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PROGRAMME / PROGRAM

Mardi / Tuesday: 25.06.2019

Lieu / Place: Faculté de Biologie, Plateforme de Recherche en biologie et écologie systémique, Salle de conférences, Splaiul Independenței, no. 91-95, Bucarest / Faculty of Biology, Research Platform in Biology and Systemic Ecology, Conference Room, Splaiul Independenței, no. 91-95, Bucharest

Session 1
Interactions homme/environnement du Paléolithique final à l'âge du Bronze / Human & Environmental Interactions from the Late Paleolithic to the Bronze Age

9h. Accueil / Opening

Président / Chair: Radu Băjenaru

9h30-9h40. Introduction à la Session 1 / Introduction to Session 1

9h40-10h. Valentin Dumitrașcu. *Stratégies d'acquisition des ressources d'origine animale dans le Paléolithique supérieur de l'est de la Roumanie.*

10h-10h20. Adrian Bălășescu, Adina Boroneanț, Valentin Radu & Clive Bonsall. *The archaeozoology of the Mesolithic in south-west Romania.*

10h20-10h40. Elena Marinova, Elske Fischer, Manfred Rösch, Wolfram Schier & Raiko Krauß. *Archaeobotanical perspectives on the Neolithisation of SE Romania (Banat): Movila lui Deciov, Bukova Pusta IV and Uivar.*

10h40-11h. Alina Corina Sîrghi, Viorica Vasilache, Florin Constantin, Mircea Lechitan, Roxana Bugoi, Tiberiu Sava, Irina Gheorghe, Pavel Mirea, Carmen Chifiriuc & Cătălin Lazăr. *Prehistoric wood: at the confluence between Natural and Anthropogenic influences. A multiple approach-oriented study of Romanian Neolithic wood fragments.*

11h-11h30. Pause / Break

Présidente / Chair: Amy Styring

11h30-11h50. Danu Mihaela, Claire Delhon, Emilie Gauthier & Olivier Weller. *Pollen et phytolithes, marqueurs des environnements préhistoriques et économie végétale dans l'espace carpato-danubien: la source salée de Halabutoaia – Țolici (Neamț).*

11h50-12h10. Luminița Bejenaru. *Interactions homme/animal dans les communautés chalcolithiques de l'Est de la Roumanie.*

12h10-12h30. Dragomir N. Popovici†, Constantin Haită, Ana Ilie, Adrian Bălășescu & Valentin Radu. *Man and environment in the Lower Danube Valley. New data from the Boian Culture at Hîrșova-tell (Constanța County).*

12h30-12h50. Laurent Carozza, Valentin Radu, Mihaela Danu, Adrian Bălăşescu & Cristian Micu. *L'exploitation du milieu entre 4800 et 4100 BC sur le tell chalcolithique de Taraschina dans le delta du Danube.*

12h50-14h30. Pause / Break

Présidente / Chair: Luminița Bejenaru

14h30-14h50. Stéphanie Bréhard, Marie Balasse, Valentin Radu, Carlos Tornero, Valentina Voinea, Dragomir N. Popovici† & Adrian Bălăşescu. *Sheep and goats during the Neo-Eneolithic of south-eastern Romania: exploitation strategies, herding scale and seasonality.*

14h50-15h10. Marie Balasse, Stéphanie Bréhard, Rosalind Gillis, Anne Tresset†, Mélanie Roffet-Salque, Richard Evershed, Cristian Micu, Laurent Carozza, Valentina Voinea, Dragomir N. Popovici† & Adrian Bălăşescu. *Continuities and changes in cattle husbandry in the Chalcolithic economies from eastern Romania: a comparative study of Hamangia and Gumelnita sites.*

15h10-15h30. Valentin Radu et Adrian Bălăşescu. *La pêche dans les communautés énéolithiques de la région de Dobrogea (Roumanie-V^{e} millénaire BC).*

15h30-16h. Pause / Break

Présidente / Chair: Elena Marinova

16h-16h20. Allowen Evin, Marie Balasse, Linus Girdland Flink, Dragomir N. Popovici†, Radian Andreescu, Douglas Bailey, Pavel Mirea, Cătălin Lazăr, Adina Boroneant, Clive Bonsall, Carlos Tornero, Valentin Radu, Denis Fiorillo, Stéphanie Bréhard, Anne Tresset†, Thomas Cucchi, Greger Larson, Keith Dobney & Adrian Bălăşescu. *Approches combinées pour appréhender l'évolution du cochon domestique en Roumanie : morphométrie géométrique, ADN ancien et analyses isotopiques.*

16h20-16h40. Cătălin Lazăr, Gabriel Vasile, Ionela Crăciunescu & Adrian Bălăşescu. Humans, animals, and funerary behaviours. *New insights into the bodies manipulations and graves re-opening practices in the Eneolithic cemetery from Sultana Malu Roşu (Romania).*

16h40-17h. Mihaela Golea, Laurent Bouby & Aurélie Salavert. *Food plants of the Eneolithic communities from Gumelnița and Sultana-Malu Roșu tell settlements.*

17h-17h20. Beatrice Ciută. *Plant exploitation during the Late Bronze Age in the Transylvaniaa area. Case study: the Teleac hillfort site (Alba County).*

Mercredi / Wednesday: 26.06.2019

Lieu / Place: Faculté de Biologie, Plateforme de Recherche en biologie et écologie systémique, Salle de conférence, rue Splaiul Independenței, no. 91-95, Bucarest / Faculty of Biology, Research Platform in Biology and Systemic Ecology, Conference Room, Splaiul Independenței, no. 91-95, Bucharest

Session 1
Interactions homme/environnement du Paléolithique final à l'âge du Bronze / Human & Environmental Interactions from the Late Paleolithic to the Bronze Age

9h. Accueil / Opening

Président / Chair: Adrian Bălăşescu

9h20-9h40. Amy Styring & Maria Hajnalová. *Traditional agriculture in Romania and its value for reconstructing prehistoric farming practices*.

9h40-10h. Morgane Ollivier, Anne Tresset†, Adrian Bălășescu, Stéphanie Bréhard, Adina Boroneanț, Christophe Hitte & Jean-Denis Vigne. *Mobility and adaptation of dogs in agricultural societies: when the study of the animal reflects the history of humans.*

10h-10h20. Ludovic Orlando. *The evolutionary origins and impact of the horse on human history.*

10h20-10h40. Pause / Break

Session 2
Acquisition, transformation et utilisation des matières dures animales sur le temps long dans l'espace Carpato-Danubien / Acquisition, processing and use of animal hard materials over the time in Carpatho-Danubian space

Présidentes / Chairs: Aline Averbouh & Monica Mărgărit

10h40-10h55. Aline Averbouh & Monica Mărgărit. *L'étude des productions en MDA et les échanges franco-roumain : un long et riche parcours.*

10h55-11h15. Nejma Goutas, Elena-Cristina Nițu & Marin Cârciumaru. *Quid des pratiques techniques et des dynamiques sociétales en Europe entre 30 000 et 20 000 ans uncal BP lorsque les ressources animales sont enfin questionnées ? Réflexions à partir des industries osseuses du site de Poiana Cireşului-Piatra Neamț.*

11h15-11h35. Petar Zidarov. *Cultural uniformity and environmental adaptations as reflected in the prehistoric worked bone assemblages along the Lower Danube and the Western Black Sea coast during the sixth and fifth millennia BC.*

11h35-11h55. Andreea Vornicu Ternea. *Les industries osseuses comme indicateurs de changement culturel au début du Chalcolithique, à l'est des Carpates.*

11h55-12h10. Pause / Break

12h10-12h30. Monica Mărgărit & Valentin Radu. *Acquisition et transformation de la valve d'*Unio *en parures dans la culture de Gumelnița (V^e millénaire BC).*

12h30-12h50. Cătălina Cernea. *Cernavoda I culture from eastern Muntenia. Some aspects of the hard animal materials industry*.

