

Actualités de la recherche en Préhistoire dans les Balkans

*Environnements, chronologies et dynamiques culturelles du
Dernier Maximum Glaciaire au début du Néolithique (ca. 23 000 à 6000 ans cal. BC)*

Recent research in the Prehistory of the Balkans

*Environments, Chronologies and Cultural Dynamics from the
Late Glacial Maximum to the beginning of the Neolithic (ca. 23,000 to 6000 cal BC)*

Séance spécialisée de la Société préhistorique française

4-5 octobre 2021, Nanterre Université



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L'objectif de ces rencontres est de proposer un tour d'horizon de l'actualité de la recherche sur la Préhistoire dans les Balkans, tant du point de vue paléoenvironnemental que techno-culturel. Elles visent à réunir à la fois des chercheurs locaux et internationaux autour d'une thématique large afin d'échanger sur les travaux récents, les dynamiques et les perspectives de recherches.

Informations importantes

Les conditions sanitaires imposent un format hybride pour l'organisation de ce colloque. Les communicants pourront au choix être présents à Nanterre ou participer en visioconférence. Les auditeurs pourront assister à la séance via une diffusion en ligne, et si les conditions sanitaires le permettent, assister physiquement aux présentations et aux échanges. Nous restons dans l'attente des consignes sur ce dernier point.

L'inscription via le formulaire suivant : [Inscription à la séance SPF "Actualités de la recherche en Préhistoire dans les Balkans"](#), vous permettra de recevoir les informations sur les possibilités d'accès et les liens de connexion. Pour les communicants cette inscription permet également de s'inscrire pour les repas du lundi et du mardi midi.

The aim of this international round table is to provide an overview of current research on the prehistory of the Balkans from a palaeoenvironmental and techno-cultural perspective. It aims to bring together both local and international researchers to discuss recent work, research dynamics and perspectives.

Important information

The health conditions impose a hybrid format for the organisation of this conference. Presenters will be able to choose to be present in Nanterre or to participate by videoconference. The audience will be able to attend the session via an online broadcast, and if health conditions allow it, to physically attend the presentations and discussions. We are still waiting for instructions on this last point.

Registration via the following form: [Registration for the SPF session "Recent research in the Prehistory of the Balkans"](#), will allow you to receive information on access possibilities and connection links. For the communicants, this registration will also allow you to register for the meals (lunch) on Monday and Tuesday.

Programme

Lundi 4 octobre

Le Paléolithique supérieur dans les Balkans, actualité, perspectives et difficultés de la recherche

9h30	Accueil des participantes et participants, introduction des journées
10h00	<i>Tsanova Tsenka</i> : The Middle To Upper Palaeolithic Transitional Period In The Eastern Balkans: The Earliest Evidence Of Modern Humans From Bacho Kiro Cave (Bulgaria) (p. 6)
10h30	<i>Peresani Marco et al.</i> : Human peopling of the Great Adriatic-Po Region during the Last Glacial Maximum (p. 8)
11h	Pause
11h15	<i>Mihailović Dušan et al.</i> : New data about the Gravettian and Early Epigravettian occupation of the central Balkan (p. 10)
11h45	<i>Dobrescu Roxana</i> : Le Paléolithique Supérieur de la Plaine du Danube (p. 11)
12h15	Repas
14h	<i>Ruiz-Redondo Aitor et al.</i> : Reassessing the Epigravettian of the Balkan Peninsula: new data from Badanj (Bosnia and Herzegovina) (p. 12)
14h30	<i>Vujević Dario, Bodružić Mario</i> : Vlakno cave - a story of transition? (p. 14)
15h	Pause
15h30	<i>Nitu Elena et al.</i> : Late Upper Paleolithic settlements at the Iron Gates Gorge of the Danube, Romania (p. 15)
16h	<i>Vukosavljević Nikola, Ruiz-Redondo Aitor</i> : Epigravettian in the north-western Balkans: old and new data (p. 16)
16h30	<i>Discussion - Le Paléolithique supérieur dans les Balkans, actualités, perspectives et difficultés de la recherche</i>

Mardi 5 octobre

Mésolithisation et Néolithisation dans les Balkans, dimensions environnementales et culturelles

