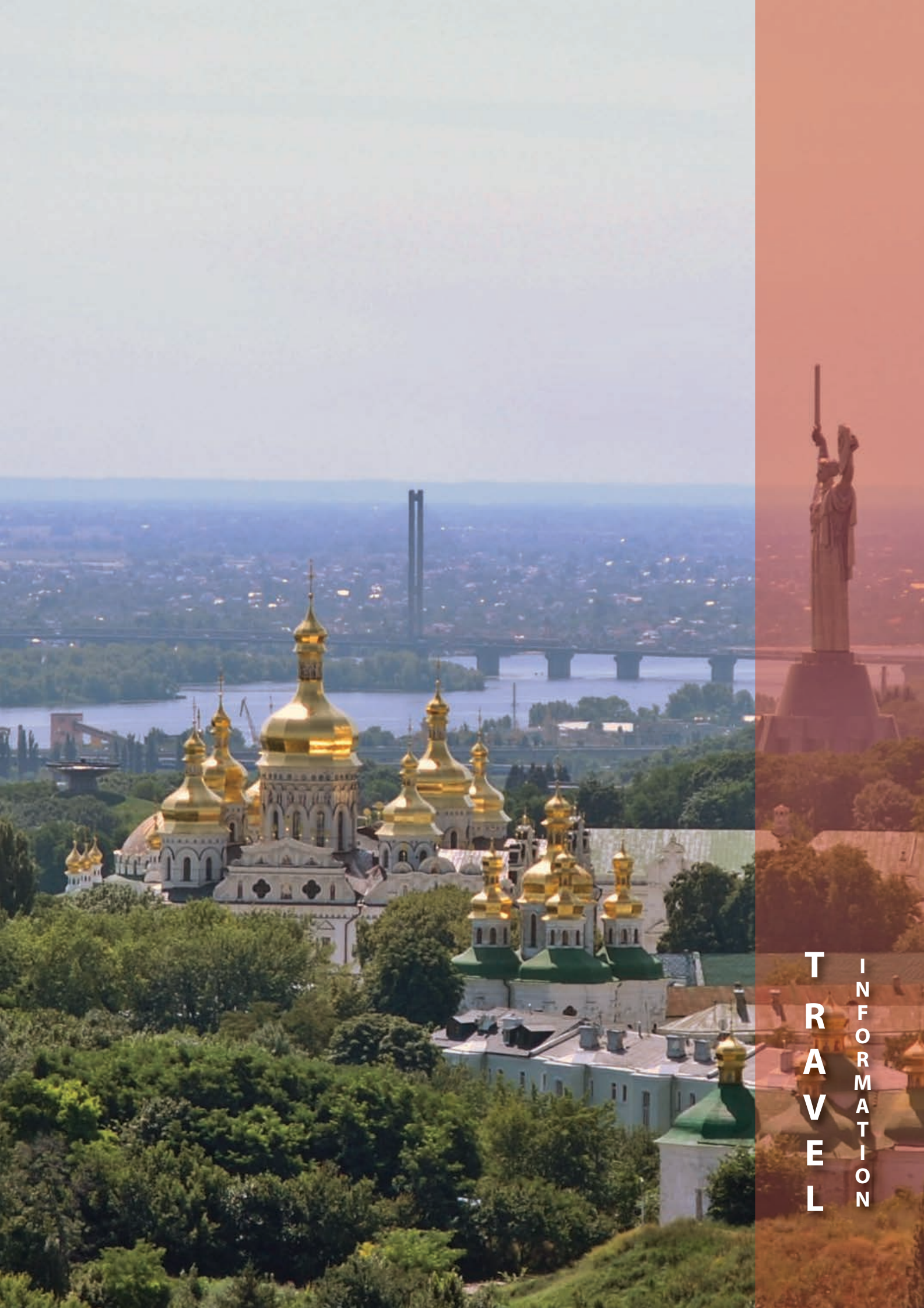
Lead by **Ekaterina Dolbunova* and Sergii Zelenko****
* St. Petersburg, Russia, ** Kyiv, Ukraine

The topics to be discussed during the workshop are:

– Law basis of diving, incl. underwater archaeology in countries - participants. Short presentations by participants of the ESD course;

– Peat - bog sites and underwater excavations: methods and organization in countries - participants;

– Perspectives and plans for the future, (presented by the members of the NEENAWA group).