12h50-14h20. Pause / Break

Session 3
Projets et perspectives / Projects and perspectives

Présidente / Chair: Mihaela Danu

14h20-14h35. Colline Brassard, Adrian Bălășescu, Jacques Barat, Adina Boroneanț, Trish Fleming, Claude Guintard, Elodie Monchâtre-Leroy, Anne Tresset†, Cécile Callou, Raphaël Cornette, Stéphanie Bréhard & Anthony Herrel. *Etude morpho-fonctionnelle de canidés actuels en vue d'une application au Néolithique roumain.*

14h35-14h50. Maria Ozana Petraru. *Microanalysis of ancient human remains: doctoral project concerning archaeological sites from east Romania.*

14h50-15h05. Cristian Oprean. *Relations between the human and the animal world in the settlement of Parța.*

15h05-15h20. Xenia Pop. *Socio-economic aspects of the life of prehistoric communities in the Lower Mureș Valley. An archaeozoological perspective.*

15h20-15h40. Pause / Break

Président / Chair: Valentin Radu

15h40-15h55. Ionela Crăciunescu, Valentin Radu, Mihaela Danu, Valentin Dumitrașcu, Mihaela Golea, Mariana Balint, Xenia Pop, Cătălin Lazăr & Adrian Bălășescu. *The BioMapPrehist project*.

15h55-16h10. Morgane Ollivier. *The BOND project.*

16h10-16h25. Cătălin Lazăr, Carmen Chifiriuc & Laurențiu Leuștean. *Doing Things Better: ArchaeoScience#RO, A New Research Platform in Romania.*

Président / Chair: Cătălin Lazăr

16h25. Idées, discussions et perspectives de la collaboration scientifique / Ideas, discussions and perspectives of scientific collaboration

Jeudi / Thursday : 27.06.2019

9h. Rendez-vous à la Maison de l'Académie Roumaine (Calea 13 Septembrie, no. 1, Bucarest) / Meeting at the Romanian Academy House (Calea 13 Septembrie, no. 1, Bucharest)

10h-12h. Visite Musée du village (Blvd. Kiselef, no. 28-30, Bucarest) / Visit of the Village Museum (Blvd. Kiseleff, no. 28-30, Bucharest) - http://muzeul-satului.ro/

12h. Déjeuner libre / Free lunch

The Village Museum, lying in a specific Romanian setting, on the Herãstrãu lake shore in Bucharest, is one of the biggest and the oldest outdoors museum in Europe. Its exibits – genuine monuments including houses, pens, churches, water and wind mills, cloth mills, of great historic and artistic value - acquaint the visitors in two hours with the specific of the Romanian village. The objects inside the households - carpets, pottery, rugs, icons, furniture - point to the originality of the folk creation, the sensibility and care for the beauty of the rural people.

The museum extends to over 100,000 m^2, and contains 272 authentic peasant farms and houses from all over Romania.

It was created in 1936 by Dimitrie Gusti, Victor Ion Popa, and Henri H. Stahl.

RESUMES / ABSTRACTS

Session 1 - Interactions homme/environnement du Paléolithique final à l'âge du Bronze / Human & Environmental Interactions from the Late Paleolithic to the Bronze Age

Valentin Dumitrașcu[1]

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Stratégies d'acquisition des ressources d'origine animale dans le Paléolithique supérieur de l'est de la Roumanie

Du point de vue archéozoologique, le Paléolithique supérieur en Roumanie est représenté par peu de sites ayant fourni des échantillons satisfaisants. La plupart des sites contenant des échantillons riches et bien préservés ont été découverts à l'est des Carpates, dans les dépôts de lœss, dans les vallées de la Bistrița (Buda, Lespezi, Poiana Cireșului, Bistricoiara, Dârțu, etc) et du Prut (Mitoc, Ripiceni, Crasnaleuca, etc). Ce sont des sites pluristratifiés, en plein air, avec un caractère saisonnier. Les niveaux archéologiques qui contiennent les assemblages fauniques les plus abondants ont été attribués au Gravettien et à l'Épigravettien. Peu de sites ont bénéficié de recherches archéozoologiques ; dans la plupart des cas, seules des listes d'espèces ont été publiées. Corroborant les résultats des études antérieures et récentes, j'ai esquissé un scénario sur les stratégies d'exploitation des ressources animales dans cette région aux environs du dernier maximum glaciaire. La chasse est concentrée sur quelques espèces, principalement le renne, le bison des steppes et le cheval. Dans le cas des sites avec le plus de restes osseux, la structure des populations de bisons et de rennes suggère que la chasse a eu lieu en automne et au début de l'hiver et semble être non sélective. Dans une moindre mesure, le cerf, l'élan et le mégacéros étaient chassés, et très rarement le chamois et l'ibex. Des carnivores et des rongeurs sont aussi présents avec peu de restes. Des objets travaillés en matières dures animales ont été découverts sur plusieurs sites.

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The archaeozoology of the Mesolithic in south-west Romania

The aim of this presentation is to synthesize the archaeozoological research undertaken on the Mesolithic faunal collections from south-west Romania. Most of the sites in the area were investigated over 45 years ago during construction of the Iron Gates I and II hydro-electric power stations. Some of those faunal assemblages were studied shortly after the excavations (Icoana, Climente I, Climente II, Cuina Turcului and Ostrovul Corbului); others have been subjected to such studies only recently (Răzvrata, Alibeg and Ostrovul Banului). In a few cases old studies have been completed by new research. Thus, by comparing and correlating the existing sets of old and new data, backed by a substantial number of radiocarbon dates and stable isotope results, a clearer picture of Mesolithic development in the area has emerged. Consequently, we have now a better understanding of the interactions between the Mesolithic communities and the surrounding environment during the period between the 10th and the 7th millennia BC.

The faunal assemblages in question display great variation in terms of the animal resources represented, from vertebrates (fish, reptiles and mammals) to molluscs. Mammal remains prevail in these assemblages, with wild boar and deer as the most significant species. Red and roe deer predominate in all assemblages except for Icoana where wild boar ranks first. Dog was the only domesticate, with evidence of having been consumed at both Icoana and Lepenski Vir.
Contrary to the faunal evidence, which suggests reliance of Mesolithic communities on terrestrial animals, C and N stable isotope studies indicate high dependence on aquatic resources, continuing into the Early Neolithic.