9h30	<i>Accueil, ouverture de la seconde journée</i>
9h45	Lobanova Mariia, Kiosak D. : Balkanic influences in the Ukrainian Forest-Steppe: the case-study of the Later Stone Age in the Middle Southern Buh valley (p. 17)
10h15	Balasescu Adrian, Radu Valentin : Interactions homme-animaux au néolithique ancienne en Roumanie (p. 19)
10h45	Pause
11h00	Triozzi Nicholas et al. : Early Neolithic Animal Husbandry Strategies in Northern Dalmatia: Insights from Stable Isotope Analysis of Ovicaprids from Crno Vrilo (p. 21)
11h30	Vitezović Selena et al. : L'industrie osseuse du Néolithique ancien du site de Nova Nadezhda (Bulgarie) (p. 22)
12h00	Repas
14h00	Perhoč Zlatko : Raw material procurement strategy in the Dalmatian Stone Age (p. 23)
14h30	Radchenko Simon : Transition Of People And Thoughts From Balkan During Late Mesolithic Age (p. 24)
15:00	Pause
15h15	Kačar Sonja : The contribution of lithic studies to the understanding of the Neolithisation processes in the Western Balkans: overview and perspectives (p. 25)
15:45	Naumov Goce : Two Tells That Tell Tellingly: Vrbjanska Čuka and Veluška Tumba in the Neolithic Pelagonia (p. 26)
16:15	Discussion - Mésolithisation et Néolithisation dans les Balkans, dimensions environnementales et culturelles
17h00	Conclusion des journées et discussion sur la publication des actes

Résumés

The Middle to Upper Palaeolithic transitional period in the Eastern Balkans: the earliest evidence of Modern Humans from Bacho Kiro Cave (Bulgaria)

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The modern human expansion out of Africa and the rapid colonisation of Eurasia by our species is one of the fundamental events in human evolution. For millions of years, different human species evolved synchronously and sometimes coexisted. Systematic migrations of *Homo sapiens* into Europe began ca 46 ka cal BP (or even before) bringing new technological and cultural features, beginning what archaeologists define as ‘Upper Palaeolithic’ (UP). During the Middle-Upper Palaeolithic transition in Europe from ca 50 ka -40 ka BP, newly arrived *Homo sapiens* coexisted and interacted with pre-existing Neanderthal populations.

In this presentation, I will discuss the latest developments in the ‘Middle to Upper Palaeolithic transition debate’, in which a number of Balkan sites play a key role. Until recently, it was widely accepted that the Aurignacian technocomplex was the first culture in Europe produced by UP *Homo sapiens*. However, recent excavations in Bacho Kiro Cave (Bulgaria) yielded new *Homo sapiens* remains directly dated to 46-43 ka cal BP (Fewlass et al. 2020) in direct association with Initial Upper Palaeolithic (IUP) artefacts (Hublin et al. 2020). IUP industries are so far only present in the Eastern Balkans on the northern slope of the Balkan Mountains, in the sites of Bacho Kiro Cave and Temnata cave. The newly excavated material from Layer I in Bacho Kiro Cave corresponds to the lithic industry previously named ‘Bachokirian’ following excavations in the 1970s; for decades it has been considered the earliest UP technocomplex in Europe (Kozłowski 1982).

Techno-typological analyses of the lithic assemblages from Layer I revealed the link between them and showed that the IUP spread into the mid-latitudes of Eurasia before 45 thousand years ago. Palaeogenetic studies of Bacho Kiro Cave’s human fossils provide evidence of a recent Neanderthal genetic contribution into the *Homo sapiens* occupying the site (Hajdinjak et al. 2021). These people used blade technology with Levallois technological features combined with symbolic behaviours that precede the subsequent Aurignacian technocomplex.

The new interdisciplinary data obtained from archaeological layers in Bacho Kiro Cave, combined with the data from the nearby sites of Kozarnika and Temnata (Tsanova 2008), led to the reassessment of the regional chrono-stratigraphic sequence. Subsequent to the Middle

Palaeolithic layers, two distinct consecutive technocomplexes (produced by the earliest Homo sapiens in the Eastern Balkans) have emerged in the record: blade technology from Bacho Kiro Cave (early IUP phase) and Temnata Cave (late IUP phase, also present in Samuilitsa II Cave) and bladelet technology from Kozarnika Cave (called Early Kozarnikian). Both technocomplexes (IUP and Early Kozarnikian) have yielded overlapping radiocarbon chronologies, which indicates that they probably coexisted in the area. It is still unclear if the two technocomplexes were produced by two distinct Homo sapiens migration groups.

