

Session C41

Monday, 4 September 2006 / Lundi, 4 Septembre 2006

*Room 6.1.56, Faculty of Sciences, Lisbon University
Salle 6.1.56, Faculté de Sciences, Université de Lisbonne*

The creation of “significant places” and “landscapes” in the Northwestern half of the Iberia, during Pre and Proto-historic times. Theoretical, recording and interpretation issues from case studies in this region

Motifs d’art rupestre, sculptures et monuments informels/formels dans la création de « lieux signifiants » et « paysages » dans la moitié Norouest de l’Ibérie, pendant les temps Pré et Proto-historiques. Questions théoriques, de registre et d’interprétation, partant de cas d’études de cette région

organized by / organisé par

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SESSION’S ABSTRACT

The first aim of this meeting is to bring together an enlarged methodological and interpretative discussion about recent field “art “ research carried out during the last three decades in north-western Iberia .

The second aim concerns different case studies related to its local and archaeological context. Natural carved or painted surfaces, stone-built monuments and the overall settled landscape must be joined together in an interpretative web of social, cosmogonical and political relations that extend, or change, over time. As a result, particular importance is given to local or regional studies where broader interpretative perspectives are emphasized following the concepts of landscape archaeology.

No less important is to bring together researchers (and issues) traditionally constrained to their own specific field: those who investigate pre and proto-historic “art” (rock, megalithic or another kind of art), and those who make “serious” or “hard” field work (ie., excavations), as well as ethnographers, specialists on religion and art, philosophers, and so on. Also theoretical approaches dealing with the relationship between methods of recording and interpretations are other key points of this meeting.

We are sadly aware that rock art sites, monuments and a vast array of the archaeological record tend to disappear due to the introduction of heavy machinery in agricultural and forestry works. Therefore, papers containing complete recordings of art (engravings, paintings or “sculptures”) made by modern or, even, experimental methods, are welcome too.

(GSA)

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 14:30 **Opening / Ouverture**
- 14:30-14:50 André SANTOS
 A M BAPTISTA
- C41-01** **Diálogos entre dois *Mundos*: Do Gravetto-Solutrense ao Magdalenense no sítio da Penascosa/Quinta da Barca (Vila Nova de Foz Côa, Portugal)**
- 14:50-15:10 F. Carrera RAMÍREZ
 Fábregas VALCARCE
- C41-02** **Aportacións recentes á arte megalítica peninsular: novidades desde o Noroeste.**
- 15:10-15:30 Filipe João Carvalho dos SANTOS
 Luís Filipe Coutinho GOMES
 João Miguel PERPÉTUO
- C41-03** **O Dólmen 2 de Chão Redondo (Sever do Vouga): escavação, restauro e iconografia.**
- 15:30-15:50 Maria de Jesus SANCHES
- C41-04** **Dólmenes do NW da Península Ibérica: uma aproximação às cenografias internas através da articulação entre arquitecturas e iconografias.**
- 15:50-16:10 João Miguel PERPÉTUO
 Joaquim GARCIA
- C41-05** **A Anta da Arquinha da Moura (Lageosa do Dão, Tondela). Processo de restauro de um dólmen com pinturas.**
- 16:10-16:30 Primitiva Bueno RAMIREZ
 Rosa Barroso BERMEJO
 Rodrigo de Balbín BEHRMANN
- C41-06** **El metal y los simbolos de los ancestros en el Norte de la peninsula Ibérica**
- 16:30-16:50 João Miguel PERPÉTUO
 Filipe João Carvalho dos SANTOS
 Luís Filipe Coutinho GOMES
 Pedro Sobral de CARVALHO
- C41-07** **As armas gravadas de Paramuna (Esmolfe, Penalva do Castelo), um povoado do Bronze Final na Beira Alta.**
- 16:50-17:10 José ROLÃO
 Carmen SEVILLANO
 Adérito FREITAS
 Anabela JOAQUINITO
 Magda GONZAGA
- C41-08** **Rupestre no concelho de Valpaços: um projecto de investigação**
- 17:10-17:30 Joana de Castro TEIXEIRA

C41-09 Entre a gravura e a escultura: a estação rupestre de Lapaça no contexto da arte de ar livre da região de Valpaços.

17:30-18:30 Discussion

ABSTRACTS / RÉSUMÉS

C41-01 André SANTOS
A M BAPTISTA

Diálogos entre dois *Mundos*: Do Gravetto-Solutrense ao Magdalenense no sítio da Penascosa/Quinta da Barca (Vila Nova de Foz Côa, Portugal)

RESUMO: Em Maio de 2004 foram apresentados pela primeira vez os resultados de uma abordagem à Arte Rupestre do Vale do Côa que tinham em conta a relação estruturada entre os motivos nela presentes e a paisagem pela qual foram distribuídos. O caso de estudo em apreço foi o complexo rupestre da Penascosa/Quinta da Barca; o *Tempo* escolhido foi o período Gravetto-Solutrense (de acordo com a caracterização crono-estratigráfica que vem sendo proposta por AMB). No referido trabalho procurámos demonstrar a existência de uma *estruturação* na base da distribuição das gravuras pela paisagem. Procurámos, de igual modo, explicitar de que maneira essa estrutura condicionaria a nossa forma de andarmos e percepcionarmos os locais por onde seríamos forçados a passar. Essa forma de percorrer e ler a paisagem seria certamente catalizada pelo modo como o próprio *Mundo* seria encarado pelas comunidades coevas.

Contudo, as figurações paleolíticas da Penascosa/Quinta da Barca não se esgotam no período focado naquele trabalho. Em tempos Magdalenenses o “santuário” foi aparentemente *reestruturado*, fruto por certo de novas formas de *estar no Mundo*. É precisamente sobre essa reestruturação que esta comunicação incidirá, procurando-se evidenciar as diferenças em relação a épocas anteriores e, simultaneamente, perceber que “paisagens” (ou espaços) eram essa(e)s que agora emergiam.

Ao mesmo tempo que é nosso objectivo contribuir para um melhor conhecimento e apreciação da Arte Paleolítica de ar livre da Península Ibérica, tentaremos também fundamentar a nossa ideia de que uma aproximação à Arte Rupestre em geral, com bases teóricas sólidas e metodologias adequadas, é algo de fundamental na altura de aceder às cosmogonias pretéritas.

C41-03 Filipe João Carvalho dos SANTOS
Luís Filipe Coutinho GOMES
João Miguel PERPÉTUO

O Dólmen 2 de Chão Redondo (Sever do Vouga): escavação, restauro e iconografia.

RESUMO: Esta comunicação pretende dar a conhecer e publicar mais uma intervenção arqueológica e de restauro num dólmen do Centro de Portugal pela empresa ArqueoHoje, lda.

Os trabalhos desenvolvidos em 2000 permitiram a obtenção de resultados importantes para o estudo do megalitismo regional. Destaque para o levantamento dos motivos gravados nos seus esteios que vêm fornecer alguns dados inéditos e enriquecer deste modo o *corpus* da arte megalítica peninsular.

C41-04 Maria de Jesus SANCHES

Dólmenes do NW da Península Ibérica: uma aproximação às cenografias internas através da articulação entre arquitecturas e iconografias.

RESUMO: Baseando-nos na documentação arqueológica publicada relativa aos dólmenes do NW da Península Ibérica que possuem iconografia no seu interior e que, em simultâneo,

disponibilizam informação arqueológica susceptível de ser estudada segundo uma perspectiva fenomenológica de utilização do espaço megalítico interno, procuraremos entender de que modo a ausência de luz natural bem como as dimensões do espaço interno condicionam ou propiciam a apreensão dos espaços iconografados. Numa outra escala de análise – a do inventário dos motivos e sua distribuição quer no espaço interno do monumento, quer nas diferentes zonas do NW peninsular –, indagaremos da eventual identificação de "mitografias" locais e/ou regionais no seio das comunidades neolíticas desta região.

C41-06

Primitiva Bueno RAMIREZ
Rosa Barroso BERMEJO
Rodrigo de Balbín BEHRMANN

El metal y los simbolos de los ancestros en el Norte de la peninsula Ibérica

RESUMEN: Los diversos trabajos que nuestro grupo de investigación viene realizando en torno al Arte Megalítico de la Península Ibérica, abarcan cuestiones relacionadas con el papel de las figuras humanas en los ámbitos cotidianos y funerarios del megalitismo.

En este marco de análisis nos proponemos valorar el decurso gráfico e ideológico que manifiestan las figuraciones armadas del Norte peninsular. La adición de armas metálicas no supone un radical cambio ideológico, sino la transformación y uso de mitologías conocidas utilizadas para justificar la posición preeminente de personajes destacados que continúan reiterando gestos funerarios y gestos gráficos de los ancestros. Ellos se erigen en herederos de la tradición.

El estudio de la estela armada de Soalar, en Navarra, nos proporciona elementos para reflexionar sobre el papel de los personajes armados en todo el ámbito nordpeninsular, evaluando – a través de ellas –, la realidad de la presencia o ausencia de determinadas tipologías metálicas, especialmente las alabardas.

En la actualidad son las representaciones gráficas las que permiten analizar una pauta significativa acerca del conocimiento de la metalurgia en este sector avalando posiciones más complejas que las tradicionalmente admitidas y matizando afirmaciones tajantes sobre marginalidades nunca demostradas desde el punto de vista arqueológico. Más aún en zonas de altas posibilidades extractivas.

C41-07

João Miguel PERPÉTUO
Filipe João Carvalho dos SANTOS
Luís Filipe Coutinho GOMES
Pedro Sobral de CARVALHO

As armas gravadas de Paramuna (Esmolfe, Penalva do Castelo), um povoado do Bronze Final na Beira Alta.

RESUMO: Com esta comunicação pretende-se a divulgação do achado de um conjunto de motivos gravados num afloramento granítico identificado em trabalhos de prospecção arqueológica desenvolvidos pela empresa ArqueoHoje no povoado de Paramuna, freguesia de Esmolfe, concelho de Penalva do Castelo.

Trata-se de um importante sítio arqueológico do Bronze Final que com este achado fica ainda mais valorizado. Efectivamente, entre outros achados, foi identificado um belíssimo conjunto de motivos gravados que representam armas, motivos iconográficos algo inéditos nesta região da Beira Alta para este período.

C41-08

José ROLÃO
Carmen SEVILLANO
Adérito FREITAS
Anabela JOAQUINITO
Magda GONZAGA

Rupestre no concelho de Valpaços: um projecto de investigação

RESUMO: O propósito deste comunicação consiste na apresentação do trabalho de prospecção e estudo sistemático da arte rupestre, do referido concelho, o qual embora tendo sido referenciado desde o séc. XIX, por autores como Leite de Vasconcelos, o abade de Baçal e J. Santos Júnior, nunca foi

suficientemente analisado, de forma a poder realizar-se um estudo de conjunto da arte ali existente, em relação com o contexto arqueológico em que se inserem.

Esta equipa detectou um conjunto relativamente extenso de sítios, compostos por painéis de gravura e pintura. Até agora, todos os locais identificados integram-se em contextos cronoculturais relacionados com a arte post-paleolítica. Esta apresentação pretende ainda estabelecer as possíveis relações existentes entre os contextos galaicos, ao norte, e os existentes a sul na região das Beiras, os quais se desenvolvem num horizonte cultural semelhante.

C41-09

Joana de Castro TEIXEIRA

Entre a gravura e a escultura: a estação rupestre de Lampaça no contexto da arte de ar livre da região de Valpaços.

RESUMO: A estação rupestre de Lampaça, freguesia de Bouçoais, concelho de Valpaços, Trás-os-Montes, Norte de Portugal, é constituída por três afloramentos graníticos, gravados por toda a sua superfície, formando uma composição de particular interesse onde o "diálogo" gravuras – tratamento da superfície – volumetria da rocha é tal que se pode afirmar que esta emerge do solo como um verdadeiro conjunto escultórico. Pretende-se com este trabalho uma abordagem (ou sua problematização) fenomenológica / contextualista, desta estação, bem como o seu enquadramento no contexto da arte de ar livre desta região.

Session C43

Tuesday, 5 September 2006 / Mardi, 5 Septembre 2006

*Anfiteatre III, Faculty of Letters, Lisbon University
Amphithéâtre III, Faculté de Lettres, Université de Lisbonne*

Symbolic figurations in the 4rd and 3rd millenia in the South of the Iberian Peninsula: the engraved schist plaques and their figurative and schematic counterparts

Répresentations symboliques aux 4ème et 3ème millénaires dans le Sud de la Péninsule Ibérique: les plaques votives en schiste, l'art mobilier et pariétale

organized by / organisé par

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SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 09:00 **Opening / Ouverture**
- 09:00-09:30 Mariana DINIZ
C43-01 **Far From Heaven: Neolithisation Process and Symbolic Drift Along Mediterranean Region**
- 09:30-10:00 Victor S. GONÇALVES
C43-02 **Black Magic, White Goddess: A Magical and Symbolic Situation of the First Half of the 3rd Millenium at Sala # 1 (Pedrógão do Alentejo)**
- 10:00-10:30 Enrique CERRILLO CUENCA
C43-03 **Revisiting the «Horn Idols» From Los Castillejos I (Fuente de Cantos, Badajoz): Symbolical Drawings on Domestic Artifacts During the 3rd Millenium.**
- 10:30-11:00 Ana Catarina SOUSA
C43-04 **Cultural Artifacts at the Pre-Historic Fortified Settlement of Penedo do Lexim (Mafra)**
- 11:00-11:30 João Luís CARDOSO

C43-05 Cultural Artifacts in the Pre-Historic Settlement of Leceia (Oeiras)

11:30-12:00 Victor S. GONÇALVES
Manuel CALADO

C43-06 Working at Home (and Abroad): the Atelier of Engraved Schist Plaques of Águas Frias (Alandroal)

12:00-12:30 Victor S. GONÇALVES
André PEREIRA
Marco ANDRADE

C43-07 The Engraved Schist Plaques of Lapa da Galinha (Alcanena)

12:30-13:00 P. Bueno RAMIREZ
R. de Balbín BEHRMANN
R. Barroso BERMEJO

C43-08 Placas y Estatuas: Elementos Para un Análisis de Las Estructuras Rituales en Los Megalitos de La Cuenca Interior del Tajo.

ABSTRACTS / RÉSUMÉS

C43-01 Mariana DINIZ

Far From Heaven: Neolithisation Process and Symbolic Drift Along Mediterranean Region

ABSTRACT: Near East neolithisation was a process in which symbolic issues seems to have played alongside with climacteric, demographic, technological and economical changes a crucial role.

From PPNA to Neolithic period, a complex set of funerary practices, symbolic figurines and monumental buildings clear illustrate that during Neolithic Revolution *different kinds of things* are under domestication processes, not only plants or animals.

Outside this primary core symbolic depictions as central authority that emerged around them lose their significance, but several small mother-goddesses figurines are still present in balcanic Neolithic.

As we move towards West, symbolic features seem to be less and less important as, until recently, demic diffusion.

The Passo di Corvo (Foggia, Italia) female figurine was the most western mother-goddess image known. And for long, Italian Adriatic shore seems to be the last stop on agricultural groups' dispersal.

Recently, sites like La Marmotta (Bracciano, Italia) and La Draga (Banayoles, Spain) clearly show that farming communities - and with them probably some kind of mother-goddesses - spread towards west Mediterranean coasts.

The discover in Valada do Mato (Évora, Portugal) 2005 digging season of a small and unfortunately headless pottery figurine reveals that in spite of that symbolic drift some echoes from heaven have reached the Far West.

C43-02 Victor S. GONÇALVES

Black Magic, White Goddess: A Magical and Symbolic Situation of the First Half of the 3rd Millenium at Sala # 1 (Pedrógão do Alentejo)

ABSTRACT: So close to right bank of the Guadiana River that the occupation passes to the other bank, Sala # 1 is a big settlement, where the surface finds count by thousands of ceramic fragments and many polished axes, adzes and other types of artefacts.

I have conducted there some excavations and at the Layer 3 of *Locus 1* some amazing situations have been found, around and within a well structured foyer.

The first point to retain is the concentration of artefacts related to the magico-religious subsystem, namely an extraordinary representation of the Goddess with Sun Eyes – the same represented in the engraved schist plaques, in cervid and bovid phalanxes, in limestone, schist or ceramics – presenting for the first time all the attributes of the face of the divinity, mouth and chin included.

Within the foyer with have found two anthropomorphic figurines that represent blessed male entities. These figurines are part of a ritual that can be classified without reserve as black magic.

The ¹⁴C places the foyer in the first half of the third millennium cal BC.

C43-03

Enrique CERRILLO CUENCA

Revisiting the «Horn Idols» From Los Castillejos I (Fuente de Cantos, Badajoz): Symbolical Drawings on Domestic Artifacts During the 3rd Millenium.

ABSTRACT: The present paper intends to actualize the knowledge about the so-called “horn idols” which can be found at several domestic context from the late IV th millennia and mainly the IIIth cal BC. There are still many questions left about the significance of these artefacts and its appearance on concrete functional areas at the sites, on the contrary to some other elements of “portable art” from peasant societies.

Thus, the opinions about “horn idols” had fluctuated alternatively between their consideration as symbolical elements or functional stands (*morillos* in Spanish). Nevertheless there is not a definitive agreement about this subject. The artifacts classified as “horn idols” are subject to a high degree of technical and formal variability, that has favoured diverse interpretations and must not go unnoticed. On the other hand, these elements have got a wide geographical dispersion in Iberia, tough they appear mainly in Southwest Iberia and in the estuary of Tagus river.

Exactly, one of the most notable joins of “horn idols” comes from Los Castillejos I at Fuente de Cantos, together with those from Vila Nova de São Pedro. Los Castillejos I is a small fortified site located between the basins of Guadiana and Guadalquivir rivers, it was dug up partially during the 1980's decade and nowadays is object of our research. Only between 1983 and 1984 were recovered more than 20 fragments or complete “idols”, some of them were decorated with incise lines. The current fieldwork has supplied us more contextualized artifacts in the habitat.

Our main goal is to try to understand the significance of the “horn idols” taking into account their contexts of appearance, besides we gather similar evidences from Los Castillejos I and other sites. These artifacts are presented as having got a clear functional vocation. Nevertheless in the case of decorated items, the symbolical covering cannot be discarded if we compare them with some stylistic attributes from other contemporary anthropomorphical representations published as “idols”. In order to support this proposal, some other decorated ceramics considered as having domestic functionality (not vessels) are analyzed.

C43-04

Ana Catarina SOUSA

Cultural Artifacts at the Pre-Historic Fortified Settlement of Penedo do Lexim (Mafra)

ABSTRACT: *Penedo do Lexim*

Located in the south area of the *Mafra* County, 40 km up north of Lisbon, *Penedo do Lexim* is a prehistoric settlement positioned on the top of a volcanic chimney.

Archaeological excavations conducted between 1998 and 2004, exposed traces of fortifications, houses, fireplaces, pavements and a large amount of artefacts, namely pottery, flaked stone, bone instruments, polish stone and some metallic remains, attributed to the 4th and 3rd millennium BC.

This place is easily defendable due to its elevated position, has plenty of natural resources in the surrounding (water, arable soils, raw material for buildings and tools). Penedo do Lexim is located in the right bank of Cheleiros creek, a small watercourse, running to the Atlantic Ocean, witch was a vital condition to the establishment of the pre-historic human occupation in this area, confirmed by the several archaeological sites discovered along its stream.

Nature and Culture

The natural position and the rocky configuration bring to Penedo do Lexim an aura of legends and stories. In fact, this site is a natural monument with more visual power than the fortifications which were built in it during the third millennium.

In almost all the places with "monumental" geologic formations in the area we can find a pre-historic occupation from the 4th and 3rd millennium: Negrais, Anços, Funchal, Odrinhas. The human occupation of these sites transforms nature in cultural places, with social and mental meanings.

Beside that fact, other elements illustrate the transformation of a natural place to a cultural anchor in the landscape. Returning to Penedo do Lexim, and to his archaeological record, we can find material elements that shows the appropriation of these rocks. In this volcanic chimney were excavated 2 rock shelters with prehistoric occupation, including human remains, with a C14 date of 2460 – 2200 cal BC, along with domestic remains, such as ceramics, fauna, lithics. (...)

C43-05

João Luís CARDOSO

Cultural Artifacts in the Pre-Historic Settlement of Leceia (Oeiras)

ABSTRACT: In this paper we present the cultural artifacts found in the important fortified pre-historic settlement of Leceia (Oeiras) in excavations performed under the supervision of the author between 1983 and 2003. The materials were subdivided by time periods from Late Neolithic to Middle Calcolithic. The diverse symbology found include the two principles present in the religious superstructure of the epoch: the male principle represent by a few scarce falic artifacts and the female principle that gave shape to the well-known calcolithic divinity, under multiple forms and types of materials.

C43-06Victor S. GONÇALVES
Manuel CALADO

Working at Home (and Abroad): the Atelier of Engraved Schist Plaques of Águas Frias (Alandroal)

ABSTRACT: The settlement of Águas Frias (Alandroal) is an amazing place in the left bank of the Lucefece, an affluent of the big Guadiana River. In many of the negative structures of this site (ditches and pits), have been detected all the elements of the chaîne opératoire for obtaining the engraved schist plaques: blocks of raw material (schist), blocks of schist with the contour of the plaques, plaques without any engraving but already polished, some polished and engraved schist plaques (though none with the suspension hole), and even some unpolished plaques, but with engravings. Examples for all these situations are presented with two kinds of comments, the first on the cultural context of the plaques, the second on the possible meanings of this situation.

We have not, at the moment, any ¹⁴C dating for the charcoal associated to the plaques, but the ceramic context authorises to propose the two last centuries of the 4th millennium and the first century of the 3rd as a possible parameters.

C43-07Victor S. GONÇALVES
André PEREIRA
Marco ANDRADE

The Engraved Schist Plaques of Lapa da Galinha (Alcanena)

ABSTRACT: Lapa da Galinha (literally «The chicken's cave»...) is a typical small cave of the Lisbon Peninsula. Situated near Alcanena, it was digged more than an hundred years ago and, at the time, the very numerous skeletons had already been removed to the local cemetery and are not available for study and dating.

A first note, very insufficient for the importance of the site, have been presented to the first National Congress of Archaeology (published, Lisbon, 1959).

All the caves used for funeral proposes in the 4th millennium presents few votive material for the number of individuals. When we find there a considerable amount of goods, then we are in general in the last centuries of it, may be in the first centuries of the 3rd.

Lapa da Galinha revealed, for the cultural milieu, a considerable amount of engraved schist plaques and a very peculiar cross («báculo»), that reminds an axe. If the cross is so peculiar and unique, also the plaques belong to a very bizarre ensemble. Most of them are double faced, the motifs and patterns are also peculiar and some plaques present unusual shapes for the Lisbon Peninsula.

The «PLACA NOSTRA» Project shows, for the first time, drawings of all the plaques available and presents some new perspectives about the meaning of the «Lapa da Galinha connection».

C43-08

P. Bueno RAMIREZ
R. de Balbín BEHRMANN
R. Barroso BERMEJO

Placas y Estatuas: Elementos Para un Análisis de Las Estructuras Rituales en Los Megalitos de La Cuenca Interior del Tajo.

RESUMEN: A partir de las placas decoradas y las estructuras rituales reconocibles en los megalitos del Tajo Internacional, los autores valoran el simbolismo del III milenio cal BC. en el sector.

El análisis que se efectúa insiste en la inserción de las placas decoradas en el marco de las representaciones antropomorfas que se asocian al megalitismo ibérico desde sus más antiguas producciones, como una especialización del Suroeste. La confluencia de estas piezas en el Alentejo valora su raíz en el imaginario regional y su dispersión en el entorno de este núcleo megalítico, avala la posición central del Alentejo en estas producciones. Su cantidad, su calidad y las sensibles diferencias en las técnicas, materias primas y diseños geométricos nos sirvieron para proponer una interpretación de talleres con marcos regionales o comarcales de distribución y, en ese rango de hipótesis, de un artesanado que incluiría los grupos que nos ocupan en el camino a la diferencia de clases que avala esta propuesta.

Otro de nuestros parámetros de análisis se ha establecido en la coincidencia técnica y gráfica entre las placas y otras producciones antropomorfas del sector que se detectan en los mismos recintos sepulcrales. Nos referimos a estelas, estatuas y menhires, por un lado. Y, por otro, a los propios soportes de los monumentos que se visualizan como auténticas estelas vestidas con un manto de diseños geométricos que coincide de modo total con la decoración más común en las placas alentejanas que en su día denominamos "tipo clásico".

Session C44

Saturday, 9 September 2006 / Samedi, 9 Septembre 2006

*Amphitheatre III, Faculty of Letters, Lisbon University
Amphithéâtre III, Faculté de Lettres, Université de Lisbonne*

Early Neolithic in the Iberian Peninsula: Regional and transregional components

Le Néolithique ancien dans la Péninsule Ibérique: Les éléments régionaux et transrégionaux

organized by / organisé par

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SESSION'S ABSTRACT

During the second half of the 6th and the first half of the 5th millennium cal BC transregional components of the Neolithic way of life (pottery, domesticates, polished stone tools) spread through the Iberian Peninsula by demic or cultural diffusion process.

The way in which different groups adopted, used and recreated those transregional components are affected by ecological but also by social backgrounds.

This workshop main purpose is to discuss based on empirical data this "regionalization process" that affects material cultural, settlements patterns and subsistence strategies. At the same time special attention is due to relationships established between different cultural areas and groups.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

09:00 **Opening / Ouverture**

09:00-09:15 Ana Isabel ORTEGA (Burgos, Spain)
 Laura JUEZ (Burgos, Spain)
 José Miguel CARRETERO (Burgos, Spain)
 Juan Luis ARSUAGA (Madrid, Spain)
 Alfredo PÉREZ (Madrid, Spain)
 María-Cruz ORTEGA (Madrid, Spain)
 Amalia PÉREZ (Burgos, Spain)
 Ana Delia RODRÍGUEZ (Burgos, Spain)
 Rebeca GARCÍA (Burgos, Spain)
 Asier GÓMEZ (Burgos, Spain)
 Laura RODRÍGUEZ (Burgos, Spain)
 Elena SANTOS (Burgos, Spain)
 Ignacio MARTÍNEZ (Alcalá de Henares, Spain)

C44-01

A new Holocene archaeological sequence from Portalon de Cueva Mayor, Sierra de Atapuerca, Burgos, Spain.

09:15-09:30 Rogelio ESTRADA GARCÍA

Jesús Francisco JORDÁ PARDO (Madrid, Spain)
Joan S. MESTRES TORRES
José Yravedra SAINZ DE LOS TERREROS

C44-02 Torca l'Arroyu: A new holocene site in the middle of Asturias (Spain).

09:30-09:45 António FAUSTINO CARVALHO

C44-03 The role of cardial pottery in the Early Neolithic of Portugal: theoretical debate and available evidence.

09:45-10:00 Enrique CERRILLO CUENCA (Cáceres, Spain)

C44-04 From "Inland Neolithic" to "Neolithic dwelling in the inland": the role of homogeneous and heterogeneous elements on the explanation of the earlier of agricultural stages in Central Spain.

10:00-10:15 Xavier CLOP (Barcelona, Spain)
Juan Francisco GIBAJA (Faro, Portugal)

C44-05 Néolithisation et structure sociale : données et discussion dans le nord-est de l'Espagne.

10:15-10:30 Bernard GASSIN (Valbonne, France)
Juan Francisco GIBAJA (Cerdanyola del Vallès, Barcelona, Spain)
J. J. IBAÑEZ
Laurence ASTRUC (Valbonne, France)
Nuno Ferreira BICHO (Faro, Portugal)
L. BOUBY
R. BUXÓ
Antonio FAUSTINO CARVALHO
Ignacio CLEMENTE (Barcelona, Spain)
Rebecca DEAN (Faro, Portugal)
J. González URQUIJO
Philippe MARINVAL (Toulouse, France)
B. MARQUEZ
L. PEÑA-CHOCARRO
A. RODRÍGUEZ
L. ZAPATA

C44-06 Regional variability of cereal agriculture in the Western Mediterranean during the Neolithic: the first steps of a new research project.

10:30-10:45 Manuel A. ROJO-GUERRA
Rafael GARRIDO-PENA
Íñigo GARCÍA-MARTÍNEZ-DE-LAGRÁN

C44-07 The Ambrona Valley (Soria, Spain): a chronological reference for the first Neolithic occupation of Inner Iberia.

10:45-11:00 César NEVES
Filipa RODRIGUES
Mariana DINIZ (Lisboa, Portugal)

C44-08 Neolithisation process in lower Tagus valley left bank: old perspectives and new data.

- 11:00-11:15 Joan BERNABEU AUBAN (València, Spain)
C44-09 Early Neolithic Cardial groups (c. 5600-4900 cal. BC) in Iberia.
- 11:15-11:30 Manuel CALADO (Lisboa, Portugal)
 Leonor ROCHA
C44-10 In the sources of monumentality: the standing stones of Fontainhas (Alentejo Central, Portugal).
- 11:30-11:45 Juan Carlos Vera RODRÍGUEZ
C44-11 Sociedades y modos de vida del 6º al 5º milenios BC en Andalucía
- 11:45-12:00 António Carlos VALERA
C44-12 Poderá Piaget ser de alguma utilidade? Algumas reflexões a propósito dos discursos sobre a Neolitização
- 12:00-12:15 Mário Varela GOMES
C44-13 The first Neolithic villages of the extreme south-western Iberia
- 12:15-13:00 **Discussion**

ABSTRACTS / RÉSUMÉS

- C44-01** Ana Isabel ORTEGA (Burgos, Spain)
 Laura JUEZ (Burgos, Spain)
 José Miguel CARRETERO (Burgos, Spain)
 Juan Luis ARSUAGA (Madrid, Spain)
 Alfredo PÉREZ (Madrid, Spain)
 María-Cruz ORTEGA (Madrid, Spain)
 Amalia PÉREZ (Burgos, Spain)
 Ana Delia RODRÍGUEZ (Burgos, Spain)
 Rebeca GARCÍA (Burgos, Spain)
 Asier GÓMEZ (Burgos, Spain)
 Laura RODRÍGUEZ (Burgos, Spain)
 Elena SANTOS (Burgos, Spain)
 Ignacio MARTÍNEZ (Alcalá de Henares, Spain)
A new Holocene archaeological sequence from Portalon de Cueva Mayor, Sierra de Atapuerca, Burgos, Spain.

ABSTRACT: The site of Portalón de Cueva Mayor, located in the Sierra de Atapuerca (Burgos, Spain), is an important Holocene archaeological site that was excavated in the 70's but from which little has been published. New excavations starting in 2000 have highlighted a deep stratigraphical sequence with human occupations starting in the beginning of the Holocene. In this paper, we present for the first time this stratigraphical sequence with a set of radiocarbon datings comprising from 8.000 BP to 2.500 BP. The implications for the origin of the peopling of the Northern Meseta of the Iberian Peninsula are discussed in the light of these new data.

- C44-02** Rogelio ESTRADA GARCÍA
 Jesús Francisco JORDÁ PARDO (Madrid, Spain)

Joan S. MESTRES TORRES
José Yravedra SAINZ DE LOS TERREROS

Torca l'Arroyu: A new holocene site in the middle of Asturias (Spain).

ABSTRACT: The archaeological site of Torca L'Arroyu was discovered in 2002 during the works of construction of the new net of sewer of Llanera's municipality (province of Asturias, N of Spain). The archaeological deposit is placed inside a small cave and it has provided some ceramic fragments very rolled, two polished lithic pieces, abundant bones of animals consumed by the man and charcoals. The archaeological materials and the ¹⁴C dates of the bones associated with the ceramics (UBAR-803 4930±70 BP y UBAR-804 4240±60 BP) indicate the existence of an settlement of certain duration that would correspond to the chronological frame of the regional Neolithic. Sites of this chronology are very scanty in the Cantabrian area, therefore, this new deposit will contribute to a better knowledge of the Neolithic in this zone of the Iberian Peninsula.

C44-03

António FAUSTINO CARVALHO

The role of cardial pottery in the Early Neolithic of Portugal: theoretical debate and available evidence.

ABSTRACT: Cardial pottery is considered the major type-fossil of the Early Neolithic in the Western basin of Mediterranean Sea. Its presence in some Portuguese sites soon demonstrated the inclusion of the Atlantic façade of Iberia in the broad process of transition to farming that took place in the West Mediterranean during the 6th millennium BC. Notwithstanding, the precise role of cardial pottery in the Early Neolithic of Portugal has been a matter of debate since the initial formulation of the period by J. Guilaine and O.V. Ferreira in 1970.

In this paper a description of the known cardial assemblages, its inventory, chronology and distribution are attempted in order to evaluate its precise importance. Recently-studied sites (such as Almonda or Cerradinho do Ginete) are presented alongside older references (such as Eira Pedrinha, Caldeirão, Escoural or Cabranosa). Stylistic comparisons with North African, Andalusian and Valencian assemblages will also be attempted to establish cultural connections and to detect possible transformations during the spread of the Neolithic along the coastal territories of those regions.

C44-04

Enrique CERRILLO CUENCA (Cáceres, Spain)

From "Inland Neolithic" to "Neolithic dwelling in the inland": the role of homogeneous and heterogeneous elements on the explanation of the earlier of agricultural stages in Central Spain.

ABSTRACT: In early eighties, some Spanish archaeologists started to use the concept "inland Neolithic" to make reference to those rare sites with impressed vessels located in the inland areas of Iberia. This expression has been regularly used by those archaeologists who needed to name the archaeological findings as a new reality which differs from Neolithic coastal groups.

But in fact, the notion of "inland Neolithic" can be found in some writings of 1930's and 1940's by Bosch Gimpera and San Valero, who had proposed other concepts such as "Caves with decorated potteries Culture" and "Neolithic of the Plateau" to name it. Since that moment, the neolithic sites of several provinces of Spain and Portugal were supposed to be more recent than the caves sited near the shorelines of Spanish Levant and Andalusia, introducing an axiom that would no be easily forgotten.

Nowadays, some projects developed in inland Iberia have shown an intense Neolithic dwelling alongside the basin of Duero, Tagus and Guadiana rivers, in the spaces considered as being part of the former "Inland Neolithic".

Maybe, the "Inland Neolithic" concept was defined within a theoretical framework dominated by the lack of archaeological data, but, at the present time, its validity can be questioned by the large number of existing sites. In this paper I wish to discuss some concepts involved in the use of this expression rather than make a synthesis about the recent research in those territories. I think that many related concepts must be reviewed; especially those linked to the homogeneity of some cultural aspects and even what can and what can not be considered as "inland".

The homogeneous/inhomogeneous nature of Neolithic groups from the inland is analyzed in order to understand the process of neolithization: whether or not the origin of Neolithic in the Inland is the same in all territories (i.e. as result of a wide colonization), and even it is a useful way to “measure” the implication of “indigenous” components on the formation of agricultural landscapes.

Summing-up, I believe that is time to look for specific regional studies and understand the diversity of geographical environments in order to appreciate the emergence of agricultural practices in inland Iberia.

C44-05

Xavier CLOP (Barcelona, Spain)
Juan Francisco GIBAJA (Faro, Portugal)

Néolithisation et structure sociale: données et discussion dans le nord-est de l'Espagne.

RÉSUMÉ: La recherche autour de l'origine et développement du mode de vie paysanne dans le nord-est de la Péninsule Ibérique a eu un important développement pendant les dernières trente années. La documentation archéologique autour de ce processus historique a eu un grand accroissement quantitatif et qualitatif, ce qui a permis d'avancer de manière très importante dans la connaissance de différents aspects de ces communautés. Toutefois, un des aspects moins abordés par la recherche a été celui de l'étude de leurs structures sociales. Mais connaître les caractéristiques des relations sociales qui se sont développées dans un certain contexte historique doit être un objectif primordial de la recherche si on veut arriver à comprendre quels ont été les processus développés par les communautés objet d'étude et les causes et les conséquences des changements qui sont documentés dans le registre archéologique.

Dans cette communication nous effectuerons un bref examen des éléments qui permettent d'établir la discussion autour des caractéristiques des relations sociales qui ont pu être développées tant dans les dernières communautés de chasseurs-cueilleurs du nord-est de la Péninsule Ibérique comme dans les premières communautés paysannes de cette zone, évaluerons les modèles généraux proposés et ses possibles applications dans cette zone et, finalement, poserons qu'ils peuvent être, de notre point de vue, les éléments les plus significatifs pour aborder cette question cruciale aussi dans l'actualité comme dans les recherches qui peuvent être développées dans un futur immédiat. Notre objectif n'est pas d'offrir une vision fermée sur quels ont pu être les formes d'organisation sociales et les transformations qui ont eu lieu dans le nord-est de la Péninsule Ibérique avec le développement du mode de vie paysanne, si non ouvrir une discussion la plus vaste possible pour pouvoir avancer dans la connaissance de cet aspect crucial des formes d'organisation de ces communautés dans notre zone d'étude.