Elena Marinova [1], Elske Fischer[1], Manfred Rösch[1], Wolfram Schier[2] & Raiko Krauß[3]

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Archaeobotanical perspectives on the Neolithisation of SE Romania (Banat): Movila lui Deciov, Bukova Pusta IV and Uivar

Within southeast Europe the Neolithic started to expand around 6000-5800 BC and a second Neolithization movement into the areas north of the Lower Danube, inside the Carpathian Basin took place ca. 500 years later, probably after Neolithic food production strategies had adapted to the conditions of the continental climate of the inner Balkan-Carpathian. As a result, the Neolithic package was modified and subsistence strategies were adjusted to the environmental constraints of the region. Thanks to these modifications, the Neolithic way of life could be transmitted thereafter into a vast area spanning from the Paris Basin in the west to the Ukrainian steppes in the east and the Baltic Sea in the north. In the current paper, we present the archaeobotanical evidence from the sites Movila lui Deciov, Bukova Pusta IV and Uivar from the Banat area of Romania. The archaeobotanical data is covering the time span from Early Neolithic to Late Neolithic (5800-4800 BC) and deals with charred macrobotanical assemblages from those three sites. The analyses will consider the development trends in the plant economy related with the annual crop production and exploitation of the wild plant resources. The evidence will be compared with further studies from the region with the aim to drive a general picture of its Neolithic plant economy in diachronic view.

Alina Corina Sîrghi [1], Viorica Vasilache[2], Florin Constantin[3], Mircea Lechitan[3], Roxana Bugoi[3], Tiberiu Sava[3], Irina Gheorghe[1], Pavel Mirea[4], Carmen Chifiriuc[1] & Cătălin Lazăr[5]

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Prehistoric wood: at the confluence between natural and anthropogenic influences. A multiple approach-oriented study of Romanian Neolithic wood fragments.

Currently, it is known that the wood was one of the primary raw materials used by the Neolithic communities for construction, fuel, but also to manufacture tools, weapons, containers or ornaments. Unfortunately, for the Balkan Neolithic, there are no many cases of good preservation of the wood elements, such situations being exceptional.
The current paper will explore some wooden objects derived that represent building elements or parts of different artefacts (e.g., bracelets or vessels) discovered in a series of flat or tell settlements investigated in Teleorman County (Romania), dated between c. 6200-4200 BC and belonging to Starcevo-Criş (Phase I) and Gumelniţa (B1 and A2 phases) communities.
Our multiple approaches consisted in X-Ray CT, SEM investigations, isolation and identification of fungal species found on the samples, and in the archaeological soil, assessment of their biodegradation potential (enzymatic activity), along with the radiocarbon dating necessary for the correct setting of the chronological framework.
The main aim was to assess the preservation state of the prehistoric wood pieces, but also to made a comparison between the fungal strains colonising the uncovered wood samples and other conspecific ones found in the archaeological levels, in terms of cellulase and chitinase enzymatic gene codification and expression, in order to set the presence of some Neolithic microorganisms agents and their integration in the past environment correlated with human actions.
This work was supported by a grant of the Romanian Ministry of Research and Innovation, CCCDI – UEFISCDI, project number PN-III-P1-1.2-PCCDI-2017-0686, within PNCDI III.

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Pollen et phytolithes, marqueurs des environnements préhistoriques et économie végétale dans l'espace carpato-danubien : la source salée de Halabutoaia – Țolici (Neamț)

La région subcarpatique de l'est de la Roumanie est caractérisée par une forte densité de sources d'eau salée. L'exploitation de certaines d'entre elles remonte au début du Néolithique et constitue l'un des premiers témoignages de la production de sel en Europe.

La source salée de Halabutoaia – Ţolici (dep Neamţ) est un site exceptionnel par son développement stratigraphique, la richesse du matériel, la qualité de conservation et son potentiel informatif. Une exploitation de la source salée a été mise en évidence ici dès le Néolithique ancien et tout au long du Chalcolithique avec de remarquables structures de combustion et près de 1,5 tonne de céramique dont, pour le Chalcolithique, la présence de moules à sel caractéristiques (briquetage du Cucuteni A final et B). La stratigraphie du dépôt est aujourd'hui estimée et décrite sur 8 m et recouvre 2500 ans d'histoire (6000-3500 BC).
Dans ce contexte remarquable, les principaux objectifs des analyses archéobotaniques étaient de tenter de reconstituer l'évolution des paléo-environnements végétaux et identifier des activités anthropiques. Les analyses menées sur les pollens et les micro-fossiles non-polliniques documentent l'histoire de la végétation et l'impact des activités humaines sur ce territoire. Ces données illustrent bien les relations étroites qui devaient exister entre exploitations du sel et pastoralisme pour ces périodes, mais aussi entre exploitation et conséquences environnementales. De plus, afin de mieux comprendre l'utilisation des plantes dans le processus de production de sel, notamment pour le chauffage de l'eau salée, nous avons mené une étude détaillée des phytolithes pour plusieurs niveaux archéologiques.

Luminiţa Bejenaru[1]

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Interactions homme/animal dans les communautés chalcolithiques de l'est de la Roumanie

Les vestiges fauniques découverts dans de nombreux sites archéologiques appartenant au complexe culturel Precucuteni-Cucuteni (Chalcolithique, environ 5200-3700 av. J.-C.) sont décrits en termes de quantification et de morphologie. Cette étude évalue les ressources animales des économies locales (élevage, chasse, pêche, cueillette de mollusques) ainsi que l'utilisation des animaux dans les rituels. Les restes squelettiques appartenant à des mammifères, principalement domestiques, prédominent dans les échantillons étudiés, mais présentent également une variation de fréquence à la fois dans l'espace et dans le temps.
La variabilité de la gestion des ressources animales par différentes communautés du Chalcolithique dans l'est de la Roumanie reflète des adaptations à des conditions éco-géographiques distinctes ainsi qu'à un environnement socioculturel particulier.

Dragomir N. Popovici† [1], Constantin Haită[1], **Ana Ilie**[2], Adrian Bălășescu[3] & Valentin Radu[1]

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Man and environment in the Lower Danube Valley. New data from the Boian Culture at Hîrșova-tell (Constanța County).

In the last few decades the beginning of the Copper Age (Boian culture) was not a subject of constant and consistent research in Romania. Only few discoveries can be mentioned. Consequently, the level of knowledge is, more or less, the same as three decades ago. However, many details concerning the evolution of Boian culture was discussed in this period. Two of these are the main subjects: evolution of this culture including the chronological frame and the transition to the Gumelnița culture.
Our presentation focuses on these two problems, the evolution and the so-called transition to the Gumelnița culture, based on the pluridisciplinary researches from Hîrșova-tell. In SC/pP and SC/pA a total surface of 140 m² was excavated. Although the archaeological deposit was not excavated completely on the entire surface, many significant data was obtained. Thus, the archaeological, sedimentological, micromorphological and archaeozoological data allow us to underline some characteristics of Boian Culture at Hîrșova-tell, especially on the latest part of the evolution.