References: Fewlass, H. et al. 2020, A 14C chronology for the Middle to Upper Palaeolithic transition at Bacho Kiro Cave, Bulgaria, *Nature Ecology & Evolution* 4 (6) : 794-801 / Hajdinjak, M. et al. 2021, Initial Upper Palaeolithic humans in Europe had recent Neanderthal ancestry, *Nature* 592 (7853) : 253-257 / Hublin, J.-J. et al. 2020, Initial Upper Palaeolithic Homo sapiens remains from Bacho Kiro Cave (Bulgaria), *Nature* 581 (7808) : 1-4 / Kozłowski, J. K., 1982, *Excavation in the Bacho Kiro cave, Bulgaria. Final report*, Warszawa, Państwowe Wydawnictwo Naukowe : 172 p. / Tsanova, T., 2008, *Les débuts du Paléolithique supérieur dans l'Est des Balkans. Réflexion à partir des études taphonomique et techno-économique des ensembles lithiques des grottes Bacho Kiro (couche 11), Temnata (couche VI et 4) et Kozarnika (niveau VII)*, British Archeological Reports International Series 1752 : 325 p..

Human peopling of the Great Adriatic-Po Region during the Last Glacial Maximum

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Since the time of the Middle Pleistocene Revolution, the increased magnitude of glacial cycles and unstable climatic conditions deeply influenced human environment adaptive strategies and lifestyle. This occurred also during the Upper Palaeolithic, when hunter-gatherers experienced dramatic turnovers, as attested by discontinuous biological and archaeological records. The timing and pattern of multiscalar shifts that occurred from the Last Glacial Maximum (LGM; 30-16.5 ka sensu) to the onset of the Late Glacial (LG) interstadial are considered among the most important events. This period was characterized by large-scale climatic oscillations triggered by changes in insolation degree that led to the build-up of boreal ice sheets and emersion of major continental shelves along the coast of North, Southwest and South Europe as consequence of the lowering of sea level up to -120 m a.s.l. Human groups reacted to ecological turnovers by increasing their resilience, as shown by a large array of evidence revealed by sites persisting at middle latitudes. Anyhow, also large migrations took place through the corridors connecting European and Mediterranean regions, and pronounced changes in demography and behaviour occurred, resulting in the synchronic and diachronic development of a variety of archaeological cultures in different regions and at different times. Lastly, these events deeply contributed to shaping our present genetic ancestry.

In Mediterranean Europe, the combination of the sea-level dropping with the extension of alpine glaciers contributed to the aggradation of the Great Po Plain (GPP) in the Great Adriatic-Po Region (GAPR). The GPP is largely known as the largest alluvial plain ever existed which connected the Italian and Balkan Peninsulae. Geomorphological, sedimentological and

ecological processes led to the persistence of boreal forests in moist habitats on stable areas and wetland margins, while open woodlands, steppes and semideserts occupied the uplands and part of the plain, where tree cover persisted until the LG. This offered suitable environmental conditions for several mammal species, while large part of their former distribution range, in Central and Northern Europe, was covered by ice sheets. South of the Alps, the more favourable environmental conditions also allowed the survival and delayed extinction of important consumers like cave bears. The presence of a rich mammal fauna in this southern glacial refugia provided subsistence to hunters-gatherers groups and enhanced their capability to maintain large-scale networks. Gravettian and Epigravettian hunter-gatherer groups inhabited the GPP, although their presence and settlement dynamics at the margins and across this region have raised questions for decades. Actually, a handful of archaeological sites outlines a patchy record of the peopling of the plain itself. Nonetheless, evidence of contacts across this area is provided by the exploitation of common chert sources and by stylistic and technical similarities in the lithic industries documented in northern and central-eastern Italy, Slovenia, Istria, and Dalmatia. Thanks to its peculiar geographic setting and climatic and ecological variability, GAPR is supposed to have represented a paradigmatic case which supported vast movements of populations. Settlement dynamics, mobility, subsistence and symbolic thought as reflected by multidisciplinary data are here reviewed to assess the role of human adaptive flexibility and population turnover as recorded by genetic discontinuity (Fu et al., 2016). As an alternative the possibility of a concurrence of both factors in drawing distinct biological and cultural ancestries is also explored.