C44-06

Bernard GASSIN (Valbonne, France)
Juan Francisco GIBAJA (Cerdanyola del Vallès, Barcelona, Spain)
J. J. IBAÑEZ
Laurence ASTRUC (Valbonne, France)
Nuno Ferreira BICHO (Faro, Portugal)
L. BOUBY
R. BUXÓ
Antonio FAUSTINO CARVALHO
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J. González URQUIJO
Philippe MARINVAL (Toulouse, France)
B. MÁRQUEZ
L. PEÑA-CHOCARRO
A. RODRÍGUEZ
L. ZAPATA

Regional variability of cereal agriculture in the Western Mediterranean during the Neolithic: the first steps of a new research project.

ABSTRACT: Agriculture is one of the forefront elements of the process of neolithisation. A preliminary study has shown the existence of regional differences in the cereal harvesting methods during the Neolithic in the Western Mediterranean. The study of the harvesting tools shows at least three distinct areas. In the Southern Spanish Levantine coast, up to the Ebro River, we find curved sickles with lithic elements inserted obliquely in the shaft. In Catalonia, Languedoc and Provence, long blades are inserted in parallel to the shaft. In the Cantabrian coast, cereals were gathered without sickles, something that is common in Atlantic or mountainous areas throughout Neolithic Europe. In this paper, we present a new project, where we explore the factors that could explain this variability, such as the environmental conditions, the type of cultivated crops, the aim of the cereal cultivation (either the grain or the straw or both), or the historic dynamics of expansion and acceptance of the Neolithic novelties, among others.

C44-07

Manuel A. ROJO-GUERRA
Rafael GARRIDO-PENA
Íñigo GARCÍA-MARTÍNEZ-DE-LAGRÁN

The Ambrona Valley (Soria, Spain): a chronological reference for the first Neolithic occupation of Inner Iberia.

ABSTRACT: The ample set of absolute dates, both on charcoal and short life samples (fauna, cereals), obtained in two open air settlements (La Lámpara and La Revilla) suggest a review of the chronological framework attributed to the first Neolithic colonization of Iberia. They also ask us to deeply reflect on the functioning of these habitats from the first communities with productive economies in the interior of Iberia, and on the limits and problems of the 14C method application. Chronologies have been traditionally built on the basis of a single date or a reduced set of dates on each site, when the availability of ample sets of dates from the same structure (number 4 of La Revilla and 9 of La Lámpara, for instance) occasionally offers surprisingly big temporal spans, and shows that the matter is much more complex than what was thought until the present day.

C44-08

Cesár NEVES
Filipa RODRIGUES
Mariana DINIZ (Lisboa, Portugal)

Neolithisation process in lower Tagus valley left bank: old perspectives and new data.

ABSTRACT: The left bank of lower Tagus valley was traditionally seen as a no-man's land during Neolithisation process, after the abandonment of the Muge shell middens around 6300 BP. On contrary, Early Neolithic settlements, both habitat and funerary sites are well-known in nearby Estremadura since 6400 BP and in Central Alentejo at least since 6000 BP.

New data brought out by recent works in this area – surveying projects and rescue excavations – have revealed, based upon typological criteria since no absolute date is available for the moment, an Early and Middle Neolithic settlement (Casas Velhas da Coelheira, Vala Real, Monte da Foz I, Moita do Ourives).

Using these, still preliminary, data we will discuss some main cultural and chronological issues linking last hunter-gathered societies and first agropastoralist groups in southern Portugal and connections between littoral and in-land Neolithic communities.

C44-09

Joan BERNABEU AUBAN (València, Spain)

Early Neolithic Cardial groups (c. 5600-4900 cal. BC) in Iberia.

ABSTRACT: Recent discoveries in central mediterranean Spain about the origins and evolution of early farming groups seems to point that

1. The starting point of the farming groups could be traced back until c. 5600 cal. BC, based on AMS datings of domestic remains.
2. At these time, in the Serpis valleys, a region located north of Alicante Province, there is no evidence of Mesolithic groups. The last Mesolithic sites documented in the area ends at c. 6000

cal BC.

3. Ceramics of these moment comes into the Impressed Ware tradition, more specifically, within the cardial groups of western mediterranean.
4. Between c. 5600-4900 cal BC, archaeological record show how these cardial groups, originally small, began to develop an special kind of social networks, showing clear manifestations of power and increasing inequalities. However these tendence stop after c. 4900 ca. BC

At these paper I will present the results of recent archaeological work carried out in the Serpis Valley area, a region lacated north the Alicante Province, affecting all these topics. Afther that, i will discuss some of its implications for the origin and social context of the cardial groups of the Iberian peninsula.

C44-13

Mário Varela Gomes

The first Neolithic villages of the extreme south-western Iberia

ABSTRACT: The study and valorization project of a small islamic fortress known as Castelo Belinho (Portimão), led to the unexpected discovery and complete archaeological excavation of a village from Early Neolithic times.

Diverse structures were identified, namely post holes, storage pits, depositional pits, inhumation pits, and fireplaces, as well as a variety of artefacts such as lithics, pottery and shell adornments.

Those cultural evidences indicate a Late Early Neolithic settlement, for which 14C calibrated analysis showed an occupation on the first half of the 5th millenium B.C. (4800-4500 B.C.).

Until the Castelo Belinho's excavation, archaeological data demonstrated that Early Neolithic settlements developed in plain areas, near to important water streams or near the sea shores, on sandy terrains, without any natural defenses. They demonstrate a scarce occupation and few dispersed house structure remains, without any nearby graves.

In fact, the Neolithic village of Castelo Belinho is set on a small hill, located between the hinterland and the sea, with good surrounding visibility and, in certain areas, defended by sharp hillsides. From there, access paths as well as the crop fields and pasture fields could be controled.

It was possible to define at least four long rectangular houses, structured by strong wood posts, one of which would have 16 m long by 2,80 m wide. Several fireplaces, storage and ritual pits, as well as graves were discovered among the houses.

The successful food production economy and the human sedentariness were revealed by the amount of large polished stone axes and adzes, manual griding stones, sickle flint blades and the storage pits. As for the animal husbandry, of goats and sheeps, this activity is well documented by the quantity of osteological remains found.

Social differences and social hierarchy were revealed by the diversity of the inhumation rituals, specially through the grave sizes and the commodities deposited with the deceased. For intance, while one adult, with over 35 years old, was laid with twenty-two *Glycymeris bimaculata* bracelets on his arms, other individuals beared no artefacts in their graves.

Another village, near the sea shore (Vau, Portimão), was equally formed by long rectangular houses. Several pits were also used as storage pits or graves.

Session C45

Friday, 8 September 2006 / Vendredi, 8 Septembre 2006

*Room 6.1.49, Faculty of Sciences, Lisbon University
Salle 6.1.49, Faculté de Sciences, Université de Lisbonne*

Cave Painting among tribals An ethno-archaeological perspective

Peintures en grotte chez les tribales Une approche ethnoarchéologique

organized by / organisé par

Sachindra NARAYAN A.N. Sinha Institute of Social Studies, Patna-Bihar, India –
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A.N. SINHA

SESSION'S ABSTRACT

The cave paintings are found among tribals globally. The archeologists as well as anthropologist have done considerable work on them in different part of the hills. In Shilavic hills, Rajmahal hills, Baraberhill, Gonda hills, (India), Saepatinimi (China), Himalyan hill region (Nepal) and in many more places we find close correlation in living tribal art and cave arts. The cave arts have influenced the culture tradition, folk paintings of the tribal living in the close vicinity of those cave arts. The proposed session would like to share the research findings and the experiences of the other scholars working in this field. This may open a new vista in anthropological-archeological researches. It is going to be a strong domain of future archeological- anthropological researches in global perspective. This particular session will be of great importance as well as of interest for those who are working in this field.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 16:30 **Opening / Ouverture**
- 16:30-16:50 Sachindra NARAYAN (Patna-Bihar, India)
C45-01 **Cave Painting Among Tribals: An Ethno Archeological Perspective.**
- 16:50-17:10 Shashi B. SAHAI (Patna, India)
C45-02 **Human Evolution: From War to Peace.**

17:10-17:30 Mitashree MITRA (Raipur, Chhattisgarh, India)
Ajay SHARMA (Raipur, Chhattisgarh, India)
S. NARAYAN (Patna, India)

C45-03 **Art and Craft of Tribes of Bastar, Chhattisgarh: Opportunities, Threats and Challenges.**

17:30-17:50 Sanjay KUMAR JHA

C45-04 **The day to day life of nomads: unique lifestyle of nomads.**

17:50-18:10 Mitashree MITRA

C45-05 **Congruence of genomic and ethno-linguistic affinities among tribes of Chhattisgarh**

18:10-18:30 **Discussion**

ABSTRACTS / RÉSUMÉS

C45-01 Sachindra NARAYAN (Patna-Bihar, India)

Cave Painting Among Tribals: An Ethno Archeological Perspective.

ABSTRACT: Barabar cave is a group of hills on the northern boundary of headquarter subdivision, lying between 25°0' and 25°3'N and 85° 1' and 85°5' and stretching 6 to 8 miles east of the Bela railway station. They are composed of gneissose granite weathering into huge boulders and contain several distinct peaks of which the most conspicuous are the Murli peak to the north the sand giripeak to the south and the Sidheswar peak which they both join on the east. A small temple on the latter peak contains a lingam called Sidheswamath, which from an inscription is one of the neighboring caves is known to be as old as the sixth or seventh century and close by on the top of the hills are some curious caves used occasionally by wandering ascetics. It has been identified with the lofty hill from which Buddha contemplated the kingdom of Magadh and it is still the object of an extension pilgrimage from the neighboring tracts. Immediately to the south at its foot lies a small valley or basin entirely surrounded by hills, except on the northeast and south east where walls have been built to complete the enclosure. Towards the southern corner of the basin are two small sheets of water, which find an outlet underground to the southeast and reappear in the sacred spring called Patalganga where a bathing festival is held once a year in the month of Bhado (August-September). On this side is the principal entrance to the valley which lies over large rounded masses of granite, now worn smooth and slippery by the feet of numerous pilgrims. In the southern corner of the valley there is a low ridge of raised platform, which granite rode, about 500 feet long, from 100 to 120 feet thick and 30 to 35 feet in height in which some remarkable cave have been cut in the solid rock. (...)

C45-02 Shashi B. SAHAI (Patna, India)

Human Evolution: From War to Peace.

ABSTRACT: Peace has been a cherished ideal of man in a world scarred by unrelenting cycles of warfare through centuries and millennia. The first recorded history is an account of protracted wars fought by Greeks against the invading Persians and the recorder-Herodotus – is acknowledged as the first historian of the world. Even some famous epics of pre-historic time's which constitute the source material for construction of proto history are tales of one deadly war or another. The Indian "Mahabharata" is all about a devastating war between "Kauravas" and "Pandavas" and the Greek epic "Iliad" a tale of the siege of Troy by Greek kings to recover the Greek beauty Helen captured by Paris. The known history of ancient, medieval and modern world is a ceaseless chain of tribal dynastic, religious and nationalist wars.

But how old is our history or proto history? Around 5000 years or so. And our kind of humans – the Homo sapiens – is much older. They were around by 100 000 years ago, more or less at the beginning of the latest ice age in the present ice epoch. (This is supported by discovery of part of a human skull, 115 000 years old, in a cave in South Africa.) And they indulged in cave paintings by around 40 000 years ago. (This is backed up by findings from a grave site near present day Moscow.) They lived in peace for millennia, feeding upon nuts, roots, insects, etc without annihilating each other in a war. That would mean that man has lived 20 times more in peace than in war. Only a holistic view of our past from across the frontiers of history can restore the perspective and indicate that war is not a historical inevitability. (...)

C45-03

Mitashree MITRA (Raipur, Chhattisgarh, India)
Ajay SHARMA (Raipur, Chhattisgarh, India)
S. NARAYAN (Patna, India)

Art and Craft of Tribes of Bastar, Chhattisgarh: Opportunities, Threats and Challenges

ABSTRACT: Tribal art is a spontaneous response to nature and natural events. Ritual, norms, traditions and practices play a major role, yet it is closely linked to food security, health and survival. The lack of codified rules makes it colorful, vibrant and evocative, the natural expression of people. This has resulted in some of the most wonderful works of art. Bastar is one such region. The promise of delving into many facets of the tribes of Bastar prompted us to unravel the mysteries of their art and crafts making. Bastar division in south Chhattisgarh, Central India has been described as a "melting pot of races" and, consequently, of cultures. The homeland of the Muria Gond, Hill Maria, Bison-horn Maria, Halba, Dhurwa, Bhatra and Dorla tribes, it differs from other tribal enclaves in that there were, concurrently, other diverse traditions from surrounding civilizations and those who ruled the area.

Bastar has a history as varied as that of the rest of India. It was a Buddhist enclave in the Fifth/ Sixth Centuries A.D., raided by the Eastern Chalukyas, Cholas, Western Chalukyas and Hoysalaas between A.D. 844 and 1150, and ruled by the Telugu Nagvansis from the 11th to the 14th Centuries. In A.D. 1323, Bastar was conquered by the Kakatiyas of Warangal and became the largest Hindu kingdom to have survived the next few centuries till its merger with the Indian Union in 1947. While the Gonds speak a Dravidian dialect, the lingua franca is Halbi, of Sanskrit origin, spoken by the Halba, the descendants of the Maratha soldiers recruited from the area. The influence of the various dynasties is most apparent in the art of the region. Unlike other tribes who lived in splendid isolation, those of the Bastar region had constant interaction with the ruling powers. (...)

C45-04

Sanjay KUMAR JHA

The day to day life of nomads: unique lifestyle of nomads.

ABSTRACT: Dinesh Mahato, a resident of Chikrauta village of Samastipur district of Bihar, was tied to a pole and tried by an adalat (court) comprising 16 Judges on the first day of the three day Kangaroo Court of Karori Caste in the campus of Kameshwar Singh Sanskrit University of Darbhanga of North Bihar on last week. He was found guilty by the court of stabbing a fellow villager and asked to pay a fine of Rs 5051. The accused was later released when his family members paid the amount.

In all five persons were tried in the Kangaroo-Court of the "NOMADS" community and all were fined. A community feast, which was started some months back, will be arranged with the amount realised from the five. In fact such "Middle Aged Traditions" of the "Peniless-Caste" or Unique Tradition of Karori Community is going on in the backward state of the India. These days hundreds of makeshift tents constructed with polythine sheets are seen clustered together on the campus of K S Darbhanga Sanskrit University. In fact, members of Karori Community, which were demanding of facilities like a tribe or scheduled caste to them, of 14 districts of Bihar have congregated to attend their own "middle-aged traditions" of Kangaroo Court."

Any member who flirts with the law has to undergo trial on the occasion which will be end on April 16. At least five guilty persons were slapped with monetary as well as physical punishment during the fair of the community which was held after a gap of three years. The court had fixed hearing for wide range of cases including attempt to murder, atrocities against women as well as one case pertaining to suicide attempt. (...)

C45-05

Mitashree MITRA

Congruence of genomic and ethno-linguistic affinities among tribes of Chhattisgarh

ABSTRACT: The central Indian state of Chhattisgarh is home to a large number of tribal populations of diverse linguistic and ethnic backgrounds. With a view to examining how well genomic affinities among tribal populations of Chhattisgarh state correspond with their ethnic and linguistic affinities, we analysed DNA samples of individuals drawn from tribes of Chhattisgarh with diverse but reasonably well-documented ethno-historical and linguistic backgrounds.

Each DNA sample was scored at sixteen biallelic polymorphic loci. On the basis of these data, genomic affinities among these populations were examined. We have found extremely good correspondance between the genomic and ethno-linguistic affinities.

Session C47

Thursday, 7 September 2006 / Jeudi, 7 Septembre 2006

*Room 12.04, Faculty of Law, Lisbon University
Salle 12.04, Faculté de Droit, Université de Lisbonne*

Archaeozoiconology Pre- and Protohistoric Animal Representations

L'Archéozoiconologie Représentations animales en pré- et proto-histoire

organized by / organisé par

Thomas W. WYRWOLL Deutsche Gesellschaft für Petroikonologie e. V. (DGP), Frankfurt, Germany. – arqueologia@freenet.de

SESSION'S ABSTRACT

Animals form the bulk of identifiable objects depicted by prehistoric societies. Indeed, these representations are a key source for past wild and domestic faunas and their change over time. Sometimes, they are the only evidence for now extinct species so far available to science, whilst in other cases they exhibit traits which cannot be found in excavated animal bones, either for the latter are not sufficiently preserved, or for these traits are, by their very nature, restricted to parts of the body usually decayed (e.g., skin). Therefore, animal representations are of crucial importance to palaeozoology (i.e., mainly, zoosystematics and domestic animal studies) - a fact too often neglected by many of the recent archaeozoologists who are conventionally trained to carry out but osteological studies. Of course, archaeological animal representations are not merely a source for the naturalist's researches on animals, but do also reflect man's perception of them. Thus these pictures are of key importance for the humanities, too (i.e., fields like general and various regional archaeologies, archaeoiconology, with its sub-discipline petroikonology, history of religions, domestication studies etc.). The symposium aims to bring together specialists from all these and additional fields of both sciences and humanities in order to expound and mutually discuss their recent results. Even though a larger part of the papers will probably address representations of Old World larger mammals, contributions on other geographical areas and zoological taxa are very welcome, too.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 14:30 **Opening / Ouverture**
- 14:30-15:00 Maria BELTRÃO (Rio de Janeiro, Brasil)
C47-01 **Contemporanéité de l'homme et de la faune Pléistocène: nouvelle evidence.**
- 15:00-15:30 George Bodi (Iasi, Romania)
C47-02 **About the bull figure in Cucuteni culture.**

15:30-16:00 Martina LAZNICKOVA-GONYSEVOVA (Brno, République Tchèque)
Stéphane PEAN (Paris, France)

C47-03 **Animal exploite, animal represente: exemple du cheval dans l'art mobilier Magdalénien de Moravie (Republique Tcheque).**

16:00-16:30 SUSHENG (Beijing, China)

C47-04 **Animal Rock Art in China.**

ABSTRACTS / RÉSUMÉS

C47-01 Maria BELTRÃO (Rio de Janeiro, Brasil)

Contemporanéité de l'homme et de la faune Pléistocène: nouvelle evidence.

ABSTRACT: Through this present abstract, we present the most recent artefact found in Toca da Esperança (Cave of Hope), located at the Municipality of Central, Bahia, Brazil.

It refers to a burin confectioned in peolelhama bone - +Paleolama major, proceeding from a layer dated at least 300.000 (three hundred thousand) years BP (vide Lumini et alii, 1987). In this site, two other bone artefacts were found: one in +Eremotherium laurillardi bone and the other also in peolelhama bone ; all in the same stratigraphic layer.

C47-02 George BODI (Iasi, Romania)

About the bull figure in Cucuteni culture.

ABSTRACT: The presentation is structured in two parts; first we make a description of the different manners the bull image is present through the Cucuteni culture period, including burned clay figurines, protomas and painted decorations on ceramics. We then trace back the origins of the image of the bull as an iconographical sign, from Paleolithic through Neolithic to Chalcolithic. We present the theoretical point of view on which our paper is built, trying to explain the evolution and variety of the bull image manners of representation, from actual craniums to protomes and painted figures, treating it as signs of a dynamic referent with changing attributes. From here on we try to establish which these attributes were and why, if the case, the image of the bull is chosen as a representation, instead of an actual human-like male figure.

C47-03 Martina LÁZNIČKOVÁ-GONYŠEVOVÁ (Brno, République Tchèque)
Stéphane PEAN (Paris, France)

Animal exploite, animal represente: exemple du cheval dans l'art mobilier Magdalénien de Moravie (Republique Tcheque).

RÉSUMÉ: L'étude présentée s'inscrit dans une problématique particulière concernant la présence de l'animal dans l'art mobilier paléolithique: il s'agit de mieux comprendre la nature des relations entre les représentations iconographiques des mammifères et leurs vestiges fossiles (matières dures d'origine animale) utilisés comme support de pièces d'art mobilier.

La confrontation d'analyses techno-typologiques de pièces d'art mobilier du Magdalénien morave et d'études archéozoologiques de leur support anatomique permet d'apporter des éléments de réponse aux hypothèses posées. Dans ce contexte archéologique particulier, le cheval est représenté sur des objets façonnés sur des éléments atomiques provenant de ce même animal. Il peut s'agir de matériel ostéologique disponible dans le cadre de l'exploitation de l'animal en tant que ressource alimentaire. A l'inverse, le support a pu être expressément sélectionné pour sa morphologie, nécessitant alors une acquisition spécifique. Il en ressort alors un nouvel éclairage sur le lien entre les figures représentées et leurs supports osseux, entre contrainte utilitaire et choix d'ordre symbolique. Au-delà, il est possible de discuter du statut du cheval chez les Magdaléniens de Moravie.

C47-04

SUSHENG (Beijing, China)

Animal Rock Art in China.

ABSTRACT:

1. Animal rock art distribution description

Animal rock art content occupies the majority of rock art of China. They mainly appear in China's south and the north rock art site, these rock art distributed regions widespread, the quantity was multitudinous, has presented the many and varied shapes characteristic. Uses cultural the type characteristic to analyze may be called as the north animal rock art is: The raising livestock time, the hunting time or is raising livestock in the hunting mix time. Looked from the rock art characteristic, they made the age is creates by each time different tribe nationality.

From ancient times till now, on the general north land, always lives take is moving about in search of pasture, the hunting as the fresh nationality. The rock art had reflected humanity's life appearance, in other words, the rock art content is as a result of the local life condition decision.

Nearly all rock art all with animal related, they are petroglyph on the ravine between, on the cliff, only then the few rock art are the pigment draw up. South the local rock art does not like northern area rock art quantity such to be many, moreover in rock art mainly by character and animal's content primarily. The dog and the cow displays most animals. This is agriculture and the hunting production activity and settles down by the south the life style to concern relatively. In the rock art dog and the cow by the native was taken continuously the totem's, is the people religious activities main sacrificial offering.

Southeast China coastal discovery rock art, although obviously has reflected the sea civilization content, but we had not seen has marine animal's rock art. (...)

Session C48

Saturday, 9 September 2006 / Samedi, 9 Septembre 2006

*Room 5.1, Faculty of Letters, Lisbon University
Salle 5.1, Faculté de Lettres, Université de Lisbonne*

Postcolonialism and Archaeology Studies

Post-colonialisme et archéologie Études

organized by / organisé par

Oscar MORO papitu2000@hotmail.com
José FARRUJIA

SESSION'S ABSTRACT

In recent years, discussions on postcolonialism have had a big impact on a wide of academic disciplines as literature, history or philosophy. Taking the definition of Ashcroft, Griffiths and Tiffin into account, postcolonial studies should be considered as the field which seeks to analyse the global effects of European colonialism. In this sense, the term "postcolonial" refers to all cultures affected by the imperial process from the moment to colonization to the present day. In recent years, discussions on postcolonialism have had a big impact on a wide of academic disciplines as history, anthropology and, more recently, in archaeology. However, there does not exist a comprehensive overview of postcolonial studies and archaeology. The present session is an attempt at partially filling this gap.

A mixture of excitement and confusion had surrounded postcolonial studies, a new field which seeks to provide a critical reflection on the effects of Western colonialism on cultures and societies. Although Edward Said's *Orientalism* (1978) is widely considered as the founding text of the field, both the term and the discipline are product of a broad tendency in literary studies of the 1990's. In this sense, postcolonial theory was broadly defined by *The Empire Writes Back* (Ashcroft, Griffiths, Tiffin 1989). In recent years, discussions on postcolonialism have had a big impact on a wide of academic disciplines as history, anthropology and, more recently, in archaeology.

Taking the most important works on archaeology and colonialism into account, the aim of this session is to present the latest research trends and results on archaeology and postcolonialism and to promote postcolonial perspectives in the history of archaeology. With an acknowledge that there is no monolithic understanding of the archaeological practice, we think archaeology can be analysed from a postcolonial perspective. Organizers encourage participants to study the following main themes on Archaeology and postcolonialism:

- Archaeology as a "colonial discourse". Said's *Orientalism*, first published in 1978, initiated a new area of studies, colonial discourse theory, which defined colonial "discourse" as its object of study. Colonial discourse is the complex of signs and practices that organize social existence and social reproduction within colonial relationships. On the assumption of the superiority of the western's culture, archaeology can be defined as the western system of concepts, practices, knowledge and beliefs about the remote past which is imposed to colonial peoples. In other words, archaeology could be examined as a "colonial discourse". From this view, it would be interesting to focus on the ways in which archaeology prevails over others non- western understandings of the remote past

and the ways in which colonialism and imperialism stimulated the development of archaeology as a science and determined the organization of archaeological knowledge.

- Archaeology as a part of the apparatus of western power which promotes and legitimates colonial control. Following Foucault and Said, in colonial discourse power and knowledge are joined together. It would be interesting to go deeply in the ways in which archaeological knowledge legitimates colonial domination. It is interesting, for instance, to explore the ways in which archeological science is used to legitimate strategies by which the western imperial power incorporates as its own the culture from colonized countries. In the same way, the ways in which archaeological discourse has justified colonial expansion should be analysed.
- Archaeology as a discourse which defines colonial identities and produced subjects. As several authors have pointed out, concepts widely used in archaeology ("primitive", "savage", "tribal", "archaic", etc.) take the western values as norm and defines non-western cultures as inferior. Taking archaeology into account, it seems interesting to describe the ways in which the question of subject and subjectivity defines the identity (collective or individual) of colonized peoples.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 11:00 **Opening / Ouverture**
- 11:00-11:15 Oscar MORO (AREA PROJECT, France)
C48-01 **Primitive Art as a Form of Cultural Appropriation: Reflections from a post-colonialist point of view.**
- 11:15-11:30 Nathan SCHLANGER (, France)
C48-02 **Culture As Colonialism.**
- 11:30-11:45 Víctor M. FERNÁNDEZ (Madrid, Spain)
C48-03 **Post-colonial encounters: making Archaeological Research in Western Ethiopia.**
- 11:45-12:00 Ana Cristina MARTINS (Lisboa, Portugal)
C48-04 **Archaeology, (post) colonial intents and national identity. Portugal during the first half of the twentieth century.**
- 12:00-12:15 Katina T. LILLIOS (Iowa, USA)
C48-05 **Colonizing Portugal: Tensions in Creating the Portuguese Prehistoric Past.**
- 12:15-12:30 Andrew GARDNER (London, UK)
C48-06 **The postcolonial paradox: an archaeologist's dilemma.**
- 12:30-12:45 A. José FARRUJIA (Universidad de la Laguna, Spain)
C48-07 **Waiving the ancestors voices? The making of Canarian prehistory in the 19th century.**
- 12:45-13:00 **Discussion**

ABSTRACTS / RÉSUMÉS

C48-01 Jane LYDON (Australia)**Through the Looking Glass: Identity, Appropriation and Mimesis in Australian archaeology.**

ABSTRACT: For scholars the essentialism of racial categories has become untenable, given that representations of otherness within relations of imperial power have undeniably served a functional purpose for the West, allowing the colonised to be 'known' and justifying colonial rule (Said 1978). Instead, current theoretical approaches stress notions of subjectivity as fluid, negotiated and contingent, shaped by gender, class, race and other axes of social differentiation. However, in the context of indigenous activism and independence movements in many former colonies, intellectual trends which emphasise the mutability and contingency of identity have been perceived as undermining Indigenous assertions of culture. Such tension is perhaps most visible within the settler societies of Australia and New Zealand, where indigenous peoples are often required to demonstrate the continuity of their connections to place and culture and to meet expectations of 'authenticity'. Gayatri Spivak's notion of 'strategic essentialism' - choosing what is useful in essentialist discourse and then finding its limits in practice - is often invoked, and indeed has proved empowering to indigenous peoples, especially at a collective level. This paper explores this dilemma and its ramifications within current archaeological practice, through examining Aboriginal peoples' deployment of archaeological representations of Aboriginality in asserting indigenous identity, and the mimetic shifts enacted by mainstream Australian society as it expresses an increasing appreciation of indigenous culture.

C48-02 Nathan SCHLANGER (, France)**Culture As Colonialism.**

ABSTRACT: The point to be argued in this paper is that the concept of culture, in both its archaeological and anthropological guises, took form and drew effects in the context of occidental colonialism. Taking account of the vast and disparate literature on the concept, I focus primarily on late nineteenth- and early twentieth-century North American sources. Upon these sources (both 'pre-Boasian' and 'Bosaian') I argue that the designation or qualifier of 'culture' was often applied to living or past populations with primarily objectives of governance and control in mind. Indeed, once out of the universalist evolutionist paradigm, 'culture' of the non-hierarchical variety effectively became a marker of distinctiveness and a codification of essential propensities of ethnic or historical kind. The notion of respect supposedly inbuilt in 'culture' may therefore well have been, from the onset, more of a veneer applied for the consumption and satisfaction of right minded social scientists: this would be confirmed by today's post-colonial emphasis on the surface appearance and contextual fluidity of culture, 'custom' and 'tradition'.

C48-03 Víctor M. FERNÁNDEZ (Madrid, Spain)**Post-colonial encounters: making Archaeological Research in Western Ethiopia.**

ABSTRACT: From 2001 a Spanish team has been conducting archaeological and ethnoarchaeological research in the Benishangul and Metekkel regions at both sides of the Blue Nile in West Ethiopia. A general survey of the area and test-excavations in several rock-shelter sites have shed light on the culture-historical sequence from the Middle Stone Age up to the present time. Archaeological data about the recent past of Nilo-Saharan populations in the area, as well as the ethnoarchaeological information gathered on the mutual relations of material culture, settlement organization and identity among several groups (Berta, Gumuz, Amhara), are relevant to the current political conflicts and the improvement of the 'ethnic' federal system in the country. In February-March 2006 a project will be implemented to begin the establishment of the first historical-ethnographical museum of the regional state of Benishangul-Gumuz. The intricate problems of constructing 'European' heritage narratives without disrupting local knowledges and of balancing the different ethnic, religious and political forces acting in the region will be addressed in the paper.

C48-04 Ana Cristina MARTINS (Lisboa, Portugal)

Archaeology, (post) colonial intents and national identity. Portugal during the first half of the twentieth century.

ABSTRACT: During the first half of the twentieth century, Portugal was submitted to an all series of political events, such as the collapse of the Monarchy and the subsequent institution of republican regime; a military dictatorship and the establishment of the so-called 'Estado Novo' (New State), ruled by A. O. Salazar until 1974.

Our historiography paid a major attention to the relation maintained between politics and iconography and, most especially, with conservation and restoration of ancient monuments, particularly the medieval ones, since it was then that Portugal began to be formed as an independent kingdom. But unlike other countries, this same historiography seems to ignore the control of political agenda defined by the 'Estado Novo' over archaeological studies.

It is therefore our aim to discuss how some excavations carried out in Portugal were influenced by ideology and predisposed archaeological interpretation and political programs. More specifically, we will analyze the work of A A Mendes Correia, who tried to oppose the image prevalent among foreigner researchers (especially French, German and Spanish) of a Pre and Proto historic Portugal as a territory culturally dependent of exogenous cultures and anthropologically connected with North Africa.

C48-05 Katina T. LILLIOS (Iowa, USA)

Colonizing Portugal: Tensions in Creating the Portuguese Prehistoric Past.

ABSTRACT: To interpret the past and the material remains from that past, archaeologists must - explicitly or implicitly - make comparative analogies to other human groups. When archaeologists from colonial nations, such as Britain, France, and Portugal, engage in reconstructing the ancient past within their territorial borders, however, a fundamental epistemological problem of intersubjectivity arises. Are the peoples from that past an extension of the Self (however defined) or do they represent the Other? Where are valid analogies to be found: in peoples and cultures within the territorial borders, in the colonies, or elsewhere?

This paper analyzes the relationship between colonialism and the study of archaeology in Portugal by examining the historiography of the Portuguese Copper Age (the 3rd millennium BC) during the 19th and 20th centuries. I specifically address how ideas about the Portuguese Copper Age shifted over this period, particularly after the loss of the African colonies in the 1970s. Although significant changes in interpretation are noted, I argue that all archaeology is fundamentally a colonial project, whether or not it is carried out within an archaeologist's national borders.

C48-06 Andrew GARDNER (London, UK)

The postcolonial paradox: an archaeologist's dilemma.

ABSTRACT: The critique of colonial reason which has characterized one strand of postcolonialism has called into question some of the essentialist stereotypes of cultures which served imperial powers in the past. At the same time, the nature of power relations in the postcolonial world has often left previously subjugated peoples in need of alternative but no less essentialist forms of identity. This creates a significant dilemma for the principles of archaeological interpretation, whereby it is acceptable to question the authenticity of some (previously-powerful) cultural groupings, such as 'Roman', but controversial to undermine others, such as 'Celtic'.

Consideration of this dilemma, however, brings into sharp focus the situational nature of archaeological knowledge. Acceptance of this situational-dependence is a necessary step to the progress of archaeology as a discipline with a constructive social relevance, and it can be philosophically-grounded in the pragmatism of William James, John Dewey, and Richard Rorty. In this paper, I will consider how this approach helps us deal with the issues created by past colonialisms, and those which are happening now.

C48-07 Manuel R. GONZÁLEZ MORALES (, Spain)

The role of French Chronologies in the development of Prehistoric Cantabrian Research (1879-1916).

ABSTRACT: The classic works in the history of Spanish archaeology have attested the influence of French Chronologies in the first development of Prehistoric Cantabrian Research. Generally, these works have depicted the French influence as a “natural” scientific process. This paper shows that the assimilation of French chronological systems was clearly related to what one may call the “imperialist” context of the period. I argue that, during the period between 1879 and 1916, the main doctrines about the prehistoric ages were formulated by French authorities under the direction of Gabriel de Mortillet and Henri Breuil. Taking into account this context, I will show that the institutionalization of the Spanish research at that time was largely based on the adoption of the French model. As I will examine in the final section of the paper, the assimilation of this model provoked a particularly interpretation of the material culture which still remains dominant today.

Session C52

Monday, 4 September 2006 / Lundi, 4 Septembre 2006

*Room 12.04, Faculty of Law, Lisbon University
Salle 12.04, Faculté de Droit, Université de Lisbonne*

Cognitive archaeology as symbolic archaeology

Archéologie cognitive comme archéologie symbolique

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SESSION'S ABSTRACT

In the second half of the last century, theory began to have a great influence in archaeological research, but in the last twenty years that influence became more and more notorious. For example, according to Renfrew, "an important component of the cognitive-processual approach is to set out to examine the ways in which symbols were used." (in *Towards a cognitive archaeology*, 1994). These ideas present an useful methodology to research prehistoric symbolism with a scientific approach. The aim of this colloquium is to study the prehistoric mind and symbolism with a cognitive approach, towards a scientific symbolic archaeology.

The coordinators believe that is time to apply these ideas in prehistory and, in a special way, in prehistoric iconography, in order to collect the manifestations of the past mentality hidden in different symbols that appear in schematic rock art, in pottery, in the spatial distribution of tumuli, and so on. For these purposes we call the interested researchers to submit both theoretical and applied papers.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 14:30 **Opening / Ouverture**
- 14:30-14:45 Lionel SIMS (London, UK)
C52-01 **Decoding spiral and cup mark symbolism with cultural archaeoastronomy.**
- 14:45-15:00 Marco García QUINTELA (Santiago de Compostela, Spain)
C52-02 **Trigónia comparativa y ofidiomorfismo apotropaico.**
- 15:00-15:15 Philippe HAMEAU (Nice, France)
C52-03 **Organisation d'un sanctuaire rupestre les rochers de Creysseilles (Ardèche).**
- 15:15-15:30 Frank PRENDERGAST (Dublin, Ireland)

- C52-04** 'In the eye of the beholder': a re-evaluation of passage tombs in the Irish Neolithic landscape through the integration of spatial, visibility and archaeoastronomical data.
- 15:30-15:45 Massimo CULTRARO (Italy)
- C52-05** Geometric motions on vessel and hidden symmetries into community: a study of the painted pottery from EBA Sicily (Italy) in reconstructing patterns of social memory.
- 15:45-16:00 Emilia PASZTOR (Szazhalombatta, Hungary)
- C52-06** The significance of the sun, moon and celestial bodies to societies in the Carpathian Basin during the Bronze Age.
- 16:00-16:15 Michael RAPPENGLÜECK (Munich, Germany)
- C52-07** The "domestication" of the world into a house and a home: Cosmographic symbolism as a basic expression of the human mind.
- 16:15-16:30 Andrea VIANELLO (Oxford, UK)
- C52-08** The ship and its symbolism in European prehistory.
- 16:30-16:45 Fernando COIMBRA (Salamanca, Spain)
- C52-09** Cognitive archaeology, rock art and achaeoastronomy: interrelated disciplines.
- 16:45-17:00 George DIMITRIADIS (Philippi, Greece)
- C52-10** Space Analysis as Cognitive Approach to Prehistoric Mentality.
- 17:00-17:15 SUSHENG (Beijing, China)
- C52-11** Howl cognitive mask in Rock Art.
- 17:15-17:30 Davide DELFINO (Milano, Italy)
- C52-12** Simbologie du Metal: le cas des depots dans les Alpes de l'Ouest au Bronze Final.
- 17:30-17:45 Romeo DUMITRESCU (Bucharest, Romania)
- C52-13** Fertility kits. A possible approach of the female representations in Precucuteni - Cucuteni cultures.
- 17:45-18:00 Dragos GHEORGHIU (Bucharest, Romania)
- C52-14** Symbolic technologies in Chalcolithic Clay Cultures.
- 18:00-18:15 Li WINTER (Stockholm, Sweden)
- C52-15** From Diffusion to Interaction: connections between the Nordic Area and the Mediterranean Cultures during the 2nd Millennium BC.