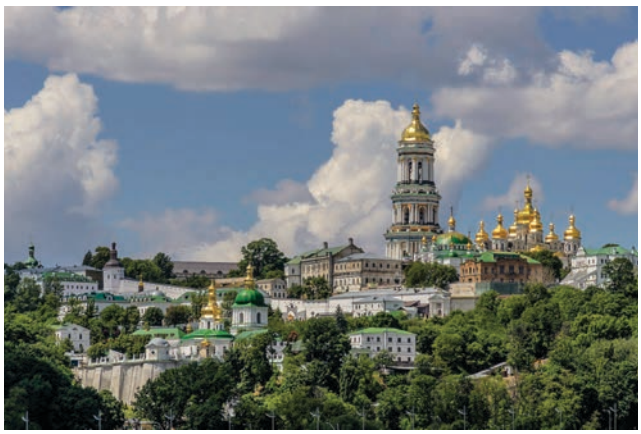
TRAVEL INFORMATION

1. Trypillya Village. Kyiv Regional Archaeological Museum in Trypillya.

2. Kaniv Nature Reserve. Kaniv, Cherkasy region.

3. National Historical and Ethnographic Preserve "Pereyaslav".

TRAVEL ROUTE MAP



The National Kyiv-Pechersk Historical Cultural Preserve

Address: str. Lavrska, 9, building 8, Kyiv.
Opening times: Open daily 9.00 – 18.00, last admission till 17.00
http://www.kplavra.kiev.ua

Almost a thousand years above the Dnipro steep slopes golden domes of Kyiv-Pechersk Monastery – one of the most important shrines of the Christian Orthodox world, are shining. In ancient chronicles "Tale of Bygone Years" there is a mention, dated by 1051 year, of the monastery establishment by the monks in the caves near Kyiv. The first inhabitant of the monastery was Anthony, who took vows on Mount Athos. People came to him for a blessing, and then his supporters expanded the caves, arranged cells and a church. Later, when monastic life was transferred to the surface, the monks buried their dead for seven centuries in the labyrinths.

The monastery was given its name from the caves (*pechery*) of the monastery – Pechersk. As a large and influential Orthodox monastery it received the status of Lavra (Greek: *Λαύρα* is a name for some biggest orthodox friaries, that were of great historic and spiritual significance) before the Mongol times. In the 16th–17th centuries Kyiv-Pechersk monastery established itself as one of the centres of Christian culture. Famous chroniclers, writers, scientists, artists, doctors, publishers lived and worked here.

The resolution on the recognition of the Kyiv-Pechersk Lavra historical and cultural national preserve was adopted in 1926. In 1988, during the celebration of the 1000th anniversary of Christianity in the Russian land, Holy Dormition Kyiv-Pechersk Lavra reopened. Individual objects of the preserve, in particular Near and Far Caves, were given to the Ukrainian Orthodox Church. It was opened here the Theological Academy and Seminary, there is here the residence of the Primate of the Ukrainian Orthodox Church. Given the uniqueness of the Lavra Art architecture ensemble, the value of the reserve in the development of national and world science and culture, the 14th session of the UNESCO Intergovernmental Committee brought Kyiv-Pechersk Lavra in the List of World Heritage.

Today, the preserve is one of the largest Ukrainian cultural, educational and scientific institutions. There are on its territory: Museum of Historical Treasures of Ukraine, Museum of Theatre, Music and Cinema of Ukraine, Museum of books and printing of Ukraine, micro miniatures' Exhibition, Museum of Ukrainian Decorative Folk Art. The unique monuments of art and architecture XI-XX centuries, Near and Far Caves labyrinths, permanent and temporary exhibitions that complement the main exhibition are also situated here.

The Museum of Historical Treasures of Ukraine

Address: 9 Lavrska Str. aka 21 Ivan Mazepa Str., Kyiv
(Building № 12, in Kyiv-Pechersk Reserve aka Lavra), Kyiv.
Opening times: Tuesday to Sunday 10.00 – 16.45
Closed every Monday and last Friday
http://miku.org.ua/en/museum_of_historical_treasures_of_ukraine.html

The Museum of Historical Treasures of Ukraine was open as the branch of the NHMU in January 1969. The most ancient collections are the archaeological artefacts, discovered in the Ukrainian territory mostly during the 20th century.