New data about the Gravettian and Early Epigravettian occupation of the central Balkan

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Until only ten years ago, few Gravettian and Early Epigravettian sites were known in the central Balkans. Thanks to recent research, however, the number of archaeological sites from the period has increased significantly. In Serbia, remains from the Last Glacial Maximum (LGM) *sensu lato* have been recorded at Šalitrena pećina, Velika pećina, Bukovac, Hadži Prodanova pećina, Pešturina, Meča Dupka, Velika Vranovica (Donja pećina) and Pećina kod stene; in Montenegro at Vrbička pećina and (thanks to AMS dating) Crvena stijena, while in Bosnia and Herzegovina it is confirmed at Pećina pod Lipom, situated on the Glasinac Plateau. This data supports the notion that the Balkan Peninsula represented a glacial refugium during LGM and that human recolonization of hilly and mountainous zones occurred immediately after the cooling. The paper examines the factors that could have influenced the changes in technology and settlement system and population movements in the central Balkans in the times prior, during, and immediately after the LGM.

Le Paléolithique Supérieur de la Plaine du Danube

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Les modalités d'occupations au Paléolithique Supérieur dans la Plaine roumaine du Danube sont assez mal connues. Un très faible nombre de gisements a fait l'objet de fouilles systématiques : Vadastra, Ciuperceni La Vii 1 et Giurgiu Malu Rosu. Pourtant, nous disposons de quelques éléments pour caractériser le Paléolithique Supérieur de cette aire géographique : analyse du matériel lithique, exploitation des territoires, datations.

Reassessing the Epigravettian of the Balkan Peninsula: new data from Badanj (Bosnia and Herzegovina)

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The site of Badanj (Bosnia and Herzegovina) exhibits the first rock art dated to the Upper Palaeolithic (UP) in the Balkan Peninsula. The locality consists in a large and deep rock-shelter, with a small cave on its eastern edge.

The dimensions of the rock-shelter are 21x8x11m. Đ. Basler (1976; 1979) was the first to excavate the site in the 1970s. He was able to identify prehistoric occupations from the Late Upper Palaeolithic (Lateglacial). A large engraved boulder was unearthed: the entire surface of the boulder was covered by archaeological deposits until Basler's excavations. In 1986-87, excavations were resumed at Badanj under the direction of Z. Kujundžić and R. Whallon. They confirmed the presence of Late Epigravettian and potentially Mesolithic. Whallon (1989) distinguished two different phases of occupation corresponding to the Late Pleistocene and, probably, the Early Holocene. Badanj is a major site for Balkans UP due to several reasons. Firstly, it is the first site where Palaeolithic parietal art was discovered in the region. Secondly, it is one of the richest sites in lithic elements for the Epigravettian in this territory (more than 8000 retouched pieces just from Whallon's excavations and over 350,000 lithic remains issued from both excavation projects). Thirdly, Badanj has yielded the largest collection of UP personal ornaments in south-eastern Europe (more than 1000 items), consisting on various pierced bone, tooth and shell beads. Finally, this site yielded the largest collection of Palaeolithic mobiliary art in the Balkans, a rare element in this territory. Despite still remaining unanalysed, at least 20 engraved bone fragments and tools were found at the site; an exceptional number considering that only other 18 have been identified for the UP in the entire Balkan Peninsula so far (Ruiz-Redondo et al., 2020). A few years ago, we resume the excavations in this exceptional site. The aim was to precise the stratigraphy and to assess the chronology of the different human occupations, providing a precise view of the evolution of one of the leading sequences for the Epigravettian in Europe. The geoarchaeological study and the first dating series have revealed that the archaeological sequence is deeper and longer than previous works recognised. In this

paper, we present the preliminary results of both the excavation and the dating project in progress at the site and the further implications for the knowledge of the Late Upper Palaeolithic in the Balkan Peninsula.

References : **Basler 1976**, Paleolitsko prebivalište Badanj kod Stoca. *GZM (A)* n.s. sv. **29**: 5-18 / **Basler 1979**, le Paléolithique final en Herzegovine. in Sonnevile-Bordes (ed.), *La fin des temps glaciaires en Europe*, CNRS, Paris: 345-355 / **Ruiz-Redondo et al. 2020**, Beyond the bounds of Western Europe: Paleolithic art in the Balkan Peninsula. *Journal of World Prehistory* **33** (4): 425-55 / **Whallon 1989**, The Paleolithic site of Badanj: Recent excavations and results of analysis. *GZM (A)* n.s. sv **44**: 7-20 / **Whallon 1999**, The lithic tool assemblages at Badanj within their regional context in *Bailey, G. et al. (ed.): The Paleolithic Archaeology of Greece and Adjacent Areas*, British S. of Athens 3: 330-42.