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L'exploitation du milieu entre 4800 et 4100 BC sur le tell chalcolithique de Taraschina dans le delta du Danube

Depuis 2010, une équipe franco-roumaine a engagé un projet de recherche centré sur l'étude des communautés agro-pastorales qui peuplaient le delta du Danube durant le 5ème millénaire avant notre ère. Ce projet est centré sur les relations qui unissaient les sociétés Gumelniţa et leur environnement. Dans le contexte particulier du delta du Danube, ces communautés ont été exposées à des changements environnementaux rapides, et plus spécifiquement aux transformations de l'hydrosystème.
La fouille du tell submergé de Taraschina, aujourd'hui situé au cœur du delta du Danube, est conduite dans la perspective de reconstruire le lien nature-société-environnement. Les horizons archéologiques livrent différentes archives qui permettent de reconstituer l'activité des communautés et de mesurer leur impact sur l'environnement. A l'échelle du site, les données paléo-économiques sont analysées à haute résolution chronologique, à l'aide de datations radiocarbone. Des études archéozoologiques dédiées aux invertébrés (bivalves et escargots) et vertébrés (poissons, reptiles, oiseaux, mammifères), palynologiques et l'analyse des phytolithes ont livré des informations qui permettent de reconstituer le paléo-environnement et la paléo-économie de ces populations

chalcolithiques. Il a été possible de mettre en évidence un important signal de traitement des céréales sur le site de Taraschina, et dans son environnement proche.
Les données archéologiques mettent en évidence une diminution du signal anthropique vers 4350-4250 av. n.è. (changement du mode d'occupation). L'abandon du site est lié à la montée des eaux et au changement environnemental qui en a résulté. Dans ce contexte, le site archéologique est considéré comme un conservatoire de la paléo-biodiversité.

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Sheep and goats during the Neo-Eneolithic of south-eastern Romania: exploitation strategies, herding scale and seasonality.

Romania is a climatic and cultural crossroads. The contribution of sheep and goats in the Neo- and Eneolithic socio-economic systems of south-eastern Romania is a good example: although they are not predominant as in the Mediterranean area, they play a more important role than in temperate Europe. Research conducted during the last ten years allows us to better describe the characteristics of sheep husbandry, in terms of exploitation strategies, herding scale and seasonality. No change is perceptible in sheep exploitation strategies between Early Neolithic and Eneolithic; given the available data, this observation could however result from sampling bias as well as from continuous practices. Sheep/goats were butchered and eaten in situ and for some of the studied sites it was the only activity identified. In these instances, herding activities took place outside the excavated areas as suggested by the absence of new-borns and young lambs in the mortality profiles. At Hârşova-Tell and Borduşani-Popină, stable isotope analyses show that sheep were reared in close proximity to the settlements, rather than in an extensive system, so it is very likely that pens or sheepfolds were, in these cases, close to the dwelling areas (the tell) where sheep have been eaten. Lastly, the identification of a restricted lambing period during the Neo- and Eneolithic has permitted to show that, on three settlements, sheep slaughtering seldom occurred from late spring to early autumn. For two of them, it coincides with the period when fishing and bivalve gathering primarily took place.

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Continuities and changes in cattle husbandry in the Chalcolithic economies from south-eastern Romania: a comparative study of Hamangia and Gumelniţa sites.

Cattle have played a pivotal role in most Neolithic societies that diffused across Europe following the Danubian corridor. One millennium after their introduction to Romania, cattle remain a major component of Chalcolithic economies, although to varying extents according to cultural groups. This research examines continuities and changes in cattle husbandry in two cultural complexes: the Hamangia, corresponding to the settling of Chalcolithic communities west of the Black Sea from the turn of the 5th mil BC, illustrated by the settlement of Cheia in the central Dobrudja plateau; the Gumelniţa A2, or the development of the tell sites in the second half of the 5th mil BC, recovered at Borduşani-Popină, Hârşova-tell and Taraschina in the Danubian plain. A predominant role of cattle in the Hamangia economy is nuanced by the raising importance of caprines and pigs in the Gumelniţa A2. Nevertheless, the orientation of the production reveals continuity as evidenced from similar cattle mortality profiles, suggesting production of meat and milk; the latter was also attested by lipid residues in ceramics at Borduşani. The availability of milk on the annual scale was reduced due to a restricted period for calving, as evidenced from stable isotope analysis in teeth. This would suggest strong environmental constraints in the management of cattle diet throughout the year. Stable isotopes also reveal a strong seasonal C_4 plants component in cattle's (and caprines') diet at Borduşani, Hârşova and Taraschina, not detected in the wild fauna. This signal may be specific to the Danubian plain, and helps defining the scale of herding.

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La pêche dans les communautés énéolithiques de la région de Dobrogea (Roumanie-V^e millénaire BC)

La recherche archéologique complexe menée dans certains sites énéolithiques de Dobrogea (V^e millénaire BC) nous a fourni un abondant matériel faunique qui a permis de tracer les principales caractéristiques de la pêche et son évolution pour cette région. La liste des taxons pêchés est en corrélation avec le spectre taxinomique naturel caractéristique des eaux du milieu environnant chaque site. Les restes les plus abondants sont ceux appartenant aux grands poissons d'eau douce tels : la carpe, le silure, le sandre et les esturgeons. Les données concernant les dimensions des poissons pêchés nous montrent que la taille évolue durant cette période vers une pente

décroissante. Dans les sites continentaux (Cheia et Luncavița), il est probable que les poissons aient été consommés grâce aux échanges. D'une part ce fait nous confirme que le poisson était un aliment apprécié et d'autre part que certaines activités comme la chasse et l'élevage sont limitatives pour développer une activité de pêche à un tel niveau qu'elle peut compter dans les stratégies d'alimentation. Les analyses menées sur les mollusques aquatiques (bivalves genres *Unio* et *Anodonta*) ont fourni des informations en lien avec les changements de leurs paramètres écologiques. Et parce que l'interaction directe entre les deux taxons est bien connue (les poissons sont des hôtes intermédiaires dans le cycle de développement de ces bivalves), on considère que ces changements qui ont surtout été d'ordre hydrologique ont pu avoir des conséquences aussi sur les populations de poissons et indirectement sur les stratégies de pêche.

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Approches combinées pour appréhender l'évolution du cochon domestique en Roumanie : morphométrie géométrique, ADN ancien et analyses isotopiques

De par sa position géographique et sa richesse archéologique, La Roumanie constitue un emplacement de choix pour l'étude de l'évolution des espèces domestiques et de leurs interactions avec les sociétés d'éleveurs. L'histoire de la domestication du cochon est complexe et son appréhension nécessite d'employer une combinaison d'approches apportant chacune des éléments complémentaires. Afin de définir le statut morphologique, sauvage ou domestique, des individus nous avons utilisé la morphométrie géométrique appliquée sur 449 dents provenant de 18 sites archéologiques roumains et datant du Mésolithique à l'âge du Fer. Cette étude a permis de détecter : des animaux domestiques de petite taille, des sangliers (grande taille et conformation dentaire sauvage), ainsi que des individus présentant des caractères intermédiaires (grande taille et conformation domestique) de statut incertain. Le séquençage de l'ADN mitochondrial de 37 individus a permis de confirmer l'origine géographique des premiers cochons introduits au Néolithique et de détecter la présence probable d'hybrides ainsi qu'un remplacement total de population. Afin d'étudier le régime alimentaire et le lieu de vie (élevage extensif/maintien au village) des individus, des analyses isotopiques (carbone et azote) ont été menées sur trois sites ce qui a conduit à l'identification d'animaux féraux.
Ces résultats réalisés en grande partie sur les mêmes individus ont permis de mieux comprendre l'histoire du cochon en Roumanie, de mieux caractériser la diversité de cette espèce reflétant à la

fois mouvements et mélanges de populations. De nombreuses questions restent toutefois encore en suspens.