There are various decorations of ancient people, their weaponry, horses harness, ritual vessels, etc. These original objects reflect the culture of the nomadic Cimmerians, Scythians and Sarmatians who ruled on the Ukrainian lands since the 9th century BC till the 4th century AD. Many adornments were created for the nomadic elite by the goldsmiths from the Greek cities that appeared on the Northern Shore of the Black Sea since the mid 7th century BC. Since the 4th century AD the steppes saw a succession of Turkic tribes arriving from Asia. Thus the Middle Age collection houses the decorations of the Huns, Avars, Khazars, Cumans and other nomads from the 4th – 14th centuries.

The highlights of the Museum are the most ancient silver decorations of the Early Slavs (the 6th- 8th centuries) and the works by the goldsmiths of the Kyivan Rus (the 9th – early 13th centuries). There are also outstanding collections of Ukrainian Goldsmithery and the works by the goldsmiths of Russia from the 16th – early 20th centuries. The Museum also houses magnificent collections of Silver Judaica and European Silver.

The Kyiv Regional Archaeological Museum in Trypillya Village

Address: 12, Geroiv Trypillya str., Trypillya,
Obukhiv District, Kyiv Region
Opening times:
Monday to Friday 9.00 – 17.00
Saturday to Sunday 10.00 – 16.00
https://sites.google.com/site/oblasnijmuzej

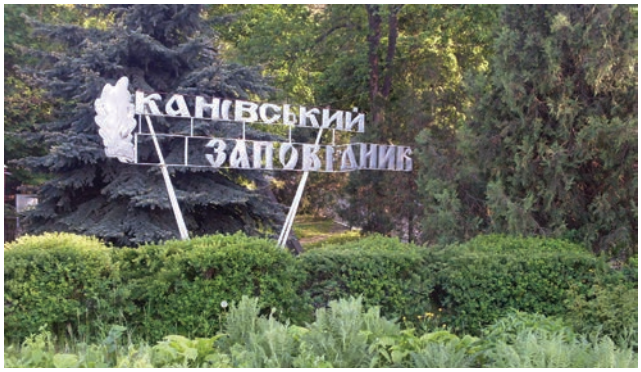
The Museum is located on the ancient steep slope of Dnipro. People first inhabited this mountain during the Stone Age, over ten thousand years ago. A settlement of Trypillian civilization existed here, six thousand years ago. The village is located where the site of the ancient town of Trepol' was, some 40 km from Kyiv and 10 km from Obukhiv. Three fertile valleys, three fields, meet here delimited by the rivers Stugna, Krasna, and Bobritsya.

The Divych mountain, which contains the site of an ancient town, sanctuary, and a burial ground of the Zarubinets'ka culture (the 2nd century BC), is included into the museum complex. There several hoards of coins from the Byzantine, Ukrainian princely times, and English, German, and Polish origins were found.

The museum's display tells about historical events which took place in the Kyiv region, from the Paleolithic period to the end of 18th century. A considerable area is occupied by exhibits of the Trypillian culture: finds of clay and daub houses, multicolored thin tableware, refined statuettes and wares made of copper.

In 2002, the museum territory landscape was changed and a bust of the famous Ukrainian archaeologist Vikentiy Khvoyka was installed near the museum. The village of Trypillya was the very place where the greatness of that previously unknown culture revealed itself before the scientist, in 1893, and it was named the Trypillya culture.

The archaeologist Vikentiy Khvoyka discovered the most prominent of the Ukrainian historic cultures, such as the Trypillian, Zarubinetska, and Chernyakhivska archaeological cultures. Among other discovered by him locations of the Paleolithic period are various sites near Kyiv and Kaniv, and the Pastyrskoe Skolots' ancient town, a settlement of the Kyiv Russ times.



The Kaniv Nature Reserve

http://kanivbiosfera.at.ua

Near the town of Kaniv at the right bank of Dnipro River and islands on the floodplain is situated the Kaniv Nature Reserve. This place was interesting for biologists, geologists, geographers, historians, archaeologists since the end of the 19th – beginning of the 20th centuries. On the banks of profound gullies can be read very clear the geological chronicle of the region.