18:15-18:30 Discussion

ABSTRACTS / RÉSUMÉS**C52-01** Lionel SIMS (London, UK)**Decoding spiral and cup mark symbolism with cultural archaeoastronomy.**

ABSTRACT: Cognition and symbols are never simply given, but located in a cultural context. This context is complex, driven variably by intent to dis-inform as much as inform. Interpreting symbols therefore requires careful procedures with recourse to external referents. This paper reviews a number of tests generated by recent advances in anthropology, archaeology and archaeoastronomy for interpreting spiral and cup mark symbolism in the Neolithic British Isles, with particular reference to the monuments of Bru na Boinne, Ireland.

C52-02 Marco García QUINTELA (Santiago de Compostela, Spain)**Trigonía comparativa y ofidiomorfismo apotropaico.**

RESUMO: Una serie de estudios lingüísticos de los años 20 efectuados por diferentes miembros de la escuela de A. Meillet mostraron la existencia de un campo semántico compartido en diferentes lenguas para palabras que designan la rodilla y conceptos en torno a la generación y la procreación. W. Deonna en 1939 relacionó la dimensión helénica de este campo semántico con el peligro simbólico que encierran los triángulos y la necesidad de su protección mágica. Más allá de la cultura griega antigua, es posible establecer series de imágenes en distintas áreas del mundo indoeuropeo que se pueden contemplar como paralelas con las series terminológicas antes indicadas. En el noroeste de la península ibérica la disposición de los petroglifos serpentiformes en el paisaje responde a este patrón intelectual, en este caso no tenemos una serie lingüística como las antes indicadas, pero elementos del folclore local apoyan esta interpretación. Más allá de este caso concreto, la intención de esta comunicación es mostrar la existencia de textos, en el más amplio sentido del término, que ayudan a interpretar el sentido de determinados petroglifos.

C52-03 Philippe HAMEAU (Nice, France)**Organisation d'un sanctuaire rupestre les rochers de Creysseilles (Ardèche).**

RÉSUMÉ: Les 68 rochers gravés du plateau de Creysseilles sont répartis en deux concentrations séparées par un petit talweg. Dans chacun des groupes, le choix des rochers n'est pas fortuit. Certains ont été apportés d'une carrière proche. L'iconographie est différente dans chacun des groupes: cupule et signe anthropomorphe masculin à l'ouest, cupule, signe anthropomorphe masculin et arceau à l'est. Cette distinction est analysée. La gravure de deux signes corniformes et de fines incisions sur des blocs de roche volcanique permettent d'évoquer les réutilisations des lieux après le Néolithique et jusqu'à l'époque moderne.

C52-04 Frank PRENDERGAST (Dublin, Ireland)**'In the eye of the beholder': a re-evaluation of passage tombs in the Irish Neolithic landscape through the integration of spatial, visibility and archaeoastronomical data.**

ABSTRACT: The passage tombs of Ireland are spatially distributed as isolated examples, in clusters around dominant focal tombs, or more sparsely in regional groups. Their construction began early in the fourth millennium BC and continued until c.2 500 BC. An almost universal preference for siting on locally prominent hilltops or mountain summits, and their disproportionately large covering cairn, makes them visible over great distances in many cases. Other characteristics include orientation on either neighbouring tombs, significant topographies, or horizon based solar astronomical events. Tomb or cairn intervisibility, possibly due to deliberate site selection, has also emerged as a recurring and potentially significant factor in this research.

Through the integration of spatial distribution patterns, tomb visibility in the landscape, visual perceptions, orientation patterns, and astronomically significant alignments, this paper will attempt to explore and widen the meaning and components of the natural and cultural landscape during the Neolithic.

C52-05 Massimo CULTRARO (Italy)

Geometric motions on vessel and hidden symmetries into community: a study of the painted pottery from EBA Sicily (Italy) in reconstructing patterns of social memory.

ABSTRACT: The pottery group related to the Castelluccio Culture in the Early Bronze Age Sicily is of considerable importance in exploring the emergence of the painted decorative system in Central Mediterranean at the beginning of the Second Millennium BC. The appearance of the Dark on Light decorated pottery is much better documented than in other areas of the Mediterranean and, in the case of Sicily, the new decorative system represents a different visual and symbolic of aesthetic labour.

This paper seeks to focus on the whole complex of decorative elements of the Castelluccio's painted pottery, which includes geometric designs and skeuomorphic figures. The alternating combination of the rigid geometry of figurative designs and linear motifs represents a practically and intellectually structured medium in reconstructing symbolic and ideological patterns. In this context, of particular interest is the appearance of more elaborated human schematic figures which have parallels in the decorated animal bones (so-called "*ossi a globuli*" in Italian literature) used in ritual purposes. The earliest introduction of multiple figures, in the scheme of "dancing ladies", is a basic constructional element in exploring the creative interchange between technical competences (in terms of operational procedures familiar and knowledge transmitted over generations and between village groups), and their associated functions and meanings.

C52-06 Emilia PASZTOR (Szazhalombatta, Hungary)

The significance of the sun, moon and celestial bodies to societies in the Carpathian Basin during the Bronze Age.

ABSTRACT: There is good evidence that solar and lunar phenomena played a particularly important role in mythology in Europe in the Bronze Age. During the Bronze Age the increasing use of special symbols assumed to be solar is well known and easily discernible on different types of archaeological artefacts. Essays on prehistoric mythology frequently mention the evident existence of lunar or especially solar cults. Yet they invariably repeat a well-known list of examples of artefacts and rock art from many different parts of Europe. The Bronze Age finds in the Carpathian Basin, in particular, have never been systematically examined with regard to these concepts. In the paper I study:

- the astral decorations on various objects from different social groups, what kind of relation do they bear to the other features of the artefacts (material, colour, shape, purpose of use, role in the burial custom, position in grave)

My paper will address questions such as the following:

Were the astral decorations on Bronze Age artefacts real astral symbols belonging to a certain archaeological culture or cultures, or were they so generally used that their origin cannot be determined?

C52-07 Michael RAPPENGLÜECK (Munich, Germany)

The "domestication" of the world into a house and a home: Cosmographic symbolism as a basic expression of the human mind.

ABSTRACT: Archaeological records worldwide show that cosmographic symbolism played an important role in the life of man since very early epochs. It seems that there is a basic human need for organizing the world into a meaningful system of related parts, which helps to integrate and orientate man within. Parallel to the progressive reduction of instincts man developed topo-semantic systems to

establish and maintain order and rhythm in personal and social life interacting with the given environmental conditions. These structures were also useful to give answers on fundamental questions of man concerning the structure of the world and in particular the life-cycles of creatures, with the focus on the problem of death. Therefore human mind tried to recognize the world as a house and a home, a structured and habitable realm. The topography of the landscape, the architecture of places, settlements, and buildings (huts, houses, temples), and the shape of certain objects (e.g. vessels) served as cognitive models for the ordered, domesticated world, which then can be named a “cosmos”. Thus cosmographic symbolism found in archeological relicts across cultures and epochs can give important information about the structure and development of the human mind. The paper first presents the main cosmographic elements which can be found in archaeological data, including iconography. Secondly it shows some concepts of archaic cosmographies, based on ethnographical records, religious traditions and mythology. Thirdly it discusses what the cosmographic symbolism indicates about the structure and development of the human mind. This is done by applying the results and methods of different sciences, like biology, anthropology, archaeoastronomy, or philosophy (phenomenology).

C52-08 Andrea VIANELLO (Oxford, UK)

The ship and its symbolism in European prehistory.

ABSTRACT: The ship can be a powerful image today. Scholars dedicate studies to this transportation mean. Yet, it is also a symbol frequently used in antiquity. There are different ways in which the ship appears to prehistoric people. It can be the sight of a sailing ship, a model or a representation in rock-art, wall paintings, pottery decoration, on seals and precious objects. There are also different meanings that the ship carries. It can be a utilitarian mean of transportation, a symbol of adventurous voyages, a religious symbol and much more. This paper aims at presenting and analysing some symbolisms attached to the image of the ship in rock art.

C52-09 Fernando COIMBRA (Salamanca, Spain)

Cognitive archaeology, rock art and archaeoastronomy: interrelated disciplines.

ABSTRACT: The subject of cognitive archaeology is to study the ways of past thought, through material remains. This way, rock art is a privileged field for doing that, because it allows the contact with “images from ancient worlds as ancient human minds envisioned them” (Taçon & Chippindale – *An archaeology of rock art through informed methods and formal methods*, in *The Archaeology of Rock Art*, Cambridge University Press, 1998). As one can see, rock art has a kind of “directness”, since the engravings are “direct material expressions of human concepts, of human thought” (*Idem, Ibidem*). So, rock art seems better for a cognitive archaeological approach than the research, for example, of themes like pottery, sculpture, or architecture, although symbolic they may be.

On another hand, archaeoastronomy interrelates with cognitive archaeology, because it studies early cognitive abilities from past civilizations. It also interrelates with rock art, because, in some cases, it may explain some engravings not understood by only archaeologists. Rock art interrelates with archaeoastronomy, since some engraved or painted rocks depict celestial environments and also astronomical transitory phenomena like comets.

In this paper, the author presents some theoretical considerations, regarding the interrelationship of the three mentioned disciplines, that will be illustrated with examples of rock art from different parts of the world, with different chronologies. This way, studying rock art with the contributes of cognitive archaeology and archaeoastronomy, it will lead to a research about symbolic archaeology done with a scientific approach.

C52-10 George DIMITRIADIS (Philippi, Greece)

Space Analysis as Cognitive Approach to Prehistoric Mentality.

ABSTRACT: The present paper is an address proposal for the discussion in C52: Cognitive Archaeology as Symbolic Archaeology. Indeed, the author is convinced that Space is more important as human existence parameter than Time. Starting point to this cognitive approach to the prehistoric mentality is the space syntax analysis of the various archaeological evidences in different scales. The

anthropomorphic territory as expression of the dispositional collocation of tribal dwellings and the figurative composition on megalithic slabs are two different scale examples how the prehistoric man was tried to re-organize the space according his mentality.

C52-11 SU SUSHENG (Beijing, China)

Howl cognitive mask Rock Art.

ABSTRACT: A mask in rock art is that image who look likes a human face. Engraved masks are widespread in several rock art sites and have diverse forms, produced in different time. Meanwhile we also found masks in well known archaeological sites made by clay, bronze and wood. What is their meaning and how to interpret it? There are a lot of records on historical documents, ancient stories, legends and myths. To understand the deeper meaning of the masks and especially the howl masks is necessary try to find the common symbolic elements in all these documents and evidences. Symbol is cultural phenomenon that have survived and transmitted on different artefacts including different means. One interesting approach is the utility of the howl masks in everyday life and may be used as an ancient Chinese character in past writing system. Masks was used by ancient man not only as an elements for worship proposals but it might be have reflect a natural calendar belief. Howl mask reflect human being and his god-nature. The cognitive approach on engraved howl masks is just in the beginning and we need more time until to understand better their hidden message.

C52-12 Davide DELFINO (Milano, Italy)

Simbologie du Métal: le cas des dépôts dans les Alpes de l'Ouest au Bronze Final.

RÉSUMÉ: La zone des Alpes de l'Ouest, pendant l'âge du Bronze Final, est caractérisée par plusieurs dépôts d'objectes métalliques avec plusieurs finalités de déposition : trésors métalliques sous forme de matière première et métaux à recycler, où plutôt déposition des produits finis que par la majorité sont à considérer objets d'élite ou de valeur. Dans une étude de ce dernier type de dépôts, de sa composition, de leur localisation géographique et de contextes archéologiques synchroniques qui sont chez ces dépôts, c'est possible commencer une étude cognitive pour comprendre une symbolologie de pouvoir, sacralité ou autre.

C52-13 Romeo DUMITRESCU (Bucharest, Romania)

Fertility kits. A possible approach of the female representations in Precucuteni - Cucuteni cultures.

ABSTRACT: Two "boxes" with 21 female statues and 13 chairs with different signs were discovered at Isaiia (Iași County) and Poduri (Bacău County) and from these finds some questions arise. It is for the first time that female statues are gathered together with the cones, small balls and chairs, in a box. We try to examine these archaeological discoveries with a doctor's eye. After a summary of physiological data, we arrived at the conclusion that this assembly of statues could represent a schema of the fertile female period / cycle, probably received by each young couple as a gift of "fertility kit" upon getting married.

C52-14 Dragos GHEORGHIU (Bucharest, Romania)

Symbolic technologies in Chalcolithic Clay Cultures.

ABSTRACT: I believe that an area where Cognitive Archaeology could be perceived as Symbolic Archaeology is the study of technologies. In current research it seems customarily to separate the study of technologies/ *chaines-operatoires* from the study of symbolism, since we overlook the fact that technologies, like all the pre-Modern cultural aspects, could be activities with a high symbolic content beside their functional character. In the present paper I will analyse some of the formative technologies of building in the East European Chalcolithic clay cultures, focussing on the symbolism of cyclical processes of construction and deconstruction of objects.

C52-15

Li WINTER (Stockholm, Sweden)

From Diffusion to Interaction: connections between the Nordic Area and the Mediterranean Cultures during the 2nd Millennium BC.

ABSTRACT: This paper tries to raise and nourish questions about the appearance of symbols/images in the Swedish rock carving tradition with striking parallels in the Mediterranean cultures in the 2nd Millennium BC. The main lines of inquiry concern the spread of symbols/images, ideas and conceptions through Bronze Age Europe, and how different ritual practices and beliefs could have been introduced and adopted in different parts of Europe. By presenting material studies of rock art images in Scandinavia and images from the Bronze Age cultures in the Mediterranean area, and also the rock art from the intermediary area of Valcamonica in Northern Italy, it is intended to explore the possibilities for cultural reception, (i.e. how a motif is transmitted between cultures and how the motif changes along the way), transmission of symbols and knowledge, cultural interaction and cultural change. Further it is discussed whether similarities in form are enough to assume that contacts between cultures geographically situated very far apart took place, and whether the symbols and images in question had the same meaning in a changed context.

POSTERS

Gloria Grati

La technique et le symbolisme des gestes pendant la construction des figurines. Une étude comparative dans les traditions de Gumelnita et de Cucuteni.

Session C53

Friday, 8 September 2006 / Vendredi, 8 Septembre 2006

*Room 5.1, Faculty of Letters, Lisbon University
Salle 5.1, Faculté de Lettres, Université de Lisbonne*

**A New Dawn for
the Dark Age?
Shifting Paradigms in Mediterranean
Iron Age Chronology**

**Une nouvelle aube
pour l'âge noire?
Changeant les paradigmes de la
chronologie de l'Âge du Fer**

organized by / organisé par

Dirk BRANDHERM Ruhr-Universität Bochum, Institut für Archäologische Wissenschaften, Bochum, Germany – dirk.brandherm@ruhr-uni-bochum.de

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SESSION'S ABSTRACT

Much of our current chronological framework for the first half of the last millennium BC in the Mediterranean was established before the advent of science-based dating methods. Ultimately, this framework still rests on 'historical' dates attributed to the various styles of Greek Geometric pottery, which are partly based on information provided by ancient authors, and partly derived from Near Eastern chronology through imports of Greek pottery in the Levant.

For several decades then, our conventional chronology has remained largely unchanged, although dendro-dates and calibrated radiocarbon dates have come into increasing conflict with our established framework. The resulting problems are thrown into particularly sharp relief where 'indigenous' chronologies from the non-classical Mediterranean lands, established by scientific methods, conflict with the conventional dating of Greek and Phoenician imports.

Such is the case e.g. in Italy, southern France and the Iberian Peninsula, where the solution all too often has been to explain away the resulting discrepancies by resorting to ad hoc concepts such as 'heirloom theories', ill-defined 'transitional phases' or similar ruses, mostly avoiding any discussion of the underlying methodological issues. In order to address these, a broader approach is needed, which pays particular attention to the specific problems raised by the juxtaposition of 'historical' and science-based dates.

The same problems currently plague chronological discussion at the eastern end of the Mediterranean, where fresh data in recent years have brought about a renewed and rather controversial debate concerning Levantine Iron Age chronology. As imports of Greek Geometric

pottery from some of the relevant Syro-Palestinian sites in the past have been employed to extrapolate 'historical' dates not only for Dark Age Greece, but also for early Greek and Phoenician activities abroad, any changes in the East are bound to knock-on and affect the Iron Age absolute chronology of Mediterranean cultures from Italy to the Iberian Peninsula, and beyond.

Recent discussions of chronological issues in different parts of the Mediterranean have all too often taken place in isolation from each other, rarely addressing the underlying methodological issues in a coherent manner. Thus the principal aim of this colloquium is to overcome the restrictions of regional or other specialisations and to provide a forum for a truly interdisciplinary discourse, in the broadest sense, bringing together scholars from all relevant areas of interest, be they experts in science-based dating methods, in Biblical, Phoenician and Greek archaeology, or any other field of Mediterranean Iron Age archaeology. We are convinced that by analysing and comparing the problems encountered at different points of contact between distinct regional chronologies, new perspectives for their solution will open up.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

09:00 **Opening / Ouverture**

09:00-09:30 Ayelet GILBOA (Haifa, Israel)
 Ilan SHARON (Jerusalem, Israel)
 Elisabetta BOARETTO (Rehovot, Israel)

C53-01 **Not dark at all: updating early Phoenician stratigraphic, ceramic and radiocarbon sequences and their implications for the West.**

09:30-10:00 Elena BOZHINOVA (Sofia, Bulgaria)

C53-02 **The beginnings of the Iron Age in Thrace: archaeological evidence and questions of chronology.**

10:00-10:30 Kaan IREN (Muğla, Turkey)

C53-03 **The problems of the Dark Age pottery from southern Aeolis.**

10:30-11:00 Antonios KOTSONAS

C53-04 **Cretan Iron Age chronologies.**

11:00-11:30 Albert J. NIJBOER (Groningen, The Netherlands)

C53-05 **The Iron Age in the Mediterranean: a chronological mess or 'Trade before the Flag', Part II.**

11:30-12:00 Anna Maria BIETTI SESTIERI (Chieti, Italy)
 Anna DE SANTIS (Roma, Italy)
 Albert J. NIJBOER (Groningen, The Netherlands)
 J. VAN DER PLICHT (Groningen, The Netherlands)

C53-06 **Relative and absolute chronology of Latium vetus from the Late Bronze Age to the Orientalizing Period.**

12:00-12:30 Martin TRACHSEL (Zurich, Switzerland)

C53-07 **First steps towards a revised chronology for Greek Geometric pottery.**

- 12:30-13:00 Dirk BRANDHERM (Bochum, Germany)
C53-08 **Greek and Phoenician potsherds between East and West: a chronological dilemma?**
- 13:00-14:30 **Lunch / Déjeuner**
- 14:30-15:00 Alicia MEZA (Forest Hills, NY, U.S.A.)
C53-09 **Ancient Egypt and the Phoenician connection.**
- 15:00-15:30 F. NUÑEZ
C53-10 **Articulating the Phoenician sequence**
- 15:30-16:00 A. MEDEROS
C53-11 **The dating of the Trojan War and its implications for Late Bronze Age chronology in the Mediterranean**
- 16:00-16:30 Christoher PARE
C53-12 **The Dark Age and the origins of Iron Age fibulae in southern Europe**
- 16:30-17:00 M. Torres ORTIZ
M. RUIZ-GÁLVEZ
A. RUBINOS
C53-13 **The chronology of the Late Bronze Age in western Iberia and the beginning of the Phoenician colonization in the western Mediterranean**
- 17:00-17:30 M. E. AUBET
C53-14 **The dawn of the Phoenician presence in the West**
- 17:30-18:30 **Discussion**

ABSTRACTS / RÉSUMÉS

- C53-01** Ayelet GILBOA (Haifa, Israel)
Ilan SHARON (Jerusalem, Israel)
Elisabetta BOARETTO (Rehovot, Israel)
Not dark at all: updating early Phoenician stratigraphic, ceramic and radiocarbon sequences and their implications for the West.

ABSTRACT: The 'darkness' of the early Iron Age is perhaps lightest in Phoenicia, and to a secondary extent in its neighbour to the south – Philistia. Recent research in these regions is providing new chronological opportunities. Phoenicia in particular produced well-stratified sequences of early Iron Age occupations in several sites, facilitating detailed chronological subdivisions within this period and the close perusal of ceramic developments. Interregional commercial interconnections are well attested in the early Phoenician Iron Age. These not only highlight the complexity of economic activities, but also enable cross-correlations with regions in Phoenicia's immediate vicinity and with

Late Cypriot and Cypro-Geometric Cyprus as well as Protogeometric and Sub-Protogeometric Greece. The largest suite of radiometric dates from Phoenicia, that from Tel Dor on Israel's Carmel coast, indicates a chronology significantly lower than conventional for parts of the Phoenician sequence. This entails adjustments in some of the temporal frameworks abroad. This conclusion is cross-checked vs. other sites in the southern Levant that produced overseas ceramics and vs. several hundreds of ¹⁴C determinations obtained from 20 sites in different regions of Israel in the framework of the Iron Age Dating Project conducted by the authors.

C53-02 Elena BOZHINOVA (Sofia, Bulgaria)

The beginnings of the Iron Age in Thrace: archaeological evidence and questions of chronology.

ABSTRACT: The present paper aims at giving an overview of sites and materials representing the first phase of the Early Iron Age in Bulgaria. According to research carried out during the last decades, apart from the necropolises of the western Rhodopes region, the only sites that provide stratigraphic sequences for the period from the Late Bronze Age to the Early Iron Age are sanctuaries. The accumulation of new data and publication of comprehensive studies now allow the identification of chronologically specific pottery forms and fibulae types, which together with the data from the burial practices also help to define the territory of different culture groups. Standardized pottery forms and decoration style is a characteristic of the period. The spread of the channeled ware is a synchronous phenomenon for most of Thrace and marks the final stage of the Late Bronze Age, followed by the adoption of stamped pottery as a geometric decoration style. The significant number and typological variation of iron artifacts during the 11th to 9th centuries BC point towards communications with Greece and Anatolia. The possibilities for determining the chronology of these processes are limited to some isolated ¹⁴C samples from Late Bronze Age sites and a few Aegean imports of LH IIIC pottery, and chronological statements are only possible by comparison with the chronological sequences from sites such as Troy, Thassos, Assiros and Kastanas.

C53-03 Kaan IREN (Muğla, Turkey)

The problems of the Dark Age pottery from southern Aeolis.

ABSTRACT: In this paper, I intend to examine the decorated Dark Age pottery from southern Aeolis. Aeolis is still an "undiscovered land" for archaeology. The main reason for this is insufficient number of excavations and surveys as well as the recovered materials remaining unpublished. In this proposal, I present the mostly unpublished Protogeometric and Geometric pottery from various research projects in southern Aeolis. Some interesting finds were obtained from the necropolis of Pitane, one of the cities of the Aeolian League, which was excavated almost fifty years ago by Prof. E. Akurgal. They are particularly relevant to Aeolian cultural and chronological problems, as they were found in graves. Other settlements like Küçükkale or Araptepe (their ancient names are still unknown) have yielded some other finds during different surveys, carried out in southern Aeolis by myself and other colleagues. In this paper, also diverging points of view are presented on some published material, such as the finds from Myrina or Larisa. Also, I provide some unpublished Dark Age materials from Phokaea as analogies; although I do not accept Phokaea as an Aeolian city, but as a city with a hybrid culture where the northern Ionian culture seems more dominant. In this paper, by dealing with the pottery, I am aiming to highlight some connections of the Aeolians with other cultures, and to present a new point of view on the distribution of Dark Age settlements in southern Aeolis. While the pottery from this period is not numerous, it covers a wide chronological range, from the Protogeometric to the Early Orientalising Period. Also this pottery appears an adequate tool to discuss some of the problems of the chronology and of the production centres of Aeolian decorated Dark Age pottery as well as the influences from both their neighbours and mainland Greeks.

C53-04 Antonios KOTSONAS

Cretan Iron Age chronologies.

ABSTRACT: The study discusses the problems of the conventional, absolute and relative chronology in the island of Crete. Its first aim is to outline the methodological problems of some of the existing chronologies and emphasise the Cretan sub-regional diversity. The complexity of the

emerging picture illustrates the validity, as well as the limitations of the notion of the regional ware in the Aegean. The second part of the paper reviews the Cretan contexts that have produced Cypriot and Phoenician wares and provide chronological cross-references between Crete and the Eastern Mediterranean, laying emphasis on the new material from the cemetery of Eleutherna.

C53-05

Albert J. NIJBOER (Groningen, The Netherlands)

The Iron Age in the Mediterranean: a chronological mess or 'Trade before the Flag', Part II.

ABSTRACT: The paper discusses the confusion regarding the absolute chronology of the 10th to 8th centuries BC in the Mediterranean. The debate on the absolute dates during the Iron Age has become a mess on account of the various independent positions taken by scholars from diverse Mediterranean regions. This poor state of affairs is the main topic addressed. In addition some recent high-quality radiocarbon results from Italy, Carthage and Huelva will be presented briefly.

Aspects discussed are:

- The conventional absolute chronology
- Carthage and the adjusted absolute chronology for the Phoenician settlements in southern Spain
- The dispute on the absolute chronology of the Iron Age in Italy
- The low and high chronology debate on the Iron Age in Palestine
- Radiocarbon and dendrochronological research at Gordion
- The revised absolute chronology of central Europe and
- 'Trade before the Flag', Part II.

In the last part of this presentation it is suggested to alter somewhat the absolute chronology of the Greek Geometric Fine Wares, resulting in a longer trading phase in the Mediterranean before the establishment of Greek settlements in southern Italy during the late 8th century BC.

C53-06

Anna Maria BIETTI SESTIERI (Chieti, Italy)

Anna DE SANTIS (Roma, Italy)

Albert J. NIJBOER (Groningen, The Netherlands)

J. VAN DER PLICHT (Groningen, The Netherlands)

Relative and absolute chronology of Latium vetus from the Late Bronze Age to the Orientalizing Period.

ABSTRACT: Based on a substantial group of archaeological complexes, both settlements and cemeteries, the Late Bronze Age (LBA) and Early Iron Age (EIA) relative chronology of Latium vetus – the territory which includes Rome and the Alban hills – is well established. The traditional absolute chronology for these periods is 13th-10th century (LBA) and 9th-8th century (EIA).

Recent work in collaboration with the Groningen ¹⁴C Laboratory provided an important series of cal BC dates for the whole sequence. As regards the earliest part of the time span considered, there are no significant changes; on the contrary, the LBA-EIA transition is raised to the beginning of the 10th century, and the earliest phase of the EIA probably does not exceed the first half of the 9th century; a likely implication is that the traditional date for the EIA-Orientalizing transition (ca. 730-720 BC), based on two strongholds of Mediterranean chronology, the appearance of the Early Protocorinthian pottery style and Thucydides' dates for the earliest Greek colonies in Sicily and southern Italy, apparently should also be raised.

Throughout the period considered, an interesting historical process, apparently the direct precedent of early Roman history, can be identified through the analysis of the archaeological record. During the earliest LBA phases the overall material culture as well as the metal industry of Latium vetus both show a definite influence from its northern neighbour, Etruria.

The final phase of the LBA (ca. 11th-early 10th century cal BC) is characterized by the appearance of a specifically local funerary ritual, cremation with miniature outfit, which was exclusive to the members of the local communities who were given the main social roles, both religious and political. Apparently, this phase marked the emergence of the specific cultural identity of Latium vetus, and therefore can be considered as the actual beginning of Roman history. (...)

C53-07

Martin TRACHSEL (Zurich, Switzerland)

First steps towards a revised chronology for Greek Geometric pottery.

ABSTRACT: The sequence of Greek Geometric pottery (GGP) remains the chronological kingpin of the early first millennium BC in the Mediterranean – in spite of the problems and contradictions it causes e.g. in Italy, or even in Greece itself. In this paper, it first will be shown that the synchronization of Attic and Corinthian Geometric pottery – as it was presented by Coldstream in 1968 – is flawed and needs to be corrected. In a second step, the evidence used for attributing historical dates to GGP is to be discussed and connected to the revised relative chronology. In a third and final part, the new ‘historical’ chronology of GGP will be confronted with the results of radiocarbon dating and dendrochronology. The present paper is based on chapters 7 and 9 of the author’s doctoral thesis: “Untersuchungen zur relativen und absoluten Chronologie der Hallstattzeit”. Universitätsforschungen zur Prähistorischen Archäologie 104. Bonn 2004.

C53-08 Dirk BRANDHERM (Bochum, Germany)

Greek and Phoenician potsherds between East and West: a chronological dilemma?

ABSTRACT: Ever since the publication of the stratigraphic sequence documented in Tyre by P. Bikai, the fragments of Greek Geometric pottery found at that site have been used by archaeologists to establish the absolute chronology not only for the Phoenician material from Tyre, but also for Phoenician remains throughout the Mediterranean. When over the last couple of decades calibrated radiocarbon dates from Phoenician contexts in the West were becoming available in ever increasing numbers, it soon became more and more evident that the results of this scientific dating method could not be matched with conventional ‘historical’ dates derived from the Tyre master sequence. Recently, M. Trachsel has proposed an alternative chronology for Greek Geometric pottery, which may be used to revise the absolute dates attributed to the Tyre sequence. This paper aims to examine the consequences of such a revision on Phoenician chronology in general, and particularly on the chronology of Phoenician activities in the West, to see if this revised chronology of Greek Geometric pottery can be reconciled any better with the calibrated radiocarbon dates presently available.

C53-09 Alicia MEZA (Forest Hills, NY, U.S.A.)

Ancient Egypt and the Phoenician connection.

ABSTRACT: As the Phoenicians expanded their trade routes over the Mediterranean Sea, they carried with them more than goods. They exported new ideas and innovations. Many new settlements on the coasts of the Western Mediterranean Sea were the outcome of this new cultural explosion. Religion, art, writing and rituals were transported from Ancient Egypt to far reaching places. For many cities and countries this cultural exchange meant the transitions into the age of History. The aim of this paper is to investigate the major settlements in the Mediterranean Sea which inherited the Semitic culture of the Phoenicians.

Session C54

Thursday, 7 September 2006 / Jeudi, 7 Septembre 2006

And/ Et

Friday, 8 September 2006 / Vendredi, 8 Septembre 2006

*Room 6.1.56, Faculty of Sciences, Lisbon University
Salle 6.1.56, Faculté de Sciences, Université de Lisbonne*

On shelter's ledge

Histories, theories and methods of rockshelter research

Prés du bord d'un abri

Les histoires, théories et méthodes de recherches sur les abris sous roche

organized by / organisé par

- | | |
|------------------------|--|
| Marcel KORNFELD | University of Wyoming, Department of Anthropology, Laramie, U.S.A. –
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SESSION'S ABSTRACT

Rock shelters have played a significant role in the history of archeology; from being mines for artifacts, especially of perishable materials to being thought of as a panacea for developing chronologies. Rock shelters became significant sources of prehistoric data commensurate with the development of archaeology as a discipline in the nineteenth century. Few would argue that Neandertal (Feldhofer Cave), Krapina, La Madeleine, or Laugerie-Haute, were not major sources of data about early human history.

Rock shelters are unique features of the landscape in that they offer naturally produced shelter lasting innumerable generations. However, shelters vary among themselves nearly as much as they vary from other (notable open air) archaeological manifestations. For these and other reasons rockshelters have always held a special place in archaeology, with the Perigordian shelters providing a catalyst for developing special analytical and interpretive techniques for maximizing the information potential from their investigations.

The purpose of this session is to provide a global assessment of today's rockshelter studies. In particular the participants are asked to address:

- 1) The history and synthesis of rock shelters research in their region;
- 2) The theoretical perspectives of the role of rockshelters in prehistory and
- 3) The field, analytical, and interpretive methods specific to rock shelter investigations.

Leaving apart important problems connected with multidisciplinary studies, we wish to concentrate on the archaeological methodology, especially those issues as matching the stratigraphic excavations with spatial analysis, techniques for artifact plotting, functional interpretation of inhabited space, perspectives for identification of domestic structures in rockshelters, etc. Although we wish to begin

with a historical perspective we encourage the participants to move quickly to cutting edge theoretical and methodological issues facing them in rock shelter studies today. This session provides a global view on variability of rock shelter formation, deposition, and evolution. This is a particularly significant aspect of the colloquium as it is currently unclear how rock shelters vary globally and how this variability affected their prehistoric use and today's investigative approaches.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

7th September 2006 / 7^{ème} Septembre 2006

9:00-10:50 **Chair: Marcel KORNFELD (Laramie, Wyoming, U.S.A.)**
Block 1- Background and Ancillary Studies

09:00-09:15 Marcel KORNFELD (Laramie, Wyoming, U.S.A.)
Sergey VASIL'EV (St. Petersburg, Russia)
Laura MIOTTI (Buenos Aires, Argentina)

C54-01 **Variation, continuity and change in rockshelters and rockshelters studies: a global perspective.**

09:15-09:30 Jean-Pierre TEXIER (Talence, France)

C54-02 **Geological rereading of rock shelter deposits of Perigord in the light of new paradigms.**

09:30-09:45 Françoise DELPECH (Talence, France)

C54-03 **Stratigraphie et Chronologie en Archéologie Préhistorique.**

09:45-10:00 William R. FARRAND (Ann Arbor, Michigan, U.S.A.)

C54-04 **Evolution rockshelters in time and space.**

10:00-10:15 Susan MENTZER (Boston, U.S.A.)
Paul GOLDBERG (Boston, U.S.A.)

C54-05 **Picking apart geogenic and anthropogenic sediments at Pech de L'Aze IV.**

10:15-10:30 Rosana OBREGON (Spain)

C54-06 **Answer to the problem of the diachronic and synchronic relationship of arqueopaleontological elements in sites with homogeneous sediments in the Middle-Pleistocene: the example of Gran Dolina, Sierra de Atapuerca.**

10:30-10:45 Jorge MARTÍNEZ-MORENO (Cerdanyola del Valles, Spain)
Rafael MORA (Cerdanyola del Valles, Spain)
Ignacio DE LA TORRE (London, UK)

C54-07 **Depicting a palimpsest: from the arqueography to the site dynamics reconstruction.**

- 10:45-11:00 **Pause**
- 11:00-12:50 **Chair: Ivor KARAVANIĆ (Zagreb, Croatia)
Block 2 – Western and Southern Europe.**
- 11:00-11:15 Jean Philippe RIGAUD (Talence, France)
C54-08 **Rockshelters of the Perigord 25 years later.**
- 11:15-11:30 Lawrence GUY STRAUS (Albuquerque, New Mexico, U.S.A.)
Manuel GONZÁLEZ MORALES (Santander, Spain)
C54-09 **El Miron: a cave for all seasons and all reasons in the Cantabrian Cordillera (Northern Spain).**
- 11:30-11:45 Nuno BICHO (Faro, Portugal)
Mary C. STINER (Tucson, Arizona, U.S.A.)
Delminda MOURA (Faro, Portugal)
Armando LUCENA
C54-10 **Rockshelter studies in Southwest Iberia: the case of Vale Boi (Algarve, Southern Portugal).**
- 11:45-12:00 Ivor KARAVANIĆ (Zagreb, Croatia)
Nikola VUKOSAVLJEVIĆ (Zagreb, Croatia)
Rajna ŠOŠIĆ (Zagreb, Croatia)
Sanjin MIHELIĆ (Zagreb, Croatia)
C54-11 **Approaches to the middle Paleolithic rockshelter and cave research in Croatia.**
- 12:00-12:15 Martina KNAVS (Ljubljana, Slovenia)
C54-12 **Archaeological research in rock shelters and caves in Slovenia.**
- 12:15-12:30 Manuela MONTAGNARI (Trieste, Italy)
C54-13 **Caves and rockshelters of the Trieste karst (Northeastern Italy) in late prehistory.**
- 12:30-12:45 **Discussion**
- 12:45-14:30 **Lunch / Déjeuner**
- 14:30-16:20 **Chair: Sergey Vasil'ev (St. Petersburg, Russia)
Block 3 – Eastern and Southeastern Europe and Asia.**
- 14:30-14:45 Sergey A. VASIL'EV (St. Petersburg, Russia)
C54-14 **125 years of the rockshelter studies in Russia.**

- 14:45-15:00 Vadim N. STEPANCHUK (Kiev, Ukraine)
Nikolaj N. KOVALYUKH (Kiev, Ukraine)
C54-15 **Rockshelters in Ukranian Middle Paleolithic: the case of Crimea.**
- 15:00-15:15 E. BELYAEVA (St. Petersburg, Russia)
V. LYUBIN (St. Petersburg, Russia)
C54-16 **History and methods of research of the Caucasus Paleolithic rockshelters.**
- 15:15-15:30 E. BELYAEVA (St. Petersburg, Russia)
V. LYUBIN (St. Petersburg, Russia)
C54-17 **The use of rockshelter sites in the Caucasus Paleolithics.**
- 15:30-15:45 Maria M. KANUKOVA (Vladikavkaz, Russia)
C54-18 **Chronostratigraphy of Mousterian rockstelters (Northwestern and Central Caucasus).**
- 15:45-16:00 Nazim I. HIDJRATI (Vladikavkaz, Russia)
C54-19 **Unique combination of natural factors for preservation of cave deposits (Weasel Cave phenomenon).**
- 16:00-16:15 **Discussion**
- 16:15-16:30 **Break / Pause**
- 16:30-18:20 **Chair: Andrey KRIVOSHAPKIN (Novosibirsk, Russia)**
Block 4 – Central and Northern Asia, and North Africa.
- 16:30-16:45 Andrey KRIVOSHAPKIN (Novosibirsk, Russia)
C54-20 **Multidisciplinary investigation of Obi-Rakhmat rockshelter, Northeastern Uzbekistan.**
- 16:45-17:00 Patrick J. WRINN (Tucson, Arizona, U.S.A.)
Carolina MALLOL (Tucson, Arizona, U.S.A.)
Susan M. MENTZER (Tucson, Arizona, U.S.A.)
C54-21 **More than shelter: the spring deposits of Obi Rakhmat Grotto and the cautionary tale of Paltau Cave, Northeastern Uzbekistan.**
- 17:00-17:15 Anton ANOIKIN (Novosibirsk, Russia)
C54-22 **Archaeological caves sites in the vicinity of Teshik-Tash Grotto (Baisun-Tau Mountain, Uzbekistan).**
- 17:15-17:30 Michael SHUNKOV (Novosibirsk, Russia)
C54-23 **The Paleolithic human habitation in the environs of Denisova Cave in the Altai.**

17:30-17:45 Alexander POSTNOV (Novosibirsk, Russia)
C54-24 The possible influence of the natural environment on the character of the archaeological material in the Ust-Kanskaya Cave (Gorny Altai).