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Humans, animals, and funerary behaviours. New insights into the bodies manipulations and graves re-opening practices in the Eneolithic cemetery from Sultana Malu Roșu (Romania)

The Eneolithic cemetery from Sultana-Malu Roşu (ca. 5000-4000 cal. BC) was discovered in 2006, and until now 99 inhumation graves have been investigated. Most of them are regular graves (single primary burials). The secondary burials and skeletons without skulls represent an unusual situation in this cemetery that fit in the deviant burial category documented in different sites from the fifth millennium BC. They demonstrated a complex process of manipulation of the human body in this community and the particular perspective of the living members of society about the funerary ritual and the death of the individuals. Also, this kind of burials may reflect shared identities between the living and the dead, mainly because some human anatomical elements were found scattered in the area of the settlement associated with this cemetery.
The current paper will explore the case of the grave 28 that fits in the secondary burial category. Discovered in 2009, it contained human osteological remains from two human individuals, without anatomical connection, alongside with Gumelniţa ceramic fragments and faunistic remains. Among them, a *Bos taurus* horn was identified. Another *Bos taurus* horn was discovered in a pit (C1/2009) located in the proximity of the grave 28, and it represents the pair of the horn that was discovered here.
Our analysis will include the study of this deviant burial concerning archaeological, zooarchaeological and anthropological data alongside with radiocarbon and GIS data. Also, we will explore the aspects regarding the individual, shared, and collective identities created by the living in this cemetery, in close relation with similar Eneolithic finds from the Balkans.
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Food plants of the Eneolithic communities from Gumelnița and Sultana-Malu Roșu tell settlements

The eponym site of Gumelnița culture and the tell settlement of Sultana-Malu Roșu are two of the most important Eneolithic archaeological sites from south-eastern Romania. The Gumelnița culture

which developed in the second half of the Vth millennium BC is an integrated part of the Kodjadermen-Gumelnița-Karanovo VI cultural complex that existed in the Balkan region.
These two sites have provided crucial information regarding the utilisation of construction materials, funerary practices, the socio-economic relations between human groups (for instance, through metal and other „prestige" objects) and the relationship between humans and their natural environment. Another important information provided by archaeological items are those of food consumption, either from tools used in food production, from animal bones, or from plant seeds.
Through this paper we focus on the macrobotanical remains (seeds and fruits) that were found on these two sites. The aim of this paper will be to address the food choices plant use made by the Gumelnița and Sultana-Malu Roșu communities and also to contribute to the paleoenvironmental reconstruction of these two sites. Carbonized seeds and fruits corresponding to more than 20 taxa were retrieved over a period of 50 years. Even though many species are regularly mentioned in other Gumelnița culture sites or other sites of different cultures, additional rarely found plant species (as new glume wheat and acorn fruits) were identified at Gumelnița and Sultana-Malu Roșu. Last but not least, a comparison between Gumelnița and Sultana-Malu Roșu tell settlements about plant food consumption will accompany this paper.

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Plant exploitation during the Late Bronze Age in the Transylvaniaa area. Case study: the Teleac hillfort site (Alba County)

We will present the archaeobotanical results from the last three years when important discoveries were made regarding the diet of communities who inhabited here during Late Bronze Age. These results are part of a major interdisciplinary project which has developed during 2016-2018 (LOEWE Project) involving new technologies in archaeology in order to facilitate the interpretation of results. The Teleac hillfort is located in south-eastern Transylvania on top of a hill near the Mures River. The settlement from Teleac was classified as a princely one due to the important archaeological discoveries made inside of the fortification.
Due to major discoveries regarding the plants used in the diet of Teleac hillfort inhabitants we can offer some insights regarding the plant exploitation during LBA in this area.

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Traditional agriculture in Romania and its value for reconstructing prehistoric farming practices

Remnants of traditional farming communities practising non-mechanised agriculture still exist in some areas of Romania and can provide important information for the reconstruction of prehistoric farming practices and growing conditions. Fieldwork carried out in the Sighisoara district between 2000 and 2008 focused in particular on the cultivation of einkorn wheat, which alongside emmer was

a staple crop of the earliest Neolithic farmers in Europe. Ecological data on arable weeds growing in the fields was collected alongside information on sowing times, soil management strategies (weeding, manuring, fallowing) and crop processing techniques. The nitrogen isotope values of cereal grains sampled from the fields were also determined, providing a framework for interpreting the isotope values of cereal grains preserved on archaeological sites in terms of past manuring practices.

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Mobility and adaptation of dogs in agricultural societies: when the study of the animal reflects the history of humans

The dog was domesticated 15,000 to 20,000 years ago by hunter-gatherers from Western Europe and the Far East. Movements of human populations during millennia have resulted in the spread of domestic animals through the world. Their spread across Eurasia would be linked to the development of closed societies. The unique relationship between man and dog was shaped by a process of mutualisation initiated within the framework of the hunter-gatherers of the Pleistocene. We have shown the specificity of this man-animal relationship and the importance of the first agricultural societies in the diffusion of dogs and their strong morphological and physiological modifications. An undeniable link exists between the man and the dog and the cultural evolution of the first impacts the biological evolution of the second (adaptation of dogs to the diet of the first agricultural societies, dissemination of new populations of dogs accompanying men during their migrations in the Neolithic). This parallel evolution between the two species allows, by the study of the evolution of dog populations, to trace the evolution of human populations and paves the way for further research on the adaptation of these animals to agricultural societies and the scale of economic and socio-cultural changes that trigger the adoption of agriculture.