Kaniv hills are a unique (for flat areas) plicate geological stratification. They are parted by ravines (up to 100 m deep), old and recent powerful landslide bodies of the mountain bedrock. It is believed, that these hills have appeared as a result of the Dnipro river basin ice array pressure. About 60 million years ago, the Kaniv district was part of the Kharkov Sea. The petrified remains of shellfish, ammonites and belemnites, marine reptilian bones, and shark teeth, are all on display. Later, the sea floor became part of the mainland, where giant horse-tails and ferns bloomed. Paleobotanists found petrified remains of a bog cypress, which is in the same family with the mightiest modern tree (a giant sequoia), and other new to science extinct plant types that were unearthed. During the last hundreds of thousands of years, in the middle part of the Dnipro river basin, climate became considerably more severe. Several ice ages forced the heat-loving types of plants and animals to relocate to the south, and some simply became extinct. Other kinds of plants and animals, those better adapted to the severe environment, replaced them. Some 8-10 thousand years ago, giants-mammoths, woolly rhinoceroses, giant deer and bison, still roamed along the vast Kaniv district steppes. The saber-toothed tigers, cave lions and bears hunted their prey in the forests.

For the last 35-40 thousand years, people lived in the Kaniv district territory as suggested by numerous discovered stone tools and extraordinary, unique stone female figurines of the Paleolithic epoch. In 1966, nearby, in the village of Mezhyrich, a mam-

moth hunters' dwelling was found. It was built in the 16th-14th millennium BC. Archaeology of the region is also represented by the remains of the Trypillya, Zarubinetska and Chernyakhiv Cultures, and also Skolotts and Scythians, whose settlement were uncovered here.

The Kaniv Natural Reserve was created in 1923. In 1939 the Reserve was transferred to Taras Shevchenko National University of Kyiv. Professors and students of the Biological, Geographical, Geological and Archaeological faculties participated in investigations of the Reserve. The Kaniv Nature Reserve has become an important experimental and educational base of University.

Today the area of the Kaniv Nature Reserve is 2027 hectares. It consists of gullies and forested hills, two islands on floodplain of Dnipro River: Kruglyk and Shelestiv, and Zmiyini (Snakes) islands in the Kaniv Reservoir. Main functions of the Reserve are the conservation of unique natural complexes of the Ukrainian forest steppe, conservation of biodiversity, monitoring of natural processes in ecosystems.

For the last 100 years, Kaniv district has been the spiritual cradle of the whole Ukrainian community, because here, on the Chernecha hill, the Great Kobzar – Taras Shevchenko is resting forever. The nature of the Kaniv district is majestic and unique, it has captivated the hearts of geniuses, and millions of ordinary people that once visited this land of plenty it is the heart of Ukraine.

The Kaniv Natural Museum

Address: in the Kaniv Nature Reserve,
Cherkasy District.
Opening times:
Monday to Friday 8.00 – 16.30
Closed every Saturday and Sunday
http://kanivbiosfera.at.ua

It was opened in the age-old memorial house of academician M. Bilyashivskyj, on the territory of the Kaniv Nature Reserve in 1969.

The paleontology, archaeology, zoology, botany, forestry, and ecology departments of the museum present the history of the Kaniv district's nature from the Mesozoic and Paleolithic times up to present day. The scientific value, originality, and variety of exhibits make this museum unique.

Petro Domashenko, an artist, historian, student of local lore, is the founder of the museum. The wall frescos and pictures, stylish, decorative patterns on the floor characteristic for each department, wonderful stained-glass windows, numerous portraits of research workers and people that devoted their lives to the study of the Kaniv district, are the results of his long-term effort.

The Kaniv History Museum

Address: 15, Heroiv Nebesnoi Sotni st.,
Kaniv, Cherkasy District.
Opening times:
Tuesday to Sunday 09.00 – 18.00
Closed every Monday
http://kaniv-museum.at.ua

It has a rich collection of over seven thousand exhibits. They are mainly materials excavated in the Kaniv district. In the large collection of ceramics, from the Neolithic times until the 20th century, are wares of the Trypillian era. The ornamented tableware and sacral statuettes made over 6 thousand years ago.

The National Historical and Ethnographic Preserve "Pereyaslav"

Opening times:
Wednesday to Sunday 09.00 – 17.00
Closed every Monday and Tuesday
http://www.niez.com.ua

The National Historical and Ethnographic Preserve "Pereyaslav" is situated in town Pereyaslav-Khmelnytskyi, one of the oldest cities of Ukraine, first mentioned in the Chronicle in Prince Oleg's treaty with Constantinople in circa year 907. The "Pereyaslav" Preserve complex is the pride and decoration of the town, consisting of 27 museums of various subjects. In 2003, the rich storage collection of the prehistoric archaeological cultures' exhibits made it possible to open another museum on the territory of the preserve – the Museum of the Trypillya culture.

The Museum of the Trypillya culture.