17:45-18:00 Stefano BIAGETTI (Roma, Italy)
Savino di LERNIA (Roma, Italy)
C54-25 Excavation at Takarkori rockshelter (Acacus Mts., Libya).

18:00-18-15 Anatoly ZENIN (Novosibirsk, Russia)
C54-26 Identification of the specific cave sedimentation processes and interpretation of spatial distribution of cultural horizons in multilayered cave sites.

18:15-18-30 Discussion

8th September 2006 / 8^{ème} Septembre 2006

9:00-10:50 Chair: Ted GOEBEL (Reno, Nevada, U.S.A.)
Block 5 – Western North America and Mexico.

09:00-09-15 C. Melvin AIKENS (Eugene, Oregon, U.S.A.)
C54-27 Desert caves and rockshelters in the Great Basin of North America.

09:15-09-30 Ted GOEBEL (Reno, Nevada, U.S.A.)
Bryan HOCKETT (Elko, Nevada, U.S.A.)
Kelly GRAF (Reno, Nevada, U.S.A.)
David RHODE (Reno, Nevada, U.S.A.)
C54-28 Paleoindian archaeology of the Eastern Great Basin, U.S.A.: the views from Bonneville estates rockshelter, danger cave and Smith Creek Cave.

09:30-09-45 Francis E. SMILEY (Flagstaff, Arizona, U.S.A.)
Susan GREGG SMILEY (Flagstaff, Arizona, U.S.A.)
C54-29 A century of Basketmaker II Rock Shelter research in the American Southwest: the archaeology of transition to farming across the Colorado Plateau.

09:45-10:00 Leticia GONZÁLEZ ARRATIA (Coahuila, Mexico)
C54-30 Rockshelters: an important feature in desert landscape of ancient hunter-gatherers in Northern Mexico.

10:00-10:15 Marcel KORNFELD (Laramie, Wyoming, U.S.A.)
C54-31 Rockshelter of the Middle Rocky Mountains: 70 years of research.

10:15-10:30 Mary LOU LARSON (Laramie Wyoming, U.S.A.)
C54-32 A GIS perspective on rockshelter landscapes.

- 10:30-10:45 Judson FINLEY (Pullman, Washington, U.S.A.)
C54-33 **Rockshelter stratigraphy as evidence for rapid climate change in the North American Middle Rocky Mountains.**
- 10:45-11:00 **Break**
- 11:00-12:20 **Chair: Boyce DRISKELL (Knoxville, Tennessee, U.S.A.)
Block 6 – Eastern and Southern North America.**
- 11:00-11:15 Jonathan A. BURNS (James Creek, Pennsylvania, U.S.A.)
John S. WAH (James Creek, Pennsylvania, U.S.A.)
Robert E. KRUCHOSKI (James Creek, Pennsylvania, U.S.A.)
C54-34 **The madness behind the method: interdisciplinary rockshelter research in the Northeastern United States.**
- 11:15-11:30 James ADOVASIO (Erie, Pennsylvania, U.S.A.)
C54-35 **Closed site investigation in the American Northeast: the view from Meadowcroft.**
- 11:30-11:45 Michael B. COLLINS (Austin, Texas, U.S.A.)
C54-36 **Geomorphological explanations for the Lack of Clovis occupations of karstic caves and rockshelters in the Middle Tennessee Valley, Southeastern United States.**
- 11:45-12:00 Boyce DRISKELL (Knoxville, Tennessee, U.S.A.)
C54-37 **Rockshelter archaeology in the Middle Tennessee Valley of North America.**
- 12:30-12:45 **Discussion.**
- 12:45-14:30 **Lunch / Déjeuner**
- 14:30-16:20 **Chair: Laura MIOTTI (Buenos Aires, Argentina)
Block 7 – South America and Oceania.**
- 14:30-14:45 Laura MIOTTI (Buenos Aires, Argentina)
C54-38 **Caves and rockshelters: mean hunter-gatherer landmarks at volcanic landscape in extra-Andean Patagonia.**
- 14:45-15:00 Françoise DELPECH (Talence, France)
C54-39 **Stratigraphie et Chronologie en Archéologie Préhistorique.**
- 15:00-15:15 Francisco MEÑA (Santiago de Chile, Chile)
C54-40 **Caves and their changing uses: the case of Baño Nuevo.**

15:15-15:30 Louis Alberto BORRERO (Buenos Aires, Argentina)
R. BARBEREÑA (Buenos Aires, Argentina)
F.M. MARTIN (Buenos Aires, Argentina)
K. BORRAZZO (Buenos Aires, Argentina)

C54-41 Collapsed rockshelters in Patagonia.

15:30-15:45 Nora FRANCO (Buenos Aires, Argentina)
Adriana MEHL (Buenos Aires, Argentina)
Clara OTAOLA (Buenos Aires, Argentina)

C54-42 Chorrillo 2 (Upper Santa Cruz Basin, Patagonia, Argentina): new data on its stratigraphic sequence.

15:45-16:00 Marshall I. WEISLER (Brisbane, Australia)

C54-43 Past studies and future directions of rockshelter archaeology in the Pacific Islads.

16:00-16:15 Mary C. STINER (Tucson, Arizona, U.S.A.)
Steven L. KUHN (Tucson, Arizona, U.S.A.)
Todd A. SUROVELL (Wyoming, U.S.A.)
Paul GOLDBERG (Boston, U.S.A.)
Liliane MEIGNEN (Valbonne, France)
Stephen WEINER (Rehovot, Israel)
Ofar BAR-YOSEF (Cambridge, Massachusetts, U.S.A.)

C54-44 Implications of variation in bone preservation in Hayonim Cave (Israel).

16:15-16:30 **Discussion**

ABSTRACTS / RÉSUMÉS

C54-01 Marcel KORNFELD (Laramie, Wyoming, U.S.A.)
Sergey VASIL'EV (St. Petersburg, Russia)
Laura MIOTTI (Buenos Aires, Argentina)

Variation, continuity and change in rockshelters and rockshelters studies: a global perspective.

ABSTRACT: Rockshelters have always held a special place in archaeology. Early in the history of the discipline rockshelters provided much information on early hominids and hominid behavior. Later and in many parts of the world some shelters were found to have exceptional preservation, thus providing a glimpse of perishable items of prehistoric peoples. Because of their importance to unraveling the mysteries of prehistory, special field, analytical and interpretive techniques were developed to deal with shelters. Rockshelters are unique features of the landscape in that they offer naturally produced shelter lasting innumerable generations. However, not all rockshelters are the same and the differences between them are as large as the difference between shelters and open air sites. Nevertheless, the variation in formation, morphology, deposition, occupation, and other characteristics of shelters is not well understood. In this paper we introduce the special place of rockshelters and rockshelter research in archaeology and prehistory.

C54-02 Jean-Pierre TEXIER (Talence, France)

Geological rereading of rock shelter deposits of Périgord in the light of new paradigms.

ABSTRACT: From the beginnings of prehistoric research in Périgord, the geological reading of deposits associated to regional rock shelters has undergone noticeable changes. These differences of interpretation are linked not only to the state of knowledge but also to the predominant concepts and problematics that have underlied research at different periods of the evolution of Prehistoric Science.

In this paper, we recall the evolution of these concepts through the successive geological interpretations proposed for some regional reference sites (Laugerie-Haute, La Ferrassie, La Micoque). Then, we present the main results obtained since the nineties and the new paradigms on which they rest.

C54-03 Françoise DELPECH (Talence, France)

Stratigraphie et Chronologie en Archéologie Préhistorique.

Abstract: Much of what we know about prehistoric human life is drawn from materials preserved in the rockshelters and caves in which people once lived. Because these material are routinely found in stratified deposits, the principals and methods of stratigraphy are fundamental to our efforts to establish spatial and temporal relationships among archaeological entities. Failing to apply, or incorrectly applying, these principles and methods leads to the formulation of invalid hypotheses concerning the chronology of past events. We use examples drawn from sites in southwestern France, notably La Ferrassie and Laugerie-Haute (Dordogne), to illustrate this fact and to present a series of alternative hypotheses concerning the chronology of these sites derived from a stratigraphic reanalysis of them.

C54-04 William R. FARRAND (Ann Arbor, Michigan, U.S.A.)

Evolution rockshelters in time and space.

ABSTRACT: Given careful excavation and adequate chronological control, it is possible to reconstruct the development of a rockshelter over the period of time during which it was occupied. The Abri Pataud (Dordogne, France) provides an excellent example. For the period from about 34,000 to 20,000 rcybp, one can follow the successive collapses of the brow of the shelter and the retreat of its back wall under a frost dominated climate. This sequence proceeds from an early small overhang followed by the development of a considerable sheltered area and finally to the nearly complete filling of the rock niche. Radiocarbon chronology coupled with sedimentary information reveals an early phase of sediment accumulation of about 93 cm/1000 years followed by several hiatuses, some as long as 2000-3000 years, and ending with a somewhat reduced rate of 69 cm/1000 years. Another example, though less well dated, comes from Yabrud Rockshelter I in Syria. This shelter is much older (>150 thousand years), contains Yabrudian through Mousterian industries and variants, and lies in a semi-arid climate, but shows a similar pattern of brow collapse and back wall retreat. Its evolution appears to be much slower than that of the Abri Pataud.

C54-05 Susan MENTZER (Boston, U.S.A.)
Paul GOLDBERG (Boston, U.S.A.)

Picking apart geogenic and anthropogenic sediments at Pech de L'Aze IV.

ABSTRACT: Rockshelter and cave sediments have been studied with a traditional set of analyses adapted from sedimentology: granulometry, grain shape, heavy mineral composition, as well as pH, calcium carbonate, and organic matter. Newer approaches have focused on magnetic susceptibility as a paleoclimatic and chronological tool. Because of their use of bulk samples, these approaches have generally focused on paleoclimatic/environmental reconstructions, leaving behind the anthropogenic aspects of the deposits, which can actually tell us how people utilized space. In this paper we take a different tack in the analysis of sediments from the Middle Paleolithic sites of Pech de l'Azé II and IV in the Dordogne, France. We compare the information obtained by traditional techniques with soil micromorphology at the site of Pech de l'Azé II. We then present the results of burning experiments along with those of micromorphology, FTIR, and microprobe analyses from Pech de l'Azé IV. Like micromorphology, experimental archaeology assists cave researchers in separating geogenic from anthropogenic formation processes. The sediments at Pech de l'Azé IV consist of burned layers within

the lower 60 cm overlain by sand mixed with roof fall. The burning experiments support the use of bone as fuel and furthermore suggest that following burning, the Pech de l'Azé IV hearths were likely trampled. Overlying these combustion features are more geogenic accumulations of rockfall and sand. Karstic dissolution products and remnant deposits suggest that a former phreatic karstic system linked Pech de l'Azé IV with the neighboring sites of Pech de l'Azé I and II. Cold climate features are remarkably absent, even though they are evident in partially penecontemporaneous Pech de l'Azé II. Lack of soil moisture is likely responsible although reasons for this are unclear.

C54-06 Rosana OBREGON (Spain)

Answer to the problem of the diachronic and synchronic relationship of arqueopaleontological elements in sites with homogeneous sediments in the Middle-Pleistocene: the example of Gran Dolina, Sierra de Atapuerca.

ABSTRACT: The study lower Paleolithic sites with homogeneous sediments challenges our dating methodologies and can lead to erroneous interpretations of inseparable overlapping occupations (palimpsests). This problem is addressed through a computerized treatment of the data and application of archaeo-stratigraphic method. With this method more accurate divisions between the archaeopaleontological assemblages are defined on the basis of empty spaces between them that allow us to isolate such assemblages. We can establish depositional patterns and therefore good diachronic relationships.

C54-07 Jorge MARTÍNEZ-MORENO (Cerdanyola del Valles, Spain)
Rafael MORA (Cerdanyola del Valles, Spain)
Ignacio DE LA TORRE (London, UK)

Depicting a palimpsest: from the arqueography to the site dynamics reconstruction.

ABSTRACT: Reconstruction of the Neanderthal activities and behaviour is a highly debated topic. Some claims about the existence of complex intra-site pattern in this period. It would imply that Neanderthals organize their existence in similar terms documented in ethnoarchaeological contexts or among Upper Palaeolithic hunter-gatherers. This possibility deserves to be analyzed from a methodological perspective, specifically in the case of rock-shelters with multiple archaeological levels. In this paper the arqueographical framework developed for understanding the cultural and natural processes from the Middle Palaeolithic site of La Roca dels Bous is presented. From a sedimentary point of view, la Roca dels Bous deposits were formed by the collapsing of heteromethic blocs, fabric and sediments derived from the weathering of the limestone wall. The complexity of formation processes at la Roca dels Bous difficult the identification of the archaeological levels, usually composed by artefacts associated to hearths that configure discrete layers with a limited vertical dispersion (10-15 cm thick). The systematic recording of the archaeological assemblages on large surfaces (around 50 m²) through the use of a teodolite laser allows analyzing the development in plan and depth of the geometry of each archaeological level. The information provided by infographic vertical and oblique plots allows distinguishing internal layers that can be interpreted as result of different occupational events dispersed over the surface of the site. The combination of these topological information links with the result of the lithic refits allows reconstructing the accumulation processes implied in the site formation and the relationships among horizontal clusters. These aspects are essential to describe the general settlement dynamics and have deep implications about the Neanderthal behaviour.

C54-08 Jean Philippe RIGAUD (Talence, France)

Rockshelters of the Perigord 25 years later.

ABSTRACT: Rockshelters of the Perigord contributed significantly to establishing the chronological and cultural framework of the European middle and late Pleistocene. A large number of rockshelter sites, long cultural sequences, and good preservation of cultural material have been responsible for a long standing reputation of the Perigord as a prehistorian's paradise. In what way has this situation marked the theoretical and methodological orientation of prehistoric research since the middle of the 19th century? The Perigordian model has been exported, imported, duplicated, misinterpreted,

plagiarized all over Europe, Africa and Middle East with no consideration for its specificity and for its limits of use, generating criticisms, inappropriate sometime, clear-sightedness occasionally.

Now, 25 years after Rockshelters of the Perigord has been published, what has changed in our methodology, in our interpretation of the raw data? What still makes rockshelter archaeology an unrivaled source of information?

C54-09

Lawrence GUY STRAUS (Albuquerque, New Mexico, U.S.A.)
Manuel GONZÁLEZ MORALES (Santander, Spain)

El Miron: a cave for all seasons and all reasons in the Cantabrian Cordillera (Northern Spain).

ABSTRACT: El Mirón is a large cave very strategically located on a cliffside on the northern flank of the Cantabrian Cordillera, near its borders with Vizcaya and Burgos. We have been excavating this important site since 1996, revealing a complex, nearly complete culture-stratigraphic sequence dated by 56 radiocarbon determinations and spanning the period between the late Mousterian (41 kya) and the early Bronze Age (3.5 kya), as well as traces of the Middle Ages (A.D. 1000-1400). As a place utilized by humans in the fluctuating late Quaternary landscapes of upland Cantabria, El Mirón's functional role changed considerably through time. There are some levels that are extremely rich and diverse in their contents, with evidence of major, repeated, multi-purpose human occupations, with constructed features and abundant artifacts and faunal remains: Lower/Middle Magdalenian, Neolithic, Chalcolithic and Bronze Age. Other levels have more discrete or even merely isolated remains of more ephemeral, sporadic human visits to this site. The Solutrean occupations seem to lie somewhere in-between in terms of occupation intensity, although they may have been functionally restricted (perhaps as hunting camp episodes). This paper will explore the nature of inter-variability throughout the El Mirón sequence, keeping in mind the relationship of this remarkable site to a large cluster of Upper Paleolithic cave art loci in its immediate vicinity. In many respects, this site is reminiscent of the other great cave site located on the edge of the Cantabrian Cordillera: El Castillo.

C54-10

Nuno BICHO (Faro, Portugal)
Mary C. STINER (Tucson, Arizona, U.S.A.)
Delminda MOURA (Faro, Portugal)
Armando LUCENA

Rockshelter studies in Southwest Iberia: the case of Vale Boi (Algarve, Southern Portugal).

ABSTRACT: Rockshelters have been most important in the study of prehistoric archaeology, particularly of the Paleolithic period. In Portugal, however, very few rockshelters have been found, tested and excavated that shed light on the Paleolithic occupation of the Western edge of Europe. This paper will focus first on the history of research of rockshelters in Portugal. Secondly, it will center on the case of the rockshelter of Vale Boi (Algarve, Southern Portugal), a site with Upper Paleolithic and early Neolithic occupations. Interpretation of the site and their human occupations will be discussed and interpreted based on various aspects, specifically site formation processes on slope deposits, intra-site spatial organization, excavation techniques and GIS data processing techniques.

C54-11

Ivor KARAVANIĆ (Zagreb, Croatia)
Nikola VUKOSAVLJEVIĆ (Zagreb, Croatia)
Rajna ŠOŠIĆ (Zagreb, Croatia)
Sanjin MIHELIĆ (Zagreb, Croatia)

Approaches to the middle Paleolithic rockshelter and cave research in Croatia.

ABSTRACT: There is a long tradition of cave and rockshelter research in Croatia. The first Middle Paleolithic site to be discovered was Krapina, located in northwestern Croatia. It was excavated by Dragutin Gorjanovic-Kramberger. His excavation methodology was very progressive for the time, and included stratigraphic excavation and notes on the horizontal distribution of finds at certain parts of the site. In southern Croatia, the only systematically excavated Middle Paleolithic site is Mujina Pecina. The three-dimensional recording of all artifacts and ecofacts enabled the spatial patterning. This paper

presents spatial analysis of certain occupation levels from Mujina Pecina, which provided the reconstruction of some aspects of behaviour of the Mousterian people on the eastern Adriatic coast.

C54-12 Martina Knavs (Ljubljana, Slovenia)

Archaeological research in rock shelters and caves in Slovenia.

ABSTRACT: Western and southern Slovenia's karst systems are rich in caves, overhangs and other karst features. In this paper I deals with the history of rockshelters research in Slovenia and human use of rockshelters and caves from prehistory to the present. Specific procedures of sedimentation in rockshelters and caves demand different methodological approaches compared with excavation in open air site. The author presents differences in methodology and techniques for artifact plotting used by Slovene researchers.

C54-13 Manuela MONTAGNARI (Trieste, Italy)

Caves and rockshelters of the Trieste karst (Northeastern Italy) in late prehistory.

ABSTRACT: Since the 19th century about 160 caves of archaeological interest, including less than 10 rockshelters, have been discovered in the Trieste Karst (North-eastern Italy). As the investigations have been carried out by both professionals and amateurs (mainly speleologists), the quality of the data is not always good enough to define the exact nature and chronological position of different episodes of use. Nevertheless, since the 1990s an interdisciplinary research project (C.R.I.G.A.; Informatic Cadastre of the Archaeological Caves) has combined critical revisions of pre to protohistoric collections, old literature and historical archives with geo-environmental surveys in order to build a geo-referenced database of the area. The results of C.R.I.G.A., together with the sedimentological and soil micromorphological analyses and archaeometric dates, now allow a better understanding of the cultural evolution in the area as well as the formulation of new hypotheses about the use of the region (pastoralism, salt). These data will be discussed and compared with the situation of caves and rockshelters in the rest of Northern Italy from the Neolithic to the beginning of the Bronze Age.

C54-14 Sergey A. VASIL'EV (St. Petersburg, Russia)

125 years of the rockshelter studies in Russia.

ABSTRACT: The paper deals with the developmental history and contemporary state of art in the rockshelter studies in Russia. In spite of the fact that the majority of advances in the Russian Paleolithic archaeology are associated with the exploration of the open-air occurrences, the territory of Russia and adjacent countries, especially those areas as Caucasus, Crimea, the Ural Mountains, Southern Siberia, and Central Asia, abound in cave sites. The history of fieldwork began with the discoveries of Merezhkovsky at Crimea in 1879. First attempts to develop the methodology for the stratigraphic subdivision of cave sediments were put forward by Shchurovsky. The 1920s saw the important developments in field methods. Bonch-Osmolovsky pioneered the study of the stratigraphy fitted together with the spatial distribution of artifacts at Kiik-Koba (Crimea). Combined with new approaches to the lithic (technological studies, statistical classification) and bone analysis this study was original and important. It is worth noting that this intriguing line of inquiry foreshadowed the methodology of François Bordes which were to appear in the late 1940s during the exploration campaign at Pech de l'Azé. Further developments in cave site studies in the 1950-1980s in Russia were mostly associated with the works of Lyubin in the Caucasus. Today an important cluster of the rockshelters and caves located in Altai and extensively excavated under direction of Derevyanko served as a focal center for improvement of field methods.

C54-15 Vadim N. STEPANCHUK (Kiev, Ukraine)
Nikolaj N. KOVALYUKH (Kiev, Ukraine)

Rockshelters in Ukrainian Middle Paleolithic: the case of Crimea.

ABSTRACT: Mountains characterize two geographical areas of Ukraine, Carpathians in extreme west and Crimean Mountains in the south. The overwhelming majority of cave sites are reported for

the latter area, while only few Paleolithic occupations in caves are currently known in Ukrainian Carpathians. Since the year 1873 Crimean cave sites have been subjected to intensive studies. Several dozen multilayered Middle Paleolithic sites in shelters and caves provide important data on various aspects of Neanderthal behaviour, such as dynamic of localisation, intensity and duration of occupations through time and space, and variability of activities, including burial practice and construction activity. Exact chronological setting of distinct occupation episodes and correlation of sequences is of great importance for correct recognition of these aspects in interpreting the evidence provided by Crimean cave sites.

C54-16 E. BELYAEVA (St. Petersburg, Russia)
V. LYUBIN (St. Petersburg, Russia)

History and methods of research of the Caucasus Paleolithic rockshelters.

ABSTRACT: Around 50 rockshelters containing Paleolithic components are known today in the Caucasus. They are located in the limestone massifs extending along the Great Caucasus range and in the Trans-Caucasian volcanic upland. First Paleolithic rockshelters were discovered as early as at the end of 19th century, but excavations of these sites started only in the 1930s. Most rockshelters were investigated in the 1960-1980s by scholars of Saint-Petersburg and Moscow as well as by researchers of the archaeological centers of the Trans-Caucasian republics. Although the methods of investigation were gradually improved, there are examples of thorough investigations accompanied with multi-disciplinary researches, as well as lower quality excavations. After the political and economic crisis of the 1990s only several Caucasus Paleolithic rockshelter sites continued to be investigated in the post-Soviet states. The current state of research is characterized by international collaboration with significant progress in site logistics, excavation techniques, and multi-disciplinary researches, including plotting with a total station, wet-sieving, and zooarchaeological analysis.

C54-17 E. BELYAEVA (St. Petersburg, Russia)
V. LYUBIN (St. Petersburg, Russia)

The use of rockshelter sites in the Caucasus Paleolithics.

ABSTRACT: The Caucasus are extremely rich in various closed sites (galleried caves, grottoes, and mostly rockshelters-abri). Most represent karstic cavities formed in limestone ridges surrounding the Great Caucasus but there are also grottoes in basalt flows of Trans-Caucasian upland. Humans first settled the Caucasus rockshelters in Acheulean epoch represented in six caves. There are three multi-layered sites in the Central Caucasus (base camp of Kudaro I, temporary camps of Kudaro III, and Cona), the Azykh site with periodic occupations (Lesser Caucasus), temporary camp of Treugol'naya (Northern Caucasus) and residues of eroded level in the Akshnyr site (Black sea-side). Mousterian levels found in many more caves of the same regions and some other parts of the Caucasus (North-Western Caucasus, Imereti region) reflect mostly low or medium intensity of intermittent occupations. Almost all the Mousterian sequences contain a single industrial tradition. Moreover, there are three local groups of caves, inhabited repeatedly, with distinctive industries, possibly indicating territoriality. Many Acheulean and Mousterian levels of cave sites contain traces of hearths located according certain patterns whereas some regularity in spatial distribution of cultural remains ("internal organization") is rarely observed. In general both a choice of rockshelter type (e.g., deep cave or rock shelter) and its use were predetermined by changes of climatic factors. In the Upper Paleolithic these factors became especially strong. Around 90% of the cave sites inhabited in this period are concentrated in small canyons of the Imerety region, Georgia, where micro-climate was the most suitable.

C54-18 Maria M. KANUKOVA (Vladikavkaz, Russia)

Chronostratigraphy of Mousterian rockshelters (Northwestern and Central Caucasus).

ABSTRACT: The paper presents results of analyses from many years of investigation at Paleolithic sites in the Caucasus. Several rockshelters with absolute dating and/or some marker elements (geological patterns, such as levels of rock falls or specific lithologic characteristics) were chosen for chrono-stratigraphic correlation. The sites are concentrated in the northwestern and central Caucasus,

on the north coast of the Black Sea, at different elevation ranging from 290 to 1600 m (a.s.l.) and represented by grottoes, rockshelters and caves of different types. The two intervals of more intensive site occupation by the Mousterian populations took place at the time of Early Wurm I interstadials and at the time of the beginning of Wurm III. The stratigraphic profiles of the chosen rockshelters are not represented by long sequences of sediments because of their poor preservation and/or the size of sediment columns. The only exception is Myshtulagty Lagat (Weasel Cave; central part of the Northern Caucasus) – a complex cave where cave morphology and sedimentation processes preserved long sediment profiles and cultural remains accumulated due to cave's location in the contact zone between the plain and mountains. Hence, there are remnants of short-term and long-term visits of Mousterian peoples to Myshtulagty Lagat (Weasel Cave).

C54-19 Nazim I. HIDJRATI (Vladikavkaz, Russia)

Unique combination of natural factors for preservation of cave deposits (Weasel Cave phenomenon).

ABSTRACT: Myshtulagty Lagat (Weasel Cave) is a key cave in Southeastern Europe and Caucasus for reconstructing Pleistocene climato-stratigraphic events. The phenomenal preservation of more than 30 m deep layers including 10 layers of volcanic ash is caused by the rare combination of karst and neotectonic processes continuing to the present day. The chemical composition of deposits and a number of other taphonomic factors resulted in unparalleled preservation of bones, wood charcoals and other components of the cultural assemblage. The absence of noticeable effect of water erosion on the layers allows for interpretation of domestic specialization of different parts of the multilayered cave system in different periods depending on the peculiarity of climate, and habitation. Excavation methods developed and used in the course of the 25 year study allow us to expose and identify the habitation surfaces in the field without the use of analytical methods such as microstratigraphy.

C54-20 Andrey KRIVOSHAPKIN (Novosibirsk, Russia)

Multidisciplinary investigation of Obi-Rakhmat rockshelter, Northeastern Uzbekistan

ABSTRACT: Since 1998, a multidisciplinary international team has conducted excavations at Obi-Rakhmat, a rockshelter in the northern Tian Shan Mountains, Uzbekistan. The goals of the investigation have been to understand the chronology, environments and behavioral variability of the inhabitants of the region in late Middle and early Upper Paleolithic. Twenty-two geological layers, reaching a depth of 10 m, have so far yielded >40,000 stone artifacts and >3,000 identified animal bones. Funded by a Leakey Foundation a comprehensive dating and geoarchaeological program has been already initiated at the site. In addition, in 2003, 6 hominid teeth and approximately 150 cranial fragments, including two petrousal bones, were recovered in situ from paleolithic cultural horizon representing the first hominid discoveries in Uzbekistan since the Teshik-Tash Neanderthal child in 1938.

C54-21 Patrick J. WRINN (Tucson, Arizona, U.S.A.)
Carolina MALLOL (Tucson, Arizona, U.S.A.)
Susan M. MENTZER (Tucson, Arizona, U.S.A.)

More than shelter: the spring deposits of Obi Rakhmat Grotto and the cautionary tale of Paltau Cave, Northeastern Uzbekistan.

ABSTRACT: Numerous caves and rockshelters in Central Asia served as loci of hominid and animal occupation during the Pleistocene. Detailed interdisciplinary studies of the formation of these sites have not been undertaken. The interpretive value of such an approach has been demonstrated at Hayonim Cave, Kebara Cave, Abri Romani and other Paleolithic sites in Eurasia. Since 1998, an international team has conducted interdisciplinary research at Obi-Rakhmat Grotto and Paltau Cave with the goal of attaining high levels of accuracy in the reconstruction of site formation processes, paleoenvironments, and the contexts of hominid occupation. Preliminary geoarchaeological results contribute to the development of theoretical perspectives on the role of rock shelters in Central Asian prehistory. Micromorphological analyses indicate that exogenous sediments contributed little to the

Obi-Rakhmat deposit, therefore, the archaeological and hominid remains can be assumed to be *in situ*. The bulk of the stratigraphic sequence represents a gentle, continuous style of sedimentation characteristic of a freshwater spring environment that would have attracted hominids and their ungulate prey. Moreover, the calcitic nature of the spring deposit created good preservation conditions, allowing taphonomic investigation of the bone assemblages as well as reliable uranium-series dating of associated travertines. Finally, geoarchaeological analyses at Paltau Cave, a nearby deposit of similar lithology, reveal diagenetic minerals of biogenic origin. This site provides a Holocene example of phosphate alteration, a process generally associated with Pleistocene localities.

C54-22 Anton ANOIKIN (Novosibirsk, Russia)

Archaeological caves sites in the vicinity of Teshik-Tash Grotto (Baisun-Tau Mountain, Uzbekistan).

ABSTRACT: In 2003, an archaeological team of the Institute of Archaeology and Ethnography SB RAS carried out a survey in the immediate vicinity of Teshik-Tash (Baisun-Tau Mountain range, Uzbekistan). Archaeological excavations were undertaken at Teshik-Tash-2 shelter, located 100 m from Teshik-Tash. The excavation area at Teshik-Tash-2 was 12 m² and the depth of the profile was seven meters. Soft sediments are mostly a loess loam. A total of 17 strata were observed and 28 lithic artifacts were recovered in association with strata two through 14. Lithic artifacts were located randomly through the deposit. In addition to excavations in the cave, reconnaissance was carried out in caves in the immediate vicinity to Teshik-Tash-2. Several new rock-shelters filled with soft sediment were discovered, while other grottoes known before were reexamined, including: Amir-Temir-1, Amir-Temir-2, Kara-Kamar, Allia-Makat, Gut-Kamar-1, Gut-Kamar-2, Chary-Kamar and Machai. Investigations of these shelters yielded scarce Paleolithic artifacts if any at all. Scarcity of archaeological finds suggests short-term occupation of the sites by the early humans. The high elevation of these sites of over 1750 m asl, in combination with a more severe climate and a long cold season compared to the valleys might explain the sparse use of these sites only during the warm seasons of a year. In addition, narrow canyons with abrupt walls accumulated considerable snow cover, making the majority of the shelters hardly accessible in winters. The majority of the shelters are low, dark and dump “tablet-shaped” cavities unfavorable for human habitation. The only exceptions are Teshik-Tash and Chary-Kamar that have yielded the most interesting Paleolithic artifacts. It can be hypothesized that the long-term occupation sites are situated at lower elevations, such as in the Machai-Darya valley, where the climate is warmer and more stable. Excavations at Machai-Darya support this hypothesis.

C54-23 Michael SHUNKOV (Novosibirsk, Russia)

The Paleolithic human habitation in the environs of Denisova Cave in the Altai.

ABSTRACT: Paleolithic site Denisova Cave in the Altai is one of the principal sources of information on the initial stages of human occupation of the North and Central Asia. The earliest layers have been dated back to 282-155 ka BP and correlated to the early Middle Paleolithic. Overlying horizons have yielded abundant Middle Paleolithic artifacts side-scrapers, notch-denticulate tools, isolated points and bifaces. Anthropological remains recovered in association with the lower cave strata have been attributed to the early *Homo sapiens*. Still above, Upper Paleolithic horizons dating from 50-15 ka BP have been recognized. The tool kit comprises end-scrapers, burins, borers, foliate bifaces, micro-blades. The early Upper Paleolithic horizon has yielded one of the most ancient collections of personal body decorations made of animal bones and teeth, mammoth tusk, ostrich egg shell, mollusk shell and gem stones. The collection includes pendants, beads, cylindrical beads ornamented with incisions, a bracelet and bone needles and borers. Paleolithic inhabitants of the cave lived under favorable conditions of mosaic mountain environment. The subsistence strategy was based on hunting bison, red deer and horse inhabiting steppe zones, roe-deer and Siberian red deer inhabiting mixed forests and mountain sheep and Siberian mountain goat from rocky slopes.

C54-24 Alexander POSTNOV (Novosibirsk, Russia)

The possible influence of the natural environment on the character of the archaeological material in the Ust-Kanskaya Cave (Gorny Altai).

ABSTRACT: The Altai Mountains represent a complex system of mountain ridges forming a watersheds for some of the largest rivers of Eurasia, including the Ob, Irtysh, and Enisei, on the one hand, and the rivers of a closed drainage basins in western Central Asia on the other. The Ust-Kanskaya Cave is situated in the Central Altai, in the Charysh River valley. It was the first Mousterian site discovered in Northern Asia and was initially investigated by S.I. Rudenko in 1954. Within 100 km of Ust-Kanskaya Cave are several other Paleolithic sites, including: Kara-Bom, Ust-Karakol, Tumechin, and Anui open air sites, as well as Okladnikov, Strashnaya, and Denisova caves. Among these Kara-Bom, Ust-Karakol-1, and Denisova Cave have been most intensively studied. These sites are multi-layered, chronometrically dated and contain up to 20 culture-bearing horizons. Investigation of well-stratified cave and open-air sites, located within close proximity to one another, provides additional information concerning sedimentation hiatuses occurring at some sites as well as technical and typological changes in the development of primary reduction strategies and secondary artifact treatment. In 1998, an archaeological expedition from the Institute of Archaeology and Ethnography at Novosibirsk resumed investigations of the cave. The grotto environment has influenced the nature of the lithic industry in the Ust-Kanaskaya Cave. Experts in many fields, including geology, geomorphology, paleobotany, paleontology, paleopedology, anthropology, geophysics, geochronology, from various academic and educational institutions in Novosibirsk, Moscow, St. Petersburg, and other scientific centers, have participated in the research. Such a complex and interdisciplinary approach assures collecting the most complete information concerning human cultural evolution and environment during the past 300,000 years.