Vlakno cave - a story of transition?

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Vlakno cave (Dugi Otok, Croatia) is one of the most prominent prehistoric sites discovered in Croatia recently. Small rockshelter served as an ideal place for small communities of hunter-gatherers during the Upper Palaeolithic and Mesolithic. Test excavations in the cave uncovered 5 m-thick stratigraphy with continuous cultural layers that currently can be traced back to 19,500 cal. BP, keeping in mind that this depth is not final in terms of cultural layers. Current research is focused on the layers that fit closely to the LGM period. The longevity of cave occupation evidenced in the stratigraphical record without visible hiatus presents an excellent opportunity to investigate broader changes in society, landscape and environment. Furthermore, the integrity of the archaeological record allows investigation of changes in mobility, social organization, economy, subsistence, diet, as well as data concerning chronology, transitions and cultural tradition. Patterns evident on the finds indicate gradual transition to typical Mesolithic assemblage with strongly pronounced Epigravettian tradition.

Late Upper Paleolithic settlements at the Iron Gates Gorge of the Danube, Romania

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The archaeological investigations in the Iron Gates area undertaken between 1964 and 1971, carried out in the context of construction works of the Hydro-energetic Complex in this region, has resulted in the discovery of several sites with Late Upper Paleolithic occupations: Cuina Turcului, Climente I and II, the Veterani Cave, Veterani Terasă point, Ostrovul Banului, Ogradena Răzvrata, Ogradena Terasă. Although many settlements have an uncertain stratigraphic context, at least one site, the Cuina Turcului rock shelter, may provide important information on the cultural characteristics of the Late Upper Paleolithic occupations in this area. In addition to highlighting the general characteristics of the settlements in this region, our presentation will focus on the analysis of the two occupations discovered at Cuina Turcului, one of the richest Paleolithic sites researched at the Iron Gates.

Epigravettian in the north-western Balkans: old and new data

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In our presentation we will give an overview of various aspects of material culture left by Epigravettian hunter-gatherers in north-western Balkans together with chronology and settlement dynamics. We critically review old and present new data contributing to better understanding of regional Epigravettian. Epigravettian techno-complex encompasses time frame from approximately 25,000 until 11,500 cal BP. Its archaeological evidence, both old and new, is biased and almost exclusively known from cave and rockshelter sites, although certain progress should be expected with recently discovered Epigravettian stratified open-air site Konjevrate in central Eastern Adriatic.

Epigravettian is the best documented period of human presence in the north-western Balkans during Palaeolithic. At the same time, it is highly fragmented because the region experienced significant palaeogeographic changes across the Pleistocene-Holocene transition when Pleistocene Adriatic Plain was flooded and disappeared. For this reason, the current overview represents only a partial picture that does not cover the whole space that Epigravettian groups used to exploit or all the aspects of their everyday life during Last Glacial Maximum and Late Glacial.

Despite all biases and constraints that surround the research on Epigravettian, this review shows that caves and rock shelters provided significant amount of data about different aspects of Epigravettian hunter-gatherers' lifeways, i.e. lithic production, raw material provisioning areas, food procurement, body adornment, settlement dynamics, rock and portable art.

Balkan influences in the Ukrainian Forest-Steppe: the case-study of the Later Stone Age in the Middle Southern Buh valley

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The chronology and cultural pattern of the Mesolithic-Neolithic in the south of the Eastern Europe remain disputable. There are certain micro-regions that are well supplied with stratified sites and radiocarbon dates, while others lack these prerequisites for understanding human settlement there. Recently, the Middle Southern Buh region (territory of modern-day Ukraine, between towns of Haivoron and Pervomaisk) added up to the small list of better studied zones. It is situated in Forest-Steppe zone nowadays on the contact between Podillian upland and Ukrainian Crystalline shield, in a hilly landscape divided by rivers flowing mostly in north-south or north-west – south east directions.