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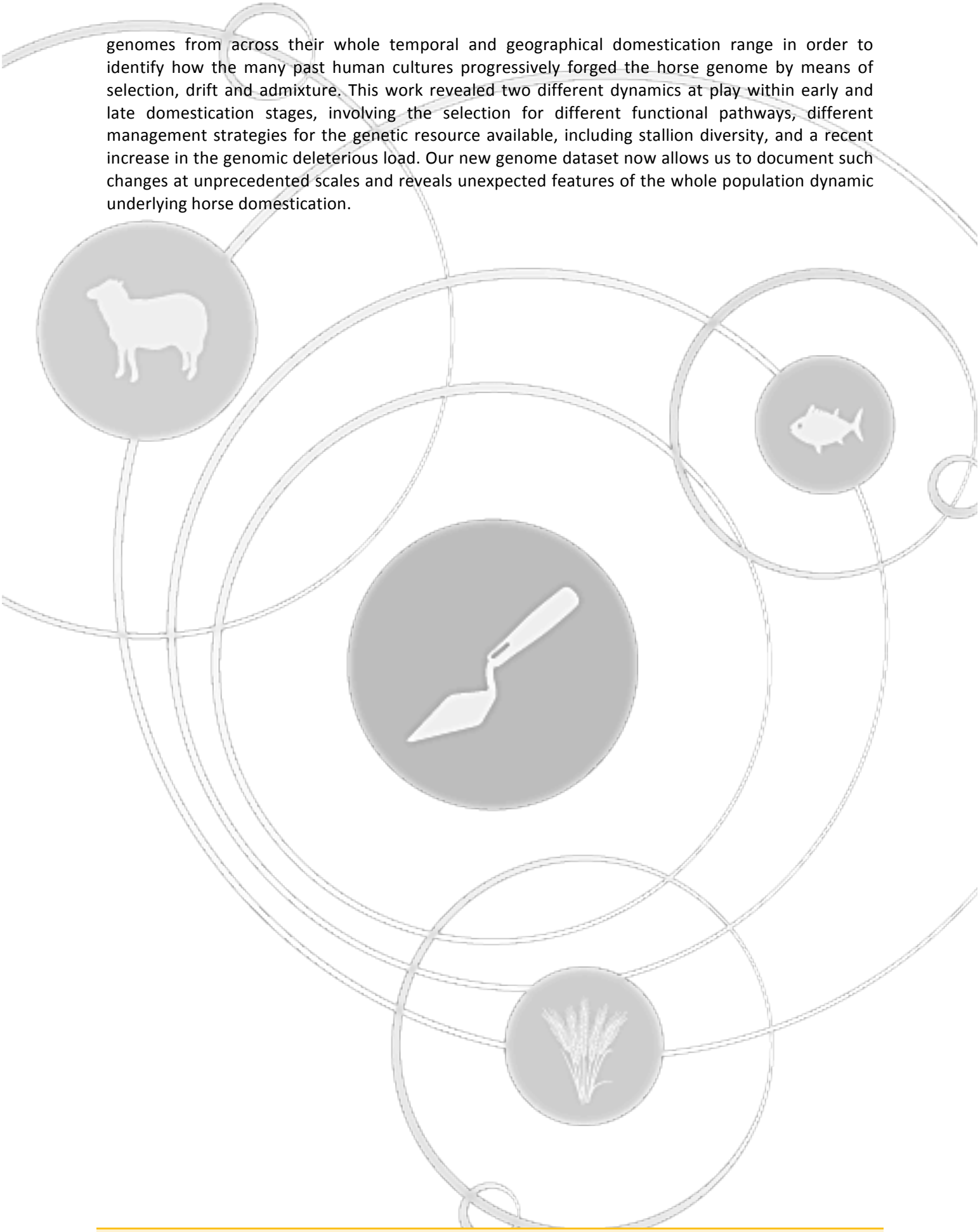
The evolutionary origins and impact of the horse on human history

The domestication of the Horse and its impact on warfare, transportation and agriculture, have revolutionized human history. Even though most modern breeds have been engendered within the last couple of centuries, humans have managed horse livestock for over five millennia. Recent selective and management strategies have tremendously impacted the genetic structure of horse populations. As a result, modern patterns of genetic diversity can only partly help reconstruct the horse domestication process prior to the modern era. Recent research in our laboratory, carried out in the framework of the ERC PEGASUS program, has endeavoured to sequence complete horse

genomes from across their whole temporal and geographical domestication range in order to identify how the many past human cultures progressively forged the horse genome by means of selection, drift and admixture. This work revealed two different dynamics at play within early and late domestication stages, involving the selection for different functional pathways, different management strategies for the genetic resource available, including stallion diversity, and a recent increase in the genomic deleterious load. Our new genome dataset now allows us to document such changes at unprecedented scales and reveals unexpected features of the whole population dynamic underlying horse domestication.



Session 2 - Acquisition, transformation et utilisation des matières dures animales sur le temps long dans l'espace Carpato-Danubien / Acquisition, processing and use of animal hard materials over the time in Carpatho-Danubian space

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L'étude des productions en MDA et les échanges franco-roumains : un long et riche parcours

Dès le milieu des années 1980, l'étude des productions en matières dures animales a conduit à établir de solides échanges entre la France et la Roumanie dans le cadre des travaux de la commission de nomenclature de l'industrie de l'os créée par H. Camps-Fabrer (CNRS, Aix-en-Provence). Ils furent le terreau d'échanges fructueux et ce fut une évidence scientifique d'établir des partenariats avec des laboratoires et des chercheurs roumains lors de la création de nouveaux programmes au début des années 2000. Cela a notamment été le cas du Groupement de recherche international PREHISTOS (*Prehistoric exploitation of osseous materials in Europe*) du CNRS (dir. A. Averbouh) établi en partenariat avec UDC Bucarest (2006-2010) puis lors de son renouvellement avec le MNIR Bucarest, l'Université de Târgoviște et l'ICEM de Tulcea (2010-2014). Ce programme de recherche s'est doublé d'un réseau formation-recherche PECO-NEI (France-Russie-Roumanie-Hongrie) du MENESR, impliquant là encore des étudiants et collègues roumains et en 2013, une session du GDRI Prehistos fut organisée par des membres roumains et français (M. Margarit, G. Le Dosseur et A. Averbouh). Elle donna lieu en 2014 à une publication bilingue - anglais-roumain - de ses actes. A l'heure actuelle, l'étude des productions en MDA se développe à travers d'autres programmes associant les deux pays, tels la fouille de Taraschina (Dir. L. Carozza) ou celle du site gravettien de Poiana Cireșului (Coord. C. E. Nițu et M. Cârciumaru).
Cette introduction à la session 2 dressera un bilan des programmes de recherche conjoints conduits depuis les années 2000 et évoquera les programmes actuels dont la plupart seront présentés en détail au cours de la session.

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Quid des pratiques techniques et des dynamiques sociétales en Europe entre 30 000 et 20 000 ans uncal BP lorsque les ressources animales sont enfin questionnées ? Réflexions à partir des industries osseuses du site de Poiana Cireşului-Piatra Neamț.

Poiana Cireşului, sur la rive droite de la vallée de la Bistriţa, à l'est des Carpates, offre l'une des plus longues séquences archéostratigraphiques du Paléolithique supérieur de Roumanie. Trois niveaux, datés entre 20 000 et 30 000 uncal BP, ont été identifiés jusqu'à présent. Conservés dans des dépôts

lœssiques et séparés par des couches stériles épaisses, Poiana Cireşului offre des conditions de conservation remarquables. Ce gisement a livré des témoins matériels riches et variés, dont les plus grands ensembles fauniques et d'industries en matières dures animales du pays pour la tranche chronologique ici concernée, et plus des deux tiers des objets d'art et de parure connus localement pour le Paléolithique. Des gastéropodes marins percés (*Homalopoma sanguineum*) attestent de liens directs ou indirects avec la Méditerranée (à plus de 850 km) pour le niveau le plus ancien du site. La qualité de la documentation de ce gisement constitue un cas d'étude rare pour traiter des dynamiques culturelles du Paléolithique supérieur ancien de l'est-carpatique et ses relations avec les régions voisines. C'est aussi un excellent candidat pour initier des approches croisées entre archéozoologue et technologue (restitution des chaînes opératoires globales d'exploitation des ressources animales). Dans le cadre de cette communication, nous nous intéresserons aux systèmes techniques d'exploitation de ces ressources singulières (à la croisée du minéral et du vivant). Les savoir-faire en jeu dans leur traitement restent encore très peu connus pour ces périodes. Leur potentiel heuristique en fait un objet d'étude des plus structurants pour interroger autrement les sociétés nomades du Paléolithique et plus encore les modèles théoriques qui ont construit l'histoire des sciences en archéologie préhistorique.

Cette recherche a été effectuée dans le cadre du projet PALEOTECH – Comportement technique et symbolique des communautés paléolithiques des Carpates Orientales (Roumanie) avant et pendant le dernier Maximum Glaciaire, code du projet PN-III-P4-ID-PCE-2016-0614.