C54-25Stefano BIAGETTI (Roma, Italy)
Savino di LERNIA (Roma, Italy)**Excavation at Takarkori rockshelter (Acacus Mts., Libya).**

ABSTRACT: The Takarkori rockshelter is located in the southernmost Libyan fringes of the Acacus Mountains, near the border between Libya and Algeria. The site, about 200 meters above the *wadi* (river bed), at around 1100 meters asl, dominates a large valley, named Wadi Takarkori, which connects the Tassili Plateau (Algeria) to the central ranges of the Acacus Mountains. The site was discovered in 1999 by the team of the Italian-Libyan Archaeological Mission in the Acacus and Messak, that have been working in the area since the 1950s. This shelter shows an exceptional state of preservation, considering the endangering situation of many sites of the Libyan Sahara due to an increase of tourism and oil exploitation. In the past campaigns, we excavated around 100 square meters, topped by badly eroded thin Late Pastoral sediments, consisting of laminated dung, inter-mixed with a few charcoal lenses, dating to around 4500 years bp. This layer covers a thick stratified deposit of a long Middle Pastoral frequentation, radiocarbon dated between 5000 and 6000 years bp. The underlying layers of Early Pastoral age suffered from heavy wind erosion, and are poorly preserved. A restricted area close to the rock walls features an important concentration of human burials, belonging to different cultural phases. The surface now exposed is related to the Late Acacus (Mesolithic) period, characterized by a stone hut, a fence and a large fireplace, likely belonging to the same phase of occupation. During the excavation all the archaeological features and materials have been recorded by means of topographical electronic devices, to build up a GIS platform. The importance of accuracy in providing high definition quantitative data is given by the specific spatial organization of the pastoral Neolithic layers. Those are made of discontinuous series of fireplaces (of different structure, size, and shape), punctuated by stone structures and dung accumulations.

C54-26

Anatoly ZENIN (Novosibirsk, Russia)

Identification of the specific cave sedimentation processes and interpretation of spatial distribution of cultural horizons in multilayered cave sites.

ABSTRACT: Multilayered cave sites provide rich and important information on the development of Paleolithic industries. Cave sites usually demonstrate complex stratigraphic sequences. Knowledge of specific features of sedimentations inside caves is crucial in studies of cave stratigraphy including such aspects as establishing culture-bearing horizons, detecting the state of preservation of deposits and consequent interpretation of the situation. In the course of long-term studies of cave sites in the Altai, a rich experience in recognition and analyses of sedimentation processes in caves has been obtained. It helps chronological attribution of established cultural horizons and identification of early human living areas.

C54-27 C. Melvin AIKENS (Eugene, Oregon, U.S.A.)

Desert caves and rockshelters in the Great Basin of North America.

ABSTRACT: The archaeology of dry caves and rockshelters established by the 1920s a rich and varied record of material culture in the desert west of North America, as well as stratigraphic evidence that indicated a high antiquity for human occupation in the region. Textiles from Lovelock Cave, Nevada, led to comparisons of early Great Basin cultures with the Basketmakers of the American Southwest. Sagebrush bark sandals from Fort Rock Cave, Oregon, were found buried under volcanic ash from the cataclysmic eruption that formed the Crater Lake caldera in the southern Cascade Range, which placed the occupation much farther back in time than Basketmaker. Deep, well-stratified deposits at Danger Cave, Utah, investigated in the early 1950s when C-14 dating was just becoming operational, showed that people camped on clean sand left on the cave floor by receding Pleistocene lake Bonneville, some 11,000 years ago, and came back to the cave again and again over the succeeding millennia as the cave deposits built up to a depth of over three meters. Since then, it has been clearly realized that the marvelously rich record of caves is nevertheless a very partial record of human occupation in the region. Nevertheless, cave and rockshelter records have retained a pre-eminent research position because of their sheer richness in all kinds of organic remains that inform on environments, environmental changes, and human subsistence. Complicated stratigraphic records and long use histories, however, make it hard to interpret with confidence the apparent relationships between particular artifacts, cultural features, and “ecofacts” from the deposits. This paper contemplates the balance between the benefits and drawbacks of cave archaeology by comparing interpretations drawn by archaeologists in the old days of faith, when the cave records seemed good, to those being drawn in our current era of skepticism, when they seem highly suspicious.

C54-28 Ted GOEBEL (Reno, Nevada, U.S.A.)
Bryan HOCKETT (Elko, Nevada, U.S.A.)
Kelly GRAF (Reno, Nevada, U.S.A.)
David RHODE (Reno, Nevada, U.S.A.)

Paleoindian archaeology of the Eastern Great Basin, U.S.A.: the views from Bonneville estates rockshelter, danger cave and Smith Creek Cave.

ABSTRACT: Numerous caves and rockshelters are known from the limestone/dolomite hills of the western Bonneville basin, straddling the Nevada-Utah border of western North America. First and foremost of these is Danger Cave, excavated by Jesse Jennings in the late 1940s and early 1950s, and later by David Madsen and David Rhode in 1986. Also significant are Smith Creek Cave, containing a Paleoindian cultural component excavated in 1968-1974 by Alan Bryan, and Bonneville Estates Rockshelter, currently undergoing study by our interdisciplinary team. These three dry caves and rockshelters have provided our most comprehensive and detailed record of Paleoindian and early Archaic adaptations in the Great Basin. Datable hearths and well-preserved organic artifacts and ecofacts (including human coprolites) have yielded a suite of more than 100 ¹⁴C dates upon which we can base chronologies and consider paleoenvironmental change across the Pleistocene-Holocene boundary. Well-preserved faunal remains with excellently preserved taphonomic indicators (e.g., cut marks, gnaw marks) have provided important details about human hunting strategies and site formation processes. Associated lithic and perishable artifacts (e.g., cordage, bone tools) are being used to determine technological and subsistence activities carried out in the caves/shelters, as well as to chronicle change in technological organization during the Paleoindian and Archaic periods. With these excellently preserved records, we have an unprecedented opportunity to study change in human adaptations across the Pleistocene-Holocene boundary, 11,000-7000 ¹⁴C years ago. In this paper, we present the up-to-date results of our ongoing excavations and analyses, focusing primarily on the new record from Bonneville Estates, but putting it in the context of earlier work in the region's other caves.

C54-29 Francis E. SMILEY (Flagstaff, Arizona, U.S.A.)
Susan GREGG SMILEY (Flagstaff, Arizona, U.S.A.)

A century of Basketmaker II Rock Shelter research in the American Southwest: the archaeology of transition to farming across the Colorado Plateau.

ABSTRACT: The Basketmaker II peoples of the southern Colorado Plateau in the northern portions of the American Southwest achieved archaeological fame before the close of the nineteenth century. The majestic rock shelters in the deeply incised canyons of the plateau yielded astounding material cultural finds including virtually every type of perishable remains. In this paper, we examine the history of Basketmaker II rock shelter research, explore a range of current theoretical and chronometric approaches, and describe current research methods. In the American Southwest, the Basketmaker rock shelters have for 120 years provided a first-rate laboratory for the study of the earliest Colorado Plateau farmers and the processes of agricultural transition. We examine the spatial aspects of shelter use including the evolution of storage technology and the construction of small, surface and semi-subterranean dwellings. Because most Basketmaker II shelters have been looted to some degree, we have learned to turn the problem of the ubiquity of looters' spoil piles to spatial and chronometric sampling advantage and to rapidly assess the extent of site damage and intact cultural deposits. Accordingly, we present the results of over a century of intensive chronometric and material cultural research which provide a remarkable window on the earliest Colorado Plateau farmers, the foundation of American Pueblo societies.

C54-30 Leticia GONZÁLEZ ARRATIA (Coahuila, Mexico)

Rockshelters: an important feature in desert landscape of ancient hunter-gatherers in Northern Mexico.

ABSTRACT: In Coahuila, as well as in other parts of the Mexican desert, rockshelters are an important feature of the desert landscape. Ancient hunter-gatherers inhabited this area for at least 10,000 years, and made extensive use of rockshelters for both domestic and ritual activities. The first archaeological site in the desert, for which we have documentation, is an Indian cemetery in a large rockshelter found in 1838. According to archaeological evidence, rockshelters were carefully selected and used for different purposes by prehispanic population, for both domestic and ritual activities. However, climatological and geological characteristics prevent the formation of clearly visible natural stratigraphy, and the 19th century activities depleted many shelters of their deposits. For these and other reasons, excavation of rockshelters has not been a priority in desert archaeology of Mexico. One of the first professional archaeologists to work in this region, Walter W. Taylor, excavated several shelters in the 1940's and left a good but unpublished account of the methodological problems he confronted during excavation and interpretation. This paper shows the importance of shelters for preserving a wide range of perishable artifacts that allow a good reconstruction of resource exploitation, work process, and a variety of instruments and objects that past societies manufactured and used. On the other hand the paper shows the difficulty in defining shelter chronostratigraphy. This is illustrated by data from different archaeological sites in Cuatrociénegas, Coahuila, México, excavated by Walter W. Taylor and recently by the author.

C54-31 Marcel KORNFELD (Laramie, Wyoming, U.S.A.)

Rockshelter of the Middle Rocky Mountains: 70 years of research.

ABSTRACT: The Middle Rocky Mountains abound in rockshelters many of which were utilized by prehistoric inhabitants, arguably since the earliest human occupations of the Americas. The shelters in this region vary in size, morphology, bedrock geology, sedimentation, time depth of human use, tempo and periodicity of use, and in many other characteristics. The shelters played a significant role in developing regional cultural chronology, which although considerably developed at this time, continues to unfold with new chronologically diagnostic artifacts from shelters holding a key to understanding. Presently we are reexamining previously investigated shelters with cutting edge research strategies, namely interdisciplinary in nature, as well as initiating studies of newly discovered shelters. Both are yielding significant information about rockshelter use, variability, and links to other components of regional settlement.

C54-32 Mary LOU LARSON (Laramie Wyoming, U.S.A.)

A GIS perspective on rockshelter landscapes.

ABSTRACT: Long term intensive research in rockshelters and caves throughout the world has yielded some of the best preserved and most informative data about human existence. Many of these

investigations include multiple locations within a region that have produced significant comparisons between shelters. The use of geographic information systems (GIS) in rockshelter research allows new and exciting perspectives about the landscape within which these shelters are found. This paper discusses the GIS of Bighorn Mountain rockshelters of north central Wyoming. The GIS layers include data on the location, aspect, formation, viewshed, and cultural contents of more than 180 previously and newly recorded shelters. Additionally, over 100 more shelters within one canyon in the Bighorns, Paint Rock, are included in a high resolution consideration of shelter formation, placement, and cultural chronology. The Bighorn Mountains GIS provides archaeologists with new ways to look at ancient human occupation of the Central Rocky Mountains.

C54-33 Judson FINLEY (Pullman, Washington, U.S.A.)

Rockshelter stratigraphy as evidence for rapid climate change in the North American Middle Rocky Mountains.

ABSTRACT: Where rockshelters occur in large numbers across a region, their stratigraphic deposits may be a reliable proxy of past environmental change for that region. The French Perigordian rockshelters are one example. The Bighorn Mountains, a range of the North American Middle Rocky Mountain province, is another area where rockshelters are reliable tools in paleoenvironmental reconstruction. I use stratigraphy from nine sites to examine the effect of rapid climate change on rockshelter depositional regimes. Rapid climate change (decadal to century time spans) has gained increasing attention over the last several years, especially as new high-resolution spatial and temporal information emerges from ice and ocean-sediment cores. A recent comparison of numerous continental and oceanic records demonstrated remarkable pan-global consistency in the timing of Holocene climatic events. Other studies demonstrate the effects of rapid climate change on North American terrestrial systems, particularly in the Great Plains and Rocky Mountains. I hypothesize that changes from autogenic to allogenic depositional modes reflect extrinsic climatic controls on geomorphic systems delivering sediments into rockshelters. While extrinsic controls of ebbolis deposition remain debatable, allogenic loess deposition is the primary line of evidence linking rockshelter stratigraphy to rapid climate change in Bighorn Mountain rockshelters.

C54-34 Jonathan A. BURNS (James Creek, Pennsylvania, U.S.A.)
John S. WAH (James Creek, Pennsylvania, U.S.A.)
Robert E. KRUCHOSKI (James Creek, Pennsylvania, U.S.A.)

The madness behind the method: interdisciplinary rockshelter research in the Northeastern United States.

ABSTRACT: The sandstone rockshelters of the northeastern United States are valuable resources for archaeologists seeking contextual and behavioral clues about the recurrent use of sheltered spaces by prehistoric humans over the past 14,000 years. Such clues must be carefully recovered from the complex sediment deposits that have accumulated beneath rock overhangs and on talus slopes. After excavation, the full cultural implications of the evidence are not readily apparent without further detailed analyses. Researchers are faced with the realities of the inherent limitations of archaeological data, decisions about the appropriate methods of spatial analyses, and the challenge of relating their data to past human behavior. A major research concern is linking behavioral theory to the interpretation of the patterned traces of prehistoric hunter-gatherer occupations. Towards this goal, fine-grained excavation data and analyses from recently investigated upland rockshelters in Pennsylvania serve to: 1) illustrate methods to identify natural and cultural formation processes, 2) highlight the idiosyncrasies of rockshelter formation under regional climatic conditions and related excavation requirements, and 3) situate the archaeological interpretation of these sites in the larger context of global hunter-gatherer prehistory.

C54-35 James ADOVASIO (Erie, Pennsylvania, U.S.A.)

Closed site investigation in the American Northeast: the view from Meadowcroft.

ABSTRACT: Though not as well known as other portions of North America for cave and rockshelter research, the American Northeast contains one of the most intensively investigated closed site loci

ever excavated on earth. Meadowcroft Rockshelter, in southwestern Pennsylvania, has been under nearly continuous study since 1973 and the research protocols employed at that site are widely considered to represent the state-of-the-art. The constantly evolving research methodology used at Meadowcroft is summarized and its implications for rockshelter/cave research in the Northeast and, more broadly, other areas are addressed.

C54-36 Michael B. COLLINS (Austin, Texas, U.S.A.)

Geomorphological explanations for the Lack of Clovis occupations of karstic caves and rockshelters in the Middle Tennessee Valley, Southeastern United States.

ABSTRACT: Although occupied caves and rockshelters abound in the Middle Tennessee Valley of northern Alabama and it is an area with one of the greatest concentrations of Clovis point discoveries in North America, no intact Clovis occupation of a rockshelter has been documented. Traditional archeological excavations and analyses of individual rockshelters do not afford an explanation for this apparently discordant pattern. When the ages and sources of geologic fills of multiple caves and rockshelters of different elevations are considered relative to base level of the Tennessee River, it can be demonstrated that most of the intact caves and rockshelters were either buried in alluvium or were beneath the water table until after Clovis times. Other shelters and caves that were potentially suitable for occupation during Clovis times are severely degraded at present and have not received much archeological scrutiny. Incision by the Tennessee River and karstic response to lowering of base level between about 14,000 and 10,000 rcybp are indicated by fluvial and speleological geomorphological evidence and are the processes inferred to explain the archeological pattern.

C54-37 Boyce DRISKELL (Knoxville, Tennessee, U.S.A.)

Rockshelter archaeology in the Middle Tennessee Valley of North America.

ABSTRACT: Well known for its numerous archaeological sites testifying to a cultural history rooted in the late Pleistocene, the Middle Tennessee Valley of North Alabama is characterized by karstic topography where sinkholes, caves, and shelters are quite common. Many of these sheltered places were utilized by prehistoric foragers, leaving an important record of life which, unlike most open air sites of the region, has been better protected from processes of destruction. Recent research at Dust Cave combines geomorphology and geochemistry, faunal and floral analyses, and technological studies to interpret data from a series of discrete, organic laden strata within a chronometric framework informed by numerous radiometric determinations. Exploration at Dust Cave is the culmination of rockshelter research in this region which began in the early 1960's and has played a prominent role in development of methods of data retrieval and analysis, and refinement of cultural history and chronology. Current rockshelter research in the region seeks insight into the organization of subsistence and settlement of Late Pleistocene and Early to Middle Holocene foragers and provides a useful forum for discussing forager theory.

C54-38 Laura MIOTTI (Buenos Aires, Argentina)

Caves and rockshelters: mean hunter-gatherer landmarks at volcanic landscape in extra-Andean Patagonia.

ABSTRACT: The Deseado Massif (Santa Cruz Province) is one of the most important areas which since 19th century had contributed excellent palaeoenvironmental and archaeological information to the first human settlements in New World. Caves and rockshelters are the main places where archaeological data were found. So, these special *loci* hold not only cultural materials (of pre and post-Hispanic periods) across millennia, but also paleoecological and taphonomic information. Many caves present extended stratigraphic and archaeological sequences, that allow us to infer the different histories of human colonization, mobility, subsistence, massive extinction of Pleistocene megafauna, relationship between first colonizer and the animals, and symbolic issues related to art, death and use of space. This work details some of the main archaeological contexts excavated and studies developed by our research team over fifteen years at Piedra Museo, Aguada del Cuero, Los Toldos, and La Primavera localities. The final aim is to present a regional model of the process of colonization and consolidation in the area during last 13 thousand years and discuss the changes in the use of

space by people and animals in this particular environment that act as sedimentological traps in the great plateau of Patagonia.

C54-39 Françoise DELPECH (Talence, France)

Stratigraphie et Chronologie en Archéologie Préhistorique.

ABSTRACT: Much of what we know about prehistoric human life is drawn from materials preserved in the rockshelters and caves in which people once lived. Because these material are routinely found in stratified deposits, the principals and methods of stratigraphy are fundamental to our efforts to establish spatial and temporal relationships among archaeological entities. Failing to apply, or incorrectly applying, these principles and methods leads to the formulation of invalid hypotheses concerning the chronology of past events. We use examples drawn from sites in southwestern France, notably La Ferrassie and Laugerie-Haute (Dordogne), to illustrate this fact and to present a series of alternative hypotheses concerning the chronology of these sites derived from a stratigraphic reanalysis of them.

C54-40 Francisco MEÑA (Santiago de Chile, Chile)

Caves and their changing uses: the case of Baño Nuevo.

ABSTRACT: Caves have always been attractive to human beings, who have used them as setting for different activities. There are spaces particularly adequate to specific functions and even if they have been reoccupied several times, they may have been always used for relatively similar functions (i.e., family group residences, ceremonial space for a small and select group of people). There are other caves, however, that could well serve for different purposes. If, moreover, they are a relatively scarce resource, it is only natural that they were used for the most diverse activities on different visits especially among hunter-gatherer peoples. On the other hand, they are particularly complex sedimentological deposits. The restrictions to movement represented by their rocky walls and "natural" microtopographic conditions (i.e., immobile rocks, low ceilings) determine to a large extent the use of these spaces, therefore producing an intense removal of previous deposits, oftentimes of cultural origin. Superimposed activity areas (i.e., sleeping areas, hearths), pits for garbage disposal, floor clearing are some of the many phenomena that can affect the surface of this kind of site and make it difficult to define discrete occupation floors. This problem is particularly acute on show sedimentation sites, where it is very difficult to disentangle the palimpsest effect of thousands of occupations on a meter deep matrix. The Baño Nuevo Cave on Central Patagonia has provided a particularly instructive setting for the application of many different tools (i.e., microscopic analysis of flotation recovered samples, usage of multiple radiocarbon dates) geared to define "floors" or at least relatively synchronic and functionally homogeneous units. On the other hand, we have attempted to rule out the former availability of other caves on the surroundings. Their actual absence would certainly aid to explain in part the abundant remains of animals that occupied the cave in seasons alternated to those when it was used by humans and its use both for ceremonial (i.e., disposal of the dead, wall painting) and domestic functions.

C54-41 Louis Alberto BORRERO (Buenos Aires, Argentina)
R. BARBEREÑA (Buenos Aires, Argentina)
F. M. MARTIN (Buenos Aires, Argentina)
K. BORRAZZO (Buenos Aires, Argentina)

Collapsed rockshelters in Patagonia.

ABSTRACT: Rockshelters may have been places used during short periods, but their sequences still produced the basic archaeological framework for several American regions. Patagonia is one of those cases. It is known that sequential changes occurred at many rockshelters, including a reduction of habitat produced by sedimentation. These changes were important determinants for the human selection of those places. Places that offered protection against wind and rain in the past ended as accumulations of rocks that were no longer attractive for human habitation. A review of cases in Southern Patagonia is presented, and the example of Cerro León 3, Baguales Range, Argentina is explored in some detail.

C54-42 Nora FRANCO (Buenos Aires, Argentina)
Adriana MEHL (Buenos Aires, Argentina)
Clara OTAOLA (Buenos Aires, Argentina)

Chorrillo 2 (Upper Santa Cruz Basin, Patagonia, Argentina): new data on its stratigraphic sequence.

ABSTRACT: Chorrillo Malo 2 is a rockshelter located in the Upper Santa Cruz Basin (Patagonia, Argentina), very close to the Andean range. Its occupation by hunter-gatherers begins ca. 9,700 years B.P. and there is evidence that suggests it corresponds to an early human exploration phase of the area. Its stratigraphic sequence expands for ca. 8,000 years. New chronological data from recent excavations are presented. Changes in the stratigraphy are evaluated taking into account its sedimentary sequence, along with information about changes in the position and patina of lithic artifacts and bone weathering. New data from lithic and faunal analysis as well as the presence of structures are presented. On this basis, changes in human use of the site are suggested. The effect of changes in the shape of the rockshelter is evaluated.

C54-43 Marshall I. WEISLER (Brisbane, Australia)

Past studies and future directions of rockshelter archaeology in the Pacific Islands.

ABSTRACT: Although not the first class of archaeological sites to be systematically investigated in the Pacific Islands, the study of rockshelters has held a pivotal position for developing local and regional chronologies across Oceania due to their artifact-rich contents and exceptional preservation of organic materials for expanding the inventory of material culture and for reconstructing environmental histories. The history of rockshelter archaeology in the Pacific is summarized, highlighting the role of these sites in tandem with the development of Oceanic archaeology in general. Recent trends include large multi-disciplinary teams organized to unravel the complex stratigraphy and outline the cultural-historical sequence set against environmental change and faunal extinctions.

C54-44 Mary C. STINER (Tucson, Arizona, U.S.A.)
Steven L. KUHN (Tucson, Arizona, U.S.A.)
Todd A. SUROVELL (Wyoming, U.S.A.)
Paul GOLDBERG (Boston, U.S.A.)
Liliane MEIGNEN (Valbonne, France)
Stephen WEINER (Rehovot, Israel)
Ofar BAR-YOSEF (Cambridge, Massachusetts, U.S.A.)

Implications of variation in bone preservation in Hayonim Cave (Israel).

ABSTRACT: Understanding the cause of patchy bone distributions in archaeological sites requires that one distinguish bone decomposition in place from “empty” areas where bones were never present. Marked horizontal variations in bone abundance are found in the thick Mousterian layer (E) of Hayonim Cave, a large Paleolithic site in northern Israel. Infrared analyses of minerals in the sediments identify zones of advanced diagenesis and decomposition alongside zones whose chemistry clearly favored the preservation of bones and wood ash. These differences adhere closely to the distribution of recognizable bones in the deposits, indicating that spatial variation in bone abundance is essentially a product of differential preservation conditions. However, the few bones present in the bone-poor units are in surprisingly good condition. The higher degree of abrasion damage and more random orientations of these bones indicate that small amounts of recent material were introduced into older layers by small burrowing animals and perhaps localized trampling. The ratio of post-Mousterian to Mousterian artifacts in layer E, and the numeric contrasts in bone abundance among stratigraphic units, indicate that time-averaging from mechanical intrusion was quantitatively unimportant (2-5%) throughout this greater than 2.4 m thick layer. Good preservation environments can be distinguished from poorer ones on the basis of mineral assemblages in sediments, and deposits that once contained bone and wood ash can be identified long after the visible traces of these materials have disappeared.

POSTERS

Darko Komso,
Blecic, Martina

Lovranska Canyon, Istria, Croatia

ABSTRACT: Lovranska Canyon is a very important archaeological area with more than 30 caves, some are considerably different in size. Few of them, like Oporovina and Vrtaske peci, were excavated.

Oporovina cave was excavated at the beginning of 20th century by Belario de Lengyel and it yielded the first finds from the Paleolithic period in the Adriatic area. It also yielded numerous finds from other prehistoric periods as well as from the roman and early medieval period. The excavation of Vrtaske peci revealed archaeological remains from prehistory and early medieval period.

The multidisciplinary project concentrated on the Lovranska canyon started in 2005, with the main goal of understanding the changes in patterns of cave use in the micro region. The history of previous excavations and the current stage of the project will be presented in this poster.

Session C55

Saturday, 9 September 2006 / Samedi, 9 Septembre 2006

Room 11.02, Faculty of Law, Lisbon University
Saale 11.02, Faculté de Droit, Université de Lisbonne

Romanization and Indigenous societies Rhythms, ruptures and continuities

Indigénismes et romanisation Rythmes, ruptures et continuités

organized by / organisé par

João Pedro BERNARDES

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SESSION'S ABSTRACT

This session focus on the transformations on the indigenous communities that faced the Roman conquest. Rather than the assimilation or the resistance, it is more important to debate the rhythms of transformation for each region, that ultimately conduced to continuities or breaks that announced the end of the proto-historic societies.

RÉSUMÉ DE LA SESSION

S'agit d'une session que vise débattre les transformations que ont place au sein de les communautés indigènes face à la conquête et installation des Romains. Plus que les dynamiques de résistance ou assimilation , sont ses rythmes que intéressent connaître et débattre dans les diverses régions et que conduiront ou pas a ruptures et continuités que annoncent la fin des sociétés proto-historiques.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

09:00 **Opening / Ouverture**

09:00-09:20 Herbert SAUREN

C55-01 **Romans and Residents:administrative, monetary and linguistic systems.**

09:20-09:40 Francisco SANDE LEMOS (Braga, Portugal)
Gonçalo CORREIA DA CRUZ (Guimarães, Portugal)

C55-02 **Citânia de Briteiros: latest data on Romanization issues. General Study Project at the Citânia.**

09:40-10:00 João TERESO (Alcobaça, Portugal)
Helena BARRANHÃO

C55-03 **Terronha de Pinhovo and the romanization of the NE Portugal.**

10:00-10:20 João Pedro BERNARDES (Faro, Portugal)

C55-04 **A Romanização do Extremo Ocidental do Império: mutações e persistências.**

10:20-10:40 Marta HERRERO (Oviedo, Spain)

C55-05 **Clarissimi lusitani en los círculos dirigentes de Roma. Contribución al estudio del proceso de romanización en Lusitania.**

10:40-11:00 **Discussion**

ABSTRACTS / RÉSUMÉS

C55-02 Francisco SANDE LEMOS (Braga, Portugal)
Gonçalo CORREIA DA CRUZ (Guimarães, Portugal)

Citânia de Briteiros: latest data on Romanization issues. General Study Project at the Citânia.

ABSTRACT: It has been made a general context on the Romanization on the Citânia de Briteiros, according to old investigation projects developed along the XXth century, and to the recent General Study Project developed at the Casa de Sarmento. In this particular it's proposed to characterize the impact, the ruptures and the continuities within Romanization process in this archaeological settlement, based on recent excavation practice and on recent analysis of structure overlapping. In fact, the phenomenon of the proto-urbane organization is here related with the Romanization process, analysing different phases for the urban development of the site. At the same time, it's presented a detailed analysis of an Iron Age family compound, with comparison with an 1st century family house. It will be too mentioned recent discoveries within Citânia's rock art.

C55-03 João TERESO (Alcobaça, Portugal)
Helena BARRANHÃO

Terronha de Pinhovo and the romanization of the NE Portugal.

ABSTRACT: Terronha de Pinhovo is a settlement placed next to the southern limits of the ancient territory of the Zoelae (NE Portugal). It may have been crucial to the defence of its borders and the passage through the Macedo Valley. During the three excavation summer-campaigns three different areas were opened exposing the Iron Age and Roman occupations, several domestic areas and some (possibly defensive) stone banks.

A circular perishable structure made in soil and clay, with abundant charcoal and carbonized seeds, testifies an Iron Age occupation, still poorly known. This phase partially overlays the stone banks, whose chronology is still unknown. Three main roman phases have been found, testifying several construction, abandonment and reoccupation moments, between I and V AD.

A short data analysis, mainly from surveys in the Macedo de Cavaleiros area, shows that most Iron Age settlements don't provide any evidence for a roman occupation. At the same time, new settlements have been established during the roman period, all in open places without natural defence conditions.

C55-04

João Pedro BERNARDES (Faro, Portugal)

La Romanisation de l'Extrême Occidental de l'Empire: Mutations et Persistances

RÉSUMÉ: L'extrême occidental de l'empire, région périphérique, assure aspects de la romanisation que doivent être envisagés aussi dans un contexte régional. Malgré la force avec laquelle le procès de romanisation on fait sentir, il s'adapte et est adopté par les matrices culturelles régionales de façon plus ou moins intense qui jamais perdront quelques-uns de ses traits les plus enracinés, et même soient offusqués par l'entité politique et culturelle dominante. A pair de plusieurs mutations opérées par les canons de l'impérialisme romain au point d'on peut parler d'une romanisation dans le sens d'une première globalisation À échelle européenne et méditerranéenne, il y a des nuances culturelles locaux et régionaux que persistent, d'une façon endormie, à avalanche de la globalisation romaine et que finalement vont surveiller avec la désagrégation de l'empire. Confrontant les régions du Nord et Sud de Portugal, on voit que le procès romanisateur, au contraire d'être homogène, il est une étape formative avec des rythmes et niveaux de réalisation bien différenciés d'accord les espaces d'étude.

C55-05

Marta HERRERO (Oviedo, Spain)

***Clarissimi lusitani* en los círculos dirigentes de Roma. Contribución al estudio del proceso de romanización en Lusitania.**

ABSTRACT: Contenido: se estudian las carreras protagonizadas por los senadores originarios de ciudades lusitanas para evaluar cuál fue la contribución en el gobierno del Imperio Romano de una provincia periférica como Lusitania. Tras el estudio prosopográfico, se trata de reconstruir la evolución del reclutamiento senatorial, incidiendo en la aparente recuperación que experimenta a partir de finales del siglo III, frente a lo que ocurre en las otras provincias hispanas.

Session C57

Tuesday 5 September 2006 / Mardi, 5 Septembre 2006

*Room 12.04, Faculty of Law, Lisbon University
Saale 12.04, Faculté de Droit, Université de Lisbonne*

Setting the Record Straight Toward a Systematic Chronological Understanding of the Middle to Upper Palaeolithic Boundary in Eurasia

Ranger les données:

**Vers une compréhension systématique de la chronologie à la transition
du paléolithique Moyen au paléolithique Supérieur en Eurasie**

organized by / organisé par

- Olaf JÖRIS** Römisch-Germanisches Zentralmuseum, Forschungsbereich Altsteinzeit,
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- S. William G. DAVIES** University of Southampton, Centre for the Archaeology of Human Origins,
Southampton, UK – s.w.g.davies@soton.ac.uk

SESSION'S ABSTRACT

The Middle to Upper Palaeolithic boundary marks an important turning point in human history and cultural evolution. The demographic processes underlying this “transition” throughout Eurasia are among the most debated issues in Palaeoanthropology and Palaeolithic archaeology.

Two fundamental models, representing opposing perspectives, have been proposed. The first suggests that Upper Palaeolithic humans coming “Out of Africa” spread rapidly into particular regions of Eurasia and later expanded their range to include other, more peripheral areas. This later phase of population expansion is argued to have instigated the extinction of Neanderthals in their last remaining refugia. The alternate model argues for a multiregional development from Neanderthals to Modern humans and from the Middle to the Upper Palaeolithic. These models, and others, are based not only on the interpretation of hominin fossils and material culture from specific sites, but also, and to a large degree, on stratigraphic records and chronometric age-determinations.

This session thus focuses on the evaluation and re-evaluation of both existing and new regional chronometric records in the context of recent advances in radiocarbon dating and interpretation. We hope to demonstrate that both the selective highlighting of particular radiometric dates and the uncritical use of bulk collections of unfiltered data to promote one model or the other are counter-productive, and that only the development and adoption of a systematic apparatus of quality control will contribute to the spatio-temporal understanding of the demographic processes underlying the Middle to Upper Palaeolithic boundary in Eurasia.

RÉSUMÉ DE LA SESSION

La transition du paléolithique Moyen au paléolithique Supérieur est un changement important dans l'histoire de l'homme et dans l'évolution culturelle. Le processus démographique qui est étroitement lié à cette "transition" dans toute l'Eurasie est un des sujets les plus discutés en paléanthropologie et en archéologie préhistorique.

Deux modèles fondamentaux, qui présentent des perspectives contradictoires, sont proposés. Selon le premier l'homme du paléolithique Supérieur sort de l'Afrique ("Out of Africa") et se répand rapidement dans quelques régions de l'Eurasie. Plus tard, leur diffusion affecte d'autres régions plus périphériques. Cette dernière phase de l'expansion est considérée comme raison de l'extinction des Néandertaliens dans leurs dernières régions de refuge. L'autre modèle propose un développement de l'homme de Néandertal vers l'homme actuel dans plusieurs régions pendant la transition du paléolithique Moyen au paléolithique Supérieur. Ce modèle et d'autres sont basés non pas seulement sur des interprétations des fossiles humains et de la culture matérielle de quelques sites particuliers mais aussi sur des données stratigraphiques et sur des datations chronométriques.

Cette séance se focalise sur l'évaluation et re-examen des données chronométriques anciennes et nouvelles dans le contexte des progrès récents d'interprétation et de datations C14. Nous espérons montrer que les deux approches, ni l'accent sur quelques dates C14, ni l'utilisation des datations non critiquées ne peuvent soutenir l'un ou l'autre modèle d'évolution. Ils ne contribuent ainsi pas à l'avancement des recherches. Seulement le développement et l'adoption d'un système de contrôle qualitatif vont contribuer à la compréhension des processus démographiques dans ses relations spatiales et chronologiques, qui sont les bases de cette transition du paléolithique Moyen au paléolithique Supérieur en Eurasie.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

09:00-09:15 **Introduction**

09:15-09:30 Olaf JÖRIS (Neuwied, Germany)
Martin STREET (Neuwied, Germany)
Thomas TERBERGER (Greifswald, Germany)

C57-01 **At the End of the ¹⁴C-Scale: Scenarios at the Transition from the Middle to the Upper Palaeolithic.**

Data and Databases
S. William G. DAVIES (Southampton, UK)

09:30-09:45 Paul PETTITT (Sheffield, UK)

C57-02 **Revolutions that Were or Were Not: the Chronometry of the Transition in Europe and Its Limitations.**

09:45-10:00 Pierre M. VERMEERSCH (Leuven, Belgium)

C57-03 **Constructing a Database of the Chronology of the European Palaeolithic – Prospects and Problems.**

10:00-10:15 Bernhard WENINGER (Köln, Germany)
Olaf JÖRIS (Neuwied, Germany)

C57-04 **Use of Multi-Proxy Palaeoclimate Data at the Middle to Upper Palaeolithic Boundary.**

10:15-10:30 Break / Pause

**Absolute Age Determination
Olaf JÖRIS (Neuwied, Germany)**

10:30-10:45 Richard G. FAIRBANKS (Palisades, NY, U.S.A.)
Richard G. MORTLOCK (Palisades, NY, U.S.A.)
Tzu-Chien CHIU (Palisades, NY, U.S.A.)
Li CAO (Palisades, NY, U.S.A.)
Alexey KAPLAN (Palisades, NY, U.S.A.)
Arthur L. BLOOM (Ithaca, NY, U.S.A.)
Pieter M. GROOTES (Kiel, Germany)
Marie-Josée NADEAU (Kiel, Germany)

C57-05 Radiocarbon Calibration Curve Spanning 0 to 50,000 years BP Based on $^{230}\text{Th}/^{234}\text{U}$, ^{238}U , $^{231}\text{Pa}/^{235}\text{U}$ and ^{14}C Dates on Pristine Corals and Tree Rings.

10:45-11:00 Paul HAESAERTS (Brussels, Belgium)
V. CHIRICA (Iasi, Romania)
F. DAMBLON (Brussels, Belgium)
N. I. DROZDOV (Krasnoyarsk, Russia)
Larissa E. KOULAKOVSKA (Kiev, Ukraine)
A. A. SINITSYN (St. Petersburg, Russia)
J. VAN DER PLICHT (Groningen, the Netherlands)

C57-06 Radiocarbon Chronology and Climatic Signature of the Middle Pleniglacial Loess from Danube to Yenisei: Comparison with the Marine and Greenland Data.

11:00-11:15 Simon P. E. BLOCKLEY (Oxford, UK)
C. S. LANE (UK)
A. M. POLLARD (Oxford, UK)
R. Nick E. BARTON (Oxford, UK)
John J. LOWE (London, UK)

C57-07 Tephrochronology and Improved Chronological Frameworks for the Middle to Upper Palaeolithic Transition.

11:15-11:30 Francesco G. FEDELE (Napoli, Italy)
Biagio GIACCIO (Roma, Italy)
Irka HAJDAS (Zurich, Switzerland)

C57-08 Timescales and Cultural Process at ca. 40,000 cal BP in the Light of the Campanian Ignimbrite Eruption, Western Eurasia.

11:30-11:45 Break / Pause

**REGIONAL BLOCK I – Near East, Southeastern & Eastern Europe, Northern Asia
S. William G. DAVIES (Southampton, UK)**

11:45-12:00 Daniel S. ADLER (Storrs, CT, U.S.A.)
Ofar BAR-YOSEF (Cambridge, MA, U.S.A.)