The stratified site of Melnychna Krucha contained two layers of Mesolithic. The lowermost stratigraphic unit belonged to the Middle Mesolithic Kukrek culture and yielded the assemblage of chipped stone tools containing conical bladelet cores, multiple burins on blades and flakes, "Kukrek inserts" and truncated and backed points and bladelets. It existed around 7500-7300 calBC. It finds little correspondence in the Balkanic Mesolithic sites. The lower layer belonged to the so-called "Kukrek cultural tradition" and was dated to the timeslot of 6400-6200 calBC. It finds some structural correspondence in the Romanian site Albești. However, the "Kukrek" peculiarities should be additionally studied in order to explain their mysterious disappearance at the border of the former USSR.

The numerous traces of Criș culture influence are found in local para-Neolithic sites ("Buh-Dniester culture"), but it is not the case with the para-Neolithic stratigraphic units at the Melnychna Krucha. They yielded a radiocarbon age of 5950-5650 calBC.

Linear Pottery culture reached the Middle Southern Buh region during its Notenkopf phase (5250-5050 calBC). The site of Kamyane-Zavallia yielded some potsherds ornaments in the Dudești style reflecting a long-distance exchange and anchoring the chronology of the Kamyane-Zavallia to the well-dated sequences of Danube valley.

Early Trypillian sites (Precucuteni III) appeared in the region around 4650-4450calBC. Their interaction with local para-Neolithic population is subject to vivid debates (see Haskevych et al. 2019; Tovkailo 2020).

The dense Trypillian settlement is attested in the region during Trypillia B1 (Cucuteni A3-4) stage. The sites of Trypillia B1 (Sabatynivka I, Berezivska HES, Shamrai, Topoli) yielded some ceramic imports both from Cucuteni area and also from Gumelnița culture area. Cucuteni culture is represented by trichrome painted ceramics, which is accounted for a small percentage of the entire ceramic complex of the Trypillian sites in the region (in Sabatynivka I - 5%). The analogies to this ceramics could be found in this Cucuteni settlements: Hăbășești I, Trușești, Darabani I (Palaguta 2016, p. 143). Imports from the Gumelnița culture area are represented by typical semi-spherical and conical bowls and vessels with the wide horizontal flutes (Burdo 2015). Items of particular interest are three small adzes made from jadeite that macroscopically resemble a raw material coming from NW Italy.

Interactions homme-animaux au néolithique ancienne en Roumanie

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La néolithisation de l'Europe autour de 7000-6000 BC a lieu par deux courants de migrations. Celui nommé Danubien est représenté sur le territoire actuel de la Roumanie par les populations Starčevo-Criş (6200-5500 BC) qui arrivent depuis le sud et sud-ouest de cette région.

En Roumanie plus de 70 sites du Néolithique ancien ont été fouillés, mais uniquement 37 ont été analysés du point de vue archéozoologique. Parmi les plus 30.000 restes étudiés, la majorité provient des mammifères (84%) suivi par les mollusques (escargots et bivalves) - 15%. Les autres classes d'animaux (1%) incluent les poissons, les reptiles et les oiseaux.

Parmi les mollusques, les bivalves de rivière (genre *Unio*) et ceux qui vivent dans le lac (*Anodonta*) dominent surtout dans les sites qui se trouve au bord du Danube. Les poissons sont représentés par plus de 10 espèces surtout dans les sites près du bord du Danube ou de grandes rivières. Les esturgeons et le silure atteignent les tailles les plus grandes. Les espèces de petite taille (les cyprinidés) s'ajoutent à l'inventaire des sites surtout là où le tamisage a été systématiquement employé.

Les mammifères domestiques sont majoritaires dans tous les sites avec quelques exceptions, voire en Olténie ou en Banat. Ainsi les sites Starčevo-Criş peuvent être divisés en deux tendances distinctes : ceux pour lesquels l'élevage des bovins est de premier ordre (la plupart) et ceux où les caprinés sont prédominants (*Dudeştii Vechi*, *Foeni-Gaz*, *Balş*, *Trestiana*, *Leţul Vechi*, *Cauce*, *Coţatcu*, *Negrilesti* etc). En général sur les sites des premières phases (I et II) les caprinés sont prépondérants, mais ce n'est pas une règle absolue si on regarde les sites d'Olténie sur lesquels les bovins sont prédominants. Le cochon a une importance réduite, avec une contribution de moins de 10%, mais avec quelques exceptions, et il est même absent sur certains sites.