Address: 10, Taras Shevchenko str.,
Pereyaslav-Khmelnytskyi, Kyiv District.
Opening times:
Wednesday to Sunday 09.00 – 17.00
Closed every Monday and Tuesday

A special part of museum is devoted to Vikentiy Khvoyka, who in 1893 excavated the settlement of an unknown before culture nearby Trypillya village. That culture was named Trypillian. Copies of the finds and the Kyiv research drafts are presented, as well as the original materials from sites on the right bank of the

Dnipro River. Among the exhibits there, one can even see V. Khvoyka's picture executed in the style of painting on the Trypillian tableware. Side by side with these, materials about the research history and about the researchers themselves are exhibited – photos and works of many prominent scientists: V. Khvoyka, V. Scherbakivskyy, M. Bilyashivskyy, M. Makarenko, S. Gamchenko, S. Magura, T. Passek, E. Krychevskyy, S. Bibikov, O. Kandyba (Ol'zhich), V. Danilenko, and others.

The unique exhibits of the museum testify to our predecessors advanced agriculture from the 6th millennia BC. Among those, the imprints of wheat corn ears, ears of the relict wheat and wild polba, cultural double and single corned wheat, visible on burnt outer clay coverings of the dwellings from the settlements of Dobrovody and Grym'yachka, A pronged hoe was used for planting of the grain cultures, and a sickle made from flint plates was helpful for harvesting the crop; the latter was almost as good as a metallic one. Grain graters are exhibited next to those in the museum, which could grind the grain into grouts and flour. Special cooking pots and bowls for food are displayed in the museum too.