Anna BELFER-COHEN (Jerusalem, Israel)

C57-09 **Dating the Demise: Neanderthal Extinction and the Establishment of Modern Humans in the Southern Caucasus.**

12:00-12:15 Ofer BAR-YOSEF (Cambridge, MA, U.S.A.)
Anna BELFER-COHEN (Jerusalem, Israel)

C57-10 **The Initial and Early Upper Paleolithic in the Levant and the Caucasus.**

12:15-12:30 Eleni PANAGOPOULOU (Athens, Greece)
Paraskevi ELEFANTI (Egham Surrey, UK)
Panagiotis KARKANAS (Athens, Greece)

C57-11 **The Middle to Upper Palaeolithic Transition in Greece: the Evidence from Lakonis Cave.**

12:30-13:00 **Discussion**

13:00-14:30 **Lunch / Déjeuner**

14:30-14:45 John F. HOFFECKER (Boulder, CO, U.S.A.)
M. V. ANIKOVICH (St. Petersburg, Russia)
A. A. SINITSYN (St. Petersburg, Russia)
Vance T. HOLLIDAY (Tucson, AZ, U.S.A.)
G. A. POSPELOVA (Moscow, Russia)
Steven L. FORMAN (Chicago, IL, U.S.A.)
Biagio GIACCIO (Roma, Italy)

C57-12 **From the Bay of Naples to the River Don: The Campanian Ignimbrite Eruption and the Middle to Upper Palaeolithic Transition in Eastern Europe.**

14:45-15:00 Yaroslav V. KUZMIN (Vladivostok, Russia)

C57-13 **The Middle to Upper Palaeolithic Transition in Siberia: Chronology, Environment, and Archaeology.**

15:00-15:15 **Break / Pause**

REGIONAL BLOCK II – Central and Northwestern Europe
Daniel S. ADLER (Storrs, CT, U.S.A.)

15:15-15:30 Ladislav NEJMAN (Canberra, Australia)
Ed J. RHODES (Canberra, Australia)
Rainer GRÜN (Canberra, Australia)

C57-14 **Refining the Chronology of Central European Late Middle and Early Upper Palaeolithic Sites Using Optically Stimulated Luminescence and Thermoluminescence Dating.**

15:30-15:45 Daniel RICHTER (Leipzig, Germany)

Gilbert TOSTEVIN (Minneapolis, MN, U.S.A.)
Petr SKRDLA (Brno, Czech Republic)

C57-15 **Chronometric Dating of the Type Locality of Bohunice (Czech Republic).**

15:45-16:00 Nicholas J. CONARD (Tübingen, Germany)
Michael BOLUS (Tübingen, Germany)

C57-16 **Dating the Boundary between the Middle and Upper Paleolithic in Swabia.**

16:00-16:15 Thomas F. G. HIGHAM (Oxford, UK)
Roger JACOBI (London, UK)
Christopher BRONK-RAMSEY (Oxford, UK)

C57-17 **Radiocarbon Dating of Palaeolithic Bone in Oxford Using Ultrafiltration AMS.**

16:15-16:30 Roger JACOBI (London, UK)
Thomas F. G. HIGHAM (Oxford, UK)

C57-18 **Radiocarbon Dating of the British Middle to Upper Palaeolithic: New Oxford Ultrafiltration Dates.**

16:30-16:45 **Break / Pause**

**REGIONAL BLOCK III – Southwestern & Southern Europe, Northwestern Africa
Olaf JÖRIS (Neuwied, Germany)**

16:45-17:00 François BON (Toulouse, France)
Jean-Guillaume BORDES (Bordeaux, France)
Nicolas TEYSSANDIER (Toulouse, France)
Tsenka TSANOVA (Bordeaux, France)

C57-19 **From West to East: Rethinking the Earliest Aurignacian.**

17:00-17:15 Jorge MARTINEZ MORENO (Cerdanyola del Valles, Spain)
Rafael MORA TORCAL (Cerdanyola del Valles, Spain)
Ignacio DE LA TORRE (London, UK)

C57-20 **Further the North of the "Ebro Frontier": Timing the Last Neanderthals of the Southeastern Pyrenees.**

17:15-17:30 Federico BERNALDO DE QUIROS (León, Spain)
J. Manuel MAILLO (Madrid, Spain)
M. Jose IRIARTE (Spain)

C57-21 **The Place of "El Castillo" in the Middle to Upper Paleolithic Transition.**

17:30-17:45 Julien RIEL-SALVATORE (Tempe, AZ, U.S.A.)
Steven E. CHURCHILL (Durham, NC, U.S.A.)
Angiolo DEL LUCCHESI (Genova, Italy)
Vincenzo FORMICOLA (Pisa, Italy)
Brigitte HOLT (Amherst, MA, U.S.A.)
Fabio NEGRINO (Pisa, Italy)

Guiseppe VICINO (Finale Ligure Borgo, Italy)

C57-22

All in due Time: New Data on the Chronology of the Early Upper Paleolithic and Late Mousterian in Peninsular Italy.

17:45-18:00

R. Nick E. BARTON (Oxford, UK)
Abdeljalil BOUZOUGGAR (Rabat, Morocco)
Christopher BRONK-RAMSEY (Oxford, UK)
Simon N. COLLCUTT (Oxford, UK)
Thomas F. G. HIGHAM (Oxford, UK)
Simon PARFITT (London, UK)
Ed J. RHODES (Canberra, Australia)
J. L. SCHWENNINGER (Oxford, UK)
Christopher B. STRINGER (London, UK)
Elaine TURNER (Neuwied, Germany)
S. WARD (Oxford, UK)

C57-23

The Relationship between the Middle and Upper Palaeolithic in Northern Morocco and the Place of the Aterian.

18:00-18:15

Break / Pause

Diffusion of Innovations
Daniel S. ADLER (Storrs, CT, United States)

18:15-18:30

Michael BOLUS (Tübingen, Germany)
Nicholas J. CONARD (Tübingen, Germany)

C57-24

What Can We Say About the Spatial-Temporal Distribution of Early Aurignacian Innovations?

FINAL BLOCK – Problems and Perspectives
(Olaf JÖRIS / Daniel S. ADLER / S. William G. DAVIES)

18:30-19:30

SESSION PARTICIPANTS

Discussion of

Data and Databases

Absolute Age Determination

REGIONAL BLOCK I – Near East, Southeastern & Eastern Europe, Northern Asia

REGIONAL BLOCK II – Central & Northwestern Europe

REGIONAL BLOCK III – Southwestern & Southern Europe, Northwestern Africa

Diffusion of Innovations

ABSTRACTS / RÉSUMÉS

C57-01

Olaf JÖRIS (Neuwied, Germany)
 Martin STREET (Neuwied, Germany)
 Thomas TERBERGER (Greifswald, Germany)

At the End of the ¹⁴C-Scale: Scenarios at the Transition from the Middle to the Upper Palaeolithic.

ABSTRACT: The first appearance of anatomically modern humans (AMH) in Eurasia broadly coincides with the beginning of the Eurasian Upper Palaeolithic (UP). Against the background of this observation it seems widely accepted that Neanderthals – responsible for the Middle Palaeolithic (MP) – were mentally incapable of adapting to a “cultural revolution” of modern humans colonizing Eurasia some 40 kyr ago. Thus, the Middle to Upper Palaeolithic boundary in Eurasia would mark a decisive turning-point in human history and cultural development.

This understanding of cultural change implies that cultural expressions are directly linked to the different mental capabilities of different biological species.

In contrast to this concept, the “Theory of Memes” offers alternative interpretations to explain the pattern observed, since ideas and innovations may be transmitted across ethnic entities and generations far more rapidly than the postulated colonization of Eurasia by a new species. Such a scenario would largely disentangle the process of cultural change from the concept of a dependence on species-determined mental capabilities.

Direct dating of hominid fossil remains which fall into this period of transition, together with the direct and / or contextual dating of specific relevant artefacts (e.g. points made from organic materials, items of personal adornment) will help to resolve the fine chronology of the “cultural revolution” at the MP-UP boundary. It will be demonstrated that any evaluation of the radiometric database can easily lead to circular arguments in our understanding of the biological and cultural processes underlying the MP-UP transition in Eurasia.

It will be asked to which degree cultural change at the MP-UP boundary can be explained as a result of *in situ* evolution or whether colonization models appear more plausible. We will also question whether the Recent African Origin (RAO) of modern humans suggested by analyses of both modern human and Neanderthal mtDNA provides the only possible origin of modern human behaviour.

KEYWORDS: MP-UP Transition, Radiocarbon Chronology, Models of Biological *versus* Cultural Evolution

Data and Databases Data and Databases

S. William G. DAVIES (Southampton, UK)

C57-02

Paul PETTITT (Sheffield, UK)

Revolutions that Were or Were Not: the Chronometry of the Transition in Europe and Its Limitations.

ABSTRACT: Radiocarbon chronology is an essential element in discussions of the Middle to Upper Palaeolithic transition in Europe. While all scholars are aware that there are considerable limitations to the technique between 30,000 and 40,000 ¹⁴C-BP (i.e. >5 half-lives), most discussion centres on problems of accuracy in the period. By contrast, chronological precision has received little attention. Given that the question as to whether Neanderthals were ‘contemporary’ with early modern humans is still debated, problems with precision need to be highlighted, understood, and debated. This talk uses some recent examples of the debate to isolate the real limitations to our work in this field. By doing so it attempts to clarify how poor data, and poor use of data, results in un-testable dogmas which persist in the field today. Finally, on a wider scale, the methodologies of scholars working in Europe are compared with those of africanists who argue for a ‘long chronology’ of the emergence of modern human behaviour.

C57-03

Pierre M. VERMEERSCH (Leuven, Belgium)

Constructing a Database of the Chronology of the European Palaeolithic – Prospects and Problems.

ABSTRACT: At the Berlin INQUA Congress it was decided to build a database of available chronometric dates of the European Palaeolithic. Each form in Microsoft Access 2000© is dedicated to a single site layer. Each form comprises the following items:

- Geographical situation of the site such as its geomorphologic position in the landscape.
- Cultural information with cultural attribution e.g. Early Aurignacian.
- Stratigraphical information with reference to lithostratigraphy, biostratigraphy, chronostratigraphy (MIS) and the relation to palaeosols. The position of the prehistoric artefacts is evaluated in relation to its *in situ* situation and to the sedimentary environment of the deposits.
- Chronology is registered as uncalibrated conventional ¹⁴C-age, uncalibrated ¹⁴C-AMS-age, TL, OSL, other radiometric dates, palynology and palaeontology. Each date includes an evaluation of its reliability.
- Postdepositional effects are mentioned.
- Information on environmental condition is specified in relation to lithostratigraphy, palynology, macro remains, animal palaeontology and archaeozoology.
- Bibliography.

The data have been collected from the literature and from other more restricted databases. The database contains now more than 9,500 dates. One of the major problems is the evaluation of the reliability of the chronometric dates and the availability of the environmental and geographical information. GIS based approaches can be used to investigate the spatial distribution of the sites over Europe.

The < Radiocarbon Palaeolithic Database Europe v.5 > can be downloaded from following URL address: <http://www.kuleuven.be/geography/frg/projects/14c-palaeolithic/download/>.

C57-04 Bernhard WENINGER (Köln, Germany)
Olaf JÖRIS (Neuwied, Germany)

Use of Multi-Proxy Palaeoclimate Data at the Middle to Upper Palaeolithic Boundary.

ABSTRACT: The construction of reliable age-models based on radiocarbon dates at the transition from the Middle to the Upper Palaeolithic is a major multidisciplinary task that is best accomplished by the combination of research efforts from many scientific disciplines (e.g. Palaeolithic Archaeology, Quaternary Geology, Palaeoclimatology, Radiocarbon Dating). To support the palaeodemographic and palaeoclimatological analysis of large archaeological radiocarbon databases, we have developed a software package called < CalPal > (Cologne Calibration and Palaeoclimate Research Package).

< CalPal > can be downloaded from following URL address: <http://www.calpal.de>

< CalPal-online > can be downloaded from following URL address: <http://www.calpal-online.de>

In this paper we describe the research philosophy underlying < CalPal > and discuss the corresponding analytical procedures (Glacial ¹⁴C-age calibration, error analysis, palaeoclimate proxies, synchronisation and fine-tuning of age-models, ¹⁴C-database, cartography) that can be utilized in the sample-critical construction of archaeological age-models based on radiocarbon dates in the time-window 26–60 ka ¹⁴C-BP. An important component of < CalPal > is a dialog allowing the fully automated construction of Glacial ¹⁴C-calibration curves (i.e. including complete quantitative error analysis), that can support Palaeolithic researchers in keeping pace with the presently highly dynamic research in the large variety of neighbouring data-producing natural sciences.

KEYWORDS: MP-UP Transition, Radiocarbon Age Calibration, Palaeoclimatology, Palaeodemography.

Absolute Age Determination
Olaf JÖRIS (Neuwied, Germany)

C57-05 Richard G. FAIRBANKS (Palisades, NY, U.S.A.)
 Richard G. MORTLOCK (Palisades, NY, U.S.A.)
 Tzu-Chien CHIU (Palisades, NY, U.S.A.)
 Li CAO (Palisades, NY, U.S.A.)
 Alexey KAPLAN (Palisades, NY, U.S.A.)
 Arthur L. BLOOM (Ithaca, NY, U.S.A.)
 Pieter M. GROOTES (Kiel, Germany)
 Marie-Josée NADEAU (Kiel, Germany)

Radiocarbon Calibration Curve Spanning 0 to 50,000 years BP Based on $^{230}\text{Th}/^{234}\text{U}/^{238}\text{U}$, $^{231}\text{Pa}/^{235}\text{U}$ and ^{14}C Dates on Pristine Corals and Tree Rings.

ABSTRACT: We present a radiocarbon calibration curve and conversion program based on published tree ring data and more than 400 age measurements via $^{230}\text{Th}/^{234}\text{U}/^{238}\text{U}$, $^{231}\text{Pa}/^{235}\text{U}$ and ^{14}C dates on pristine corals spanning the past 50,000 years < <http://radiocarbon.LDEO.columbia.edu> >. Our calibration curve and calibration program are based on a hierarchical Bayesian statistical model that rigorously assesses errors in both radiocarbon and calendar years. We identified and extensively tested pre-screening criteria and pre-treatment methods that prove critical for accurate radiocarbon and calendar age determinations on corals that have been exposed to fresh water. Local reservoir ages for the Holocene at Kiritimati (350 yrs), Barbados (365 yrs) and Araki (365 yrs) islands sample sites are estimated by differencing the coral ^{14}C ages from the calendar age correlative tree ring ^{14}C ages. The oceanographic suitability of these sites are assessed and compared with respect to the stability of the reservoir ages over the past 50,000 yrs. Greater confidence in radiocarbon calibration data sets can be gained when the geochemical and geophysical causes of $\delta^{14}\text{C}$ variations can be explained and corroborated with independent evidence. We identify a general consistency between our coral $\delta^{14}\text{C}$ record and the $\delta^{14}\text{C}$ output from carbon cycle models based on the global ^{14}C production estimates although the amplitudes do not match. High-precision and high-accuracy $^{230}\text{Th}/^{234}\text{U}/^{238}\text{U}$ dates anchor the timing of this $\delta^{14}\text{C}$ record however a linear component of the long-term $\delta^{14}\text{C}$ trend may be due to inaccuracies in the generally accepted ^{14}C decay constant. The inherent uncertainty in the accuracy of measuring or estimating the shape of ^{14}C beta spectrum below 20 keV may lead to biases in reported decay constant estimates. In light of several recent measurements of the beta spectrum at low energies for applications outside of radiocarbon dating, it is evident that the ^{14}C half-life needs to be accurately measured and validated by both calorimetric and counting techniques before we can accurately partition and interpret $\delta^{14}\text{C}$ records spanning the past 50,000 yrs. A unique advantage of a radiocarbon calibration curve developed from fossil corals is the unambiguous correlation between age, radiocarbon calibration and sea level derived from the same samples.

KEYWORDS: Radiocarbon Calibration, Corals, Uranium Series Dating.

C57-06 Paul HAESAERTS (Brussels, Belgium)
 V. CHIRICA (Iasi, Romania)
 F. DAMBLON (Brussels, Belgium)
 N. I. DROZDOV (Krasnoyarsk, Russia)
 Larissa E. KOULAKOVSKA (Kiev, Ukraine)
 A. A. SINITSYN (St. Petersburg, Russia)
 J. VAN DER PLICHT (Groningen, the Netherlands)

Radiocarbon Chronology and Climatic Signature of the Middle Pleniglacial Löss from Danube to Yenisei: Comparison with the Marine and Greenland Data.

ABSTRACT: During the last decade our investigations were devoted to complementary long löss successions with pluristratified Palaeolithic settlements rich in charcoal, from the Middle Danube Basin (Willendorf, Bohunice and Dolní Vestonice), the East Carpathian Area (Molodova and Mitoc) and the Don Basin (Kostienki). This approach has provided a high resolution climatic sequence with a chronological framework back to 45 ka ^{14}C -BP set up on large series of radiocarbon dates. The degree of resolution of the middle pleniglacial löss was further improved at Kurtak in Central Siberia, with a remarkable semi-continuous climatic record well dated from 26 ka to 42.5 ka ^{14}C -BP on wood

remains and charcoal. In this way, the integrated loess sequence could be compared by proxy-correlation with the climatic signal recognized in the fluctuations of ^{18}O in the Greenland ice cores, allowing the radiocarbon ages of the events recorded in the loess sequence to be compared with the ice-varve chronology. This correlation gives also access to the corrected chronology based on paired ^{14}C and U/Th dates, correlated with the Greenland record via the climatic signal of the marine sequence preserved along the Iberian margin.

C57-07

Simon P. E. BLOCKLEY (Oxford, UK)
C. S. LANE (UK)
A. M. POLLARD (Oxford, UK)
R. Nick E. BARTON (Oxford, UK)
John J. LOWE (London, UK)

Tephrochronology and Improved Chronological Frameworks for the Middle to Upper Palaeolithic Transition.

ABSTRACT: Understanding the nature of and drivers behind the transition from the Middle to Upper Palaeolithic over the last hundred thousand years requires high precision chronological control. This is largely due to the necessity to compare different sites in time in order to understand the overlap or otherwise between Neanderthals and anatomically modern humans and to compare archaeological data to evidence for abrupt environmental change, which is seen in some quarters as one possible key factor in the demise of archaic human populations.

Although many useful dating methods are available for the study of this period, principally radiocarbon dating and OSL, dating uncertainties still often preclude detailed understanding of the relationships in time and space between different hominid groups and between the archaeological and environmental record. Here we present the potential for using microscopic volcanic ash layers (microtephras) that are incorporated in to archaeological sites as time stratigraphic isochronous markers to directly link sites in time and to relate them to wider environmental records.

Recent discoveries of microtephra layers many thousands of kilometres from the source eruptions has revolutionised chronological strategies in many areas of palaeo-science and has the potential within Palaeolithic archaeology of providing an important element within multi-proxy dating schemes. Here we outline the likely distribution of the main tephtras that should be of importance for European, near Eastern and North African Middle/Upper Palaeolithic archaeology and demonstrate the presence of discrete microtephra layers in a Middle to Upper Palaeolithic archaeological cave site from North Africa.

C57-08

Francesco G. FEDELE (Napoli, Italy)
Biagio GIACCIO (Roma, Italy)
Irka HAJDAS (Zurich, Switzerland)

Timescales and Cultural Process at ca. 40,000 cal BP in the Ligth of the Campanian Ignimbrite Eruption, Western Eurasia.

ABSTRACT: Significant new information is showing that the Campanian Ignimbrite (CI) eruption from the Phlegrean Fields, southern Italy, was much larger than hitherto supposed and in fact one of the largest Late Quaternary explosive events. Furthermore, the eruption can be very precisely dated to 40,000 cal BP. In view of this unique combination of factors, a systematic study of the CI impact on climate and human ecosystems has been carried out (2001–06), with particular attention for any interference this volcanic catastrophe may have had with ongoing processes of cultural or even biological evolution. The contribution of the CI research project is twofold, chronological and ecological. Concerning chronology, no environmental factor is better suited to correlate regionally disparate episodes than a major volcanic event. The CI provides unequalled means to correlate stratigraphic sequences across western Eurasia, and, by further correlation with regional and super-regional paleoclimatic records, including Greenland isotope stratigraphy, affords a unique opportunity to establish age and climatic context of some important European archaeological sequences.

Concerning ecology, in the present report we endeavour to show that the CI eruption had a major climatic impact; the results of a computer simulation will be presented. As a consequence, when coupled with other environmental factors (the beginning of Heinrich Event 4 etc.), the CI impact on

ecological systems must now be appraised as one of the most considerable ever determined among the known explosive eruptions of the whole volcanic record worldwide. Human ecology in particular must have been affected. An ad-hoc investigation indeed shows that Palaeolithic occupation was severely altered throughout the direct-impact zone of the eruption (a significant hiatus in archaeological sequences being one indicator), and very likely along fringe areas in southern and southeastern Europe. A qualitative modelling of the CI consequences on the ecology and lifeways of human societies has been attempted. This catastrophic event calls for a reconsideration of the processes and rhythms involved in the so-called Middle to Upper Palaeolithic 'transition', a dubious expression subsuming a period of accelerated change in cultural configurations, which spans an interval across the CI age (40,000 cal BP) and displays peculiar phenomena in western Eurasia. Within this interesting and controversial subject, we believe that the CI brings to the discussion an unexpected factor, worth careful consideration. This, for the moment, only adds to the intricate picture of Late Pleistocene Eurasia and its transformations.

REGIONAL BLOCK I – Near East, Southeastern & Eastern Europe, Northern Asia
S. William G. DAVIES (Southampton, UK)

C57-09 Daniel S. ADLER (Storrs, CT, U.S.A.)
 Ofer BAR-YOSEF (Cambridge, MA, U.S.A.)
 Anna BELFER-COHEN (Jerusalem, Israel)

Dating the Demise: Neanderthal Extinction and the Establishment of Modern Humans in the Southern Caucasus.

ABSTRACT: This paper considers the recent radiometric dating (^{14}C -AMS, TL, ESR) of seventy-five late Middle and early Upper Palaeolithic samples from Ortvale Klde rockshelter, southern Caucasus. These data speak to the lengthy tenure of Neanderthals in the region, but they also highlight this population's relatively rapid demise and the establishment of modern human populations approximately 35–32 ka ^{14}C -BP. While this dataset provides the first temporal assessment of this regional biological and cultural shift, it also allows new insights into local Palaeolithic population movements and interactions and the continent-wide process of Neanderthal extinction.

C57-10 Ofer BAR-YOSEF (Cambridge, MA, U.S.A.)
 Anna BELFER-COHEN (Jerusalem, Israel)

The Initial and Early Upper Paleolithic in the Levant and the Caucasus.

ABSTRACT: Current dates indicate that the earliest Upper Paleolithic assemblages in Eurasia are reported from the Levant. The Initial Upper Paleolithic industries include special tool types, such as 'chamfered pieces' in the Northern Levant, and Emireh points in the south. Their dates in sites such as Boker Tachtit, Ksar Akil, Kebara and Uçagizli are as yet not fully established but based on the available uncalibrated radiocarbon dates fall within the range of 47/45–42/40 ka ^{14}C -BP. The following 'Early Ahmarian', a blade-dominated industry, dates to the range of 40/38–34/32 ka ^{14}C -BP. The "classical" Aurignacian assemblages with bone and antler tools, pendants, blades and bladelets as well as nosed and carinated scrapers present in the Levant were dated to ca. 34–27 ka ^{14}C -BP, although these readings require further examination, and re-dating. The 'Late Ahmarian' is in part contemporary with this Aurignacian phenomenon (most probably intrusive into the Levant) and lasts from 34/32 through ca. 20 ka ^{14}C -BP. While the exact source of the EUP industries in the Caucasus is as yet unknown, based on information from Ortvale Klde and Dzudzuana cave, these industries date to 35/34–27 ka ^{14}C -BP. It should be stressed that the local "carinated core" industry that was compared to the European Aurignacian dates to 23–20 ka ^{14}C -BP and in our view has no relationship to the "classic" Aurignacian culture. Critical examination of the available dates will demonstrate how the sequences in the Levant and the Caucasus differ from the European ones and may throw light on the distribution of cultural entities and the patterns of human dispersals.

C57-11 Eleni PANAGOPOULOU (Athens, Greece)
 Paraskevi ELEFANTI (Egham Surrey, UK)

Panagiotis KARKANAS (Athens, Greece)

The Middle to Upper Palaeolithic Transition in Greece: the Evidence from Lakonis Cave.

ABSTRACT: Current models of Neanderthal-Modern interactions and the Middle to Upper Palaeolithic transition are contradictory due to the uncertainties of the dating methods and the lack of diagnostic hominid fossil remains associated with *early* Upper Palaeolithic assemblages. In the critical area of the Balkans and Southeastern Europe the relevant evidence consists of low resolution and fragmentary, ill-dated records. Greece represents one of the routes by which modern humans may have entered the continent from the Near East. Excavations at the recently discovered cave complex of Lakonis in southern Greece have documented an extensive record of hominid use from ca. 100–40 ka BP. The deposits span the Middle and Initial Upper Palaeolithic (IUP) and contain extremely rich cultural remains and overlapping hearths. A Neanderthal tooth associated with IUP assemblages radiometrically dated to ca. 40 ka BP adds to the very small number of taxonomically diagnostic human fossil material from *early* Upper Palaeolithic European contexts. Technological analysis document a local development of the *early* Upper Palaeolithic industries from a Middle Palaeolithic substratum. The latter finds are directly relevant to the current Neanderthal-Modern debate and indicate, that, at least in Southern Greece, the makers of *early* Upper Palaeolithic assemblages were Neanderthals.

C57-12

John F. HOFFECKER (Boulder, CO, U.S.A.)
M. V. ANIKOVICH (St. Petersburg, Russia)
A. A. SINITSYN (St. Petersburg, Russia)
Vance T. HOLLIDAY (Tucson, AZ, U.S.A.)
G. A. POSPELOVA (Moscow, Russia)
Steven L. FORMAN (Chicago, IL, U.S.A.)
Biagio GIACCIO (Roma, Italy)

From the Bay of Naples to the River Don: The Campanian Ignimbrite Eruption and the Middle to Upper Palaeolithic Transition in Eastern Europe.

ABSTRACT: Both a short half-life and the effects of the cosmogenic nucleide peak complicate radiocarbon dating of the Middle to Upper Palaeolithic transition in Eurasia. As a result, a chronological framework for the transition must be based primarily on other methods of dating and correlation with reliably dated chronostratigraphic markers. One of the latter is the Campanian Ignimbrite (CI) eruption, dated by $^{40}\text{Ar}/^{39}\text{Ar}$ and various stratigraphic methods to ca. 40 ka BP, which generated a massive ash plume from its source in southern Italy across southeastern and eastern Europe. The CI ash recently has been identified at localities on the Middle Don River in Russia (PYLE *et al.*, in press), where Upper Palaeolithic occupation levels are buried below the ash at Kostenki. The dating of these levels is supported by the position of the Laschamp Excursion and OSL dating, indicating ages of ca. 45–40 ka BP. The occupations contain assemblages with blade technology, burins, end-scrapers, bone and ivory artifacts, ornaments, imported fossil shells, and possibly figurative art. They are interstratified with several “transitional” assemblages with a high percentage of typical Middle Paleolithic stone artifact forms, but without bone artifacts, imported materials, ornaments, and art. A similar pattern has been documented in Italy (FEDELE *et al.* 2003).

C57-13

Yaroslav V. KUZMIN (Vladivostok, Russia)

The Middle to Upper Palaeolithic Transition in Siberia: Chronology, Environment, and Archaeology.

ABSTRACT: The studies of the Middle to Upper Palaeolithic transition in Siberia are important because they connect Europe and the Near East with East Asia. The main methods used in this study are ^{14}C -dating, analysis of site geomorphology and stratigraphy, palynology, and palaeontology.

The latest Mousterian (LMP) complexes in Siberia are ^{14}C -dated to ca. 27–34 ka ^{14}C -BP (Dvuglazka, layer 7; Mokhovo 2; Kurtak 4, layer 17; Aryshevskoe 1, layer 6; Okladnikov Cave, layer 3).

The earliest Upper Palaeolithic (EUP) complexes are dated to ca. 43 ka ^{14}C -BP (Kara-Bom, layers 6–5); ca. 40.5 ka ^{14}C -BP (Kamenka 1); ca. 39 ka ^{14}C -BP (Podzvonkaya and Makarovo 4); ca. 38.5 ka ^{14}C -BP (Kandabaev); ca. 35 ka ^{14}C -BP (Ust-Karakol 1, layer 10); and ca. 34.0 ka ^{14}C -BP (Ust-Kova).

There are a few sites with both LMP and EUP cultural components: Kara-Bom, Denisova Cave, and Ust-Karakol 1 (Altai Mountains), Dvuglazka (Sayany Mountains), Kurtak 4 (Yenisei River basin), Khotyk 3, and Arta 2 (Transbaikal).

Thus, the Middle to Upper Palaeolithic transition in Siberia was gradual, with definite co-existence of LMP and EUP cultural complexes. Environmental conditions at ca. 43–34 ka ¹⁴C-BP corresponding to OIS 3 were cool, and a major part of Siberia was covered with tundra and forest tundra in the north, and forest and forest steppe in the south.

KEYWORDS: Middle to Upper Palaeolithic Transition, Siberia, Radiocarbon Dating, Geoarchaeology.

REGIONAL BLOCK II – Central and Northwestern Europe

Daniel S. ADLER (Storrs, CT, U.S.A.)

C57-14 Ladislav NEJMAN (Canberra, Australia)
Ed J. RHODES (Canberra, Australia)
Rainer GRÜN (Canberra, Australia)

Refining the Chronology of Central European Late Middle and Early Upper Palaeolithic Sites Using Optically Stimulated Luminescence and Thermoluminescence Dating.

ABSTRACT: We have dated several late Middle Palaeolithic and early Upper Palaeolithic sites in southern Moravia (Czech Republic) and western Slovakia using OSL and TL. The sites include Kůlna cave, Stránská Skála, Bohunice, and Vedrovice V. in southern Moravia, and Dzeravá Skála cave in western Slovakia. Most of these sites yielded large lithic assemblages corresponding to the Middle to Upper Palaeolithic transition, and they have been at the centre of discussions about the Middle to Upper Palaeolithic transition in Central Europe. While some of our data have confirmed previous dating results (mainly ¹⁴C), at other sites in other cases, the OSL/TL-dates were significantly older than previously established or assumed chronologies. This has important ramifications for the chronology of the Middle to Upper Palaeolithic transition in this part of Europe. The results of this dating project also have the potential to change our perceptions of the timing of the most important events, in particular the extinction of Neanderthals and arrival of anatomically modern humans, which are known to have occurred during this critical period in European prehistory.

C57-15 Daniel RICHTER (Leipzig, Germany)
Gilbert TOSTEVIN (Minneapolis, MN, U.S.A.)
Petr ŠKRDLA (Brno, Czech Republic)

Chronometric Dating of the Type Locality of Bohunice (Czech Republic).

ABSTRACT: The Bohunician type-site – Bohunice – is located on the eastern margin of the city of Brno, Moravia. It yielded several lithic assemblages collected during 1960–1970s by VALOCH and co-workers from profiles of trenches for construction work. A new excavation was realized by TOSTEVIN & ŠKRDLA in 2002. Its aim was a detailed study of the artefact distribution within the paleosol and to increase the sample of lithics. They confirmed the presence of a single archaeological layer and report an association of characteristic products of Levalloisian technology with foliate points (ŠKRDLA & TOSTEVIN 2003, 2005). The unique cultural historical situation of the Middle Danube, with the intrusive Bohunician and the supposedly contemporaneous, locally-derived Szeletian provides a key for the understanding of the changes observed in the lithic industries from the Middle to the Upper Palaeolithic in Europe. The chronological position of the type locality is thus crucial.

Within the framework of the East Central European loess stratigraphy, the artefact-bearing lower paleosol at Bohunice is the last interpleniglacial paleosol in Moravia (SVOBODA *et al.* 1996), which is correlated with the Hengelo interstadial, dated to approximately 40–38 ka ¹⁴C-BP. The sediment of the occupation layer has been dated by thermoluminescence (TL) to 47.3 ± 7.3 ka BP (ZÖLLER 2000). This method is nowadays regarded as inappropriate for this type of sediment and needs to be evaluated by optical luminescence. Radiocarbon dating by beta counting estimates the age of the

various Bohunice artefact palimpsests between 36 and 43 ka ¹⁴C-BP (SVOBODA *et al.* 1996). Given the problems associated with the required samples for this method, new ¹⁴C-AMS-data is needed for verification.

Within the framework of a Leakey grant and generous assistance from the American School of Prehistoric Research, Harvard University, luminescence methods were used to determine the age of occupation and sedimentation of the palimpsest excavated in 2002 from the type locality. We will present TL-ages on burnt flints which provide direct age estimates of the Palaeolithic occupation, and Optical Luminescence age estimates of the sediment deposition on samples from the occupation layer, as well as on the loess layers above and below. This approach provides the possibility for internal testing of luminescence age estimates of the sedimentation, and a basis for comparison with new ¹⁴C-AMS-data obtained on charcoal. The data are derived from the locality of the main archaeological artefact concentration.

Additionally, luminescence dating methods provide another set of independent data for testing various hypothesis like the proposed "Middle Paleolithic Dating Anomaly" (CONARD & BOLUS 2003; RICHARDS & BECK 2001), as well as models for the dispersal of anatomically modern humans into Europe (e.g. the Neanderthal Acculturation Model, the Danube Corridor Model, etc.).

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C57-16

Nicholas J. CONARD (Tübingen, Germany)
Michael BOLUS (Tübingen, Germany)

Dating the Boundary between the Middle and Upper Palaeolithic in Swabia.

ABSTRACT: Based on ESR-dates and TL-dates produced by Daniel RICHTER, the Swabian Middle Palaeolithic ends between 45 and 40 ka BP. Most sites in the region suggest that an occupational hiatus occurred between the end of the Middle Palaeolithic and the beginning of the Upper Palaeolithic, which begins with fully developed Aurignacian assemblages. RICHTER's TL-dates place the start of the Aurignacian at about 40 ka BP. Many radiocarbon dates from the region, especially the well-provenienced ¹⁴C-AMS-dates from Geißenklösterle and Hohle Fels produce a very noisy signal with dates spanning the range from ca. 40–30 ka ¹⁴C-BP. Contrary to expectations, several dates for the terminal Middle Palaeolithic produced younger radiocarbon ages than those of the earliest Aurignacian. Detailed taphonomic and geoarchaeological analyses provide little evidence for re-deposition and mixing of the deposits in question. If the TL- and ESR-dates are correct, the radiocarbon ages tend to be underestimates of the calendar age of the Middle and Upper Palaeolithic deposits. Unlike localities in other regions, at Geißenklösterle and Hohle Fels, radiocarbon ages from bones tend to predate the ages produced from charcoal from the same strata. This paper will address the possible explanations for these partially contradictory observations.

KEYWORDS: Last Neanderthals, Early *Homo sapiens sapiens*, Aurignacian, Swabia, Palaeolithic.

C57-17

Thomas F. G. HIGHAM (Oxford, UK)
Roger JACOBI (London, UK)
Christopher BRONK-RAMSEY (Oxford, UK)

Radiocarbon Dating of Palaeolithic Bone in Oxford Using Ultrafiltration AMS.

ABSTRACT: AMS-radiocarbon dating of bone is particularly challenging when the material is poorly preserved and yields of extractable collagen are low (< 1% wt.). Problems are further magnified when the 'true' age approaches the background limit of the method (ca. 0.2–0.1 pMC; 50–55 ka ¹⁴C-BP). Research in Oxford has focussed on developing more effective pre-treatment protocols for extracting and characterising Type 1 bone collagen, tripeptides or purified amino acids, and validating ¹⁴C-AMS-measurements obtained using a suite of analytical parameters. These latter include carbon to nitrogen atomic ratios (C/N), % weight collagen, % carbon and stable isotope analyses of C and N.

Our current method comprises the gelatinisation of the bone using well-established techniques, with ultrafiltration of the soluble gelatin using a 30 kDalton (kD) molecular weight ultrafilter. The ultrafilter retain material that is greater than the 30 kD molecular weight cut-off and this will include undegraded collagen chains since these are ca. 100–110 kD in MW. The <30 kD fraction will include smaller molecular weight materials that are passed through the ultrafilter. These can include degraded collagen fragments, salts, soil-derived amino acids and the like. Some of these materials may have a different radiocarbon age than the bone we seek to date.

Ultrafiltration enables collagen of a demonstrably improved quality to be extracted, as shown by C/N-ratios and other analytical parameters. It also enables poor quality collagen samples to be identified and excluded from dating.

We have concentrated in the last 5 years on re-dating the corpus of British Middle and Upper Palaeolithic material using this technique. The results are discussed in greater detail in a paired paper (JACOBI & HIGHAM) in this meeting. We have also recently extended this work to the continent and dated further material of Palaeolithic age from La Ferrassie and Abri Pataud (France), Vindija (Croatia) and Kostenki (Russia). New radiocarbon results from these sites will be presented and the implications for the existing chronologies discussed. There are significant wider implications for pretreating archaeological bone samples from other contexts.