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Cultural uniformity and environmental adaptations as reflected in the prehistoric worked bone assemblages along the Lower Danube and the Western Black Sea coast during the sixth and fifth millennia BC

Intensive archaeological excavations in the past century facilitated the establishment of a general chronological framework of alternating trends of culturally converging and diverging processes at a number of prehistoric settlements and cemeteries along the Lower Danube and the western Black Sea coast largely disregarding the modern national borders between Romania and Bulgaria. The correlations between the two areas were mostly based on nominal degrees of similarity between settlement patterns, burial rites, and above all pottery, figurines, and copper finds. Contrastingly the interpretative potential of most products of the bone and antler industry was much too often dismissed as relatively negligible from a positivistic evolutionary perspective. Personal observations of finds from largely unpublished collections, however, indicate that certain types of tools, weapons, figurines and ornamental pieces have rather specific spatio-temporal affinities. For example, one could distinguish certain characteristic types of objects common for both areas – some of them being even clumsily copied in the peripheral zones. Others, like some fishing gear made of antler had rather specific distribution along particular sections of the Danube or the coastal lagoons indicating distinct specializations and environmental adaptations. Grave inventories also allow us to distinguish certain sex, age, and status-specific bone artefacts. Even though most of these observations refer to largely unpublished collections, both from Bulgaria and Romania, I would try to outline those likely holding greater potential for revealing continuities and discontinuities in the archaeological record,

not so well represented by other classes of artefacts, thus deserving more detailed attention in future studies.

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Les industries osseuses comme indicateurs de changement culturel au début du Chalcolithique, à l'est des Carpates.

Dans la région de l'est des Carpates, la plus grande partie du V^{e} millénaire av. n.è. est marquée par des grandes transformations culturelles déclenchées par l'émergence de la métallurgie dans les régions voisines des Balkans. Ce qu'on appelle ici le début de Chalcolithique comprend les phénomènes culturels depuis l'utilisation des premiers objets de métal par des communautés qui conservent encore de forts éléments néolithiques (la culture Precucuteni) jusqu'à la formation des sociétés "pleinement chalcolithiques" (la première phase de la culture Cucuteni). Comme la majorité des éléments de la culture matérielle, l'outillage en os reflète ces transformations, mais dans une manière propre. A partir de l'étude comparative de la composition de l'inventaire et des schémas d'acquisition et de transformation des matières osseuses, nous proposons une discussion sur le contenu et la dynamique de changement et les vecteurs de transferts culturels dans ce contexte particulier.

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*Acquisition et transformation de la valve d'*Unio *en parures dans la culture de Gumelnița (V^{e} millénaire BC)*

Les mollusques d'eau douce du genre *Unio* ont été exploités par les communautés humaines de la culture de Gumelnița principalement pour la nourriture et secondairement pour réaliser des parures avec leurs valves. Notre étude analyse les perles circulaires - la catégorie typologique la plus importante dans laquelle les valves ont été transformées. Ces ornements qui sont à différentes étapes de transformation technologique et d'utilisation (des ébauches aux pièces finies très usées) et qui proviennent des différents contextes stratigraphiques (zones de déchets, maisons) nous montrent qu'ils ont été réalisés dans le site et ensuite portés par les membres de la communauté. Il y a aussi des "stocks" de perles circulaires finies, sans usure, qui attestent d'une bonne gestion de ce produit, permettant le remplacement de pièces endommagées ou égarées. La sélection de la valve d'*Unio* n'était pas accidentelle. Elle est facile à récolter parmi les déchets culinaires et en même temps a une structure assez dure et résistante pour permettre une utilisation à long terme. Dans le but d'identifier les coûts investis dans la fabrication de ces perles circulaires, nous avons développé un programme expérimental dans lequel les principaux paramètres ont été enregistrés : acquisition de la matière première, outils employés, temps nécessaire pour chaque étape technologique. Les

perles ont ensuite été réunies dans un bracelet et portées pour identifier le modèle d'évolution de l'usure. La comparaison entre les pièces expérimentales et celles archéologiques nous a permis de vérifier les hypothèses concernant l'utilisation de ces ornements.
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Cernavoda I culture from eastern Muntenia. Some aspects of the hard animal materials industry

The profound change noticed at the cultural level at the beginning of the second half of the 4th millennium BC was determined by the intrusion of groups of allogeneic populations of different origins, having a distinct material culture and practicing livestock-based economic activities in flocks. This phenomenon of the westward migration of some groups in the northern Pontic steppe areas will interrupt the natural evolution of indigenous Eneolithic communities. In contact with them, some groups will lose their identity, while others will give birth to new cultural entities such as Cernavoda I. The knowledge of these communities, in the context of their interaction with the local civilizations, Gumelniţa and Cucuteni, represents a current research topic. But deciphering and understanding the socio-economic particularities of the Cernavoda I communities was made more difficult by the type of archaeological researches carried out: surface research, surveys, small excavations, rare systematic researches, which favored the enrichment of the repertoire of settlements and to a lesser extent the recording of concrete details, especially with regard to the hard animal industry.
In this context, there has been a need to conduct a study on aspects such as: the characteristics of the raw materials used and the strategies for obtaining them, the documentation of the transformation techniques and the types of objects recorded.

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Morpho-functional study of extant canids: application to the Romanian Neolithic

The large number of dog and red fox remains in Romanian archaeological sites is an indication of their omnipresence in the daily lives of Neolithic humans. Both were involved in symbolic systems and used as food sources, even if one was bred and the other hunted. Moreover, high phenotypic plasticity may have allowed a rapid adaptation to novel selection pressures. However, the temporal and spatial evolution of morphological variability in relation to social and techno-economic changes – such as the development of agriculture during the Neolithic period – remains poorly documented. Since archaeological mandibles are generally well preserved and have a key role in the animal's chewing ability, they are promising to explore morphological variability and its functional consequences. We present a morpho-functional model we developed for extant dogs and red foxes and how it is impacted by external constraints such as diet or increased proximity to humans. Photogrammetry is used to obtain 3D reconstructions of mandibles which are analysed using geometric morphometrics. Extant specimens were dissected to establish a biomechanical model allowing us to estimate bite force of archaeological remains based on the mandible only. This application will ultimately be part of a more global study to compare Romanian canids with those that populated Western Europe between the Late Glacial and the Bronze Age. A comparison of the evolutionary trajectories of the dog (domestic) and the fox (commensal) should enable to better understand the evolution of canids under natural and anthropic constraints at the beginning of the Holocene.

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Microanalysis of ancient human remains: a doctoral project on archaeological sites from eastern Romania.

Microanalysis of human remains is a developing field of physical anthropology and it has seen, so far, a gradual positive growth in the last decades. The aim of the project is to cover paleohistological aspects addressed to ancient human populations in Eastern Romania, from Neolithic to the post-medieval period. This research includes the diachronic evaluation of palaeodiet through dental

macro- and microwear analysis, the palaeopathological and histotaphonomical assessments of human remains discovered in archaeological sites. The project methodology considers different methods and techniques such as optic microscopy (bright field - BF, epifluorescence - FLUO and differential interference contrast DIC) and scanning electronic microscopy (SEM). Semiquantitative and quantitative analysis are provided through assigned histological scores, micrometry and image analysis. This project represents the first anthropological microanalysis study in Romania, and the expected results will contribute to the knowledge development in the domain. This research complements the classical anthropological results and it is correlated and integrated within archaeological context.