Київське метро

та швидкісний транспорт

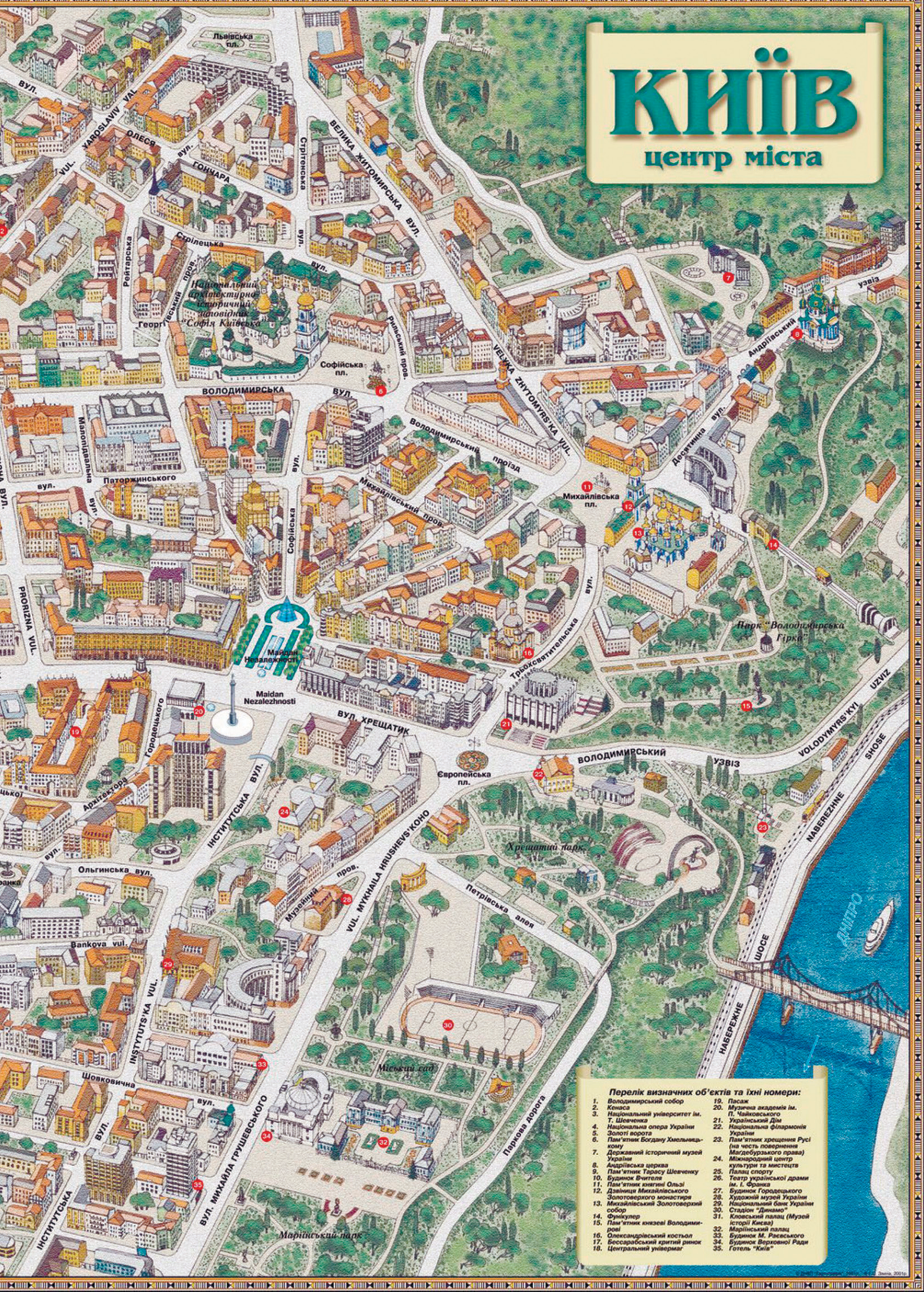
Kyiv Rapid Transit Map

Умовні позначки · Legend

- M1 — Червона лінія метро · Red Metro Line
- M2 — Синя лінія метро · Blue Metro Line
- M3 — Зелена лінія метро · Green Metro Line


Ботанічний сад ім. академіка О. Фоміна
Паньківська вул.
вул. Пирогова
вул. Івана Франка
vul. Ivana Franka
вул. Леонтовича
вул. Чапаєва
ВУЛ. БОГДАНА ХМЕЛЬНИЦЬКОГО
БУЛЬВ. ТАРАСА ШЕВЧЕНКА
BUL'V. TARASA SHEVCHENKA
ВУЛ. ЛЬВА ТОЛСТОГО
VUL. L'VA TOLSTOHO
ВОЛОДИМИРСЬКА ВУЛ.
VOLODYMYRS'KA VUL.
Театральна пл.
Парк ім. Тараса Шевченка
VUL. HOR'KOHO
ВУЛ. ГОРЬКОГО
Пушкінська вул.
Pushkins'ka vul.
пл. Льва Толстого
ЧЕРВОНОАРМІЙСЬКА ВУЛ.
CHERVONOARMIIS'KA VUL.
VUL. BOHDANA KHMEL'NYTS'KOHO
ВУЛ. ХРЕЩАТИК
VUL. KHRESCHA
вул. Шота Руставелі
Бессарабська пл.
BASEINA VUL.
Есплянадна вул.
БАСЕЙНА ВУЛ.
Даревіна вул.
пров. І. Козловського
Круглоуніверситетська
Lutsrans'ka vul.
вул. Заньк
Банкова вул.
Лютеранська
Шовковична вул.
Shovkovychna vul.
Госпітальний пров.
Госпітальна вул.
BUL'V. LESI UKRAINKY
ВУЛ. МЕЧНИКОВА
Академіка Богомольця
Орлика
Липська
Пилипа
Виноградний пров.
БУЛЬВ. ЛЕСІ УКРАЇНКИ
вул. Леоніда Первомайського
VUL. MECHNYKOVA

КИЇВ
центр міста



Перелік визначних об'єктів та їхні номери:

1. Володимирський собор
2. Кенаса
3. Національний університет ім. Т. Шевченка
4. Національна опера України
5. Золоті ворота
6. Пам'ятник Богдану Хмельницькому
7. Державний історичний музей України
8. Андріївська церква
9. Пам'ятник Тарасу Шевченку
10. Будинок Вчителя
11. Пам'ятник княгині Ользі
12. Дзвіниця Михайлівського Золотоверхого монастиря
13. Михайлівський Золотоверхий собор
14. Фунікулер
15. Пам'ятник князеві Володимирові
16. Олександрівський костьол
17. Бессарабський критий ринок
18. Центральний універмаг
19. Пасаж
20. Музична академія ім. П. Чайковського
21. Український Дім
22. Національна філармонія України
23. Пам'ятник хрещення Русі (на честь повернення Магдебурзького права)
24. Міжнародний центр культури та мистецтв
25. Палац спорту
26. Театр української драми ім. І. Франка
27. Будинок Городецького
28. Художній музей України
29. Національний банк України
30. Стадіон "Динамо"
31. Київський палац (Музей історії Києва)
32. Маріїнський палац
33. Будинок М. Рєєвського
34. Будинок Верховної Ради
35. Готель "Київ"

FOR NOTES

Information
www.neenawa.kiev.ua