C57-18

Roger JACOBI (London, UK)
Thomas F. G. HIGHAM (Oxford, UK)

Radiocarbon Dating of the British Middle to Upper Palaeolithic: New Oxford Ultrafiltration Dates.

ABSTRACT: A recent review paper by ALDHOUSE-GREEN & PETTITT (1998) has emphasised the thinness of the radiocarbon record for the British Middle and Early Upper Palaeolithic. We have attempted to address some of the challenges in their paper by obtaining new ultrafiltered determinations for bone from key British sites including Robin Hood Cave and Pin Hole at Creswell Crags, the Hyaena Den at Wookey Hole, Coygan Cave, Kent's Cavern, Bench Quarry Cave and Paviland. In the majority of cases the ultrafiltered collagen samples have produced older radiocarbon results than previously, a fact that we correlate with the more effective removal of trace proportions of modern contaminants. Although ¹⁴C-determinations are few, they suggest strongly that leaf-points belong to the first part of the British Early Upper Palaeolithic, while a pair of ¹⁴C-determinations confirms that the Aurignacian is indeed likely to be late compared with the rest of mainland Europe. We hope to present new ¹⁴C-determinations of the "Red Lady" of Paviland at this lecture.

**REGIONAL BLOCK III – Southwestern & Southern Europe, Northwestern Africa
Olaf JÖRIS (Neuwied, Germany)****C57-19**

François BON (Toulouse, France)
Jean-Guillaume BORDES (Bordeaux, France)
Nicolas TEYSSANDIER (Toulouse, France)
Tsenka TSANOVA (Bordeaux, France)

From West to East: Rethinking the Earliest Aurignacian.

ABSTRACT: One of the most critical issues in evolutionary anthropology is actually related to the behavioural and cognitive processes that underlie the technical and socio-symbolic mutations related

to the Early Upper Paleolithic in Europe. In this perspective, it is currently admitted that the Aurignacian represents the initial dispersal of anatomically modern humans from the adjacent areas of the Near East to the Atlantic coast. This paradigm thus supports the global Pan-European homogeneity of the Aurignacian material culture and its East-West translation towards Europe.

The present lecture reviews new data obtained through the revision of classical Aurignacian sequences in the Aquitan basin, in Central Europe and in the Balkans. It allows us to re-discuss the unity and variability of the initial stages of “the Aurignacian” and to present hypotheses on their formation, chronology and evolution.

C57-20

Jorge MARTINEZ MORENO (Cerdanyola del Valles, Spain)
Rafael MORA TORCAL (Cerdanyola del Valles, Spain)
Ignacio DE LA TORRE (London, UK)

Further the North of the “Ebro Frontier”: Timing the Last Neanderthals of the Southeastern Pyrenees.

ABSTRACT: The “Ebro frontier” has been consolidated as a powerful descriptive tool for understanding the Middle/Upper Paleolithic transition in Iberia. In this scenario the southeastern Pyrenees is a key area. Some scholars claim a prolonged Neanderthal persistence in the area, some thousand years after the arrival of *Homo sapiens* to the region, as represented by the Proto-Aurignacian technology described at l’Arbreda.

In this presentation we will discuss the radiometric framework of Tragó, Roca dels Bous and Santa Linya. For these Middle Paleolithic sites located in the South-eastern Pyrenees a chronometric frame has been obtained by different dating systems; thermoluminescence in Tragó, and ¹⁴C-AMS in Roca dels Bous and Santa Linya.

The dates from those three Middle Palaeolithic sites show the difficulties for obtaining a coherent radiometric frame for the MIS 3 settlements. On the other hand, we consider that these sites allow the establishment of a chronological frame that implies that Neanderthals continued living further north of the Ebro Border until more recent periods than has been considered.

KEYWORDS: Middle/Upper Palaeolithic Transition, Southeastern Pyrenees, Ebro Frontier, Radiometric Overlap, MIS 3.

C57-21

Federico BERNALDO DE QUIROS (León, Spain)
J. Manuel MAILLO (Madrid, Spain)
M. Jose IRIARTE (Spain)

The Place of “El Castillo” in the Middle to Upper Paleolithic Transition.

ABSTRACT: The site of El Castillo provides a detailed background for the Middle to Upper Palaeolithic Transition in Cantabrian Spain, with a complete series of ¹⁴C-dates of both the Mousterian and the Transitional Upper Palaeolithic. Those dates are considered along with palynological analyses in order to establish a more complete sequence of events related with the Transition.

C57-22

Julien RIEL-SALVATORE (Tempe, AZ, U.S.A.)
Steven E. CHURCHILL (Durham, NC, U.S.A.)
Angiolo DEL LUCCHESI (Genova, Italy)
Vincenzo FORMICOLA (Pisa, Italy)
Brigitte HOLT (Amherst, MA, U.S.A.)
Fabio NEGRINO (Pisa, Italy)
Giuseppe VICINO (Finale Ligure Borgo, Italy)

All in due Time: New Data on the Chronology of the Early Upper Paleolithic and Late Mousterian in Peninsular Italy.

ABSTRACT: We present the results of ongoing research aimed at understanding the nature and tempo of the so-called Middle to Upper Paleolithic transition throughout the Italian peninsula. We focus especially on new chronometric evidence from our excavations at Riparo Bombrini, in northern Italy, and from a large-scale re-analysis of data derived from Uluzzian assemblages from southern Italy.

The results of targeted analyses of ^{14}C -dates, palynology, zooarchaeology, and sedimentology at Riparo Bombrini combine to present a tightly defined chrono-climatic context for the latest Mousterian and the earliest Proto-Aurignacian in the north of the peninsula, two cultural facies separated by a semi-sterile depositional episode. These data are then used to assess “goodness-of-fit” with other septentrional sequences, and to provide a baseline framework in which revisions of the chronology of Grotta di Castelcivita and new chronological data from Grotta del Cavallo and Grotta della Fabbrica can be incorporated to profitably address questions pertaining to cultural and behavioral change during that phase of Italian prehistory. The resulting conclusions are finally used to provide a critical assessment of the dynamics of putative modern human population dispersals in Eurasia and of the potential impact of natural disasters on this process.

C57-23

R. Nick E. BARTON (Oxford, UK)
 Abdeljalil BOUZOUGGAR (Rabat, Morocco)
 Christopher BRONK-RAMSEY (Oxford, UK)
 Simon N. COLLICUTT (Oxford, UK)
 Thomas F. G. HIGHAM (Oxford, UK)
 Simon PARFITT (London, UK)
 Ed J. RHODES (Canberra, Australia)
 J. L. SCHWENNINGER (Oxford, UK)
 Christopher B. STRINGER (London, UK)
 Elaine TURNER (Neuwied, Germany)
 S. WARD (Oxford, UK)

The Relationship between the Middle and Upper Palaeolithic in Northern Morocco and the Place of the Aterian.

ABSTRACT: In this paper we examine the chronological relationships between the Middle and Upper Palaeolithic in Northern Morocco and within the wider context of Northwest Africa. For Morocco one site of particular interest is that of Grotte des Pigeons at Taforalt where we are currently investigating a long sequence of Middle and Upper Palaeolithic deposits. Based on newly available dating evidence (^{14}C -AMS, OSL and TL) for this site, the earliest Upper Palaeolithic can be placed at $25,760 \pm 140$ ^{14}C -BP (OxA-13556), although a slightly earlier estimate of $36,000 \pm 1,400$ BP has been obtained for the same level based on OSL-measurements. These dates are broadly similar to those for Upper Palaeolithic blade industries in the Jebel Gharbi in Libya, but are considerably older than anything so far discovered in the Maghreb. Amongst the other major outstanding issues is whether there is a significant hiatus between the Middle and Upper Palaeolithic, and whether the Middle Palaeolithic persisted much later in some areas than others, as has been observed for Europe. Of critical importance to this interpretation is the dating of the latest Aterian in Morocco. It has been proposed by some authors that the Aterian survived in this region until 20,000 BP. Our work at Taforalt suggests that there is a stratigraphic break between the Latest Middle Palaeolithic and the Upper Palaeolithic but it is still unclear how the Aterian fits into this scheme. For comparative purposes we consider the dating of the Aterian at a number of other sites in Atlantic Morocco where we have also been working.

Diffusion of Innovations

Daniel S. ADLER (Storrs, CT, United States)

C57-24

Michael BOLUS (Tübingen, Germany)
 Nicholas J. CONARD (Tübingen, Germany)

What Can We Say About the Spatial-Temporal Distribution of Early Aurignacian Innovations?

ABSTRACT: Based on ESR- and TL-dates by Daniel RICHTER and a large number of radiocarbon dates from the Aurignacian of the Swabian Jura, we have argued that some innovations of the Aurignacian are documented at an early date in this region. The Swabian Aurignacian also provides a distinctive regional signature for the use of lithic and organic technology, as well as for the temporal distribution of ornaments, figurative art and musical instruments. The *Kulturpumpe* models that have

been used to explain this phenomenon have been rejected by authors including ZILHÃO, d'ERRICO and VERPOORTE. Here we will compare that spatial-temporal pattern of Aurignacian innovations in western Eurasia in a test of the *Kulturpumpe* models.

KEYWORDS: Last Neanderthals, Early *Homo sapiens sapiens*, Aurignacian, Chronostratigraphy.

FINAL BLOCK – Problems and Perspectives

(Olaf JÖRIS / Daniel S. ADLER / S. William G. DAVIES)

SESSION PARTICIPANTS

Discussion of Data and Databases

Absolute Age Determination

REGIONAL BLOCK I – Near East, Southeastern & Eastern Europe, Northern Asia

REGIONAL BLOCK II – Central & Northwestern Europe

REGIONAL BLOCK III – Southwestern & Southern Europe, Northwestern Africa

Diffusion of Innovations

POSTERS

Lyudmila V. LBOVA (Novosibirsk, Russia)

(REGIONAL BLOCK I: Near East, Southeastern & Eastern Europe, Northern Asia)

Chronology and Paleoecology of the Early Upper Paleolithic in the Trans-Baikal Region.

ABSTRACT: The region east of Lake Baikal is viewed as the easternmost territory where the Upper Paleolithic appeared rather early. Its chronology is relevant for adjacent regions as well. While the Trans-Baikal Upper Paleolithic sites are rather numerous and probably representative, it is so far difficult to assess the beginning of this epoch due to the insufficiency of materials, lack of reliably dated profiles, absence of a detailed technical or typological characteristics of industries, etc. Today, more than 100 absolute dates are available, based on traditional as well as new techniques (radiocarbon, RTL, thermo-gravimetry). Detailed studies of key sections has made it possible to reconstruct environmental conditions of Paleolithic human habitation and to build up a basal geoarchaeological scheme for periodization of major stages in the development of nature and culture. In correlation, the combination of absolute and relative methods of dating of cultural-bearing strata provides more correct estimations of chronology and environment of formation of culture associated with anatomically modern humans in the Trans-Baikal region and Mongolia.

In recent years, we have discovered and examined a new series of Middle and Early Upper Paleolithic sites in the Trans-Baikal region. Chronologically divergent sites have been revealed in southern Buryatia by geoarchaeological methods designed to document chronostratigraphic and cultural-historical schemes. The tentative scheme of organization of the Trans-Baikal Middle and Early Upper Paleolithic suggests the existence of several technological trends. Cultural modifications of the Trans-Baikal Early Upper Paleolithic represent two evolutionary trends: the predominant one, based on blade technologies and the secondary one, based on other reduction techniques. The pattern is less clear and more variable than the preceding Middle Paleolithic.

In our view, there is little if any continuity between the Middle and the Upper Paleolithic. Generally, inventories associated with anatomically modern humans appeared in the Trans-Baikal region no earlier than 40 ka BP (Kamenka, Varvarina Gora [3], Khotyk [3 & 4], Podzvonkaya, etc.).

KEYWORDS: Chronology, Geoarchaeology, Middle to Upper Paleolithic Transition, Trans-Baikal Region.

Andrey A. SINITSYN (St. Petersburg, Russia)

(REGIONAL BLOCK I: Near East, Southeastern & Eastern Europe, Northern Asia)

Kostenki 14 (Markina Gora): A Key Section for the Cultural and Geological Stratification of the Initial-Early Upper Palaeolithic of Eastern Europe.

ABSTRACT: Kostenki 14 (Markina Gora) has been known to contain four cultural layers, however new excavations from 1998–2005 identified a total of nine cultural layers. The main additions to the cultural stratigraphy include 4 layers representing the most ancient chronological group of Kostenki. These were identified in a series of fossil soils beneath volcanic ashes.

Analyses in the 1980s connected the volcanic ash with the Campanian Ignimbrite (CI) of the Phlegrean Fields, South Italy, and the horizon Y5 of the Adriatic marine cores. The age was regarded as 38 ka BP. In 2000 the cultural layer directly connected with the volcanic ashes was identified on Markina Gora. Three radiocarbon dates of 32 ka ¹⁴C-BP highlighted the divergence between the radiocarbon chronology and the age of ash, a finding confirmed in 2002–2005 by five laboratories. Techno-typological features of the lithic assemblage, for example numerous Dufour micro-blades, strengthen the cultural affiliation of this layer with the Aurignacian.

The age of the next cultural layer (IVa), associated with a fossil soil, is defined by series of seven radiocarbon dates at 34–33 ka ¹⁴C-BP.

A horizon with separate archaeological remains and radiocarbon dated to 34 ka ¹⁴C-BP is associated with another fossil soil in which the Lashamp palaeomagnetic excursion (40–42 ka ¹⁴C-BP) has been identified.

A radiocarbon date of 34 ka ¹⁴C-BP has been determined for a horizon of mammoth bones (without cultural affiliation) situated in stratified sediments directly beneath those in which the Lashamp excursion has been identified.

The lowermost cultural layer (IVb) contains an unknown cultural tradition of the most ancient Upper Palaeolithic of Eastern Europe. A total of eleven radiocarbon dates (37–36 ka ¹⁴C-BP), three IRSL dates (46–34 ka BP), and an OSL series (upper sediments: 53–47 ka BP; lower sediments: 56–48 ka BP) highlight issues of chronological scale, with a "short" chronology suggested by the radiocarbon dates and a "long" chronology suggested by the stratigraphy, IRSL-OSL dates, and palaeomagnetic and palynological data.

The nine cultural layers at Markina Gora are attributed to a series of cultural entities beginning with the Gravettian in the upper layer (22 ka ¹⁴C-BP), followed by a series of more than 60 radiocarbon dates and more than 40 IRSL-OSL dates, all from stratified contexts. Together with the presence of short-term chronological marks (e.g., volcanic ashes, magnetic excursions) Markina Gora contains a sequence of cultural and geological sediments that represent the key section for understanding the East European Upper Palaeolithic chronological frameworks of 22–>45 ka BP.

Alain TUFFREAU (Lille, France)

V. CHIRICA (Iasi, Romania)

Sandra BAILESCU (Paris, France)

Paul HAESAERTS (Brussels, Belgium)

M. LAMOTHE (Montréal, Canada)

(REGIONAL BLOCK I: Near East, Southeastern & Eastern Europe, Northern Asia)

The Transitional Industry of Mitoc-Valea Izvorului (Romania): an Erroneous Interpretation.

ABSTRACT: Previous studies of the Mitoc-Valea Izvorului site (Prut Valley, Romania) have suggested the presence of a transitional industry between Middle and Upper Palaeolithic. During recent excavations (2003–2004), new chronostratigraphical investigations together with OSL-sediment dating have demonstrated the presence of Middle Palaeolithic and Aurignacian artefacts within distinct stratigraphic units. Stratigraphic correlations have been made with the nearby site of Malu Galben, where Aurignacian and Gravettian industries are documented.

György LENGYEL (Miskolc, Hungary)
Zsolt MESTER (Miskolc-Egyetemvaros, Hungary)

(REGIONAL BLOCK II: Central and Northwestern Europe)

A New Look at the Radiocarbon Chronology of the Szeletian in Hungary.

ABSTRACT: The Szeletian is widely known as a transitional culture from the Middle to Upper Palaeolithic. Its eponym site, Szeleta Cave, is located in Northeast Hungary in the Bükk Mountains. Szeleta is the only site in Hungary where ¹⁴C-dates are available for Szeletian layers. Thus, the radiocarbon chronology of the Szeletian in Hungary is based on the sequence of Szeleta Cave, which is dated to ca. 43–22 ka ¹⁴C-BP. In this paper we give a critical view on the ¹⁴C-samples from Szeleta in order to re-interpret the radiocarbon dates. We focus on the stratigraphy, the composition of layers, and the archaeological context, with which effective geogenic disturbances of layers and essential problems in the interpretation of the cave stratigraphy are recognized. This warns us to re-evaluate the radiocarbon chronology of the Szeletian in Hungary.

Joaquim SOLER SUBLIS (Tübingen, Germany)
Narcís SOLER (Girona, Spain)
Julià MAROTO

(REGIONAL BLOCK III: Southwestern & Southern Europe, Northwestern Africa)

Clarification of L'Arbreda's Archaic Aurignacian Dates.

ABSTRACT: The record of L'Arbreda cave (Serinyà, Catalonia, Spain) has provided several ¹⁴C-AMS dates which indicate an early presence of the archaic Aurignacian in the eastern Pyrenees. Therefore, these dates are critical to the establishment of the chronological boundary between the Middle and the Upper Paleolithic in Western Europe.

L'Arbreda's level H (archaic Aurignacian) has been dated to 38.300 ± 500 ¹⁴C-BP and the level I (final Mousterian) to 39.900 ± 600 ¹⁴C-BP (both are means of several dates). These results, provided by samples taken during modern excavations, were already known.

However, the popularity reached by João Zilhão and Francesco d'Errico's critical works on key Aurignacian sites, including L'Arbreda, force us to reassert the validity of these dates. First we reiterate our explanations about the integrity of L'Arbreda's archaeological record and secondly we prove that the archaeological associations and the cultural meaning of the different dated samples are correct. The distribution of archaeological finds demonstrates that the dated samples were taken from the corresponding archaeological levels following procedures that minimized risks of contamination.

Esteban ÁLVAREZ FERNÁNDEZ (Santander, Spain)
Olaf JÖRIS (Neuwied, Germany)

(Diffusion of Innovations)

On the Origin of Early Upper Palaeolithic Personal Ornaments. An Evaluation of the Chronometric Data Base.

ABSTRACT: Traditionally, the earliest occurrence of personal ornaments in the European record is documented at the Middle to Upper Palaeolithic Transition (Chatelperronian, Uluzzian, leaf point industries, Bacho Kiro). However, the paucity of sites dating to this period which have produced such ornaments, the often doubtful contextual association of the finds (many of the sites have problems with stratigraphy), as well as the limited number of personal ornaments known to date, bring into question the evidence for their utilisation prior to the Aurignacian.

Personal ornaments are a regular component of Aurignacian industries, showing a broad spectrum of form, raw materials and techniques of attachment. In this paper it is argued that personal ornaments occurred in Europe from about 38,000 ¹⁴C-BP onwards, in association with the emergence of *H. sapiens sapiens*.

KEYWORDS: Personal Ornaments, "Transitional Industries", Aurignacien, Upper Palaeolithic.

Session C58

Thursday, 7 September 2006 / Jeudi, 7 Septembre 2006

*Room 11.06, Faculty of Law, Lisbon University
Saale 11.06, Faculté de Droit, Université de Lisbonne*

Come in... .. and find out

Opening a New Door into the Analysis of Hunter-Gatherer Social Organisation and Behaviour

Entrez et faites – vous une idée

Ouvrir une nouvelle voie pour l'analyse des organisations sociales et des comportements des peuples chasseurs-cueilleurs

organized by / organisé par

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SESSION'S ABSTRACT

Intra site spatial analyses of Upper Palaeolithic and Mesolithic sites provide a wealth of information about hunter-gatherer social organisation and behaviour. Over the last 40 years the application of modern excavation techniques at sites in western Eurasia has produced an extensive body of data suitable for spatial analysis. Despite this, many interpretations of spatial patterns are pre-determined by ideas originating from ethnographic observations, and tend to disregard the full potential of the available archaeological data.

Since the 1990's several innovative analytical methods have been introduced to Palaeolithic archaeology, in combination paving the way for more detailed studies of spatial patterns. Against this background, the session seeks to evaluate and re-evaluate spatial organisation during the Upper Palaeolithic and Mesolithic.

RÉSUMÉ DE LA SESSION

Les analyses spatiales au sein des gisements du Paléolithique supérieur et du Mésolithique livrent une richesse d'informations sur les organisations sociales et sur les comportements des peuples

chasseurs-cueilleurs. Pendant ces 40 dernières années, l'application des techniques de fouilles modernes à plusieurs gisements de l'Eurasie occidentale a permis de rassembler un important corpus de données propices aux analyses spatiales. Néanmoins, plusieurs interprétations des distributions spatiales sont encore basées sur des hypothèses prédéterminées, fondées sur des observations ethnographiques, et tendent à ignorer largement l'important potentiel des données archéologiques valides disponibles.

Depuis les années 1990, plusieurs méthodes d'analyse innovatrices en archéologie paléolithique, ouvrant la voie à la réalisation d'études spatiales plus détaillées. Dans ce contexte, la combinaison de plusieurs méthodes analytiques est recommandée, car elle donne une meilleure base pour l'interprétation objective de l'organisation spatiale des gisements préhistoriques. L'objectif de cette séance est d'évaluer et de rediscuter l'organisation spatiale durant le Paléolithique supérieur et le Mésolithique.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

09:00-09:10 **Opening / Ouverture**

09:10-09:25 Sabine GAUDZINSKI-WINDHEUSER (Neuwied, Germany)
Olaf JÖRIS (Neuwied, Germany)
Martina SENSBURG (Neuwied, Germany)
Martin STREET (Neuwied, Germany)
Elaine TURNER (Neuwied, Germany)

C58-01

Introduction.

Spatial Analysis of European Upper Palaeolithic Sites

09:25-09:45 Philip R. NIGST (Leipzig, Germany)
Walpurga ANTL-WEISER (Vienna, Austria)

C58-02

Intrasite Spatial Organization of Grub/Kranawetberg: Methodology and Interpretations. Insights into the Spatial Organization of Gravettian Sites in Eastern Central Europe.

09:45-10:05 Stefan WENZEL (Neuwied, Germany)

C58-03

The Magdalenian Dwelling of Orp East (Belgium) and Its Spatial Organisation.

10:05-10:25 Jérôme BULLINGER (Neuchâtel, Switzerland)
Denise LEESCH (Neuchâtel, Switzerland)
Nicole PLUMETTAZ (Neuchâtel, Switzerland)

C58-04

On the Spatial Organisation of the Magdalenian Site at Monruz (Neuchâtel, Switzerland).

10:25-10:40 **Break / Pause**

10:40-11:00 Martina SENSBURG (Neuwied, Germany)
Olaf JÖRIS (Neuwied, Germany)

C58-05 The Magdalenian Site of Gönnersdorf (German Rhineland): Problems and Perspectives of a Synthetical Study.

11:00-11:20 Frank MOSELER (Neuwied, Germany)

C58-06 An Analysis of Concentration IV at the Magdalenian Site of Gönnersdorf.

11:20-11:40 Elaine TURNER (Neuwied, Germany)
Martin STREET (Neuwied, Germany)
Laura NIVEN (Neuwied, Germany)

C58-07 Spatial Analysis of Hunted Fauna at the Magdalenian Site of Gönnersdorf.

11:40-12:00 **Break / Pause**

Spatial Organization and the Division of Labour

12:00-12:20 Dick STAPERT (Groningen, The Netherlands)

C58-08 Tracing Men and Women in the Palaeolithic. Some Spatial Patterns in Upper Palaeolithic Settlements.

12:20-12:40 D. NADEL (Haifa, Israel)
E. WEISS (Israel)

C58-09 Space Division of Domestic Activities. Preserved on a 23,000 Years Old Floor at Ohalo II, Israel.

12:40-14:30 **Lunch / Déjeuner**

Spatial Analysis of European Mesolithic Sites

14:30-14:50 Jorge MARTINEZ MORENO (Cerdanyola del Valles, Spain)
Rafael MORA TORCAL (Cerdanyola del Valles, Spain)

C58-10 The Mesolithic Site of Font del Rós.

14:50-15:10 Daniela HOLST (Neuwied, Germany)

C58-11 Duvensee – Settlement Behaviour in the Early Mesolithic.

15:10-15:30 Claudio CASATI (Copenhagen, Denmark)
Lasse SØRENSEN (Copenhagen, Denmark)

C58-12 Ålyst – a Maglemose Settlement-Complex with Hut Structures from Bornholm, Denmark.

15:30-15:45 **Break / Pause**

15:45-16:05 Lars LARSSON (Lund, Sweden)

Arne SJÖSTRÖM (Lund, Sweden)

C58-13 The Development of House and Hut Structures in the Mesolithic of Southern Scandinavia.

16:05-16:25 Ole GRØN (London, UK)

C58-14 Litter and waste on a dirty Mesolithic floor. An Early Ertebølle dwelling excavated under water.

Spatial Organisation within Caves

16:25-16:45 Pablo ARIAS (Santander, Spain)
Roberto ONTAÑÓN (Santander, Spain)
Esteban ÁLVAREZ FERNÁNDEZ (Salamanca, Spain)
Marián CUETO (Santander, Spain)
Cristina GARCÍA-MONCÓ (Santander, Spain)
María José IRIARTE (Santander, Spain)
Mikel ELORZA (Santander, Spain)
Luis C. TEIRA (Santander, Spain)

C58-15 Magdalenian living floors in the Lower Gallery of La Garma. A preliminary approach.

16:45-17:05 Leore GROSMAN (Jerusalem, Israel)
Anna BELFER-COHEN (Jerusalem, Israel)

C58-16 The Natufian Human Burials at Hilazon Tachtit Cave: The Meaning of Spatial Distribution.

17:05-17:20 **Break / Pause**

FINAL BLOCK – Problems and Perspectives

17:20-20:00 SESSION PARTICIPANTS

Discussion of

Spatial Analysis of European Upper Palaeolithic Sites

Spatial Organization and the Division of Labour

Spatial Analysis of European Mesolithic Sites

Spatial Organisation within Caves

ABSTRACTS / RÉSUMMÉS

C58-02 Philip R. NIGST (Leipzig, Germany)

Walpurga ANTL-WEISER (Vienna, Austria)

Intrasite Spatial Organization of Grub/Kranawetberg: Methodology and Interpretations. Insights into the Spatial Organization of Gravettian Sites in Eastern Central Europe.

ABSTRACT: Grub/Kranawetberg is a multilayered Gravettian site in Lower Austria, close to the Slovakian border. The site is excavated since 1993 and yielded three archaeological horizons with abundant finds and some evident structures (see e.g. ANTL & FLADERER 2004).

The main focus of this paper is on the GIS-based methodology of intrasite spatial analysis, especially emphasizing the possibilities of recognizing formation processes, size-sorting and locating a possible dwelling. Application of various methods, among them piece-plotting, mapping of find quantities, application of kernel density estimates and ring and sector analysis, in the 1995 and 1996 excavation area (e.g. NIGST 2004; in press) showed latent structures which are interpreted as evidence for a dwelling in this area of the site.

Contrasting these results with the analysis of an area of big mammal bones (Knochenanhäufung) in the west of the proposed dwelling will form the second part of the paper.

A comparison of the Grub/Kranawetberg record with the Eastern Central European evidence, e.g. the South Moravian sites (Dolní Vestonice, Pavlov, Milovice), will form a basis for addressing questions like group size, social organization and land use patterns.

KEYWORDS: Intrasite Spatial Analysis; Dwelling; Settlement Structures; GIS; Gravettian

REFERENCES: ANTL, W. & FLADERER, F.A. 2004. Outlook to the East: the 25 ky BP Gravettian Grub/Kranawetberg Campsite (Lower Austria). In: SVOBODA, J.A. & SEDLÁČKOVÁ, L.(Eds.), *The Gravettian along the Danube*, Proceedings of the Mikulov Conference, 20.-21. November, 2002, 116-130.

NIGST, Ph.R. 2004. Ein gravettienzeitlicher Behausungsgrundriß? Erste Beobachtungen zur räumlichen Organisation der Fundstelle Grub/Kranawetberg (Österreich), *Archäologisches Korrespondenzblatt* 34, 153-68.

NIGST, Ph.R. (in press), Eine Behausung aus dem Gravettien? Vorläufige Ergebnisse der GIS-basierten Analyse der räumlichen Verteilung der Fundobjekte in Grub/Kranawetberg (Österreich) mit einem Überblick über die Behausungen aus dem Gravettien Europas, *Archaeologia Austriaca*.

C58-03 Stefan WENZEL (Neuwied, Germany)

The Magdalenian Dwelling of Orp East (Belgium) and Its Spatial Organisation.

ABSTRACT: At Orp East the find concentration has a hexagonal shape of 4.5 m in length for a maximum width of 3.8 m. Its boundaries are marked almost everywhere by a clear decrease in find density or by an elevation of find quantity per unit of area connected with a clear drop of find numbers outside. The borders of the find concentration are accentuated by numerous tools and cores, which were accumulated there, and by many refitting lines which end at its edges or which run parallel to these. These indications for formerly effective limits to the find concentration are interpreted as showing the former presence of a dwelling. The dwelling had a central hearth with an extended working zone. This hearth was possibly accompanied by a nearby smaller fireplace to the Northeast. The area around the central hearth is extremely rich in debitage, cores and tools and is strictly confined. There are a considerable number of cores outside this central zone in the NNW half of the supposed tent. A small cluster of backed bladelets lies in the NW corner of the central area, while the scrapers and the laterally retouched pieces have their main distribution in the SE half of the dwelling.

KEYWORDS: Upper Palaeolithic, Magdalenian, Dwellings, Artefact Density, Refits of Artefacts

REFERENCES: WENZEL, St. 2005. Orp East: Indications for a Dwelling. *Notae Praehistoricae* 25, 83-90.

C58-04 Jérôme BULLINGER (Neuchâtel, Switzerland)
Denise LEESCH (Neuchâtel, Switzerland)
Nicole PLUMETTAZ (Neuchâtel, Switzerland)

On the Spatial Organisation of the Magdalenian Site at Monruz (Neuchâtel, Switzerland).

ABSTRACT: Monruz is a Magdalenian open-air site located near the shore of Lake Neuchâtel, in western Switzerland. Due to exceptional preservation conditions, the living floor was well conserved, including bone, antler, charcoal, red ochre, etc. Evident and latent structures can thus be studied in

detail. Extensive refitting of the cobbles and the stone slabs that were used for the construction of the hearths have allowed the spatial and temporal relationship of the 40 combustion structures to be established. Furthermore, these results contribute substantially to the understanding of the dynamic processes that underlie the dispersion of stones across the surface of Upper Palaeolithic camp sites. Most of the fireplaces can be interpreted as having been functionally polyvalent, with the spatial distribution of the activity areas around the heat source showing recurrent patterns. Based on the analysis of the spatial organisation of the different remains, various ground plans of habitation units can be put forward. In these models hearths can either be placed inside or outside of the habitation structures.

KEYWORDS: Magdalenian, Hearths, Spatial Organisation, Activity Areas, Refitting.

C58-05 Martina SENSBURG (Neuwied, Germany)
Olaf JÖRIS (Neuwied, Germany)

The Magdalenian Site of Gönnersdorf (German Rhineland): Problems and Perspectives of a Synthetical Study.

ABSTRACT: The site of Gönnersdorf is a well-known example for Magdalenian settlement features. The exceptional preservation and the large size of the site, along with the comprehensive excavation documentation, make it possible to undertake a detailed spatial analysis of the investigated site. The results of this study will be an important source of information for the understanding of the behaviour of Magdalenian hunters and foragers.

Most of the analyses undertaken since 1974 were material-oriented studies of individual find categories – the bulk of which appeared as monographs. Moreover, during the last 30 years, spatial analyses were published of large-scale features and finds in Concentration I, located in the south-west part of the site, and in Concentrations III and IV, to the north. With the presentation of the analysis of the largest of the concentrations, the centrally-located Concentration II (SENSBURG 2004), the gap in the global analysis of the site was closed.

In modern inter-concentration analyses the differing levels of detail in the studies of the individual features must be adjusted to the highest possible level of resolution and a uniform standard of processing of all find categories and features. The GIS supported processing of the Gönnersdorf finds is the basis of such a synthetical approach.

KEYWORDS: Magdalenian, Settlement Features, Spatial Organisation, Artefact Densities

REFERENCES: SENSBURG, M. 2004. Siedlungsstrukturen der Konzentration IIa von Gönnersdorf. PhD. Univ. Köln.

C58-06 Frank MOSELER (Neuwied, Germany)

An Analysis of Concentration IV at the Magdalenian Site of Gönnersdorf.

ABSTRACT: Although Concentration IV at the Magdalenian site of Gönnersdorf had already been the focal point of a detailed analysis undertaken by Thomas TERBERGER (TERBERGER 1997), a new spatial analysis of this area seemed to be indicated, not least in the light of a modified reconstruction of the dwelling features at the site (JÖRIS & TERBERGER 2001). Amongst others the spatial analysis of Concentration II, located in the centre of the Gönnersdorf site, had posed new questions, which were investigated by innovative analytical methods of plotting find densities (SENSBURG 2004).

For these reasons, TERBERGER's work was expanded by the spatial distribution of the primary lithic production, including the smallest fraction, by plotting find densities, as well as the inclusion of the results of systematic refitting studies.

The application of these data led not only to a clear definition of the inner organisation of the feature, but also permitted differences in the utilisation of several outer areas to be specified and to place these in a tangible relationship to the dwelling.

KEYWORDS: Magdalenian, Settlement Features, Spatial Organisation, Artefact Densities

REFERENCES: JÖRIS, O. & TERBERGER, Th. 2001. Zur Rekonstruktion eines Zeltes mit trapezförmigem Grundriß am Magdalénien-Fundplatz Gönnersdorf/Mittelrhein. *Archäologisches Korrespondenzblatt* 31, 163-172.

SENSBURG, M. 2004. *Siedlungsstrukturen der Konzentration IIa von Gönnersdorf*. PhD. Univ. Köln.

TERBERGER, Th. 1997. *Die Siedlungsbefunde des Magdalénien-Fundplatzes Gönnersdorf – Konzentrationen III und IV*. Der Magdalénien-Fundplatz Gönnersdorf 6 (Franz Steiner, Stuttgart).

C58-07 Elaine TURNER (Neuwied, Germany)
Martin STREET (Neuwied, Germany)
Laura NIVEN (Neuwied, Germany)

Spatial Analysis of Hunted Fauna at the Magdalenian Site of Gönnersdorf.

ABSTRACT: Investigation of the hunted fauna at the Rhineland Magdalenian site Gönnersdorf incorporates among other analytical methods the plotting and interpretation of the resulting spatial patterning of the various categories of material recovered.

At one level this simply documents and visualizes the location of particular species, parts of the skeleton or classes of material modified by butchery or tool production within the several variously defined areas of the site. At another level, plotting these categories as single finds or by the use of density maps allows the recognition of specific activity areas or locations at which material was discarded, sometimes clearly aligned with site structures identified by other means and interpreted as hearths or dwellings.

Together with information derived from refitting fragmented faunal remains and in combination with data provided by comparable analyses of the lithic assemblage and the wide range of further types of material represented at the site a dynamic interpretation of settlement activities involving fauna at the Gönnersdorf site can be attempted.

KEYWORDS: Magdalenian, Spatial Organisation, Faunal remains, Organic artefacts.

Spatial Organisation and the Division of Labour

C58-08 Dick STAPERT (Groningen, The Netherlands)

Tracing Men and Women in the Palaeolithic. Some Spatial Patterns in Upper Palaeolithic Settlements.

ABSTRACT: Combining ethnographical knowledge concerning the sexual division of labour of hunter/gatherers with the results of use-wear analysis of palaeolithic material, should in principle enable us to identify gender-related activity areas within Upper Palaeolithic sites. For this, dedicated methods of intrasite spatial analysis should be applied. There is a certain risk of circular reasoning in this approach: it is based on the assumption that Upper/Late Palaeolithic and recent hunter/gatherers had - grosso modo - the same system of labour division. However, there are reasons to believe that this is a reasonable supposition. Apart from this general problem, there are unfortunately many other problems that can and will complicate any attempts to trace palaeolithic men and women. Most of these have to do with the time depth and dynamics of the settlements. Using several well-preserved sites in Europe as examples, a step-by-step approach will be presented, and some results will be illustrated. For this work, the ring and sector method will be employed, which is a simple tool for spatial analysis on site level.

KEYWORDS: Upper/Late Palaeolithic, Gender, Activity Areas, Spatial Analysis, Ring & Sector Method.

C58-09 D. NADEL (Haifa, Israel)
E. WEISS (Israel)

Space Division of Domestic Activities. Preserved on a 23,000 Years Old Floor at Ohalo II, Israel.