La chasse joue un rôle assez important sur quelques sites du Néolithique ancien. On observe que les cervidés (et parmi eux le cerf) et l'aurochs sont les espèces les plus chassées.

différents éléments suggèrent que les populations Starčevo-Criş étaient caractérisées par une grande mobilité, en raison du poids important des ruminants domestiques qui ont besoin de pâturages. A ce stade de la recherche, on observe que la paléoéconomie des établissements

Starčevo-Criș sur le territoire de la Roumanie est modifiée par rapport à celle des sites plus au sud (Bulgarie et Grèce) et à l'ouest (Serbie et Hongrie), ce qui suggère que les bovins étaient mieux adaptés aux conditions environnementales locales que les caprinés. Il est certain que là où ces communautés Starčevo-Criș sont arrivées, elles ont orienté l'économie animale en fonction de leurs besoins et des ressources existant dans l'environnement spécifique de chaque région.

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Early Neolithic Animal Husbandry Strategies in Northern Dalmatia: Insights from Stable Isotope Analysis of Ovicaprids from Crno Vrilo

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Early Neolithic economies in Europe were largely intensive, with production levels suitable for the needs of individual households. Previous research at archaeological sites along the Dalmatian Coast of Croatia has shown that Neolithic farming economies were small in scale and remained relatively unchanged for 2ky. Zooarchaeological remains indicate that farmers husbanded herds of goats and sheep and to a lesser extent, cattle and pigs with minimal contributions from hunted wild fauna. Intensive agriculture entails high investment per unit land and may involve the use of manure to improve crop and fodder yields. Under this model, production occurs in close proximity to the settlement while animals are provisioned with fodder and herd sizes are kept small enough to ensure fodder yields are sufficient. In this poster, we present the results of stable isotope analysis of bone collagen and enamel bioapatite of goat, sheep, and cattle from the Early Neolithic site of CrnoVrilo to evaluate the degree to which early farmers engaged in intensive herd management. The relative enrichment of $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ in bone collagen and enamel bioapatite provides a useful indication of the use of manure for fodder crops and constraints on animal reproduction to one birthing season per year, respectfully. We contextualize our results within longer-term, regional economic developments observed throughout the Neolithic and present an argument for further testing of materials across the study region.

L'industrie osseuse du Néolithique ancien du site de Nova Nadezhda (Bulgarie)

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Le site de Nova Nadezhda se trouve dans la région de Thrace, en Bulgarie. Le site est localisé dans la vallée du fleuve Maritsa, sur la rive droite, à environ 300 m du fleuve, et il couvre environ 5 ha. Des fouilles de sauvetage ont été effectuées par l'Institut Archéologique National et le Musée de l'Académie Bulgare des Sciences (Sofia) en 2013-2014 donnant suite à des fouilles systématiques (en cours).

Le site de Nova Nadezhda livre des vestiges archéologiques du Néolithique ancien, du Néolithique récent, du Chalcolithique et de l'Âge du Fer. Le site comprend également une nécropole du 17-18^{ème} siècle. Les vestiges du Néolithique ancien sont les plus riches. Les structures incluent des maisons, des trous, des fossés et des sépultures ; les trouvailles incluent des récipients céramiques, des outils en pierre taillée, en pierre polie, et en matières dures animales.

Dans cette communication, nous présentons les résultats préliminaires de l'analyse techno-typologique de l'industrie osseuse du Néolithique ancien (ca. 6000 cal. BC). Les matières premières incluent des os divers (métapodes, tibia, côtes), du bois de cerf et des coquillages. Les types caractéristiques incluent des poinçons fabriqués en métapodes et côtes, des grattoirs fabriqués en côtes, des outils tranchants fabriqués en tibia, des spatules-cuillères fabriquées en métapodes, etc. L'ensemble comprend également quelques ornements et bracelets de coquillage. Les pièces techniques (des éclats, produits semi-finis) ont permis de reconstruire la chaîne opératoire pour les types principaux et montrent en même temps que les outils ont été produits dans le gisement.

L'industrie osseuse de Nova Nadezhda signale des influences du Proche Orient (visible, par exemple, dans la présence des spatules-cuillères), mais également des caractéristiques plutôt locales (comme l'utilisation des os de lapin).

Raw material procurement strategy in the Dalmatian Stone Age

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The topic of this presentation is lithic raw material procurement strategy during the Dalmatian Stone Age. It is based on analyses of lithic artefact assemblages from Late Middle Palaeolithic (Mousterian), Late Upper Palaeolithic (Epigravettian), Mesolithic, and Neolithic sites. Lithic assemblages from several sites located within and outside the region, were used for comparison.