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Relations between the human and the animal world in the settlement of Parța.

The faunal material that is the subject of this archaeozoological project comes from the archaeological research at the Neolithic settlement (5500-4400 BC) located at the border of Parța village (Timiș County). The settlement represents one of the most important Neolithic sites in northern Banat, considered a metropolis of the Neolithic developed in Banat, and one of the settlements that made it possible to define the characteristics of the Banat culture.
In the archaeozoological analysis, 9697 osteological fragments have been determined so far. The list of species identified until now is common to the Neolithic and Eneolithic sites in south-eastern Europe. Among domestic mammals, fragments of cattle, caprines, pigs and dogs (rare occurrence) have been found. In the case of wild animals, besides the usual mammals - red deer, roe deer, wild boar and aurochs – we identified rabbit, beaver, fox, wolf, bear and wild cat remains. The osteological material resulting from the numerous research campaigns at Parța (1978-2009) offers the possibility of an archaeozoological synthesis for the residence life at the settlement. We try to outline some peculiarities of animal economy of the studied populations, observing the share of activities such as animal husbandry, hunting and fishing. Another aspect of our research is the study of the importance of animal hard materials to obtain tools and utensils. We also try to determine how animals and parts of animals were used for ritual practices in the community (in sanctuaries or inside and near their house). By analysing the significance of these activities, we can observe some socio-economic characteristics of these communities and possible cultural characteristics.

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Socio-economic aspects of the life of prehistoric communities in the Lower Mureș Valley. An archaeozoological perspective

Within the frame of a larger period, that includes the end of Eneolithic and Bronze Age, several socio-economic aspects of the communities of the lower Mureș valley can be distinguished. This study

deals with the findings from Sântana ”Cetatea Veche”(late Eneolithic), Pecica ”Site 14”(early Bronze Age), Pecica ”Șanțul Mare”(middle Bronze Age), Șagu ”Sit A1_1”(late Bronze Age), Pecica ”Sit 14”-cemetery (late Bronze Age). In the attempt of highlighting an evolution of the animal economy, one must first mention the high importance of animal breeding. The most frequent encountered species were the cattle and domestic swine, caprines being the least represented. Slaughtering ages show a prevalence of the subadult individuals- bred for meat and fat production- while mature and adults were, most probably, kept as breeding stock or as secondary products source. Among the identified remnants, horse and dog bones were present, in different percentages, in every studied site. Hunting and fishing seems to be a secondary occupation of the Lower Mures valley populations. The most prevalent game species were the red deer and roe deer, followed by wild boar and aurochs (identified in Bronze Age sites) and rabbit (identified in late Eneolithic site). Catfish and molluscs remains were also identified. Antler and bone processing was also documented by the presence of a high number of crafted bone pieces identified in our investigations.

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The project BioMapPrehist

The project Bio-mapping of the Past Animal and Vegetation from the Romanian Prehistory (BioMapPrehist) proposes a new approach regarding Romanian Prehistory (c. 40000-650 cal. BC) from the bioarchaeological perspective, based on an interdisciplinary integration of the zooarchaeological and archaeobotanical data available.
The main motivation of the project is the absence from Romania of the large integrated databases regarding past fauna (e.g. molluscs, fish bones, reptiles, birds, mammals) and vegetation (e.g. seeds, charcoal, pollen) discovered in archaeological contexts, an indispensable tool in modern research. In these circumstances, we will try to realize a complex integrated analysis of the interaction between society, environment, and biodiversity in the Late Pleistocene and Holocene on the Romanian actual territory. This chronological range was a critical period in the evolution of humanity, which gradually turned from hunter-gatherer communities into farmer-breeder communities. The target period begins with the Upper Paleolithic period, continues with Mesolithic, Neolithic, Eneolithic, Bronze Age, and it ends with the First Iron Age (Hallstatt). The project is designed to provide a higher-resolution picture of the faunal and vegetal evolution for more than 40000 years, in correlation with human communities from the target area, and their food preferences, environmental resource management, and particular adaptive strategies.
The primary objectives of the project is the development of a complex analytical instrument for national and European researchers, based on bioarchaeological data and valorize the national cultural heritage, but also the integration of statistical GIS methods, in order to know the fundamental evolution and distribution of fauna and flora (and implicitly human consumption, paleoeconomy, food procuring strategies, key-events that affect the human diet) from geographically (horizontal) and chronologically (vertical) perspective.

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The BOND project

Reconstructing Biodiversity Dynamics during the Neolithic Transition
In the history of humankind, populations have often been confronted to modifications, sometimes brutal, in their environment. These changes may be the result of sudden climatic or significant cultural changes, whether sustained or decided. The Neolithic transition in Europe constitutes a perfect case study allowing us to better understand the complex interactions between culture, climate and biodiversity evolution at multi-regional scale.
During the dissemination of the Neolithic wave, farming societies encountered different climatic conditions. The European Mesolithic/Neolithic transition is also marked by local and rapid climatic events. They could have influenced local adaptation capacities of these societies and of the incoming Neolithic package. The arrival of immigrant farmers into Europe led to the voluntary introduction from the Near-East of domestic taxa, that, for some, had no ancestors in Europe, and biological invasions of the continent by synanthropic species, triggered and facilitated by the development of agriculture and the general anthropization of landscapes. Such introduction and development of new way of life could have had an impact on the endemic flora and fauna leading to large-scale recomposition of faunal/floral communities. Our project aim to find signatures of anthropic and climatic forcing on biodiversity (community level), by analyzing sedimentary archives dynamics.
It will allow us to understand:
1) Why have some hunter-gatherer societies persisted longer in North West Europe? Is their persistence correlated to the richness of the exploited natural environments?
2) How variation of climatic conditions could have influenced the diffusion of the Neolithic transition as they dispersed across Europe between 9,000 and 6,000 cal. BP?
3) What was the impact of this cultural transition on endemic biodiversity?

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Doing Things Better: ArchaeoScience # RO, A New Research Platform in Romania

The project "Interdisciplinary Institutional Platform for Excellence in Research, Development, Innovation and Professional Training in Archaeological Sciences (ArchaeoScience#RO)" aims at introducing a field of research unmatched yet at the university level in our country – Archaeological sciences.
The project will be run during the 2018-2020 period, through the Research Institute of the University of Bucharest (ICUB). The implementation of the project involved the development of a common platform, facilitating the complex, interdisciplinary and integrative approach of the archaeological, cultural heritage, through conducting research and training in archaeological and cultural heritage. This approach represents an excellent opportunity to connect Romania to the existing research directions and programs in other European Union countries and around the world.
The platform proposed for development will integrate a systematic, inter-, multi- and trans-disciplinary scientific research direction, organized by the Departments of History, Biology,

Chemistry, Physics, Geography, Geology and Geophysics of the University of Bucharest, in order to meet the current Romanian and European needs, in line with the international trends. The research teams in the field of Archaeological Sciences from the departments mentioned above will be organised as five research, development, innovation and educational training units, grouped under the following sub-disciplines: i) bioarchaeology; ii) geoarchaeology; iii) material culture studies; iv) digital archaeology; v) molecular archaeology.