ABSTRACT: An excellently preserved brush hut floor at Ohalo II (23,000 cal BP, Israel) includes the remains of several kinds of activities, of which two are presented here. The first is food preparation, attested to by an *in situ* grinding stone and the associated distribution patterns of 60,000 seeds. The second is flint knapping, with concentrations of 8,000 products and minute waste found clustered in specific parts of the floor. These flint and seed concentrations do not overlap. A wide variety of geo-archaeological studies, accompanied by field observations and laboratory results, indicate that the floor sediments are *in situ* and that most of the remains have hardly moved since the camp was abandoned.

The combined studies of the different categories of finds provide us with an unusually detailed picture of labor division within the hut: food preparation was spatially separated from flint knapping. That is, the location of domestic activities was not random, and floor space was used in a planned and recurrent manner, just as in modern times.

Spatial Analyses of European Mesolithic Sites

C58-10 Jorge MARTINEZ MORENO (Cerdanyola del Valles, Spain)
Rafael MORA TORCAL (Cerdanyola del Valles, Spain)

The Mesolithic Site of Font del Rós.

ABSTRACT: Font del Rós is an open - air site located in the Southeastern Pre-Pyrenees and contains different levels attributed to the Mesolithic and the Neolithic. In this presentation, the general trends of the SG level, which extends for 1,200 m², and is dated by ¹⁴C to about 7,500-7,000 cal BC (in the Boreal climatic sub-period), are analyzed.

The assemblage is composed of almost 20,000 lithics, 2,600 bones and several remains of plants associated to different types of hearths and storage/dumping pits. We will discuss the site's activities related to the organization of subsistence (hunting and gathering) and domestic activities such as faunal and plant processing, knapping and working of skin.

Different lines of evidence allow us to discuss whether this occupation should be considered as a camp resultant of a unique event, or on the contrary, it is the result of short-term occupations by small groups that reoccupied the site along a non- excessively long-term scale.

KEYWORDS: Font del Rós, Mesolithic, Activity Areas, Intra-site Patterns, Domestic Activities.

C58-11 Daniela HOLST (Neuwied, Germany)

Duvensee – Settlement Behaviour in the Early Mesolithic.

ABSTRACT: The excellent preservation of organic features at localities in the Duvensee moorland (Schleswig-Holstein) and the exact, three-dimensional recording of all lithic artefacts from these sites, provide a rich source of data for research into early Mesolithic settlement behaviour.

The concentrations of finds designated as "dwellings" are the *in situ*, clearly defined and fully excavated remains of short-term occupations on the banks of the former lake of the Duvensee.

A comparative spatial analysis of two sites permitted a reconstruction of the development of early Mesolithic settlement behaviour. The sites chosen are comparable in size, were from similar biotopes of the Preboreal ("Wohnplatz" 8) and Boreal ("Wohnplatz" 6) and, according to evidence for the roasting of hazel nuts at both sites, appear to have served the same economical function.

GIS-supported spatial analyses of artefact distribution and refitting produced information about settlement dynamics. It is expected that comparisons of this data with the distribution of organic remains (a mat of bark approximately 5m² in "Wohnplatz" 8 as well as numerous pine stumps and artificial wooden constructions in "Wohnplatz" 6) will provide interesting results concerning refined assessments of site-specific behaviour patterns and also methodology.

C58-12 Claudio CASATI (Copenhagen, Denmark)
Lasse SØRENSEN (Copenhagen, Denmark)

Ålyst – a Maglemose Settlement-Complex with Hut Structures from Bornholm, Denmark.

ABSTRACT: The preliminary result from the excavation campaign of the Maglemose settlement complex at Ålyst, Bornholm is presented. The large scale rescue excavation has revealed a settlement complex with at least 26 flint concentrations and at least three huts. The main lithic production in the concentrations is a blade production, in order to produce microliths. These flint concentrations have been interpreted as short term transit, hunting and fishing camps.

Three huts were also observed on Ålyst, which indicate another aspect of the internal settlement pattern of the site. Activity zones with larger pits or dumping areas for especially flint artefacts and fire cracked stones were observed around the huts. Inside the huts the northern part was interpreted as a large activity zone with pits, fireplaces and a flint concentration. The southern part of the huts was lacking internal features and lithics. The lithic artefacts from the huts show high tool diversity compared with the lithic artefacts from other flint concentrations at the site.

It is argued that the Mesolithic habitation and activity area on Ålyst, and in general, seems to be much more widespread than expected, containing a complex of several smaller and larger settlements.

KEYWORDS: Bornholm, Maglemose Culture, Settlement Complex, Hut Structures, Site Diversity.

C58-13

Lars LARSSON (Lund, Sweden)
Arne SJÖSTRÖM (Lund, Sweden)

The Development of House and Hut Structures in the Mesolithic of Southern Scandinavia.

ABSTRACT: For decades hut structures have been identified at bog sites from the Early Mesolithic. During last years new sites with house structures especially of Late Mesolithic date have been excavated, providing features of varying constructions as well of sizes. The acceptance of these structures and the interpretation of them in an economic and social context will be presented.

The organisation of these huts from bog sites has been intensively debated. By new excavations within the centre of a large bog in the southernmost part of Scania, new structures dating to the later part of the Mesolithic have been found. By careful documentation methods and refitting it has been possible to examine in detail the interaction between structures as well as the activities within and around them.

KEYWORDS: Mesolithic, Southern Scandinavia, Bog Sites, Internal Structure, Refitting.

C58-14

Ole GRØN (London, Great Britain)

Litter and waste on a dirty Mesolithic floor. An Early Ertebølle dwelling excavated under water.

ABSTRACT: The presentation presents the material from the dwelling Møllegabet II excavated 4.5 m below the surface of the sea in central Danish waters. The dwelling structure consisted of a shallow pit with its one half taken up by an earth-built platform covered by bark pieces. The preservation of wall stakes, a couple of inner stakes, berries, fruit-stones, twigs and bark as well as objects and fragments of bone from mammals, birds and fish indicates how the dwelling space was used and how flint-knapping was organised inside the dwelling-space. The dwelling pit seems to be cut into the oldest known Danish shell midden.

The second theme of the presentation is a more general discussion of the potential for Mesolithic research under water. Does it pay? How are the possibilities for survey compared to what they are in a land-situation?

Spatial organisation within caves

C58-15

Pablo ARIAS (Santander, Spain)
Roberto ONTAÑÓN (Santander, Spain)

Esteban ÁLVAREZ FERNÁNDEZ (Santander, Spain)
 Marián CUETO (Santander, Spain)
 Cristina GARCÍA-MONCÓ (Santander, Spain)
 María José IRIARTE (Santander, Spain)
 Mikel ELORZA (Santander, Spain)
 Luis C. TEIRA (Santander, Spain)

Magdalenian living floors in the Lower Gallery of La Garma. A preliminary approach.

ABSTRACT: La Garma is one of the most promising sites for the study of spatial organization among Palaeolithic hunter-gatherers. Nearly 1000 square metres of Middle Magdalenian living floors have been preserved near the original entrance of the cave and in two sectors of the Lower Gallery. This paper summarizes the research conducted so far in Zone IV, a restricted area in the central part of the Gallery where several stone structures have been documented.

C58-16

Leore GROSMAN (Jerusalem, Israel)
 Anna BELFER-COHEN (Jerusalem, Israel)

The Natufian Human Burials at Hilazon Tachtit Cave: The Meaning of Spatial Distribution.

ABSTRACT: This study will present recent results of spatial distribution analyses of the burial ground at Hilazon Tachtit cave. The cave is located at the foot of a limestone cliff on the right bank of Nahal Hilazon, western Galilee, Israel, some 14 km from the Mediterranean shoreline. Excavations revealed that a shallow depression in the cave floor, an area of ca. 30 m²—contained Natufian remains dating to the late/final Natufian phase. Burials were unearthed as three discrete concentrations, exhibiting three distinctive burial variants. At the top of the Natufian layer a burial of a single individual was lying directly on large stones between two structures. Additionally, within the structures themselves, small (ca. 1 m in diameter) and built from undressed limestone cobbles, there are single burials (N=2), covered by stone slabs. In the inner part of the cave there were collective burials in small pits (occupying an area of 5 m² to a depth of 50 cm), representing different age groups. Given the number of individuals many bones are missing, specifically long bones and crania. Probably these collective graves served as a primary burial area that was later re-opened and skulls and long bones (*i.e.* those bones that are usually found in secondary burials) were removed.

FINAL BLOCK – Problems and Perspectives

Discussion of Spatial Analysis of European Upper Palaeolithic Sites

Spatial Organization and the Division of Labour

Spatial Analysis of European Mesolithic Sites

Spatial Organisation within Caves

Session C59

Tuesday, 5 September 2006 / Mardi, 5 Septembre 2006

*Room 6.1.36, Faculty of Sciences, Lisbon University
Salle 6.1.36, Faculté de Sciences, Université de Lisbonne*

Pressure Flintknapping

**Experiment, context of emergence and development. Papers in honour of
Jacques Tixier & Marie-Louise Inizan**

Le débitage par pression

**Expérimentation, Contextes d'apparition et développement. Contributions à
l'honneur de Jacques Tixier & Marie-Louise Inizan**

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SESSION'S ABSTRACT

Regarded as the apogee of knapping techniques, pressure flaking owes its recognition to the experiments of pioneers who elucidated the mystery of obsidian prismatic blades and bullet cores. Current archaeological data show it first appeared between 20.000 and 16.000 B.P. somewhere in Asia in a Palaeolithic context known for its advanced technical inventions. Found in Palaeo-Arctic industries this technique is considered as the best marker of the penetration into North America from Siberia. Between 10000 and 8000 B.P. and associated with an increased exchange of obsidian, this technique was introduced in a Neolithic context among the most flourishing societies of the Middle East. However, its appearance in the Mesolithic of Scandinavia and its adoption by Capsian groups in North Africa, in a context of hunters-gatherers outside the obsidian exchange networks, remain exceptions to the traditional currently accepted diffusionist model. The principal aim of this session, dedicated to the technique of pressure knapping, is to bring together people working on the topic around the world to share their points of view and their results in order to expand our understanding of the contexts leading to the emergence of this technique, and the processes related to its diffusion and subsequent development.

RÉSUMÉ DE LA SESSION

Considérée comme un perfectionnement dans les techniques de taille, la pression doit sa reconnaissance aux travaux d'expérimentateurs pionniers qui ont cherché à élucider le mystère de l'obtention de lames standardisées et des nucléus « en balle de fusil ». Les données archéologiques actuelles montrent qu'entre 20000 et 16000 BP le débitage de lamelles par pression apparaît quelque part en Asie dans un contexte paléolithique connue pour ses avancées techniques précoces. Retrouvée dans les industries de la Tradition Paleo-Arctique nord américaine cette technique serait selon certains un marqueur du peuplement de l'Amérique à partir de la Sibérie. Entre 10000 et 8000 PB, et associée à un accroissement de circulation de l'obsidienne, cette technique se retrouve dans

un contexte Néolithique parmi les plus florissants du Moyen-Orient. Toutefois, son apparition au Mésolithique de Scandinavie et son adoption chez les Capsiens dans un contexte de chasseurs-cueilleurs et en dehors des réseaux d'échange de l'obsidienne font figure d'exception au modèle diffusionniste actuellement établi. Le but principal de cette session, dédiée à la technique de débitage par pression, est d'offrir une occasion aux personnes travaillant sur le sujet dans les quatre coins du monde pour partager leurs points de vue et leurs résultats afin de mieux cerner les contextes d'émergence de cette technique, les processus liés à sa diffusion et son développement.

SESSION PROGRAMME / PROGRAMME DE LA SESSION

- 09:00 **Opening / Ouverture**
- 09:00-09:10 Noura RAHMANI (Montreal, Canada)
Pierre M. DESROSIERS (Montreal, Canada)
Introduction.
- 09:10-09:30 Marie-Louise INIZAN (Paris, France)
C59-01 Le débitage par pression: précurseurs, chercheurs, géopolitiques: Un passage de témoin.
- 09:30-09:50 Marie SORESSI (Leipzig, Germany)
C59-02 The use of pressure flaking to produce Still Bay points in the Middle. Stone Age of South-Africa? Discussing Blombos cave evidence.
- 09:50-10:10 Jun TAKAKURA (Hokkaido, Japan)
C59-03 Identification of pressure flaking and its archaeological significance: A view from the Upper Palaeolithic assemblages in Hokkaido, Northern Japan.
- 10:10-10:20 **Pause/Coffee-Tea Break**
- 10:20-10:40 Andrei V. TABAREV (Novosibirsk, Russia)
C59-04 Blade and Microblade Techniques in the Stone Age of the Russian Far East: Chronological, Technological and Experimental Approaches.
- 10:40-11:00 Frédérique BRUNET (Paris, France)
C59-05 La pression en Asie centrale: invention ou diffusion?
- 11:00-11:20 Jacques PELEGRIN (Nanterre, France)
C59-06 New experimental references about pressure blade production techniques.
- 11:20-11:40 Laurence ASTRUC (Paris, France)
Didier BINDER (Nice, France)
Jacques PELEGRIN (Paris, France)

Çiler ALTINBILEK (Istanbul, Turkey)

C59-07 Première identification du débitage laminaire par pression au levier dans le Néolithique précéramique du Proche Orient (Hautes Vallées du Tigre et de l'Euphrate, Haute Djézireh, Vallée du Balikh).

11:40-12:00 Jacques CHABOT (Quebec, Canada)
Jacques PELEGRIN (Paris, France)

C59-08 Two examples of lithic industries employing pressure flaking with a lever: recent research from Northern Mesopotamia (Syria, Irak) and Southern Caucasus (Armenia).

12:00-12:20 Didier BINDER (Nice, France)
Carmine COLLINA (Marseille, France)
Oreto GARCIA-PUCHOL (Valencia, Spain)
Thomas PERRIN (Toulouse, France)

C59-09 La question des débitages par pression en Méditerranée nord-occidentale (Italie, France, Espagne) entre 7000 et 5500 cal BC.

12:20-12:40 Antonio MORGADO RODRÍGUEZ (Granada, Spain)
Jacques PELEGRIN (Nanterre, France)

C59-10 Origin and development of pressure blade production in the south of the Iberian Peninsula (VI-III mil. cal. B.C.).

12:40-13:00 Noura RAHMANI (Montreal, Canada)

C59-11 Pressure Flintknapping among the Capsians: Invention *versus* Diffusion.

13:00-14:30 **Lunch / Déjeuner**

14:30-14:50 Mikkel SØRENSEN (Copenhagen, Denmark)

C59-12 The arrival and development of pressure blade technology in Southern Scandinavia.

14:50-15:10 Jan APPEL (Paris, France)
Kim DARMARK (Uppsala, Sweden)
Lars SUNDSTRÖM (Uppsala, Sweden)

C59-13 Pressure and its relation to Percussion Techniques in Fenno-Scandian Biface Production.

15:10-15:30 Peter KELTERBORN (Meilen, Switzerland)

C59-14 Measured Flintknapping, a New Tool.

15:30-15:50 Yan Axel GOMEZ COUTOULY (Paris, France)

C59-15 Microblade Industries from the Russian Far East and Alaska.

15:50-16:00 **Break / Pause**

16:00-16:20 Pierre M. DESROSIERS (Montreal, Canada)

Mikkel SØRENSEN (Copenhagen, Denmark)
Daniel GENDRON (Montreal, Canada)

C59-16 Pressure Flaking in Eastern Arctic.

16:20-16:40 Kenneth G. HIRTH (Utah, USA)

C59-17 The Organizational Structure of Mesoamerican Obsidian Blade Production.

16:40-17:00 Véronique DARRAS (Paris, France)

C59-18 Les conditions du développement de la technologie de la lame prismatique dans la Mésoamérique occidentale.

17:00-17:20 Gene TITMUS (IDAHO, U.S.A.)

C59-19 Movie (Commented by John E. CLARK)

17:20-17:40 Jacques PELEGRIN (Nanterre, France)

C59-20 Discussion

17:40-18:30 John E. CLARK (Proto, UT, U.S.A.)

C59-21 Discussion

ABSTRACTS / RÉSUMÉS

C59-01 Marie-Louise INIZAN (Paris, France)

Le débitage par pression : précurseurs, chercheurs, géopolitique. Un passage de témoin.

RÉSUMÉ: Le débitage par pression est une technique de détachement de produits laminaires qui a été inventée par des chasseurs-cueilleurs paléolithiques dans une aire sibéro-mongole, il y a environ 20000 ans. Il est pratiqué selon des différentes mises en forme des nucleus (méthode) ce qui en fait un excellent marqueur dont on peut suivre la diffusion vers le Nouveau monde à travers le détroit de Behring ou vers le Japon, comme vers l'Orient puis l'Europe.

Il a été décrypté, expérimenté sur obsidienne et, identifié dans certains débitages méso-américains par Crabtree qui le fit découvrir sur obsidienne à deux expérimentateurs français, Bordes et Tixier au Congrès des Eyzies en 1964.

Tixier rapproche ce débitage par pression d'Amérique du Nord décrit par Crabtree, avec celui du Capsien supérieur du Maghreb, le définissant ainsi pour la première fois dans l'Ancien monde et il m'initie à sa reconnaissance dès 1972.

Puis les événements politiques m'ont conduite à m'intéresser à des périodes de la Préhistoire récente en Iraq dans laquelle ce débitage particulier était impliqué et ignoré.

C'est alors qu'une longue collaboration avec Monique Lechevallier a permis l'étude technologique des débitages du site de Mehrgarh au Pakistan daté du VIIème au IIIème millénaire. Le débitage par pression domine l'industrie lithique et a permis une étude diachronique et synchronique de grandes séries.

A partir des séries de Mehrgarh, J. Pelegrin constitue un référentiel expérimental et publie « *Du plus petit au plus grand* » en 1988 : un pas est alors franchi, non seulement pour les modèles

expérimentaux de débitage mais aussi pour l'estimation des savoir-faire et des équipements techniques impliqués selon la dimension des produits.

C59-02 Marie SORESSI (Leipzig, Germany)

The use of pressure flaking to produce Still Bay points in the Middle Stone Age of South-Africa? Discussing Blombos cave evidence.

ABSTRACT: Some authors believe that Still Bay bifacial points from the South African Middle Stone Age were most likely produced using pressure flaking. If true, the use of pressure flaking would be documented in southern Africa more than 50,000 years before its first use in Eurasia. In this poster, we provide data for the Blombos cave Still-Bay points (including detailed pictures of the points) to gain insights into this question. This poster will provide the opportunity to specialists in pressure flaking to express their view of the technique used to flake Blombos Still-Bay points.

C59-03 Jun TAKAKURA (Hokkaido, Japan)

Identification of pressure flaking and its archaeological significance: A view from the Upper Palaeolithic assemblages in Hokkaido, Northern Japan.

ABSTRACT: The Upper Paleolithic assemblages in Hokkaido, Northern Japan contain a rich record of prismatic blade cores and wedge-shaped microblade cores. However, the emergence and development of pressure flaking has rarely been examined until now. This paper presents the identification of flaking techniques in the Upper Paleolithic assemblages in Hokkaido and examines some of the implications for archaeological interpretations. I attempt to identify the flaking techniques through the analysis of lithic fracture velocity, based on the microscopic markings found on the fracture surfaces of brittle solids.

C59-04 Andrei V. TABAREV (Novosibirsk, Russia)

Blade and Microblade Techniques in the Stone Age of the Russian Far East: Chronological, Technological and Experimental Approaches.

ABSTRACT: During Final Pleistocene – Early Holocene (14 – 8000 BP) archaeological cultures of the Far eastern territories (Middle Amur Region, Lower Amur Region, Maritime Region) demonstrate various lithic technologies. Blade technique, microblade technique, pressure blade technique and microprismatic technique appear in situation of chronological sequence, co-existence and import. Archaeologists still speculate how these techniques were connected with each other culturally and chronologically. Technological and experimental approaches give some new keys to this puzzle.

C59-05 Frédérique BRUNET (Paris, France)

La pression en Asie centrale : invention ou diffusion?

RÉSUMÉ: La mise en évidence et l'analyse du débitage par pression en Asie centrale (républiques du Kazakhstan, d'Ouzbékistan, du Kirghizistan, du Turkménistan et du Tadjikistan) demeure une question marginale dans les études actuelles en raison essentiellement d'un manque de spécialistes locaux ou de la méconnaissance du matériel archéologique de cette région et de la littérature scientifique s'y rapportant. L'apport de nouveaux éléments présentés ici, et issus d'une revue critique de la question et d'analyses technologiques de collections archéologiques, vise à y remédier et contribue, en outre, à mieux comprendre les mécanismes d'apparition et de développement de cette technique en Asie centrale.

Un rappel du cadre d'étude – chronologique, géo-archéologique et historique – s'impose tout d'abord afin d'estimer les méthodes utilisées et les résultats qui suivent.

L'identification du débitage par pression en Asie centrale a permis de dresser un premier tableau de répartition chrono-culturelle de cette technique et de distinguer deux méthodes principales dans cette région : celle de type « Yubetsu » et celle du « bullet core », termes génériques dont on souligne les limites sémantiques et linguistiques. Ajoutons que les matières premières utilisées – silex, « grès siliceux », calcédoine, jaspe – sont de toujours de bonne à très bonne qualité et témoignent de nodules aux dimensions variées, explicitées selon les cas.

La première méthode (« Yubetsu ») est caractérisée par un débitage de lamelles et de microlamelles selon des principes spécifiques (préforme bifaciale du nucléus, exploitation frontale à partir de crêtes, modalité unipolaire). Elle est attestée au Kazakhstan septentrional et méridional et au Tadjikistan dans des sites attribués au Paléolithique final (12^e-11^e millénaires ?) et au Mésolithique (10^e-9^e millénaires). Sa présence résulterait d'une diffusion en provenance des régions plus orientales telles que la Sibérie, le Xinjiang, voire la Mongolie. (...)

C59-06 Jacques PELEGRIN (Paris, France)

New experimental references about pressure blade production techniques.

ABSTRACT: A large and precise experimental reference remains a key to the identification of archaeological knapping techniques. Since the early 1980's, when, thanks to J. Tixier, the earliest recognition of archaeological pressure blades in flint lead to the start of their experimental approach, the diversity of the archaeological pressure blade productions has widely enlarged.

Over different regions and periods, pressure blade production deals with different stone materials (flint possibly heat-treated, obsidian, rhyolite, etc), with a wide dimensional range of the products (from micro-blades to extra-large blades), and with various platform preparation modes, possibly related to the early use of a copper point as suspected in several Neolithic contexts.

This paper aims to discuss, on an experimental basis, the different criteria (blade morphology and technical stigmata) that can contribute to the identification of blade and bladelet production techniques, including the recognition of copper tipped pressure tools.

C59-07 Laurence ASTRUC (Paris, France)
Didier BINDER (Nice France)
Jacques PELEGRIN (Paris, France)
Çiler ALTINBILEK (Istanbul, Turkey)

Première identification du débitage laminaire par pression au levier dans le Néolithique précéramique du Proche Orient (Hautes Vallées du Tigre et de l'Euphrate, Haute Djézireh, Vallée du Balikh).

RÉSUMÉ: Le recours à la pression pour le débitage de lames et de lamelles de silex et d'obsidienne se développe dans les hautes vallées du Tigre et de l'Euphrate et sur le plateau anatolien dès le PPNB ancien au milieu du 8^e millénaire cal BC. Dans les hautes vallées, les méthodes utilisant ce procédé évoluent de façon significative tout au long du Néolithique précéramique, conduisant à la production de lamelles de plus en plus régulières et standardisées.

Dans ce contexte, l'apparition de lames d'obsidienne débitées par pression au levier peut être interprétée comme une recherche de performances dans un contexte qui voit la généralisation des diffusions de produits socialement valorisés.

Les auteurs présentent et discutent les premiers éléments qui permettent de faire état de l'apparition précoce de ces techniques et méthodes au cours du PPN récent (Çayönü tepesi, fin du 8^{ème} millénaire cal BC) et des débuts du PNA (Sabi Abyad I, 7^{ème} millénaire cal BC).

C59-08 Jacques CHABOT (Quebec, Canada)
Jacques PELEGRIN (Paris, France)

Two examples of lithic industries employing pressure flaking with a lever: recent research from Northern Mesopotamia (Syria, Irak) and Southern Caucasus (Armenia).

ABSTRACT: This paper will outline two lithic industries where the primary means of manufacture is by "pressure with a lever" recently identified in Northern Mesopotamia (end of the IVth and early Third millenium) and in the Southern Caucasus region (VIth millenium). The first industry is composed of very regular flint blades called "Canaanian blades". These tools were crafted by specialists and fragmented into segments and then exported to the villages of Northern Syria and Iraq (for example 'Atij, Gudeda, Raqa'i, Nusstell, Mozan) where they were used in threshing sledges. The second industry, considerably older, was recently discovered by a team from the "Mission Caucas" (U. Lyon 2, U. of Yerevan and Université Laval) and was manufactured using local obsidian. These tools were also used for harvesting and threshing. Experimental research has been particularly important in the rediscovery of this highly sophisticated technique.

C59-09 Didier BINDER (Nice, France)
 Carmine COLLINA (Marseille, France)
 Oreto GARCIA-PUCHOL (Valencia, Spain)
 Thomas PERRIN (Toulouse, France)

La question des débitages par pression en Méditerranée nord-occidentale (Italie, France, Espagne) entre 7000 et 5500 cal BC.

RÉSUMÉ: Le diagnostic des méthodes et techniques de débitage laminaire est un élément crucial pour aborder les questions d'inter-culturalité en Méditerranée au cours de l'Holocène, et tout particulièrement dans le cadre de la diffusion du techno-complexe néolithique.

Le partage ou l'absence de partage de techniques et méthodes de débitage complexes, dont la reproduction nécessite un véritable apprentissage, constitue une clé pour reconnaître les situations d'adoption ou d'évitement entre communautés néolithiques et mésolithiques.

Les auteurs examinent dans ce but le rôle joué par la pression au sein des chaînes opératoires laminaires au 7^e et au cours de la première moitié du 6^e millénaire, dans des contextes du Mésolithique (Complexes à lames et trapèzes, Castelnovien) et des débuts du Complexe Impresso-Cardial. Ils se fondent pour cela sur des études récentes ou en cours conduites en Sicile, dans le sud-est de la péninsule italienne, dans l'Apennin toscano-émilien, la plaine orientale du Pô, le domaine liguro-provençal, le Bas-Languedoc et le Levante espagnol.

C59-10 Antonio MORGADO RODRÍGUEZ (Granada, Spain)
 Jacques PELEGRIN (Paris, France)

Origin and development of pressure blade production in the south of the Iberian Peninsula (VI-III mil. cal. B.C.).

ABSTRACT: The Neolithic signified for the Southern area of the Iberian Peninsula the introduction of new productive systems via the break from the technology of the last hunter-gatherers (the appearance of agriculture and cattle farming, ceramic technology, polished stone...). But, on the other hand, the production of knapped stone tools, apart from differences of a typological character, had not signalled notable technical changes. In this context, about the end of the VIth mil., diverse regional sites (Los Castillejos de Montefrío, El Retamar, Cueva de Nerja, Cueva de la Carigüela, etc...) testify to the appearance of pressure for certain blade productions.

Pressure flaking will then last throughout all the Middle Neolithic sites of the region (Vth mil. cal. B.C.) and will be the main technique of blade production in the south of the Iberian Peninsula. In general, the productive system is based on the elaboration of carinated precores via direct and/or indirect percussion, from which, after heat treatment, bladelets were detached using pressure with a hand held tool or a short crutch. Larger blades detached by indirect percussion are also present to a lesser degree. With slight variations these productions will be predominant during the whole Vth millennium.

The Recent Neolithic, between the end of the Vth and the beginning of the IVth millennium B.C. introduces profound changes. One of them can be observed in blade production which seems very original in the context of the western Mediterranean. Indeed the blade production is characterised by the elaboration of preforms of prismatic core via three or four crests (rear and front side) and the platform is prepared as a sharp dihedral morphology for each blade to be detached (so as to allow pressure to be concentrated on a protruding edge). The various experiments carried out by one of us (J. Pelegrin) indicate the use of a copper punch to exert pressure on such a prepared platform. (...)

C59-11 Noura RAHMANI (Montreal, Canada)

Pressure Flintknapping among the Capsians: Invention *versus* Diffusion.

ABSTRACT: The contribution of many researchers has permitted to ascertain the adoption of pressure knapping among Upper Capsian groups and has newly established a time frame for its advent as well. Up to recently the adoption of this new technique by the Capsians was regarded as a thorough local invention. However, by taking into account the evidence of diffusion of the technique in Southern Europe, I present a revision of diverse evidences on the subject by examining possible scenarios that could explain the adoption of the technique among the Capsian. I then briefly review

archaeological evidence of pressure knapping in the Mediterranean Basin and uses technological and chronological evidences to assess claims of invention and diffusion.

C59-12 Mikkel SØRENSEN (Copenhagen, Denmark)

The arrival and development of pressure blade technology in Southern Scandinavia.

ABSTRACT: This paper will define and discuss the arrival and development of the pressure blade debitage in Southern Scandinavia. The lithic pressure technique does at first appear during the Maglemosian, around 7000 BC in Scandinavia. During this period we see a blade concept where prismatic blades are produced from conical cores. In the following late Maglemosian, pressure blade debitage is continued by a different concept in which prismatic micro blades are produced from oblong keeled cores. This pressure blade concept is maintained with small variations until the Ertebølle, around 5000 BC.

The technology used in the production of pressure debitage in Mesolithic Scandinavia is examined and the changes between the two Maglemosian concepts are discussed from a practical experimental perspective. One conclusion is that the conceptual change during the Maglemosian represents a change in the core holding system, and that this change leads to a different core morphology.

There is no certain evidence of why and how the pressure technique arrives to Scandinavia. The Maglemosian is, a relatively stable period concerning tradition, economy and environment, the author therefore interpret the arrival of pressure as due to transmission of knowledge from Eastern Europe.

C59-13 Jan APPEL (Paris, France)
Kim DARMARK (Uppsala, Sweden)
Lars SUNDSTRÖM (Uppsala, Sweden)

Pressure and its relation to Percussion Techniques in Fenno-Scandian Biface Production.

ABSTRACT: Biface pressure technique was originally introduced to Fenno-Scandia around 4000 cal BC. It first appeared in Finland and northern Scandinavia as bifacially shaped arrowheads made in exotic, flint-like materials from Russia. The technique was later on adjusted to local raw materials. In the southern parts of Scandinavia, a bifacial pressure technique was introduced in the latter part of Middle Neolithic B period (2500-2300 cal BC). In this context, the technique was a part of a more general cultural influence from the Corded Ware and Bell Beaker traditions of central and Western Europe.

Based on production experiments we will discuss ways to distinguish between pressure and percussion techniques and emphasize the importance of using of both sensually based descriptions and rational objectifying techniques when doing so. The importance of an articulate use of Tixier's "Method" and "Technique" concepts when assigning cultural/group affinity to technological traditions is emphasized. Finally, some preliminary results of a general investigation on the phylogeny of the pressured, bifacial arrowhead will be presented.

C59-14 Peter KELTERBORN (Meilen, Switzerland)

Measured Flintknapping, a New Tool

ABSTRACT: First, fundamentals and the key features are presented: Engineered blade detachment machines and modern devices for core fixations. Measured can be weights, forces, directions, distances and angles.

Then, critical comparisons which replicative flintknapping are discussed, showing that measured flintknapping does not compete with replication methods, but profitably supports today's lithic analysts and opens many new windows for future research, particularly in the field of those factors, which leave no traces behind on the cores or blades.

Finally, some recent test results are presented, including effects of size, breaks during blade detachments, system tuning, blade torsion and measurable heat treatment.

C59-15 Yan Axel GOMEZ COUTOULY

Microblade Industries from the Russian Far East and Alaska:

ABSTRACT: The literature concerning the microblade techno-complex of northeastern Asia and America has usually compared the Alaskan and Siberian archaeological records. However, rare are the publications presenting a first-hand comparison between the microblade complexes of the northwest American coast with those from the Russian Far East.

With this paper we propose to compare the microblade industries from sites located in the Primorie Region of the Russian Far East (Risovaya-1, Molodiojna-1 and Ustinovka-6) with sites from Alaska (Dry Creek, Panguingue Creek, Swan Point and Thorne River). Our current research is axed towards a broad geographical approach that will allow us to undertake a comparative study between different regions. With this approach we hope to obtain a better understanding of the cultural and technical relationship between the late Pleistocene and early Holocene microblade bearing populations.

Microblade industries from the Primorye region present a large variety of methods for the production of microcores (Yubetsu, Horoka, Togeshita, Hirosato, cylindrical cores, and microcores on flakes). We also address such issues as the influence of raw material in the production of microcores and the associated material (blade and bifacial industries, and the common tools). We show how raw materials can affect the morphological and technological debitage of microcores. Our objective is to pinpoint that the differences between sites, and indeed the similarities, may not only be the result of cultural affiliations, but also to an adaptation to the available raw materials and to other related variables independent from the knapper's will.

C59-16 Pierre M. DESROSIERS (Montreal, Canada)
Mikkel SØRENSEN (Copenhagen, Denmark)
Daniel GENDRON (Montreal, Canada)

Pressure Flaking in Eastern Arctic

ABSTRACT: The presence of pressure technique in the Eastern Arctic poses apparently no problem since it came with the first migration of people, the Palaeo-Eskimo (4500-800 BP), long after the technique was discovered and spread elsewhere in the World. Pressure technique is thus assumed to have been used in the production of bifacial points and microblades. However, current work indicates that pressure was probably not the solely technique used to produce Palaeo-Eskimo microblades and that its use have been evolving through time. The discussion will include some elements as the importance of pressure technique in the Palaeo-Eskimo technology, its origin, evolution and disappearance in Eastern Arctic.

C59-17 Kenneth G. HIRTH (UTAH, U.S.A.)

The Organizational Structure of Mesoamerican Obsidian Blade Production

ABSTRACT: This paper examines the organizational structures associated with the development of specialized obsidian blade production in Mesoamerica. At the time of the Spanish Conquest Mesoamerica contained multiple large state-level societies that operated with essentially neolithic technologies, relying on stone tools for virtually all their cutting tasks. Obsidian was used for cutting tools in many areas of Mesoamerica and a specialized pressure blade technology developed to supply both domestic and state-level consumption needs. This paper outlines the organization, scale, and complexity of obsidian blade production and the distribution systems that supported it. Mesoamerica is an example of the level of organizational complexity that can be achieved when societies lack metallurgy and stone tool production is central to their technological base.

C59-18 Véronique DARRAS (Paris, France)

Les conditions du développement de la technologie de la lame prismatique dans la Mésoamérique occidentale.

RÉSUMÉ: Les nombreuses études mésoaméricaines sur le débitage laminaire par pression sur obsidienne pointent toujours le degré de complexité socio-politique des sociétés dans lequel il se développe, comme un facteur particulièrement important. On rappellera à ce sujet les dernières publications coordonnées par K. Hirth (2002, 2003) qui décodent admirablement bien les divers mécanismes qui régulaient la production, la distribution et la consommation des lames d'obsidienne, à différentes périodes de l'histoire préhispanique, et dans plusieurs régions de Mésoamérique. En dépit

des incertitudes sur son foyer d'origine et son moment d'apparition, on observe que la lame prismatique est présente dans la plupart des régions de Mésoamérique dès le Formatif moyen, plus exactement à partir de 1000 avt. J.-C. Cependant, quelques régions, notamment dans l'Occident mexicain, offrent un schéma sensiblement différent. Dans cette dernière contrée, la lame, comme produit manufacturé, n'est introduite qu'à l'extrême fin de la période formative, c'est-à-dire au tout début de notre ère, et le développement de la technologie s'y produit ensuite de façon irrégulière et *a priori* sans logique spatiale. L'étude des systèmes lithiques mis en place par les populations originaires du Michoacan et du Bajío, entre le Formatif récent et le Postclassique (500 avt.J.-C. – 1450 ap.J.-C.), met en lumière des évolutions significatives et aboutit à un schéma qui, pour la période formative récente et terminale, met surtout en scène l'importance des choix culturels et des orientations idéologiques, avant de souligner, pour les périodes suivantes, celle des facteurs économiques et socio-politiques.

POSTERS

Antonio MORGADO RODRÍGUEZ (Granada, Spain)

Jacques PELEGRIN (Nanterre, France)

Origin and development of pressure blade production in the south of the Iberian Peninsula (VI-III mil. cal. B.C.).

ABSTRACT : The Neolithic signified for the Southern area of the Iberian Peninsula the introduction of new productive systems via the break from the technology of the last hunter-gatherers (the appearance of agriculture and cattle farming, ceramic technology, polished stone...). But, on the other hand, the production of knapped stone tools, apart from differences of a typological character, had not signalled notable technical changes. In this context, about the end of the VIth mil., diverse regional sites (Los Castillejos de Montefrío, El Retamar, Cueva de Nerja, Cueva de la Carigüela, etc...) testify to the appearance of pressure for certain blade productions.

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