Analysis of flaked stone artefacts involves determination of the raw material source, as well as the mode of raw material acquisition. Correlation of artefacts with geological raw material sources was based on extensive fieldwork undertaken in the Adriatic area.

Two basic models of procurement were proposed in order to compare territorial organization and consequences of geomorphological changes on hunter-gatherers and farmers in the research area: the model of eastern Adriatic resources, and the model of western Adriatic resources. These models were applied to prehistoric sites on the eastern Adriatic, and were assigned to specific cultural stages of the analysed sites. The eastern Adriatic resources model corresponds to pre-Neolithic periods, while the western Adriatic model corresponds to post-Mesolithic periods.

Transition of people and thoughts from Balkan during Late Mesolithic Age

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The settlements of Iron Gates region on the picturesque banks of Danube River appeared to bare special ritual practices during Late Mesolithic. This phenomenon is well-known since the excavations of the Lepenski Vir during the second half of XX century. The settlement contains not just a number of dwellings and artifacts, but also the incredible collection of fish-like therianthropomorphic rock art instances that indicate complex assets of religious beliefs of the Balkan Late Mesolithic population. The fisher's societies of those times, thus, reveal the system of beliefs that have already been analyzed from different philosophical and ontological perspectives.

Similar to Lepenski Vir, the fishing-oriented societies emerge on the vast territories of Eastern Europe and developed a particular symbolic culture during the Late Mesolithic Age. Most of them are proven to be specialized on particular fish species and depend on the environmental conditions. However, the ideas and cultural concepts may have not emerged sporadically in the different places, but transmitted by the migration of people or ideas. Recent research of the burial practices and Mesolithic population in Ukraine indicate the transitions of Late Mesolithic groups related to the fishing-oriented societies from Balkans to Ukrainian Steppes more-or-less simultaneously with the appearance of the new portable rock art tradition there. This new tradition consists of the creation or shaping the sandstone pebbles into fish-like stone blocks and the ritual practices related to these blocks' creation and possible use.

The contribution of lithic studies to the understanding of the Neolithisation processes in the Western Balkans: overview and perspectives

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The Neolithisation of the Western Balkans took place from cca. 6200 to 5400 BC, during which various cultures developed in the area: Starčevo in the continental part, Impressed Ware along the Adriatic coast and, ultimately, Danilo-Vlaška in the extreme north-west of the peninsula.

Until recently, Neolithisation was mainly approached from the perspective of pottery styles and/or through statistical modelling of radiocarbon dates. However, during the last decade the increased interest in lithic studies has opened up new areas of research that allow a new approach to the problem of transition to farming through petrographic, technological, traceological and experimental approaches.

Given that lithics is an industry common to the last hunter-gatherers and the first farmers, a comparative study of the chipped stone assemblages makes it possible to determine whether there are generic links between different social groups.

This presentation will focus on the Late Mesolithic (Castelnovian sensu lato) and the Early Neolithic (Impressed Ware and Starčevo) lithic industries from Croatia and Montenegro in order to provide a general overview of the lithic production and to outline future perspectives for understanding the Neolithisation process from the lithic perspective.

Two Tells That Tell Tellingly: Vrbjanska Čuka and Veluška Tumba in the Neolithic Pelagonia

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The tells are often regarded as architectural phenomena that appeared in the Near East and were later gradually transposed to the Balkans. They were established in Pelagonia as already developed units that integrated an entire set of Neolithic achievements (agriculture, pottery, daub buildings etc.) and generated a variety of social and symbolic processes manifested in the material culture and architecture. Due to fertile lands and easy access to a variety of resources a large number of tells emerged in the beginning of 6th millennium BC and started networks that reflected the social coherence on the pottery patterns, house models, stamps etc. But in spite of the apparent similarities in material culture and buildings the first farming communities in Pelagonia also established the modes of distinct identity for each of the settlements they inhabited. Vrbjanska Čuka and Veluška Tumba are two of the numerous Early Neolithic tells that shared evident resemblances, but also developed a number of diversities that are present in the social practices, production of material culture, architectural features etc. These two tells are studied intensively in the current multidisciplinary research that provides a new understanding of the formation processes and settlement growth including their relationship with the construction of social and symbolic identities. The paper will present the research results from the fieldwork at Vrbjanska Čuka and Veluška Tumba and the contribution of latest data in regard to the diverse social dynamism among these seemingly similar tells.